

Department of Legislative Services
 Maryland General Assembly
 2017 Session

FISCAL AND POLICY NOTE
 Third Reader - Revised

House Bill 270

(Delegate Lafferty, *et al.*)

Environment and Transportation and
 Ways and Means

Education, Health, and Environmental Affairs

Environment - Testing for Lead in Drinking Water - Public and Nonpublic
 Schools

This bill requires the Maryland Department of the Environment (MDE), in consultation with the Maryland State Department of Education (MSDE), the Department of General Services (DGS), and Maryland Occupational Safety and Health (MOSH), to adopt regulations to require periodic testing for the presence of lead in each “drinking water outlet” located in an occupied public or nonpublic school building. Among other things, the regulations must (1) require initial testing to be conducted by July 1, 2018; (2) phase in the testing, as specified; and (3) establish specific follow-up actions for positive test results. A waiver from the required testing must be granted under specified conditions. Before adopting the required regulations, MDE must gather specified information and convene a stakeholder group. The bill also establishes reporting requirements.

The bill takes effect June 1, 2017.

Fiscal Summary

State Effect: General fund expenditures increase by \$495,300 in FY 2018 for MDE to convene the stakeholder group and develop/administer the regulatory program; future years reflect ongoing costs. General fund expenditures for the Department of Health and Mental Hygiene (DHMH) may increase, potentially significantly, beginning in FY 2019 to the extent it conducts any of the required testing. MSDE, DGS, and MOSH can collaborate with MDE using existing budgeted resources. Revenues are not affected.

(in dollars)	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Revenues	\$0	\$0	\$0	\$0	\$0
GF Expenditure	495,300	320,200	334,500	349,500	365,400
Net Effect	(\$495,300)	(\$320,200)	(\$334,500)	(\$349,500)	(\$365,400)

Note:() = decrease; GF = general funds; FF = federal funds; SF = special funds; - = indeterminate increase; (-) = indeterminate decrease

Local Effect: Local expenditures increase, potentially significantly, beginning in FY 2019 to the extent that public schools are responsible for paying for the required sampling and testing. Additionally, costs likely increase for any public schools that test positive for an elevated level of lead to conduct required follow-up actions. **This bill likely imposes a mandate on a unit of local government.**

Small Business Effect: Minimal. Small private laboratories may benefit from an increase in the demand for their services.

Analysis

Bill Summary:

Relevant Definitions

A “drinking water outlet” is a potable water fixture that is used for drinking or food preparation. It includes a water fountain, faucet, or tap that is used or potentially used for drinking or food preparation and ice-making and hot drink machines.

“Elevated level of lead” means a lead concentration in drinking water that exceeds the standard recommended by the U.S. Environmental Protection Agency (EPA) technical guidance. “Technical guidance” means the most recent technical guidance issued by EPA for reducing lead in drinking water in schools, including [*3Ts for Reducing Lead in Drinking Water in Schools* \(2006\)](#) and any subsequent technical guidance issued by EPA.

Applicability

The bill does not apply to a public or nonpublic school that is classified as a public water system, as defined under § 9-401 of the Environment Article.

Required Stakeholder Group, Regulations, and Waivers

MDE must establish a stakeholder group, consisting of specified representatives, to provide advice and make recommendations regarding the development of the required regulations. Before adopting the regulations, MDE must gather information about the testing process, protocols, and efforts being undertaken by each county school system and private school to establish a safe and lead-free environment, including whether the school system or school has a plan for testing, and, if appropriate, remedial measures.

The regulations must (1) require initial testing by July 1, 2018; (2) phase in the implementation of the required testing beginning with school buildings constructed

before 1988 and school buildings that serve students in a prekindergarten program or any grade from kindergarten through grade 5; (3) establish a sampling method that is consistent with EPA technical guidance; (4) establish the required testing frequency; (5) address best practices and cost-effective testing; (6) require test samples to be analyzed by an MDE-approved entity; and (7) establish required follow-up procedures for test results that indicate an elevated level of lead in a drinking water outlet.

If a test sample indicates an elevated level of lead in a drinking water outlet, the regulations must require that (1) the results of the analysis be reported to MDE, MSDE, DHMH, and the appropriate local health department; (2) access to the drinking water outlet be closed; (3) an adequate supply of safe drinking water be provided to school occupants; (4) the school take appropriate remedial measures, including permanently shutting or closing off access to the drinking water outlet, manual or automatic flushing of the drinking water outlet, installing and maintaining a filter at the drinking water outlet, or repairing or replacing the source of the elevated level of lead in the drinking water outlet; (5) the school conduct follow-up testing; and (6) notice of the elevated level of lead be provided to parents/guardians and posted on the school's website.

MDE, in consultation with MSDE, may grant a waiver from the testing required under the bill if (1) the drinking water outlets in the school building have been tested for the presence of lead in a manner that substantially complies with the regulations issued under the bill and the test results indicate no elevated levels of lead in any of the drinking water outlets in the school building; (2) students in the school building do not have access to any drinking water outlet, and bottled water is the only source of water for drinking and food preparation in the school building; (3) a plan is in place for testing the drinking water outlets and addressing any elevated level of lead in a drinking water outlet in a manner that substantially complies with the regulations required under the bill; or (4) the local school system has completed comprehensive lead testing of the drinking water from plumbing fixtures and a comprehensive monitoring program to ensure safe drinking water in its schools.

Required Report

By December 1, 2018, and annually thereafter, MDE and MSDE must report to the Governor and specified legislative committees on the findings of the testing required by the bill. The annual report must include the name and address of each school that has elevated levels of lead in its drinking water and the type, location in the building, and use of each drinking water outlet that has an elevated level of lead.

Current Law/Background:

Public and Nonpublic Schools in Maryland

The only definition of “school” in the Environment Article is within the Asbestos Removal Subtitle, which defines “school” as any elementary or secondary school, as defined under 20 U.S.C. 8801; the federal definition is limited to nonprofit institutions. Under the Education Article, a “public school” means the public elementary and secondary education system. Elementary and secondary education includes preschool through the end of high school and their equivalent. According to the most recent MSDE FactBook, there are 1,447 public and 1,397 nonpublic schools in the State.

Environmental Protection Agency Guidance and Federal Regulation of Drinking Water

Lead is regulated in public drinking water supplies under SDWA, a federal law that was initially passed in 1974. SDWA requirements apply to “public water systems.” Schools that are *served by a public water system* are not subject to SDWA monitoring and treatment requirements because those schools do not meet the definition of a public water system. The vast majority of public water suppliers do not include schools in their sampling plans because regulations (specifically the lead and copper rule) only require sampling of single-family dwellings.

To address this gap in monitoring and testing, EPA developed a guidance document, *3Ts Technical Guidance for Reducing Lead in Drinking Water in Schools*. EPA advises that facilities with intermittent water use patterns, such as schools, may have elevated lead concentrations from the plumbing in the facility because the potential for lead to leach into water can increase the longer the water remains in contact with lead in plumbing. Testing drinking water in schools is important because children spend a significant portion of the day in these facilities and are likely to consume water while they are there. Children are most susceptible to the effects of lead because their bodies are still developing. Thus, EPA recommends testing every outlet in a school that is used for drinking or cooking.

Drinking Water Testing in Schools in Maryland and Other States

MSDE advises that recently, several Maryland public school systems have conducted lead testing in drinking water. For example, MSDE reports that Washington County Public Schools tested 600 drinking water outlets at a cost of approximately \$25 to \$55 per test. In November 2016, Carroll County Public Schools announced plans to test drinking water at schools for lead. Montgomery County Public Schools advises that from 2004 to 2007, it conducted a systemwide lead testing program of the drinking water from plumbing fixtures and that it continues to take proactive steps to ensure safe drinking water in its schools.

Several states have recently taken action to address concerns regarding lead in drinking water in schools. For example, in 2016, legislation was enacted in New York to require schools across the state to test drinking water for lead contamination. Also in 2016, New Jersey adopted regulations regarding testing for lead in drinking water in public schools statewide, and Rhode Island enacted legislation to provide grants to local governments to conduct lead testing, among other things, in the water supply systems of public schools and licensed day care facilities. Legislation also recently passed in Illinois to require schools and day care centers to test drinking water outlets for lead.

Federal legislation was also introduced in 2016 to increase testing for lead in drinking water in schools and day care centers.

Regulation of Lead in Drinking Water

In 1991, EPA published the lead and copper rule to minimize lead and copper in drinking water. Compliance is based on a three-pronged approach: (1) treatment technique requirements, including corrosion control and source water treatment; (2) lead service line replacement program; and (3) public education. In November 2016, EPA released the National Drinking Water Action Plan, calling for collaboration from all levels of government, utilities, community organizations, and other stakeholders to increase the safety and reliability of drinking water. According to the National Conference of State Legislatures, the plan encompasses six priority areas, one of which is revising the lead and copper rule to include best practices on lead service line replacement and revised guidance for testing for lead in drinking water at schools.

In Maryland, the Water Supply Program under the Water Management Administration within MDE ensures safe and sustainable supplies of water for drinking, including regulating 1,000 public water systems for compliance with the lead and copper rule.

Maryland's Lead Poisoning Prevention Program

Lead is also regulated under MDE's Lead Poisoning Prevention Program. However, that program primarily addresses the prevention of lead poisoning in children through the regulation of lead paint in rental properties. The program also provides blood lead surveillance through a registry of test results of all children tested in Maryland and oversees case management follow-up by local health departments for children with elevated blood lead levels. MDE procedures for conducting environmental investigations related to elevated blood lead levels are not codified in statute or regulation. Currently, an environmental investigation is conducted whenever a child is identified as having an elevated blood lead level of 10 micrograms per deciliter or greater.

Lead Poisoning in Children

According to the federal Centers for Disease Control and Prevention (CDC), there is no safe level of lead exposure, and adverse health effects exist in children at blood lead levels less than 10 micrograms per deciliter. Since 2012, CDC has urged health care providers and authorities to follow up on any young child with a level as low as 5 micrograms per deciliter. CDC is no longer using the 10 micrograms per deciliter level or referring to a “level of concern.” The new reference level of 5 micrograms per deciliter represents the blood lead levels of children (ages 1 through 5) in the highest 2.5 percentiles for blood lead levels.

According to MDE’s 2015 [*Childhood Blood Lead Surveillance in Maryland*](#) report, the most recent data available, 127,730 blood lead tests from 120,962 children 0-18 years of age were conducted in 2015. A total of 110,217 children younger than age 6 were tested out of an estimated statewide population of 535,094. This was an increase of 1,186 children tested compared to 2014. The estimated population of children 0-72 months of age increased from 2014 by a total of 7,790 children. Of the 110,217 children tested that year, 377 children (or 0.3% of those tested) younger than age 6 were identified as having a blood lead level of greater than 10 micrograms per deciliter, up from 355 in 2014. Of the 377 cases in 2015, 280 were new cases. An additional 1,789 children had blood lead levels between 5 and 9 micrograms per deciliter, down from 2,004 in 2014. Of those 1,789 cases, 1,388 were new cases. According to MDE, much of the decline in blood lead levels in recent years is the result of implementation and enforcement of Maryland’s lead law.

State Expenditures:

Maryland Department of the Environment’s Administrative Costs

General fund expenditures for MDE increase by \$495,293 in fiscal 2018, which accounts for a 30-day start-up delay; there is no effect in fiscal 2017. This estimate reflects the cost of hiring four regulation and compliance engineers to implement the required testing program (including establishing the required stakeholder group, gathering the required information, and coordinating with MSDE, DGS, and MOSH to develop the required regulations and initiate testing by July 1, 2018). The estimate includes salaries, fringe benefits, one-time start-up costs, and ongoing operating expenses, as well as (1) \$100,000 in contractual costs to develop a database to track the required testing and results and (2) costs associated with purchasing two vehicles. The information and assumptions used in calculating the estimate are stated below:

- the program developed under the bill is similar to the program in place within MDE to implement the copper and lead rule and has similar staffing requirements;
- MDE employs two full-time regulation and compliance engineers to implement the copper and lead rule for 1,000 public water systems;

- there are 1,447 public schools and 1,397 nonpublic schools in the State that are affected by the bill, and staffing requirements to administer the program depend on the total number of schools regulated; and
- MDE employees must review and track test results, maintain and update the database, verify compliance for all affected schools, and submit the required reports.

New Positions	4
Salaries and Fringe Benefits	\$307,008
Contractual Costs to Develop Database	100,000
Vehicles	59,700
Equipment/Other Expenses	<u>28,585</u>
Total FY 2018 State Expenditures	\$495,293

Future year expenditures reflect salaries with annual increases and employee turnover and ongoing operating expenses. This estimate assumes that MSDE, DGS, and MOSH can consult with MDE to develop the required regulations, and that MSDE can consult with MDE to approve waiver requests and receive test results with existing budgeted resources. DHMH anticipates that it can receive reports of school drinking water outlets that test positive for elevated lead levels with existing resources.

Water Sampling and Testing Costs

A reliable estimate of the costs to collect and test water samples for lead under the bill cannot be made because sampling and testing costs vary and the number of samples to be tested each year is unknown. It is also unknown whether DHMH's Laboratories Administration performs and bears most of the testing costs, or whether individual schools are responsible for paying for the collection and testing of samples using private laboratories. (The Laboratories Administration within DHMH currently conducts testing for MDE under the lead and copper rule.) In reality, it is likely that testing is performed by both the Laboratories Administration and private laboratories. The Laboratories Administration advises that it does not currently charge for water testing and that it does not plan on charging schools for testing performed pursuant to the bill. Thus, if the Laboratories Administration is responsible for the bulk, or even a portion, of the testing required under the bill, general fund expenditures for DHMH increase. If school systems hire private laboratories to collect samples and conduct the required testing, the testing costs are borne by local governments and private schools instead. For purposes of this analysis, it is assumed that at least some public schools send their tests to DHMH for analysis, and that nonpublic schools use private laboratories.

The number of tests depends on the actual number of affected schools, the number of drinking water outlets in each school, the number of samples taken at each outlet, and the frequency with which each drinking water outlet must be tested, which will be determined

by the regulations developed under the bill. MDE advises that under the lead and copper rule program, a water system may be tested five or six times in one year and then not undergo testing again for three years. A similar pattern may develop for the program required under the bill, but that is speculative.

It appears that costs for lead testing can vary significantly and may depend on the number of samples being tested at one time. Costs also vary depending on whether a sample is sent directly to a laboratory or the laboratory collects the sample *and* conducts the testing. Based on information provided by numerous sources, including MDE and DHMH, costs to test drinking water for lead appear to range from \$18 to \$55 per sample. The Laboratories Administration within DHMH estimates that its cost to test one sample is \$20 if the school collects the sample; MDE estimates that the cost is \$25 if the school collects the sample.

For illustrative purposes only, if the 1,447 public schools in the State each have five water outlets that require testing once a year, using the range of costs described above, annual costs for testing may range from approximately \$130,000 to \$398,000.

Because the bill requires that the required testing must be phased in, not all schools must be tested during the initial phase of testing. According to MSDE, there are 717 *public* schools that are elementary, elementary/middle, or prekindergarten through eighth grade that were built before 1988. Thus, the initial phase of testing must be conducted in at least this many schools. The number of private schools that must be tested during the initial phase of testing is unknown, however.

Local Expenditures: As discussed above, under the State Expenditures section of this fiscal and policy note, to the extent that public schools are responsible for paying for the required sampling and testing, expenditures for local governments increase, potentially significantly, beginning in fiscal 2019. While some school systems may already test for the presence of lead in drinking water outlets in schools, others may not. In addition, some schools may qualify for a waiver from the testing, as provided by the bill. The magnitude of any increase in costs for public school systems depends on a number of variables and cannot be reliably estimated at this time. To the extent any schools are found to test positive for lead in drinking water, local expenditures increase further, and potentially significantly, to implement the required follow-up actions.

Additional Comments: Nonpublic schools also incur additional costs to sample and test drinking water outlets in accordance with the regulations developed pursuant to the bill. *For illustrative purposes only*, based on the range of estimates discussed above, and assuming each nonpublic school has five water outlets that require testing once a year, annual testing costs for the 1,397 nonpublic schools in the State may range from approximately \$125,700 to \$384,200. Additional, potentially significant, costs are

incurred for any nonpublic schools that are found to test positive for lead in order to implement the required follow-up actions.

Additional Information

Prior Introductions: None.

Cross File: None.

Information Source(s): Garrett and Montgomery counties; Maryland Association of County Health Officers; Montgomery County Public Schools; Maryland State Department of Education; Maryland Department of the Environment; Department of Health and Mental Hygiene; Department of General Services; Department of Labor, Licensing, and Regulation; U.S. Centers for Disease Control and Prevention; U.S. Environmental Protection Agency; National Conference of State Legislatures; Office of Senator Ben Cardin; New York State Governor's Office; *Carroll County Times*; *Chicago Tribune*; Department of Legislative Services

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Analysis by: Kathleen P. Kennedy

Direct Inquiries to:
(410) 946-5510
(301) 970-5510