

Why Michigan’s Filter First Bills Matter

HB 4340, 4341, and 4342

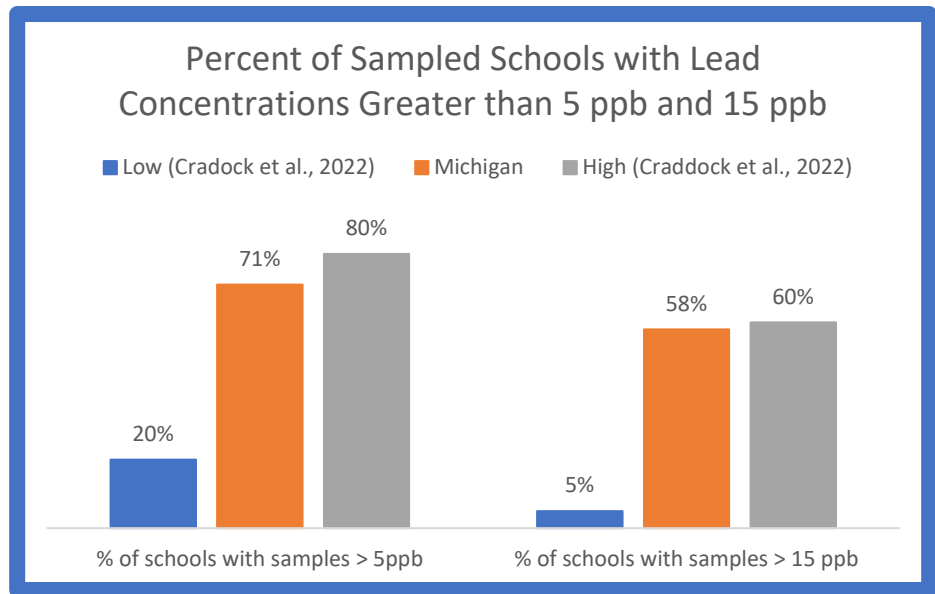
A Glimpse of Lead in Michigan’s School Drinking Water

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The Michigan Senate and House are considering bills to protect kids from lead in drinking water. The Filter First bills call for schools to provide filtered drinking water stations, and to test water from the filtered drinking stations annually to ensure the filters are working properly. Filtered drinking water stations, often called hydration stations, are drinking water fountains with bottle fillers and filters that are certified for lead removal. These devices can replace old water fountains, be retrofitted for existing fountains, or be installed independently. On-tap or in-fridge filters are allowed to ensure drinking water is available where filter stations are not practical, and more flexible options are available for childcare centers.

Children are especially vulnerable to lead exposure in schools and childcare centers given the amount of time children spend there and irregular water use patterns during the traditional school calendar.

When students and staff leave for weekends, breaks, and summer vacation, water sits stagnant in pipes. The lack of regular water flow reduces the effectiveness of corrosion control treatment, which is used to reduce the amount of lead that leaches into drinking water. Faucets, fixtures,



and plumbing new, old, and even certified “lead-free” materials are potential lead sources, because even “lead-free” materials contain lead up to 0.25% of their weight.

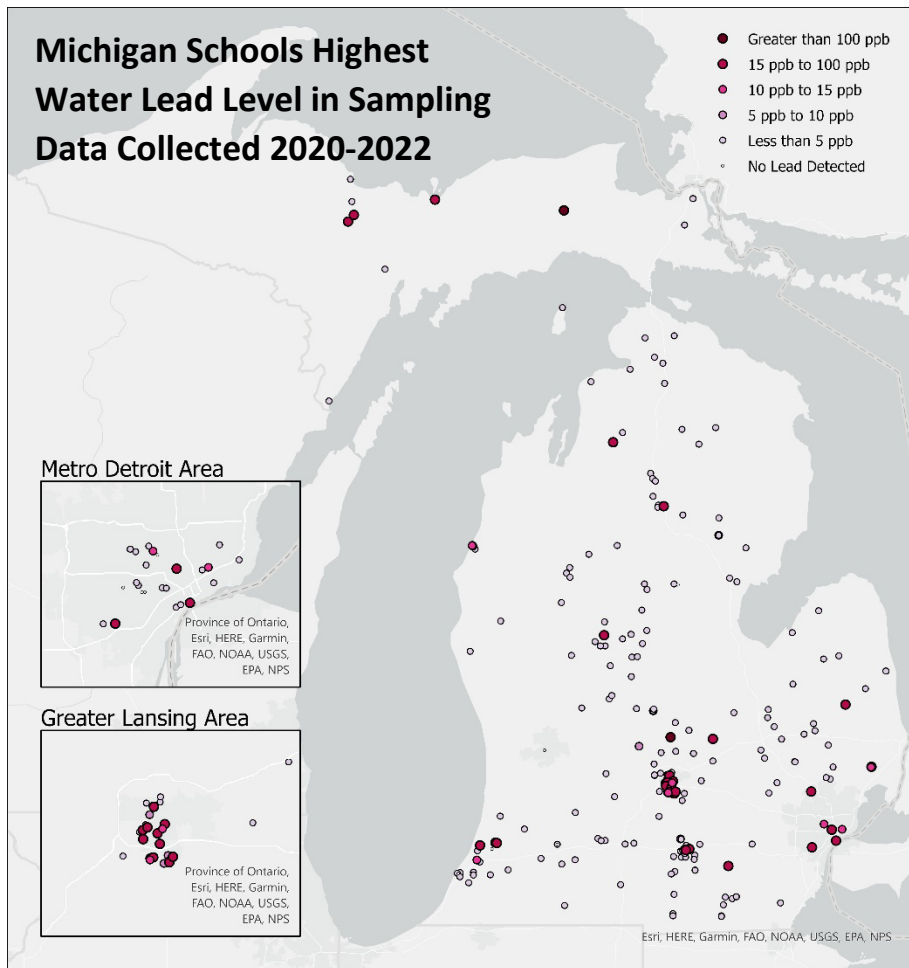
School lead sampling results in Michigan – obtained via a FOIA request – are consistent with lead sampling results collected in schools nationwide, as shown in **an analysis of lead in water samples collected between 2020 and 2022 at 114 Michigan schools and childcare centers through a voluntary sampling program funded by the Michigan Department of Environment, Great Lakes, and Energy and the United State Environmental Protection Agency.**

In the sample results, 71% of facilities sampled had at least one sample greater than 5 parts per billion (ppb) for lead and 66 of these buildings (58% statewide) had a lead result greater than 15 ppb. Detectable lead was present in 89% of the sampled buildings statewide. This is consistent with school data collected from voluntary and mandatory sampling programs in 7 states reviewed by Cradock et al., 2022, which found between 20 and 80% of schools sampled found at least one sample greater than 5 ppb, and between 5 and 60% of schools found at least one sample greater than 15 ppb. Michigan's data falls in the higher range of lead detections compared to data collected in the states reviewed in this study.

Breaking Down the Numbers

- 1,967 Michigan schools may have lead in water > 15 ppb
- 2,414 schools may have lead in water > 5 ppb
- 3,040 schools may have lead in water > 1 ppb, the AAP action level for schools and childcare centers

As shown in the map, schools that took part in sampling programs are distributed throughout the state and lead was detected in all areas.



According to the Michigan Department of Education, 3,398 schools were operating in Michigan during the 2021-22 school year. Extrapolating Michigan’s sampling results to school facilities statewide, we expect that 2,414 schools have lead in water levels greater than 5 ppb and 3,040 schools have detectable lead in their water. Further, 1,967 schools may have lead in water greater than 15 ppb.

Studies have found that most filtered water samples have undetectable levels of lead (USEPA 2016, 2022). The Filter First bills will reduce lead in water in all schools and childcares, regardless of whether they participated in sampling programs.

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. There is no safe level of lead exposure. Consequently, **the American Academy of Pediatrics (AAP) recommends an action level of 1 ppb for lead in drinking water in childcare centers and schools (Council on Environmental Health, 2016).** Likewise, EPA set the Maximum Contaminant Level Goal, defined as the safe level of lead in drinking water, at 0 ppb (USEPA, 1991).

We know there is no safe level of lead exposure. **The Filter First bills ensure that all drinking water in Michigan schools and childcare centers is filtered, improving water quality at more than 3,000 schools and ensuring that most children drink water with lead below the AAP action level of 1 ppb.**

References:

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