

Lead in School Drinking Water in New Jersey

A preliminary analysis of reported test results



August 2017

About New Jersey Future

Founded in 1987, New Jersey Future is a nonprofit, nonpartisan organization that promotes sensible growth, redevelopment and infrastructure investments to foster vibrant cities and towns, protect natural lands and waterways, enhance transportation choices, provide access to safe, affordable and aging-friendly neighborhoods and fuel a strong economy. The organization does this through original research, innovative policy development, coalition-building, advocacy, and hands-on technical assistance.

Executive Summary

New Jersey has an aging water infrastructure problem. Leaking water mains lose up to 30 percent of the supply before it reaches the customer. Combined-sewer overflows allow untreated wastewater to spill into our waterways, impacting health and closing beaches. But most concerning from a public health perspective is the frequency with which lead shows up in our drinking water.

New Jersey is now one of the few states to require testing for lead in school drinking water, which empowers parents to keep their children safe and forces schools to address the issue. In 2016, in reaction to high lead levels found in 30 of Newark's public schools, the Christie administration issued a [new state requirement](#) to test for lead in drinking water at all public and charter schools and state-funded daycare centers.

New Jersey Future wanted to shine a spotlight on these lead test results, which were required to be completed by July 12, 2017. We set out to examine the lead test results reported to and collected by the New Jersey Department of Education (DOE), in order to help quantify the extent of the problem and recommend actions to ensure schools and communities are being provided all the support they need to remediate the situation.

Among the most significant findings are:

- Lead appears in the drinking water of schools across New Jersey. The data show that lead is present in schools across the state, in all geographic regions, as well as in urban, suburban, and rural areas.
- The limited data amassed by the DOE make it impossible to get a fully accurate accounting. The type and level of data collected is insufficient to quantify how many schools in New Jersey have lead in drinking water and how many outlets require remediation to keep children safe.

Among New Jersey Future's recommendations:

- The Board of Education should create a standardized electronic collection system and require all districts to submit or re-submit the most recent lead testing results, in order for more comprehensive analysis to be conducted. An appropriate timeline should be provided for development and implementation of this reporting system.
- The BOE should require school districts to provide more clarification as to the type of water outlet and its frequency of usage by students, to give parents and families greater knowledge about potential exposure.
- Lead in school drinking water is a statewide problem that needs state-level attention. Better data collection, compilation of data statewide, and identification of actual drinking outlets will allow policy makers to understand the economics of the entire issue in order to ensure every school district has the technical and financial resources to provide long-term remediation.
- In order to protect the health of children and families, the state needs not only to ensure remediation of lead in school drinking water, but to continue its important efforts to address the presence of lead in water at home, a result of lead service lines (pipes that connect the water main to the home) and internal lead plumbing fittings and fixtures.
- The governor and/or the commissioner of the Board of Education or the Department of Health should develop a high-profile informational campaign to remind parents and pregnant women of the risk of lead exposure and encourage all parents to check with their local school district for the results of lead testing and remediation.

Background

Lead in drinking water is a serious concern that came to the public's attention recently with the crisis in Flint, Michigan, and subsequent discoveries of lead contamination in other cities around the country. New Jersey is not immune to this problem, and lead has been discovered in drinking water across the state.

Like most of the country, New Jersey's drinking water sources do not contain lead. Rather, our older water pipes and plumbing fixtures and fittings contaminate treated drinking water with lead en route to the tap. We can understand the extent of the risk for children by looking at data on children and schools.

Children: According to the Center for Disease Control, even low levels of lead exposure can stunt children's healthy brain development. Children under 6 years old in New Jersey are required to be tested for lead, and therefore act as "lead detectors," indicating the extent and location of lead exposure from all sources, including drinking water, as well as lead paint, toys, contaminated soils, and other sources. In New Jersey, over 200,000 children under age six have lead in their blood and of those, nearly 6,000 have elevated lead levels above 5 micrograms per deciliter, the blood lead level that the [Centers for Disease Control and Prevention identifies as a level of concern](#). Lead poisoning occurs across the state – in rural, suburban and urban communities, but it is most prevalent in older cities with the fewest resources to address it. In 2016, [the nonprofit organization Isles Inc. identified 11 cities](#) that have a higher proportion of lead-affected children than Flint, Michigan. The communities with the high lead levels include Atlantic City, East Orange, Elizabeth, Irvington, Jersey City, Newark, New Brunswick, Passaic, Paterson, Plainfield, and Trenton, along with Salem and Cumberland counties.

Schools: Water quality in school buildings is of particular concern, not only because many children are drinking the water, but also because the buildings are closed at night and on weekends, allowing more time for lead to leach from pipes into sitting water. Many older schools across New Jersey have interior plumbing with lead that contaminates drinking water and can stunt development of the very brains the schools are charged with educating.

Lead typically enters water by leaching out of older service lines (the pipes that deliver water from the water main into a building), interior pipes, and/or plumbing fittings and fixtures that contain lead or lead-based solder. The Environmental Protection Agency and the New Jersey Department of Environmental Protection have set the action level for lead in drinking water at 15 parts per billion (ppb), at which point corrective action must be taken

New Jersey's water supply utilities are required by law to test water for lead as it leaves the treatment plant and in a sampling of the most at-risk residences, and are responsible for reducing the potential for lead levels where that sampling exceeds federal guidelines. The water supply utilities are responsible for any lead lines they own, while public and private property owners, including municipalities and school districts, bear responsibility for their own lines and fixtures.

School districts in New Jersey are also now responsible for testing their own water. Governor Christie [has taken an important first step](#) in requiring school districts to test their drinking water and post results. In 2016, the State Board of Education set a deadline of July 13, 2017, for New Jersey public and charter schools and publicly funded child care centers to test their water for lead. The rules state that public schools must sample and analyze all drinking water outlets and food preparation sources in accordance with requirements laid out by the Department of Education and guidance from the

Department of Environmental Protection, and full results of the testing must be made available to the public immediately. Districts that find positive (above 15 ppb) results of lead in drinking water are required to notify the Department of Education and describe the measures taken to switch off any outlet exhibiting elevated lead levels and take remedial actions to provide alternate sources of water. After the initial testing, districts are required to test all drinking water outlets every six years to ensure continued compliance.

Methodology

In order to get a more comprehensive overview and to quantify the results of lead testing in schools across the state, New Jersey Future submitted four Open Public Records Act requests to the Department of Education to provide school districts' submissions of positive results of lead in their water.

The DOE indicated they were not going to compile all the lead testing results. The DOE was responsive, timely and helpful in forwarding the information as they received it from school districts. New Jersey Future obtained PDF versions of school districts' public notifications and transferred all the data by hand into a spreadsheet. This report includes only districts that sent results into the DOE that were then sent to New Jersey Future.

The data collected by New Jersey Future is available upon request by contacting [Allison Kopicki](#).

The data collected by the DOE that New Jersey Future compiled focus on positive lead results higher than 15 parts per billion, the level at which the U.S. Environmental Protection Agency (EPA) recommends taking action. However, the EPA and the Centers for Disease Control and Prevention (CDC) agree that there is no known safe level of lead in children's blood. In July, [Environment New Jersey published a report](#) that investigated lead levels in Bergen County schools, finding that half had lead levels of 1 part per billion or above. They and other advocates recommend remediating any lead levels higher than 0 ppb.

Findings

FINDING - Lead appears to be pervasive in the drinking water of schools across New Jersey, but the limited data amassed by the DOE make it impossible to get a fully accurate accounting. As of Aug. 13, 2017, only 95 school districts out of nearly 600 in New Jersey had forwarded information describing positive lead test results to the Department of Education, as required by the Board of Education. These reports show that among those 95 districts, more than 300 schools had at least one water outlet that exhibited positive results at or above 15 parts per billion. In these 95 districts, at least 14,598 water outlets were tested, and of those outlets tested, 8.1 percent exceeded the threshold for lead in drinking water.

This report only includes districts that sent results into the Department of Education that were then sent to New Jersey Future. The DOE rule requires all districts to test for lead and make full test results available at the school facility and on the district's website, but only those districts with positive lead test results must submit their results to the DOE. Some districts may not have submitted reports to the DOE because they did not include any positive lead test results. However, additional spot-checking by New Jersey Future found that numerous other school districts conducted testing for lead in drinking water, had positive results, and notified the public, but were not included in the DOE data that was analyzed. For example, some school districts that did not appear in the DOE data, such as Newark, Jersey City and Camden, have school drinking water that has tested positive for lead, have been conducting these tests before the state required them, and have posted the results online according to a [survey conducted by the New Jersey Work Environment Council](#). In fact, Camden has been providing bottled water to their students [for 14 years due to elevated lead levels in the drinking water](#).

2. FINDING - The data show that lead is present in schools across the state, in all geographic regions, as well as in urban, suburban, and rural areas. The 95 school districts accounted for in the data acquired from the DOE came from all counties across New Jersey except Mercer County (however, a spot check of websites of several school districts in Mercer County, including Princeton and Trenton, found testing had been done and positive lead results had been publicized). No type of community appears to be immune from the presence of lead. Positive results appeared in the state's more rural school districts, such as High Point in Sussex County; in suburban districts like Freehold Regional and Berkeley Heights; and in cities like Asbury Park, Passaic and Bayonne.

3. FINDING – Among those school districts that submitted results to the DOE, compliance with requirements for notification and remediation appears to be strong. Nearly all of the reporting school districts that conducted the required testing and found positive levels of lead over 15 ppb published their results on their websites and notified parents and families as required. The websites of the school districts that had sent in their data were checked, and in almost every case, the lead-in-water test results could be located easily. School submittals indicated that districts took the lead findings seriously and followed the Department of Environmental Protection's (DEP) suggested remedial actions, which included taking the affected water outlet out of service and/or posting that the water was not fit for consumption but could be used for hand washing.

4. FINDING – The type and level of data that was collected by the DOE makes it difficult to know how much exposure children have had to lead in school water. The regulation required testing of drinking water and food preparation sources, but many schools tested *all* water outlets, including janitorial sinks, dishwashers, etc., and these were included in the above results. Because of this, it is not possible to analyze how many of these outlets were actually being used regularly by students for consumption or used for food preparation. And while the schools were asked to supply the data in a format that would show what types of outlets were found to have lead (such as water fountains, bubblers, cafeteria

sources, etc.), the data were often supplied in a way that made it difficult to differentiate types of sources. Further, schools were not asked to characterize the usage level of the water outlet. For example, schools were not asked to differentiate between the usage by students of a water fountain near a gymnasium and that of a sink in a science lab.

Recommendations

- The Department of Education should create a standardized electronic collection system and require all districts to submit or re-submit their most recent lead testing results, in order for more comprehensive analysis to be conducted. A robust database of lead results would allow policy makers to get a better understanding of how widespread lead is in school drinking water, and allow them to do the necessary analysis to facilitate effective and efficient direction of remedial funding and technical assistance. Private schools and childcare centers should also be required to use this methodology for testing and reporting.
- All school testing results, even if negative, should be submitted to the DOE so that they can confirm that all districts conducted testing and so that they can understand the extent of the problem statewide. The results should be made available publicly, so parents can learn easily about conditions in their children's schools and as a way of ensuring transparency on this important public health issue.
- The DOE should work with the DEP to develop requirements for school districts to provide more clarification as to the type of water outlets testing positive and the frequency of usage. Parents and families need information that is comprehensible and appropriate, in order to understand whether their children have had any exposure. Policy makers need clear, pertinent data in order to measure the situation and understand the need that low-income communities may have for financial or technical assistance for remediation.
- The legislature set aside \$10 million for schools to test for lead. According to the DOE, this seemed to be an adequate amount for testing, as it had not been drawn down completely by the end of the testing period. However, the DOE also indicated that there could be cost savings if the state were to issue a request for proposals on which water testing companies could bid, and then were to provide schools with a list of vendors that met high performance criteria at the lowest costs. This could also be done for short-term solutions, such as providing bottled water and filter systems.
- This is a statewide problem that needs state-level attention. Better data collection, compilation of data statewide, and identification of heavily-used drinking sources will allow policy makers to understand more clearly the economics of the entire issue. The state should take a leadership role in helping low-income communities test for and remediate lead in school drinking water. For many school districts with limited resources, the costs for remediation are overwhelming, and the state should fund continued testing and reporting in these districts, dedicate staff to providing technical assistance, and subsidize long-term remediation. The state should also work with the federal government to obtain funding for this remediation, as has been proposed [in bills introduced by Sens. Booker and Duckworth and Reps. Pallone and Gottheimer](#).
- In the short-term, the state's school funding formula/program should factor in the need that economically distressed schools may have for financial assistance to take the contaminated outlets out of service and temporarily supply bottled water or install filter systems.
- The governor and/or the commissioner of the Department of Education or the Department of Health should develop a high-profile informational campaign to remind parents and pregnant women of the risk of lead exposure and encourage all parents to check with their local school district for the results of lead testing and remediation.
- The state needs to modernize its inadequate drinking water, wastewater, and stormwater systems in ways that strengthen our communities. In order to protect the health of children and families, the state needs not only to support remediation of lead in school drinking water, but to continue its important efforts to address the presence of lead in water at home, a result of lead service lines (pipes that connect the water main to the home) and internal lead plumbing fittings and fixtures.

Conclusion

While it is true that the most serious cause of lead poisoning in children is lead paint, our findings indicate that New Jersey has a widespread problem with lead in school drinking water. While we applaud the state for taking the important action in requiring testing, this is only a first step toward solving the issue. We need better data collection and analysis to understand the extent of the issue and to provide financial and technical support to enable at-risk communities to undertake permanent remediation.

Vulnerable groups – especially pregnant women and children younger than 6 – need to know how to drink water safely at home, at day care and at school. And we all should be clamoring for drinking water upgrades to support thriving, healthy communities across New Jersey.

[Jersey Water Works](#), the collaborative of leaders from many sectors committed to improving the quality of life in New Jersey communities by upgrading our state's water infrastructure, has issued a [statement on the importance of addressing the problem of lead in drinking water in our older buildings](#), and has created a [resource page](#) to help educate the public on the risks of lead exposure and provide guidance on how to reduce your risk. For more information about lead in drinking water, including actions to take if you are concerned about the water in your home, visit the [Jersey Water Works resource page](#).