



Michigan Filter First Cost Estimate

The filter first approach to reducing lead in school drinking water 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 reduce lead and other impurities.

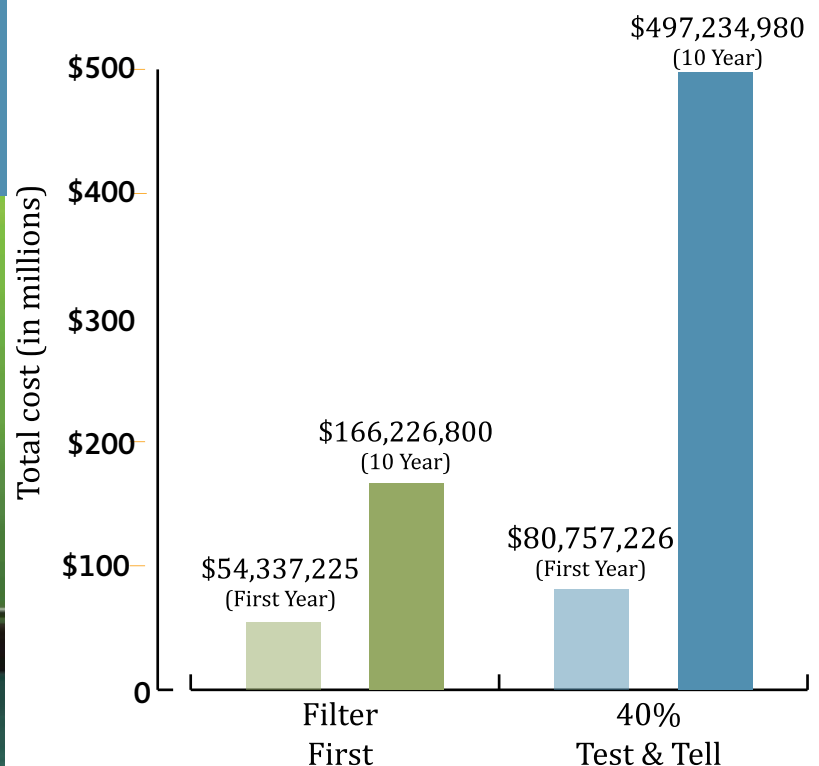
The filter first approach is more cost effective than a “test and tell” policy that has previously been proposed. The “test and tell” approach would require school districts to test all drinking water fixtures and then replace those that test positive for lead above a set action level.

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

The graph to the right shows that both the first year and the 10-year costs of the filter first approach 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 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 unit's filter three times per 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 100, but a minimum of five 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 were estimated for the first year, which includes the installation costs, and 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 in a year. We also assumed that the cost per sample would be the same as in the filter first approach, \$77.19 per 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 lead-free water is made available to students and staff at all times.