Department of Legislative Services

Maryland General Assembly
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FISCAL AND POLICY NOTE

Senate Bill 695 (Senator Pipkin, *et al.*)
Education, Health, and Environmental Affairs

Environment - Watershed Implementation Plan - Conowingo Dam Environmental Assessment

This bill prohibits a person from engaging in any activity or strategy to implement a State Watershed Implementation Plan (WIP) approved by the U.S. Environmental Protection Agency (EPA) to implement the Total Maximum Daily Load for the Chesapeake Bay (Bay TMDL) until the State completes a full assessment of the environmental impacts of the opening of the Conowingo Dam floodgates in September 2011 following Hurricane Irene and Tropical Storm Lee.

The bill takes effect June 1, 2012.

Fiscal Summary

State Effect: Because the assessment referred to in the bill is not anticipated to be completed by the bill's effective date, this bill will delay implementation of activities and strategies under the WIP. As a result, the bill has potentially significant fiscal and operational ramifications for the Maryland Department of the Environment (MDE) and other State agencies involved with WIP.

Local Effect: Because the bill will delay implementation of activities and strategies under the WIP, local expenditures for programs designed to achieve the requirements of the Bay TMDL are delayed. However, to the extent the bill results in EPA sanctions, local expenditures may increase significantly.

Small Business Effect: Meaningful.

Analysis

Current Law/Background:

The Conowingo Dam and the Susquehanna River Watershed

According to Exelon Corporation, the Conowingo Dam has been providing electricity since 1928. When constructed from 1926 to 1928, Conowingo was the largest power plant ever built. When the Conowingo Dam was completed in 1928, producing 252 megawatts, it became the second largest hydroelectric project in the United States, behind Niagara Falls. The Conowingo Dam has a license issued by the Federal Energy Regulatory Commission (FERC) that expires September 1, 2014.

MDE had previously identified the waters of the Conowingo Dam/Susquehanna River watershed as impaired by nutrients and sediments. A 2010 report specifically identified aquatic life as the designated use being impaired by phosphorus in the watershed. However, in 2011, MDE conducted a water quality assessment of the watershed and determined that the previous assessment was based on limited data and that, upon reassessment, aquatic life is not impaired at this time. However, the water quality assessment also noted that nutrient reductions will still be required to meet allocations assigned to the Northern Chesapeake Bay Tidal Fresh Bay Water Quality Segment by the Bay TMDL established by EPA on December 29, 2010.

In the Bay TMDL, EPA discusses the importance of several dams along the lower Susquehanna River as a factor influencing nitrogen, phosphorus, and sediment loads to the bay because of the large quantities of these pollutants contained in the dam's reservoirs. In the Bay TMDL, EPA assumes that the current trapping efficiencies will continue. However, if future monitoring shows a change in the capacity of the Conowingo Dam to trap nutrients, the two-year milestone load reductions could be adjusted accordingly. EPA notes that it is imperative for New York, Pennsylvania, and Maryland to work together to develop an implementation strategy for addressing the sediment, nitrogen, and phosphorus behind the Conowingo Dam through their respective WIPs to prepare for any decrease in the dam's trapping efficiencies.

The Department of Natural Resouces (DNR) and MDE have begun to study the effects of Hurricane Irene and Tropical Storm Lee on the Conowingo Dam and the Chesapeake Bay. DNR found that the Chesapeake Bay's "dead zone" (anoxic conditions) were temporarily eliminated by Hurricane Irene but were reset after Tropical Storm Lee. DNR notes that the muddy waters from the Susquehanna and its tributaries contained large amounts of nutrients capable of fueling large algal blooms. The ongoing study, which was announced in September 2011, is estimated to cost $1.4 million over a three-year period.

The Bay TMDL and the WIP Development Process

In December 2010, EPA established the Bay TMDL, which (1) sets the maximum amount of pollution the bay can receive and still attain water quality standards; and (2) identifies specific pollution reduction requirements. **Exhibit 1** illustrates Maryland's pollution reduction goals in the TMDL. All pollution reduction measures must be in place by 2025, with at least 60% of the actions complete by 2017.

Exhibit 1
Maryland's Pollution Reduction Goals in the Bay TMDL
(Million Pounds per Year)

Pollutant	2010 Loads	Bay TMDL Target Load	Percent Reduction
Nitrogen	52.76	41.17	22.0%
Phosphorus	3.30	2.81	14.9%
Sediment	1,376	1,350	1.9%

TMDL: Total Maximum Daily Load
Note: Target loads as revised by EPA in August 2011.

Source: Maryland Department of the Environment; U.S. Environmental Protection Agency

In 2010, each bay jurisdiction submitted a Phase I WIP that details how the jurisdiction will achieve its individual pollution reduction goals under the Bay TMDL. The Phase I WIP focused on the following three approaches for bridging the remaining loading gap: (1) developing new technology and approaches before 2017; (2) increasing the scope of implementation of existing strategies such as upgrading wastewater treatment plants, upgrading septic systems, and increasing the number and efficiency of stormwater runoff controls; and (3) improving regulatory requirements. The Phase I WIP establishes that all nutrient impacts from future growth must be offset if the Bay TMDL is to be met.

On January 26, 2012, Maryland released for public comment a draft of the State's Phase II WIP, which provides implementation strategies for the five major basins in Maryland (the Potomac River basin, Eastern Shore, Western Shore, the Patuxent River basin, and Maryland's portion of the Susquehanna River basin).

Consequences of Not Meeting the Bay TMDL Target Reductions

Early in the Bay TMDL development process, EPA notified states of the accountability framework in place to ensure that the watershed states initiate the WIP development process and ultimately achieve the required nutrient and sediment reductions. The accountability framework includes a number of backstop measures that EPA may take to ensure that the required reductions are achieved in the absence of effective state WIPs. These backstop measures include expanding water permit coverage to currently unregulated sources, objecting to inadequate permits, requiring net improvement offsets for new or increased point source discharges, establishing finer scale allocations in the Bay TMDL, requiring additional load reductions from point sources, increasing and targeting federal enforcement efforts, conditioning and redirecting federal grant funds, and initiating the development of local nutrient water quality standards.

State/Local Fiscal Effect: As noted above, DNR and MDE have been studying the effects of Hurricane Irene and Tropical Storm Lee on the Conowingo Dam and the Chesapeake Bay. Currently, DNR and MDE are working with Chesapeake Bay experts from the scientific, research, and academic communities to assess both short-term and long-term impacts of these two storms as well as strategies to protect the Chesapeake Bay in the future. This ongoing study includes assessing the impact of sediment and nutrients released when the flood gates of the Conowingo Dam were opened. When the study was announced in September 2011, MDE advised that it was estimated to cost $1.4 million over a three-year period. According to DNR, the study cannot be expedited in order to be completed by the bill's June 1, 2012 effective date. Thus, the bill effectively delays the implementation of WIP activities and strategies until the study is complete, likely sometime in fiscal 2015. As a result, although the bill delays State and local expenditures for these activities, it may also prevent the State and local governments from being able to achieve the reductions called for under the Bay TMDL by the required deadlines and could result in the violation of certain federal permits (such as permits issued to wastewater facilities). This could elicit any number of responses by EPA, as described above. Any decrease in federal funding, withholding of permits, establishment of new permits, reallocation of load reductions, loss of existing State permitting authority, or other sanctions will have significant fiscal and operational impacts on the State and local governments.

Small Business Effect: Small businesses may be significantly affected to the extent the bill delays WIP implementation. Many small businesses that are engaged in operations associated with planned or existing Chesapeake Bay restoration efforts may experience a reduction in the demand for their services in the short run. On the other hand, small businesses that are required to reduce nutrient and sediment loading pursuant to the WIP could benefit to the extent the bill delays spending on those activities. Small businesses across many sectors of the Maryland economy are holders of permits issued by EPA.

Permit-related costs may increase for many small businesses should the State fail to comply with the Bay TMDL by the required deadlines if EPA exercises its authority to rewrite, withhold, or establish new permits, which are some of the consequences noted by EPA in its accountability framework.

Additional Information

Prior Introductions: SB 18 of the 2011 special session, a similar bill, was referred to the Senate Rules Committee, but no further action was taken.

Cross File: None.

Information Source(s): Cecil County, Maryland Department of Agriculture, Department of Natural Resources, Maryland Department of the Environment, Public Service Commission, U.S. Environmental Protection Agency, Exelon Corporation, Department of Legislative Services

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