



# 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.

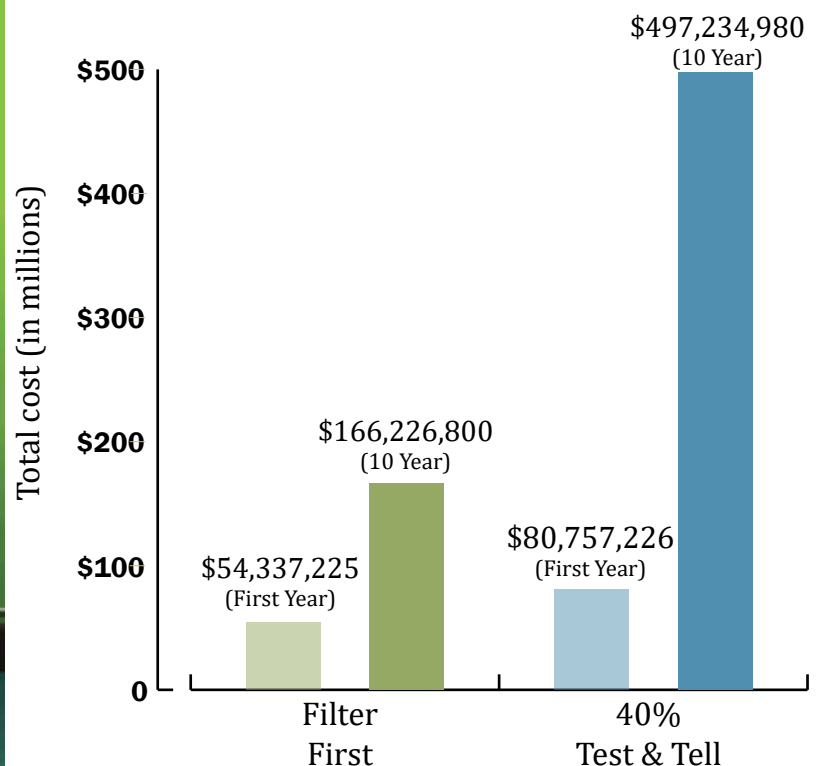
The filter first approach is more cost effective than a “test and tell” policy that has previously been proposed. The “test and tell” approach would require school districts to test all drinking water fixtures and then replace those that tested positive for lead above a set action level.

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.**