

Department of Legislative Services
Maryland General Assembly
2023 Session

FISCAL AND POLICY NOTE
First Reader

House Bill 473 (Delegate Fraser-Hidalgo, *et al.*)
Economic Matters and Environment and
Transportation

Environment - Ambient Air Monitoring - Particulate and Fine Particulate
Matter

This bill requires the Maryland Department of the Environment (MDE), by January 1, 2026, to deploy ambient air monitors sufficient to monitor levels of “particulate matter” and “fine particulate matter” in specified census tracts. MDE must provide public access to current monitoring data through the Internet in real time. The website that displays the ambient air monitoring data must include information on how to interpret the data and steps that individuals can take to prevent illness in the case of poor air quality. MDE must take all relevant ambient air monitoring data into consideration before approving any permit to construct, modify, operate, or use a source that may cause or control emissions into the air. The bill also requires the Air Quality Control Advisory Council (AQCAC) to conduct a specified study relating to ambient air monitoring in the State; related reporting requirements are established. **The bill takes effect June 1, 2023.**

Fiscal Summary

State Effect: No effect in FY 2023. General fund expenditures increase significantly (likely by more than \$600,000 annually for staffing costs alone, not including air monitoring equipment costs) beginning in FY 2024, as discussed below. State revenues are not anticipated to be materially affected.

Local Effect: The bill does not directly affect local finances or operations.

Small Business Effect: Minimal.

Analysis

Bill Summary: “Particulate matter” means particulate matter with an aerodynamic diameter less than or equal to 10 micrometers (PM10). “Fine particulate matter” means particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers (PM2.5).

Required Ambient Air Monitoring

By January 1, 2026, MDE must deploy ambient air monitors sufficient to monitor levels of particulate matter and fine particulate matter in (1) all census tracts with an average median income at or below 80% of the average median income for the State and (2) all other census tracts prioritized by MDE. In identifying census tracts for air quality monitoring, MDE must prioritize “overburdened communities” and “underserved communities,” terms which are defined under § 1-701 of the Environment Article. The bill specifies that an ambient air monitor deployed pursuant to the bill must be located within a radius that is between 5 and 15 miles from another ambient air monitor.

Permit Approval Considerations

Prior to approving any permit to construct, modify, operate, or use a source that may cause or control emissions into the air, MDE must take into consideration, all relevant ambient air monitoring data collected under the bill, or any similar ambient air monitoring program operated by a political subdivision.

Air Quality Control Advisory Council

AQCAC must study and make recommendations regarding ambient air monitoring in the State, including, among other things, (1) how to use ambient air monitoring data to mitigate toxic pollutants through regulatory action; (2) how to incorporate ambient air monitoring data into permit decision-making processes across State agencies; and (3) the cumulative impact of pollutants such as particulate matter and fine on all communities in the State. In conducting the study, AQCAC must (1) consult with the Commission on Environmental Justice and Sustainable Communities and the Maryland Department of Health and (2) hold at least two public meetings to solicit public input. AQCAC must report its findings and recommendations to the Governor and the General Assembly by September 1, 2024.

Following the submission of that report, AQCAC must (1) monitor implementation of the bill and the recommendations included in the report and (2) report its findings and any additional recommendations to the Governor and the General Assembly by September 1, 2026.

Current Law:

Mandatory Publication of Ambient Air Monitoring Data

MDE is required to provide public access to all ambient air monitoring data online. The ambient air monitoring data may be in summary form and shall include all validated ambient air monitoring data for the two most recent calendar years for which data are available.

Air Quality Control Advisory Council

AQCAC was established in 1967. AQCAC duties include (1) reviewing and advising MDE on draft air quality rules and regulations which are being considered for adoption in order to achieve air quality and public health goals and protect the environment and (2) upon request from MDE, evaluating State-level measures to meet air quality standards, legislation proposed by the General Assembly or MDE, and strategic plans created by MDE's Air and Radiation Management Administration. Prior to adopting any rules or regulations under Title 2 of the Environment Article (Ambient Air Quality Control), MDE must submit the proposed rule or regulation to AQCAC for advice. AQCAC must respond to MDE within 30 days of receiving a proposed rule or regulation from MDE by recommending either adoption, rejection, or modification.

Related Federal Clean Air Act Requirements and State Implementation Efforts

The federal Clean Air Act (CAA) requires the U.S. Environmental Protection Agency to establish National Ambient Air Quality Standards (NAAQS) for six criteria pollutants, including particulate matter (PM_{2.5} and PM₁₀), which are harmful to public health and the environment. When air quality does not meet the NAAQS for one of the criteria pollutants, the area is said to be in “non-attainment” with the NAAQS for that pollutant.

As part of CAA, both local and state air quality agencies are required to maintain and operate ambient air quality monitoring networks. Additionally, federal regulations require an annual monitoring network plan that includes certain information, including the identification of sites that are suitable (or not) for comparison against the annual PM_{2.5} NAAQS. According to the MDE's [Ambient Air Monitoring Network Plan for Calendar Year 2022](#), Maryland currently operates 24 air monitoring sites around the State that measure ground-level concentrations of criteria pollutants, air toxics, meteorological parameters, and research-oriented parameters. Of these 24 sites, there is one Interagency Monitoring of Protected Visual Environments (IMPROVE) network monitor. The IMPROVE network monitor is operated near the Piney Run monitoring station and measures PM_{2.5}, PM₁₀, PM_{10-2.5}, and speciated PM₂.

State Expenditures: MDE advises that an exact estimate of costs to implement enhanced ambient air monitoring for PM2.5 and PM10 as required by the bill cannot be made without additional information and research. However, based on a preliminary review of available data, MDE estimates that between 169 and 500 census tracts are affected. Based on the lower number of 169 affected census tracts, MDE advises that, at a minimum, general fund expenditures for *staffing costs alone* increase by \$638,843 in fiscal 2024, and by at least \$755,558 annually thereafter to hire nine new employees (six natural resources planners, two research statisticians, and one administrator) to (1) devise a strategy to deploy the required ambient air monitors; (2) obtain, install, and maintain the ambient air monitors; (3) collect data and ensure the information is posted online in real time; and (4) incorporate relevant data into consideration before approving any permit to construct, modify, operate, or use a source that may cause or control emissions into the air. Depending on how many affected census tracts are ultimately identified, staffing costs may be higher.

The Department of Legislative Services (DLS) generally concurs that general fund expenditures increase significantly (likely by at least \$600,000 annually beginning in fiscal 2024) for staffing costs alone. General fund expenditures increase significantly further – potentially by millions of dollars – to obtain, install, and maintain ambient air monitors. DLS notes that actual implementation costs depend on several unknown factors, such as:

- the number and location of affected census tracts, and whether there is space available to site ambient air monitoring equipment in the affected locations;
- the type and number of ambient air monitors that MDE must obtain (either through purchase or lease) and the related installation and maintenance costs; and
- the extent to which any supplemental software is needed to collect data and provide public access to real-time ambient air monitoring results, as required by the bill.

For context, MDE notes that costs to purchase ambient air monitors vary from between \$250 to \$41,000 each (the high end being the cost to purchase a “gold standard” federal equivalent method (FEM) monitor). Associated software and siting costs also vary widely depending on the type and number of monitors that must be purchased, installed, and maintained. According to MDE, installing FEM monitors is time consuming, and it can be difficult to locate a site that meets federal siting criteria and has adequate power and security. For certain installations, MDE may need to lease property.

Additional Information

Prior Introductions: Similar legislation has not been introduced within the last three years.

Designated Cross File: None.

Information Source(s): Maryland Department of the Environment; Department of Legislative Services

Fiscal Note History: First Reader - February 13, 2023
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