

GET THE LEAD OUT

AN ANALYSIS OF GEORGIA'S LEAD IN SCHOOL DRINKING WATER DATA



In 2014, the Flint Water Crisis caused nationwide alarm about lead and safe drinking water. Many Americans watched as a tragedy unfolded in Flint, Michigan. Through a combination of appalling decisions and denials, an entire city had its water contaminated with high levels of lead. Tens of thousands of children were exposed to lead during the crisis in Flint.¹ In addition to acute symptoms and other illnesses, by one estimate, children in Flint will lose 18,000 future healthy years combined.²

Our analysis of recent lead testing data in Georgia shows that the Peach State also struggles with lead contamination in school drinking water. Of over 2,000 samples, 45% showed lead concentrations above the standard recommended by public health experts.

Thankfully, lead contamination can be addressed and can improve children's health with simple measures, while larger and longer-term water infrastructure improvements take place. This analysis hopes to highlight the importance of continued focus on lead in school drinking water and offer actionable recommendations for schools and state leadership.

LEAD IN SCHOOL WATER

Lead is a potent neurotoxin that harms our health. Children are especially susceptible to lead poisoning as their exposure to lead has been linked to causing damage to the central and peripheral nervous system; learning disabilities; impaired formation and function of blood cells; hearing issues; ADHD; depression; lower IQ; and Anemia, among other side effects.³ Though the Safe Drinking Water Act's lead and copper rule set a standard of 15 ppb of lead concentrations in water.⁴

The American Academy of Pediatrics (AAP), the U.S. Environmental Protection Agency (EPA), and the U.S. Center for Disease Control and Prevention (CDC) have stated that lead can be harmful to human health even at low exposure levels.⁵ Further, the AAP recommended ten policies state and government officials enact to reduce a child's exposure to lead.

According to their recommendations, state and local governments should ensure that drinking water in schools does not exceed the lead concentration of 1ppb.⁶

In light of this recommendation, public health experts and agencies now agree: there is no safe level of lead for our children.

HOW DOES LEAD GET INTO OUR DRINKING WATER?

Lead leaches into our drinking water through lead-bearing pipes, fountains, and plumbing. Contrary to popular belief, lead is not naturally found in our waterways and doesn't always come from treatment plants. While larger schools are unlikely to have lead service lines, they do have extensive interior pipes, plumbing, and many more faucets and fountains - all of which are potential sources of lead.

Until 2014, significant amounts of lead were allowed in new pipes, pipe fittings, plumbing fittings, and fixtures.⁷ Some experts fear that even the new, stricter regulations for allowable levels of lead per wetted surface area in pipes and plumbing could still leave enough lead in contact with water for contamination to occur.⁸ The bottom line: most schools and early childhood education programs are likely to have lead in their water delivery systems. And where there is lead, there is a risk that the water kids are drinking can be contaminated.

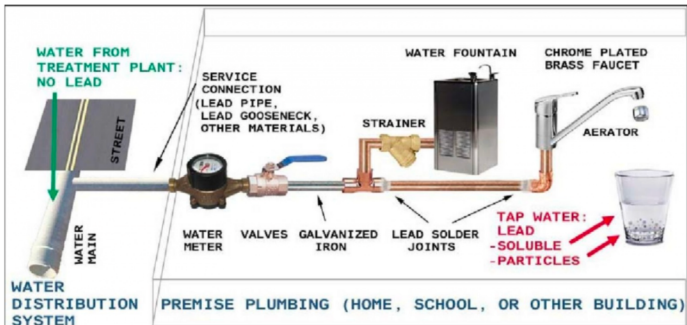


Figure 1-1: Potential sources of lead contamination in tap water of homes, schools and other buildings.

HOW AND WHAT IS GEORGIA DOING TO GET THE LEAD OUT?

In 2019, Environment Georgia released a report grading states on their efforts to reduce lead exposure in school drinking water. Georgia received a failing grade as the state has no drinking water lead standard or lead testing requirement. Unfortunately, Georgia still does not have a drinking water standard for lead or a testing requirement. But, Georgia's general assembly did take action in 2022 when it passed The Childhood Lead Exposure Control Act.

The Act outlines revisions to lead exposure control and lays out key lead prevention provisions. These include lowering allowable blood lead level limits to 5 ug/ml; instituting abatement plans for educational facilities; and developing specific abatement procedures that ensure awareness of lead poisoning hazards found on such common places as painted surfaces, soil, and playground materials.⁹

Despite those promising elements, the bill omits one very important exposure source: drinking water. Twenty percent of our lead exposure comes from our drinking water, according to the Environmental Protection Agency.¹⁰

Additionally, Georgia now has a free state lead testing program made possible by a partnership between the Georgia Department of Education and RTI International, a non-profit research group. The Clean Water for Georgia Kids program is funded by the EPA's WIIN grant to help communities meet the Safe Drinking Water Act standards. The program launched in Georgia in July 2021 and provides free lead testing for public K-12 schools and daycare centers in the state. Schools are eligible to voluntarily sign-up for an information session to learn more about the program and the process for testing. School officials are then trained to test taps and fountains.

Upon completing the required training, testing equipment is shipped to the designated school where testing is conducted by school officials who collect water samples and ship them back to the lab for testing. The test results are made public on the Clean Water for GA Kids public website.¹¹ Finally, RTI International provides recommendations for how schools can remediate any problems. However, the program does not provide funding for remediation costs.

- TRAIN school administrators as citizen scientists to collect and ship wa
- TEST all drinking and cooking taps at Georgia schools,
- TAKE ACTION to fix problems identified with recommendations based and
- COMMUNICATE findings and solutions to staff, parents, and children.

Image Source: Screen Capture from <https://www.cleanwaterforuskids.org/georgia/about>

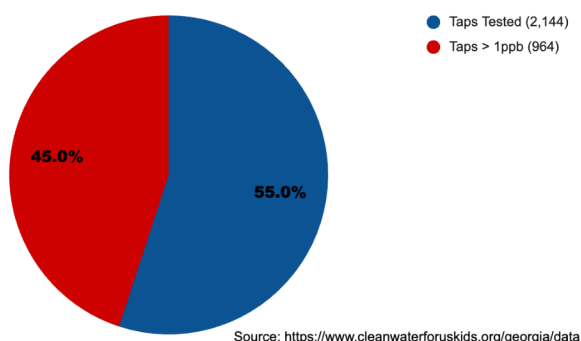


FINDINGS

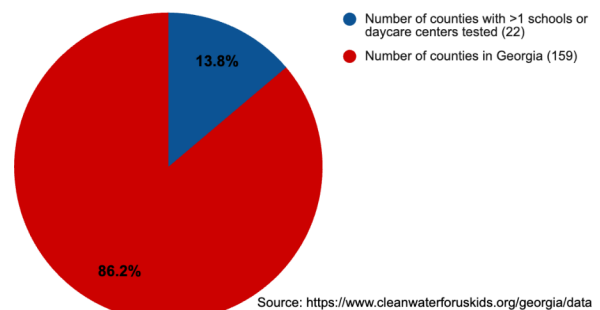
Over a year after the launch of the Clean Water for Georgia Kids Program in July of 2021, Environment Georgia analyzed the data available on the program's website. We looked at how many schools in each county have tested through the program, how many taps were tested at each school and county, and how many taps produced lead readings, specifically, lead readings 1ppb or above, the limit recommended by health professionals. We conducted our analysis on October 18, 2022. It is important to note that the Clean Water for GA Kids data site is an active site that continues to update as schools report their testing. The data also shows taps that were identified as invalid sources or as not sampled making our data set smaller.

- Forty-five percent of taps tested produced lead readings above the 1ppb limit recommended by the AAP.¹² Of the 2,144 taps tested, 964 showed elevated levels of lead.
- Forty-six schools and daycare centers have tested their schools for lead through the program. According to the Department of Education, there are 2,306 public schools in Georgia, and the Georgia Department of Early Care and Learning estimates there are roughly 3,100 daycare facilities in Georgia.¹³
- Twenty-two counties out of 159 (14%) counties have tested at least one of their schools for lead through the program.
- Fourteen of the 22 counties in the data set have tested only one school through the program.

Taps tested with unsafe levels of lead



Counties that have participated in lead testing



45%

TAPS TESTED PRODUCED LEAD READINGS ABOVE THE 1PPB LIMIT RECOMMENDED BY THE AAP.

14%

OF COUNTIES IN GA HAVE TESTED AT LEAST ONE SCHOOL THROUGH GEORGIA'S LEAD TESTING PROGRAM



ENVIRONMENT
GEORGIA

ACTION NEEDED

1. Schools must install water bottle filter stations—Getting the lead out will take time. In the interim, every outlet used for drinking or cooking should be fitted with filters certified by the Occupational Safety and Health Administration (OSHA), which includes accreditations such as the National Sanitation Foundation (NSF) or the American National Standards Institute (ANSI) to remove lead from water. Even with high levels of contamination in Flint, an EPA analysis documented that NSF filters proved effective at removing lead.¹⁴ This solution is quick and relatively affordable.

2. Actively work to Get the Lead Out by removing and replacing lead-bearing faucets, pipes, and plumbing fixtures.

3. Governor Kemp should create a lead remediation fund. Schools should have the funding they need to proactively work to get lead out of school drinking water. Schools that have tested and found lead should have a clear path to funding to help schools fix problems they find. Otherwise, schools may forgo testing to avoid the price tag they may face when they learn the results. The American Rescue Plan provided billions of dollars that state and local governments can use for drinking water infrastructure, including efforts to prevent lead contamination. The state could provide dollars as grants to school systems for lead remediation. Additionally, the Infrastructure Investment and Jobs Act provides schools with \$200 million over 5 years to prevent lead contamination of drinking water.¹⁵ The EPA WIIN Grant which provides funding for schools to test for lead could also be tapped.¹⁶

4. The Georgia Legislature should set a standard for lead in drinking water that protects public health. Medical experts agree that there is no safe level of lead, and standards that trigger mandatory remediation — often called an “action level” — should reflect this health assessment. For this reason, the American Academy of Pediatrics is calling on officials “to ensure that water fountains in schools do not exceed water lead concentrations of 1 ppb.”¹⁷ At a minimum, outlets with water exceeding this concentration should immediately be removed from service until permanent remediation, not mere flushing, ensures safe drinking water on an ongoing basis.

5. The Georgia Legislature should establish mandatory annual lead testing at public schools and institutions—we applaud the Clean Water for Georgia Kids Program and its public data site. However, the state should do more to encourage schools to take advantage of the program. Some states such as North Carolina have required daycare centers to test their schools’ water for lead. While schools must “get the lead out” proactively, testing in the interim can at least confirm some immediate threats to children’s health and ensure that remediation steps are working properly. Schools and early childhood programs should test at all water outlets used for drinking and cooking annually, and use protocols designed to capture worst-case lead exposure for children.

METHODOLOGY

To establish how many taps had been tested we counted all taps that had a valid lead value associated with the tap. We did not include taps that were listed as missing or similarly labeled. We also did not count taps that had a flag indicating the value was elevated due to a dilution as this means the volume of liquid collected for a sample was insufficient given that the standard volume for a sample must be 250 milliliters.

There were some taps, with elevated levels of lead, where additional testing had occurred. In all cases, we recorded the original value reported. In some cases, additional testing included a 'first draw' and a reading after a short flush. Environment Georgia does not recommend flushing taps before testing as the EPA recommends against pre-stagnation flushing, which removes water that has been in contact with lead service lines or fixtures.¹⁸ There is no guarantee flushing will occur before a student drinks water from a school tap or fountain.

There was one school that reported samples that were not 'first draw' samples. In other words, the water may not have been collected after the water had been sitting in the tap for a certain amount of time. Many of these samples still showed elevated levels of lead so we chose to include them even though the potential flushing could have artificially lowered the lead concentration in the sample.

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