

Department of Legislative Services
 Maryland General Assembly
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FISCAL AND POLICY NOTE

Senate Bill 823 (Senator Pipkin, *et al.*)
 Education, Health, and Environmental Affairs

Environment - Watershed Implementation Plan - Ranking Best Management Practices

This bill requires the Maryland Department of the Environment (MDE), by October 1, 2012, to develop a list of the best management practices (BMPs) that a county may use under a Watershed Implementation Plan (WIP) to implement the Total Maximum Daily Load for the Chesapeake Bay (Bay TMDL). MDE must (1) rank BMPs on the list based on the cost and expected pollution reduction value of each practice; (2) publish the list on its website; (3) mail the list to each county; and (4) update the list annually. MDE is required to include information in the list relating to the combinations of BMPs that maximize pollution reduction and minimize cost.

The bill takes effect June 1, 2012.

Fiscal Summary

State Effect: General fund expenditures increase by \$100,000 in FY 2013 for MDE to contract with an environmental engineering consultant to develop the list by the date required by the bill. General fund expenditures may increase, likely by a lesser extent, in future years if the list cannot be updated annually by MDE with existing staff and resources. State expenditures (all funds) related to WIP could decrease to the extent that the development of the list results in the implementation of a more cost-effective mix of State-funded BMPs than otherwise would occur.

(in dollars)	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Revenues	\$0	\$0	\$0	\$0	\$0
GF Expenditure	100,000	-	-	-	-
GF/SF/FF Exp.	(-)	(-)	(-)	(-)	(-)
Net Effect	(\$100,000)	\$0	\$0	\$0	\$0

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

Local Effect: Local expenditures may decrease in FY 2013 and 2014 to the extent that any jurisdictions are able to avoid costs associated with contractual services that they would otherwise obtain without the list provided under the bill. Expenditures may also decrease to the extent that the bill results in the implementation of more cost-effective BMPs.

Small Business Effect: Potential meaningful impact on small businesses affected by WIP implementation activities to the extent that the list developed under the bill alters the mix of BMPs undertaken to meet the Bay TMDL.

Analysis

Bill Summary: A “best management practice” is defined as a conservation or pollution control practice that reduces the load of pollutants discharged into the surface waters of the State, including sediment, nitrogen, and phosphorus.

Current Law/Background:

The Bay TMDL and the WIP Development Process

In December 2010, the U.S. Environmental Protection Agency (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)

<u>Pollutant</u>	<u>2010 Loads</u>	<u>Bay TMDL Target Load</u>	<u>Percent Reduction</u>
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). The Phase II WIP provides a list of the 66 BMPs used to develop the 2017 Interim Strategy. This list includes 38 agriculture BMPs, 24 stormwater BMPs, 3 septic BMPs, and 1 forest BMP.

To determine the cost of implementing the Bay TMDL, MDE began investigating the cost of local stormwater implementation in early spring 2011. As part of this investigation, MDE commissioned a study by the University of Maryland Center for Environmental Science and the Johns Hopkins University to examine costs related to stormwater BMPs and assess revenue-generating options for counties in Maryland. The study was completed in October 2011 and provided estimated costs of various stormwater BMPs, including the average unit cost over 20 years.

For contextual purposes, **Exhibit 2** shows that the preliminary estimated cost of implementing the Phase II WIP associated with the Bay TMDL exceeds \$7.5 billion through calendar 2017 and is about \$14.7 billion through calendar 2025. Annual costs to the State, local governments, and other entities are not separately identified in the plan and are not known at this time. However, as shown in the exhibit, the implementation of stormwater BMPs likely represents the largest cost to counties in implementing the Bay TMDL. There are a number of current State programs that provide funding for actions identified in the plan. Existing State funding sources are preliminarily projected by the Department of Legislative Services to provide approximately \$2.8 billion in funding for various Chesapeake Bay restoration programs between fiscal 2010 and 2017.

Exhibit 2
Estimated Phase II WIP Costs for Interim and Final Targets Under the Bay TMDL
(\$ in Millions)

<u>Source Sector</u>	<u>Cost of 2017 Strategy 2010-2017</u>	<u>Cost of 2025 Strategy 2010-2025</u>
Agriculture	\$498	\$928
Municipal Wastewater	2,384	2,384
Major Municipal Plants	2,322	2,322
Minor Municipal Plants	62	62
Stormwater	3,826	7,607
Maryland Department of Transportation	467	1,500
Local Government	3,359	6,107
Septic Systems	799	3,746
Septic System Upgrades	336	2,533
Septic System Connections	439	1,125
Septic System Pumping	24	88
Total	\$7,507	\$14,665

Note: Exhibit does not reflect costs associated with controlling combined sewer and sanitary overflows or the implementation of the Healthy Air Act.

Source: *Phase II Watershed Implementation Plan*; Maryland Department of the Environment

Phase II WIP Implementation and Decisionmaking Processes

As noted in the Phase II WIP, the State has recognized that the EPA Chesapeake Bay Program Modeling System (Bay Model), which is used to evaluate the various WIPs and develop the Bay TMDL, has continued to increase in complexity and sophistication, while lacking in accessibility and transparency for local decisionmakers. Therefore, Maryland's Assessment and Scenario Tool was developed by the State in 2011 to provide the local Phase II WIP teams with a functional planning tool that can estimate nitrogen, phosphorus, and sediment loads for their jurisdictions based on the input of specific BMPs.

MDE advises that, currently, it has partial information available on the anticipated costs of certain BMPs. And while the development of a comprehensive and rigorous list of BMP cost-effectiveness would likely be helpful in the decisionmaking process, there are still a considerable number of BMPs for which final cost estimates have yet to be developed or for which nutrient reduction efficiencies have yet to be determined by the Chesapeake Bay Program.

State Expenditures: According to MDE, the development of a comprehensive list of BMPs ranked according to cost and reduction efficiency by the October 1, 2012 deadline in the bill will require an intensive period of research and analysis, particularly given the current constraints on staff assigned to the Bay TMDL.

Thus, general fund expenditures are estimated to increase by about \$100,000 in fiscal 2013 for MDE to contract with an environmental engineering consulting firm to execute the key tasks related to development of the list required by the bill. To the extent the bill is interpreted to only require a list of cost-effectiveness for a smaller number of primary BMPs, the cost for contractual services could be less.

MDE advises that the initial list will likely need further development and expansion beyond the October 1, 2012 due date, but that it is difficult to determine whether updating the list could be performed with current staff and resources. To the extent that any work in updating the list cannot be handled with existing resources, additional contractual services will be necessary beyond fiscal 2013.

State expenditures (all funds) related to the WIP could decrease to the extent that the development of the list results in the implementation of a more cost-effective mix of State-funded BMPs than otherwise would occur.

Local Expenditures: Local government expenditures may decrease, particularly in fiscal 2013 and 2014, to the extent that the bill results in reduced consulting costs for initial planning work associated with local implementation of the Phase II WIP. Further, expenditures may decrease beginning in fiscal 2013 to the extent that the list results in the implementation of more cost-effective BMPs.

Legislative Services contacted a number of counties to glean information regarding the bill's potential impacts. Charles County advises that the bill is not anticipated to have a fiscal impact, and Frederick County is unable to determine the fiscal impact at this time. Baltimore County advises that the bill will not have a fiscal impact because the State already provides the county with related information. Similarly, Montgomery County reports that MDE has already provided a list of approved BMPs to the county and advises that the bill could result in unnecessary and duplicative expenditures to develop an additional list.

Additional Information

Prior Introductions: SB 13 of the 2011 was assigned to the Senate Rules Committee, but no further action was taken. Its cross file, HB 20, was assigned to the House Rules Committee, but no further action was taken.

Cross File: Although HB 486 (Delegate Jacobs, *et al.* - Environmental Matters) is designated as a cross file, it is different.

Information Source(s): Baltimore, Charles, Frederick, and Montgomery counties; Maryland Department of the Environment; U.S. Environmental Protection Agency; University of Maryland Center for Environmental Science; Johns Hopkins University; Department of Legislative Services

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mc/lgc

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