



Testimony in support of HB 4340, HB 4341, and HB 4342  
presented to the House Health Policy Committee  
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Chair Rogers, Majority Vice Chair Whitsett, Minority Vice Chair VanderWall, and members of the Health Policy Committee:

I'm here today on behalf of the Natural Resources Defense Council (NRDC) to testify in support of House Bills 4340, 4341, and 4342. NRDC has a long history of working to strengthen the nation's drinking water protections including efforts to eliminate lead from drinking water. I have been working on Michigan drinking water protections since the late 1990s, and I formerly served on USEPA's National Drinking Water Advisory Council, which advises that agency on implementing the federal Safe Drinking Water Act.

In 2016, New York became the first state to require lead testing of all water outlets in public schools. The New York State school testing data revealed that:

- Roughly 82% of public school buildings statewide reported one or more tap that tested above 15 ppb. EPA has set the maximum contaminant level goal for lead in drinking water at zero because lead can be harmful to human health even at low exposure levels.
- More than 56% of New York public school buildings statewide tested above 15 ppb at 5% or more of their water outlets, with a higher rate of taps testing above 15 ppb from schools outside of New York City (59%) than from schools inside New York City (51%).
- About 2% of the public school buildings statewide found levels above 15 ppb for at least half of the outlets tested, with a higher rate outside New York City (2.4%) than in New York City (1.1%).

Closer to home, Indiana conducted a voluntary lead in school drinking water testing program during the 2017-18 school year through which 57,000 samples were collected. The results indicated that 62% of schools had at least 1 fixture with lead over 15 ppb while 7% had more than 10 fixtures (roughly 25%) testing above 15 ppb.

Both New York and Indiana found that lead is present in the drinking water if you test for it. But even with the testing results from these states, we still don't have an accurate picture of lead in school drinking water due to the variability of lead release at each faucet or fixture. As the testimony

of others highlights, the test results at the same water outlet can vary dramatically from one water sample to another.

After reviewing the State of New York's lead in school drinking water occurrence data, NRDC wrote a model bill - upon which Michigan's Filter First bills are based - that goes further than New York's "Test and Chase" approach by actually protecting kids from lead in drinking water. This Filter First approach is the most cost-effective option as can be seen in our 2019 "Michigan Filter First Cost Estimate" document, which shows that the cost of Filter First for schools in year one (\$54 million) is estimated to be one-third of what it costs to implement a Test and Chase approach (\$166 million). Over a 10-year period, our 2019 cost estimate indicated the maintenance and post-filtration sampling compared to the cost of the Test and Chase approach was even more dramatic: Filter First was estimated to cost about \$80 million while Test and Chase will cost nearly a half billion dollars (\$497 million).

Some have asked why we don't just replace the lead containing fixtures and components.

There are at least two problems with that approach: 1) even new fixtures, solder, flux, and fittings contain lead, so we need to get the lead out of these components before replacing them; and 2) most school districts cannot make the immediate investment necessary to protect our kids by replacing their building's plumbing and fixtures - even if they didn't contain lead.

While my testimony focuses on lead in school drinking water, lead in childcare centers is also of great concern given the number of infants and children who spend extensive time at childcare facilities. Lead effects are especially concerning for infants and children under the age of six. Children absorb more lead than adults do, and lead - even at low levels - can damage children's developing brains and nervous systems, contributing to lower IQs, hearing loss, and learning and behavior problems. We strongly support Senate Bill 88 because it would ensure this population is protected from lead used for drinking, infant formula, and food preparation at these facilities.

Thank you for the opportunity to testify today and thank you again to the bill's sponsors for leading this important effort to protect kids. Together House Bills 4340, 4341, and 4342 are landmark efforts that will make Michigan the national leader on this front.

Senate Bills 88 and 89 and House Bills 4341, 4342, and 4344 protect Michigan children from lead in school and childcare center drinking water.



## The Problem

- ◆ Young children, infants, and fetuses are particularly vulnerable to lead because their bodies are still developing and growing rapidly.
- ◆ Lead exposure in young children can cause damage to the brain and nervous system and can slow growth and development. In addition, these developmental, long-term health effects occur at lower exposure levels in children than in adults.
- ◆ In children, low levels of exposure have been linked to damage to the central and peripheral nervous system, learning disabilities, shorter stature, impaired hearing, and impaired formation and function of blood cells.
- ◆ The American Academy of Pediatrics recommends that state and local governments take steps to ensure that water fountains in schools do not exceed water lead concentrations of 1 ppb.
- ◆ Lead is commonly found in school and childcare center drinking water across the country, including in Michigan because most plumbing materials contain lead that leaches into drinking water, even with new faucets and fixtures marked "lead free."
- ◆ This is especially problematic on weekends and during seasonal breaks when water is stagnant in plumbing systems, which reduces the effectiveness of corrosion control chemicals meant to reduce lead leaching into water.

## The Solution

The safest, most cost-effective way to protect kids from lead in drinking is to filter the water and test afterward to verify the filters are working properly.

Senate Bills 88 and 89 will protect kids from lead in school and childcare center drinking water by:

- ◆ Requiring lead-removing filtered drinking water stations in schools at a ratio of 1 per 100 students.
- ◆ Ensuring point of use filters are installed in school kitchens and teacher's lounges, and where filtered water stations are not practical.
- ◆ Giving childcare centers flexibility to adopt the best filtration system for their center, while still ensuring water provided to kids is filtered.
- ◆ Testing water after filtration to ensure filters are effectively removing lead.
- ◆ Providing training for proper maintenance of filters.

In March 2022, the legislature appropriated \$50 million to pay for water filtration devices. We are requesting an additional \$50 million in 2023 to fully fund Filter First for school and childcare centers.

### For more information:

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# Michigan Filter First Cost Estimate

The filter first approach to reducing lead contamination in drinking water at school calls for providing one filtered drinking water station for every 100 students and staff in Michigan Public Schools.

Filtered drinking water stations are water fountains or bottle fillers with filters that remove lead and other impurities.

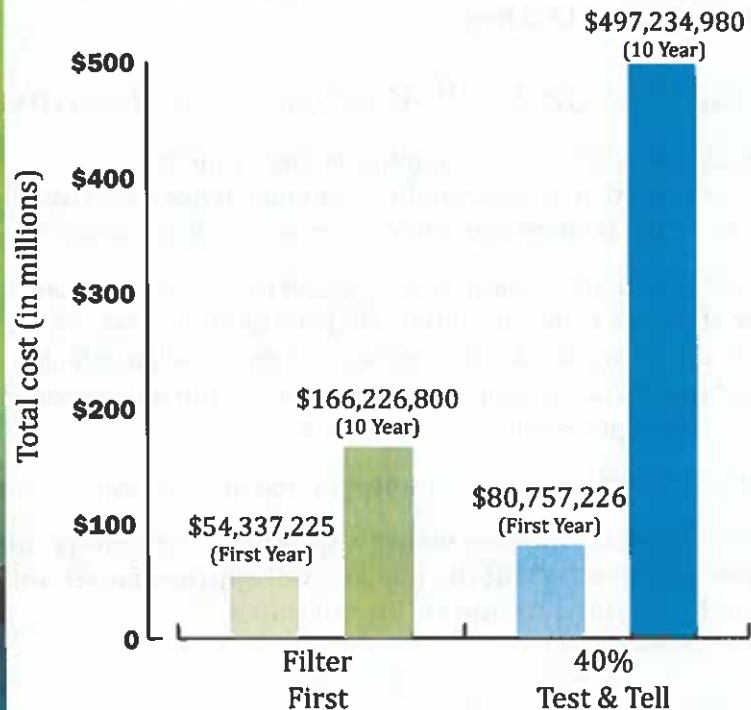
The filter first approach is more cost effective than a “test and tell” policy that has previously been proposed. The “test and tell” approach would require school districts to test all drinking water fixtures and then replace those that tested positive for lead above a set action level.

Our cost analysis shows that the filter first approach is the most cost effective and health protective option.

The graph shows that both the first year and the 10-year costs of the Filter First are significantly lower than the Test and Tell costs. The 10-year cost savings may be as much as \$331 million.



## Michigan Projected Costs Filter First versus Test & Partial Fixture Replacement





# Michigan Filter First Cost Estimate

## *Filter First Analysis Assumptions and Facts*

This filter first cost analysis assumes that the cost of purchasing and installing one filtered water bottle filling station is \$2,725 based on purchase information from Detroit Public Schools Community District (DPSCD). The State of Michigan may be able to secure an even lower price via bulk purchasing. It will cost \$141 to replace each units filter three times a year, but filters may need to be replaced less often.

We also assume that every filtration station will be sampled twice a year to verify performance. We estimated this to cost \$77.19 per sample, based upon the real costs of testing from an Indiana effort to test school drinking water.

Our calculations assume that one filtered drinking water station will be installed per 100 students and staff, or for schools with less than 50 students/staff at least five taps/fixtures would be equipped with point of use filters. Additional point of use filtered taps/fixtures were calculated by taking the school population and dividing by 200, but a minimum of 5 filtered taps were assigned to each school regardless of population.

The estimate on the number of students and staff at schools in the state was drawn from MichiganSchoolData.org and PublicSchoolReview.com. The Detroit public schools were not included in the estimate for purchasing filtered drinking water stations because they have already been purchased and installed, however the cost of maintenance and testing is included for these schools.

These costs we estimated for the first year, which includes the installation costs, and then the 10 year costs include the filter replacement and water sampling costs.

**As long as the filters are properly maintained, the filter first method assures a reliable, lead-free source of water in schools.**

## *Test and Tell Analysis Assumptions and Facts*

We assumed that the total number of taps in the state was the total school population divided by five. We assumed that all taps would be sampled twice a year. We also assumed that the cost per sample would be the same as in the filter first approach, \$77.19/sample.

We estimated that 40% of faucets would need to be replaced in the first year. It is important to note that new plumbing materials STILL CONTAIN LEAD up to 0.25% by weight. This faucet replacement cost may be an underestimate because different fixtures will test high in different years. For example, this could result in 10% faucet replacement some years but due to existing allowable lead content, new fixtures may need to be replaced again in the future.

This estimate does not assume any filtered drinking water stations or filtered taps.

**Lead release in drinking water is sporadic. Test results can vary widely from year to year. It is important to note that the test and tell approach does not guarantee that lead-free water is available to students and staff at all times.**