

How one school district took the lead in lead reduction.



The Challenge

Help school drinking water make the grade ahead of federal mandates.

Growing concerns over lead in school drinking water have sparked more stringent requirements at the federal level. Under the new Lead and Copper Rule Revision from the U.S. Environmental Protection Agency (EPA), beginning on October 16, 2024, school and child care center water service lines must be tested for lead. When testing reveals a lead level exceeding a threshold of 10 parts per billion (ppb), schools and child care centers must conduct a corrosion control study to identify a lead reduction solution.¹ The new EPA trigger level still exceeds the American Academy of Pediatrics (AAP) recommendation that lead levels in school drinking water fountains should not exceed 1 ppb.² Many schools are beginning lead mitigation initiatives now to prepare for the new regulations.

One district set a goal of 1 ppb.

Portland Public Schools (PPS), the largest school district in the state of Oregon, educates more than 49,000 students in 81 schools. With elevated levels of lead suspected in school drinking water, PPS switched to bottled water and pursued a referendum to raise funds. Their team of experts, the PPS Water Quality Team, set an aggressive goal to get the lead down to 1 ppb with a budget of \$28.5 million.³ They began field surveys and immediate fixture replacement to get some of the drinking water stations turned back on. Meanwhile, the district looked for an alternative to plumbing replacement that could help them reach their goal.

Traditional replacement of aging pipes too costly.



PPS considered replacing much of the schools' water system. However, they found that the cost to replace the necessary pipes would greatly exceed the project budget.



The Solution

A pilot program to reduce the lead.

After comparing flowrates and reduction rates, PPS partnered with 3M to install new drinking water stations with advanced lead reduction filters in several test schools. The pilot program using 3M filters helped bring lead levels to an average of less than 1 ppb. Lead levels in many fixtures were even below the testing threshold of 0.2 ppb.³

The Result

Lead detected is 30x lower than the state level for school drinking water.

Over the next three years, PPS expanded the installation of 3M filters to all schools in the district. Incorporating 3M™ Aqua-Pure™ Full Flow Water Filter System 3MFF100 into student touchpoints has resulted in an average of less than 0.5 ppb detected,³ 50% under the district's goal of 1 ppb and far below Oregon's action level of 15 ppb.



◀ A look inside the system.

With three-stage filtration, the 3M™ Aqua-Pure™ Full Flow Water Filter System 3MFF100 uses carbon block technology to reduce the lead to <1 ppb in filtered water.⁴

Stage 1: Prefiltration

Stage 2: Fine Filtration

Stage 3: Final Filtration



Exceeding expectations under budget.

The PPS Water Quality program projects to spend less than \$18 million of the \$28.5 million allocated to the project, freeing money for other school priorities. Now PPS students have access to cleaner, clearer, better tasting drinking water with some of the lowest lead levels in the nation.



Get the lead out at your school. To learn more about water quality improvement, visit [3M.com/GetTheLeadOut](https://www.3m.com/GetTheLeadOut) or call 1-866-990-9785.



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1. The New Lead and Copper Rule. Environmental Protection Agency. Accessed June 5, 2023. https://www.epa.gov/sites/default/files/2020-12/documents/lcr_overview_fact_sheet_12-21-2020_final.pdf
2. Council on Environmental Health. Prevention of Childhood Lead Toxicity. Pediatrics 138, no. 1. Itasca, Illinois: American Academy of Pediatrics, 2016. Policy Statement, <https://pediatrics.aappublications.org/content/pediatrics/early/2016/06/16/peds.2016-1493.full.pdf> (accessed March 1, 2023).
3. Bond (School Building Improvement Bond) / Water Quality. Portland Public Schools. Accessed June 6, 2023. <https://www.pps.net/Page/11458>
4. 3M™ Aqua-Pure™ Full Flow Water Filter System 3MFF100 provides <1 ppb – low lead level in the filtered water as demonstrated by NSF 53 certification testing. Much lower than 15 ppb EPA action level or 5 ppb NSF Standard 53 requirement.

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