

**Department of Legislative Services**  
Maryland General Assembly  
2020 Session

**FISCAL AND POLICY NOTE**  
**First Reader**

House Bill 1052  
Appropriations

(Delegate Lehman, *et al.*)

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**University System of Maryland - Contaminants in Campus Buildings - Review,  
Monitoring, and Remediation**

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This bill requires the University System of Maryland (USM) to establish an ongoing monitoring program for each campus building in which a contaminant, including those specified, is identified. USM must develop a transparent and inclusive system-wide process for students, faculty, and staff to submit, in writing, specific concerns related to building contamination. In addition, USM must conduct a comprehensive environmental review, as specified, of each campus building within USM. Based on the environmental review, USM must prepare an environmental report with specified information, which must be submitted to the Governor and General Assembly by December 1, 2020. **The bill takes effect July 1, 2020.**

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**Fiscal Summary**

**State Effect:** Higher education expenditures increase significantly in FY 2021 to complete the comprehensive environmental review and report by December 1, 2020. Out-year expenditures for ongoing monitoring are also likely significant. Costs vary by institution due to the number of buildings on each campus. Revenues are not affected.

**Local Effect:** None.

**Small Business Effect:** None.

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**Analysis**

**Bill Summary:** The system-wide process must include a timeline for USM to respond to concerns submitted and actions USM will take to resolve those concerns.

The environmental review must assess the presence of contaminants, including mold, fungus, asbestos, radon, heavy metals, and other substances and physical agents that may be toxic or have an adverse impact on human health.

In the environmental report, USM must (1) provide specified information about each contaminated building; (2) prioritize remediation efforts; (3) explain the criteria used to determine the prioritization; (4) estimate the cost of remediation; (5) provide a timeline for implementing remediation; and (6) describe the monitoring program.

The report must include an evaluation of the anticipated impact of climate change over the next 10 years on new or recurring building contamination, including impacts that may result from climate change as specified.

### **Current Law/Background:**

#### *U.S. Environmental Protection Agency Technical Guidance*

The U.S. Environmental Protection Agency (EPA) has a host of information and resources regarding building contaminants and building remediation, including information on laws and regulations. Among other things, these resources include a guide to [mold remediation in schools and commercial buildings](#), [asbestos laws and regulations](#), [radon mitigation standards for schools and large buildings](#), and [contaminants and remedial options at selected metal-contaminated sites](#).

EPA advises that there are no federal standards or threshold limit values for mold or mold spores, which means that sampling cannot be used to check a building's compliance with federal mold standards. However, surface sampling may be useful to determine if an area has been adequately cleaned or remediated. Similarly, the Maryland Department of the Environment does not have any exposure limit standards for indoor concentrations of mold or mold spores.

#### *Centers for Disease Control and Prevention Facts about Mold and Dampness*

According to the U.S. [Centers for Disease Control and Prevention](#) (CDC), molds are common in buildings and homes. Mold grows in places with a lot of moisture, such as around leaks in roofs, windows, or pipes, or where there has been flooding. Mold grows well on paper products, cardboard, ceiling tiles, and wood products. Large mold infestations can usually be seen or smelled. Some people are sensitive to molds. For these people, exposure to molds can lead to symptoms such as stuffy nose, wheezing, and red or itchy eyes or skin. CDC's primary recommendation for preventing mold is to control humidity levels, ideally to between 30% and 50%.

### *Maryland Department of Health Facts about Radon*

According to the Maryland Department of Health, radon is the number one cause of lung cancer in non-smokers. For children, radon and secondhand smoke are the biggest risks for developing lung cancer later in life. Unless tested with a radon test kit, a person cannot determine whether their home has radon as radon is a gas that has no smell, has no color, and is not visible.

### *Environmental Protection Agency Facts about Asbestos*

Asbestos is a mineral fiber that occurs in rock and soil. Because of its fiber strength and heat resistance, asbestos has been used in a variety of building construction materials for insulation and as a fire retardant. However, according to EPA, exposure to asbestos in the air increases the risk of developing lung disease. Exposure occurs when the asbestos containing material is disturbed or damaged and the particles and fibers are released into the air.

### *Heavy Metal Toxicity Facts*

According to a 2014 article in *Interdisciplinary Toxicology*, heavy metal toxicity is a major threat to human health. There are 23 heavy metals that are of common concern because of residential or occupational exposure: antimony, arsenic, bismuth, cadmium, cerium, chromium, cobalt, copper, gallium, gold, iron, lead, manganese, mercury, nickel, platinum, silver, tellurium, thallium, tin, uranium, vanadium, and zinc. Heavy metal toxicity can lower energy levels and damage the functioning of the brain, lungs, kidney, liver, blood composition, and other important organs. Repeated long-term exposure to some metals also can cause cancer.

### *University of Maryland, College Park Campus Mold Contamination*

The University of Maryland, College Park Campus (UMCP) has had several well publicized mold outbreaks on campus in recent years. An outbreak of mold in one of the dormitories is said to have contributed to the death of UMCP student Olivia Paregol in November 2018 from adenovirus. The full University System of Maryland [report](#) on the university's response to adenovirus and mold issues on campus can be found online. That report found that UMCP complied with recognized federal, State, and campus protocols. However, fall 2018 was marked by record rainfall and above-average measures for both temperature and humidity. According to the report, those conditions exceeded the design capacity of most campus heating, ventilation, and air-conditioning systems and exceeded the standard resources available and the ability of residential facilities staff to respond, which led to mold growth.

In 2019, there were reports in the *Diamondback* and the *Baltimore Sun* about a mold outbreak in one of UMCP's classroom buildings. Staff and students are claiming that the mold is making them sick.

There have not been well-publicized cases of other contaminants in USM institution buildings.

#### *University of Maryland, Baltimore Campus*

The University of Maryland, Baltimore Campus (UMB) advises that it has some of the contaminants listed in the bill in its laboratories for research purposes. UMB further advises that it follows Maryland Occupational Safety and Health Administration requirements regarding these contaminants. Similarly, there are cleaning agents and other substances that may be toxic that are difficult to track.

Finally, UMB advises that health and safety concerns are currently submitted directly to the environmental health services office at UMB.

**State Expenditures:** In fiscal 2021, USM institution higher education expenditures increase, significantly, to complete the comprehensive environmental review by December 1, 2020. Since the bill takes effect July 1, 2020, USM institutions have five months to complete the review and report. Within the report, USM must provide specific information about each contaminant identified, prioritize remediation efforts, explain the criteria used to determine the prioritization, estimate the cost of remediation, provide the cost of remediation, provide a timeline for implementation, and describe a timeline for implementing remediation. In addition, the report must include an evaluation of the anticipated impact of climate change over the next 10 years.

The Department of Legislative Services (DLS) advises that, due to the short timeline (five months) and amount of information that must be reported, most USM institutions will need to hire teams of outside consultants with expertise in environmental contaminants to conduct the review and develop the report. UMCP estimates these fiscal 2021 costs at approximately \$3.0 million: \$2.0 million for academic buildings and \$1.0 million for the 70 residential facilities. However, the University of Maryland Global Campus (UMGC), estimates costs at only \$40,000. These costs vary significantly because UMCP is a large residential institution, while UMGC offers primarily online courses. Other institutions were unable to estimate the costs of completing the environmental review and the initial report.

Costs continue for ongoing monitoring as required by the bill; those costs are also likely significant for most campuses. UMCP estimates ongoing monitoring costs of \$3.0 million to \$5.0 million annually. Coppin State University, Salisbury University, and UMB

all report estimated costs from \$150,000 to more than \$300,000 per institution annually to hire additional personnel and for laboratory testing. DLS cannot independently verify the laboratory testing costs but concurs that they may be significant. Costs vary depending on the number of buildings at each institution.

This estimate does not account for any costs associated with remediating buildings for any contaminants. However, costs depend on the number of buildings and their general condition.

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### **Additional Information**

**Prior Introductions:** None.

**Designated Cross File:** None.

**Information Source(s):** University System of Maryland; Maryland Department of the Environment; Maryland Department of Health; *Diamondback*; *Baltimore Sun*; *Interdisciplinary Toxicology*; U.S. Environmental Protection Agency; U.S. Centers for Disease Control and Prevention; Department of Legislative Services

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