

Department of Legislative Services
Maryland General Assembly
2019 Session

FISCAL AND POLICY NOTE
First Reader

Senate Bill 542 (Senator Lam, *et al.*)
Education, Health, and Environmental Affairs

Community Healthy Air Act

This bill establishes the Committee on Air Quality, which must develop, by January 1, 2020, an air quality sampling and monitoring protocol for the collection of air quality and public health data associated with large animal-feeding operations (AFOs). The Maryland Department of the Environment (MDE) must provide staff for the committee. The bill establishes requirements for the committee and requires the final protocol to be published on MDE's website by April 1, 2020. By October 1, 2020, MDE must (1) use the protocol to assess air pollutants and public health risks associated with all large AFOs in the State and (2) use the assessments to evaluate whether all large AFOs in the State comply with applicable federal and State air pollution emissions laws. By December 1, 2021, MDE must (1) report its findings to the Governor and the General Assembly and (2) post the report on its website. **The bill takes effect July 1, 2019, and terminates June 30, 2022.**

Fiscal Summary

State Effect: General fund expenditures increase significantly (perhaps by millions of dollars) in FY 2020 and 2021 (and possibly FY 2022). Revenues are not affected.

Local Effect: None.

Small Business Effect: None.

Analysis

Bill Summary: The required protocol must establish the methodology for MDE to use to (1) quantify the amount of air pollutants emitted from large AFOs, as specified, and (2) assess the public health risks associated with those air pollutants. When preparing the

protocol, the committee must identify all air pollutants emitted from large AFOs in the State and the potential public health risks associated with those pollutants. The protocol must be submitted for public comment and peer review, as specified. By April 1, 2020, the committee must review the comments received and incorporate them into the protocol as appropriate. Also by April 1, 2020, MDE must publish the final protocol on its website.

Committee members may not receive compensation but are entitled to reimbursement for expenses under the standard State travel regulations.

Current Law/Background:

Maryland Regulation of AFOs

AFOs in Maryland are not subject to air quality permits issued by MDE. However, AFOs are generally subject to wastewater discharge permits, depending on the size of the facility and whether the facility discharges to waters of the State. To be considered an AFO, the operation must confine its livestock for at least 45 days per year and not grow crops or forage where the animals are confined. Regulation defines whether an operation is considered small, medium, or large based on the number of animals per AFO. MDE advises that there are approximately 250 large AFOs in the State and that most are poultry related.

Federal Clean Air Act

The federal Clean Air Act (CAA) is the comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, the law authorizes the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards to limit levels of “criteria pollutants” to protect public health and public welfare and to regulate emissions of hazardous pollutants.

EPA conducted a nationwide study of air emissions from AFOs and is currently analyzing the data gathered to develop improved emission-gathering methodologies for AFO emissions. EPA plans to issue draft models for emission estimating methodologies for (1) ammonia, hydrogen sulfide, and particulate matter emissions from broiler and layer poultry operations in February 2020 and (2) for volatile organic compound emissions for swine, poultry, and dairy farms in November 2020.

According to EPA, AFOs can emit a variety of air pollutants, including hydrogen sulfide, ammonia, methane, nitrous oxide, volatile organic compounds, particulate matter, carbon dioxide, and reduced sulfur compounds. These pollutants are emitted from various sources at AFOs and cannot be standardized based solely on the number and type of animals at each operation. EPA, with the U.S. Department of Agriculture, released a 2017 best

management practices document for livestock and poultry farms that identifies actions that have been demonstrated to reduce air emissions of pollutants from such farms.

Ambient Air Monitoring Efforts on the Lower Eastern Shore of Maryland

MDE advises that it recently entered into a partnership with the Keith Campbell Foundation for the Environment and the Delmarva Poultry Industry to undertake an ambient monitoring effort on the Lower Eastern Shore in the vicinity of a concentration of poultry houses. Ambient levels of ammonia and both fine and coarse particulates will be measured upwind and downwind of a concentration of poultry houses and at two locations elsewhere in the State (in Dorchester County and Baltimore City). Measurements will take place over a one-year period. The Lower Shore results will be compared to those from the other two locations to determine whether there are any differences in ambient pollutant levels between the Lower Shore and other parts of Maryland.

Two new ammonia and particle monitors and two new shelters to house them will be financed by the Campbell Foundation. Additionally, two new ammonia monitors financed by the Delmarva Poultry Industry will be placed in two of MDE's existing monitoring stations. The overall cost of the monitoring equipment is slightly more than \$500,000. MDE will operate the ammonia and particulate matter equipment at the two new stations and the new ammonia monitors at MDE's two existing stations.

State Expenditures: Although a reliable estimate of the increase in general fund expenditures resulting from the bill cannot be made at this time, general fund expenditures increase significantly, perhaps by several million dollars, in fiscal 2020 and 2021 (and possibly fiscal 2022), for MDE to (1) conduct the required assessment of air pollutants and public health risks associated with all large AFOs in the State and (2) evaluate compliance with applicable federal and State laws. Given the short timeframe established by the bill, MDE likely needs to hire contractors to conduct the assessments and evaluations. Actual expenditures depend on several unknown factors, including the actual protocol developed by the committee, the methods used to assess air emissions from AFOs, and whether MDE must assess and evaluate *all* of the large AFOs in the State.

In a 2017 estimate, MDE advised that contracting to conduct air pollutant assessments for five AFOs was estimated to cost at least \$300,000; however, that estimate did not include any risk assessment work. MDE advises that a robust risk assessment involves a three-step process: (1) quantifying air pollutant emission levels; (2) determining (through modeling or direct measurement) the ground-level concentration of the pollutant at various points beyond a facility's property boundaries; and (3) comparing those pollutant concentrations to an agreed-upon public health-based standard that is protective of human health. MDE advises that such an analysis must be conducted for each pollutant because each pollutant has a different risk threshold. MDE also notes that, because no two AFOs are identical in

terms of location and operations, this assessment must be conducted for *each individual AFO*.

Based on the 2017 estimate and the costs to conduct ambient air monitoring on the Lower Eastern Shore, as described above, MDE estimates that assessing and evaluating all of the 250 large AFOs in the State likely costs more than \$10 million.

MDE can provide staff for the committee with existing budgeted staff and resources.

Additional Information

Prior Introductions: SB 133 of 2018, a similar bill, received a hearing in the Senate Education, Health, and Environmental Affairs Committee, but no further action was taken. Its cross file, HB 26, received a hearing in the House Environment and Transportation Committee, but no further action was taken.

Cross File: None.

Information Source(s): University System of Maryland; Maryland Department of the Environment; U.S. Environmental Protection Agency; Department of Legislative Services

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