Chesapeake Bay
Fiscal 2013 Budget Overview

Department of Legislative Services
Office of Policy Analysis
Annapolis, Maryland

January 2012

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Analysis in Brief

Major Trends

First Two-year Milestone Met: By the Administration's calculations, the first two-year milestone has been met.

Wet Calendar 2010 Obscures Overall Progress: The trend in Maryland's overall nutrient and sediment reductions is obscured by a wet calendar 2010.

Issues

Concern about Local Jurisdiction Commitment to Chesapeake Bay Restoration: Maryland's draft Phase II Watershed Implementation Plan submission reflects a certain reticence among local jurisdictions as shown by low percentages for two out of the three nutrient and sediment reduction strategy submissions. **The Department of Legislative Services (DLS) recommends that the BayStat agencies comment on the commitment level of local jurisdictions to both plan for and fund the necessary strategies for meeting the total maximum daily load.**

Chesapeake and Atlantic Coastal Bays 2010 Trust Fund Allocation: Chapter 6 of the 2007 special session (House Bill 5) established a Chesapeake Bay 2010 Trust Fund to be used to implement the State's tributary strategy. The proposed doubling of the Bay Restoration Fund (BRF) fee may mean changes to how the Chesapeake and Atlantic Coastal Bays 2010 Trust Fund is used. **DLS recommends that the BayStat agencies comment on the long-term impact of the proposed doubling of the BRF fee on the uses of the Chesapeake and Atlantic Coastal Bays 2010 Trust Fund.**

Overall Chesapeake Bay Restoration Funding: An understanding of overall Chesapeake Bay restoration funding needs and sources is slowly developing. Understanding comes from a look at Maryland's Chesapeake Bay restoration spending along with a plan for the fiscal 2012 to 2013 two-year milestones period as well as the proposed augmentation of the BRF as a potential funding mechanism for bay restoration. **DLS recommends that (1) the Administration continue to publish the overall Chesapeake Bay restoration data in the Governor's budget books and two-year milestones funding and progress for the period that began July 1, 2011, and ends June 30, 2013; and (2) the BayStat agencies comment on the proposed doubling of the BRF fee and, in general, the potential for seeking legislative approval of the Task Force on Sustainable Growth and Wastewater Disposal's Chesapeake Bay restoration funding recommendations.**

Menhaden Fishery Management Concerns: Menhaden is a filter feeding fish of substantial ecological importance to the Chesapeake Bay. According to the Atlantic States Marine Fisheries Commission, which has jurisdiction over the fishery, the menhaden fishery experienced overfishing in calendar 2008, and a total of 32 times over the last 54 years because a fishing mortality threshold was exceeded. However, the menhaden was not overfished because the population is still able to

replenish itself. **DLS recommends that the agencies comment on what the impact of the decline in menhaden numbers may be to Chesapeake Bay health and restoration efforts, and on how ecosystem-based fisheries management could play a role in restoring the menhaden population and associated ecosystem services.**

Recommended Actions

1. Add budget bill language on Chesapeake Bay restoration expenditures.

Overview

In 1999, the U.S. Environmental Protection Agency (EPA) identified the Chesapeake Bay as an impaired water body. In 2000, the Chesapeake Bay partners (the states of Maryland, Pennsylvania, and Virginia; the District of Columbia; the Chesapeake Bay Commission; and the EPA) negotiated the Chesapeake Bay 2000 Agreement, which specified voluntary restoration goals to improve the bay and remove it from the EPA's List of Impaired Waters.

Recent Policy Developments

Past efforts to restore the Chesapeake Bay watershed, which includes parts of Delaware, the District of Columbia, Maryland, New York, Pennsylvania, Virginia, and West Virginia, have resulted in insufficient progress and continued poor water quality. However, a new regional restoration initiative, prompted by federal requirements and characterized by accountability measures and short-term program evaluation, is underway. The general process by which this will work is the completion of the transition from the voluntary tributary strategies to the mandatory two-year milestone period of development, which will be guided by the recently completed Watershed Implementation Plan (WIP) in order to meet the total maximum daily load (TMDL) within a specified time period. Each of these components are described below.

Two-year Policy Milestones

In May 2009, the Chesapeake Bay partners discarded the broad 10-year goal framework used over the past 30 years and committed to new voluntary 2-year incremental goals called milestones for reducing nitrogen and phosphorus loads to the bay. These milestones have been more or less adopted as required reductions under Maryland's new Chesapeake Bay restoration policy framework. BayStat is tracking Maryland's progress toward the milestones and making relevant program information available.

The first set of milestones originally was scheduled to be achieved by December 31, 2011, but have since been changed to June 30, 2011, which corresponds more closely with the State fiscal year. The first set of milestones required a watershed-wide nitrogen load reduction of 15.8 million pounds and a phosphorus load reduction of 1.05 million pounds (relative to calendar 2008 load levels). To achieve the calendar 2011 goal, Maryland had to reduce its nitrogen loads by 3.75 million pounds and its phosphorus loads by 193,000 pounds (from calendar 2008 levels). Maryland achieved the necessary reductions according to the level of implementation of best management practices, although the heavy rainfall in calendar 2010 obscures the progress made.

Maryland has now entered the second two-year milestone period of the new calendar 2025 Chesapeake Bay restoration timeline. Of note, Maryland at first committed to a calendar 2020 goal but has since adopted the calendar 2025 timeline in order to be able to secure funding. According to the Administration, the first two-year milestones from fiscal 2010 to 2011 (technically beginning in fiscal 2009) have been met, although it is difficult to track due to the heavy rainfall experienced in recent years, which sends greater than average amounts of nutrients and sediments to the Chesapeake

Bay. For the next two-year milestone period – fiscal 2012 to 2013 – the Administration intends to reduce an additional approximately 1.2 million pounds of nitrogen.

Watershed Implementation Plan

Each watershed state and the District of Columbia submitted a final Phase I WIP to EPA in December 2010 and a draft Phase II WIP in December 2011. The WIP is intended to provide a roadmap for how each jurisdiction will achieve and maintain the bay TMDL, with the Phase I WIP providing an overall picture of reductions and the Phase II WIP a more detailed picture of nutrient loading reductions at the level of major river basins within each state.

Maryland's Phase I WIP built on current restoration efforts and identified 58 options to reduce nitrogen, phosphorus, and sediment for wastewater, urban run-off, septic systems, agriculture, and air pollution. While the final Phase I WIP addressed the overall funding need for calendar 2012 through 2017, it did not break down the costs sufficiently to determine responsibility for costs as would be needed in an overall spending plan. The Phase I WIP focused on the following three approaches for bridging the remaining loading gaps: (1) develop new technology and approaches before calendar 2017; (2) increase the scope of implementation of existing strategies such as upgrading wastewater treatment plants and increasing the number and efficiency of stormwater runoff controls; and (3) improve regulatory requirements.

EPA evaluated Maryland's final Phase I WIP and found that it met both overall statewide allocations and individual river basin targets for nitrogen, phosphorus, and sediment reductions. While EPA was satisfied with Maryland's overall level of assurance in the WIP, EPA noted that it would monitor permits for concentrated animal feeding operations and wastewater treatment plants and that there was some uncertainty about the nutrient and sediment load reductions from urban stormwater retrofits. EPA also expressed some concern about the level of technical assistance available in the agriculture sector.

Maryland's draft Phase II WIP sets the framework for allocating the pollutant loads on a major river basin scale and providing greater detail about proposed pollution controls but does not actually state the detailed level reductions proposed since EPA is still evaluating the proposed strategies by watershed model runs. Maryland's draft Phase II WIP strategies were designed using the Maryland Assessment and Scenario Tool (MAST), a simplified proxy model for the Chesapeake Bay watershed model which allows the Administration to test its reduction strategies before submitting the strategies to the EPA.

Total Maximum Daily Load

The WIP is the "reasonable assurance" that EPA required for the Chesapeake Bay partners to meet the new bay regulatory mechanism, the bay TMDL. The aggregated Chesapeake Bay TMDL, or pollution diet, went into effect on December 31, 2010.

The TMDL specifies the amount of nitrogen, phosphorus, and sediment that the bay may receive in a year and still maintain certain specified water quality standards. The bay's TMDL actually is comprised of 294 separate TMDLs – 98 impaired bay segments times three pollutants (nitrogen, phosphorus, and sediment). Maryland is responsible for 58 impaired segments and thus will have 174 TMDLs. Maryland must have practices in place by calendar 2025 to meet the pollutant loads in the TMDL.

EPA has never before completed a multi-jurisdictional TMDL on this scale; therefore, it is requiring an enhanced TMDL component – "reasonable assurance of implementation" as noted above – to ensure load levels are met. The reasonable assurance being required is Maryland's Final Phase I WIP, which was approved by EPA, and eventually Maryland's Phase II WIP.

In December 2010, EPA established the first baywide TMDL that (1) sets the maximum amount of pollution the bay can receive and still retain water quality standards; and (2) identifies specific pollution reduction requirements. **Exhibit 1** illustrates Maryland's revised pollution reduction goals as published in Maryland's draft Phase II WIP. All pollution reduction measures must be in place by calendar 2025, with at least 60% of the actions complete by calendar 2017. Maryland had committed to an accelerated schedule requiring all measures to be in place by calendar 2020 and 70% of the actions to be complete by calendar 2017 but, as noted above, has since returned to the EPA's required timeline.

Exhibit 1

Total Interim and Final Target Loads[1]

Million Pounds Per Calendar Year

Pollutant	2009 Load	2025 Target Load	Reduction from 2009 Load
Nitrogen	52.88	41.17	22.1%
Phosphorus	3.20	2.81	12.2%
Total Suspended Solids (Sediment)	1,387.00	1,350.00	2.7%

[1] The target loads shown reflect the information contained in Maryland's draft Phase II Watershed Implementation Plan. The Environmental Protection Agency (EPA) has completed an update of the watershed model, which is in now in Phase 5.3.2. EPA's Phase 5.3.2 model run indicates a total nitrogen loading of 52.22 million pounds in calendar 2009 and 52.76 million pounds in calendar 2010 for Maryland. The reason for the difference may be flaws in how EPA's model calculates nutrients loads from manure.

Source: Maryland's Draft Phase II Watershed Implementation Plan

Given the size and scope of the TMDL, it is perhaps inevitable that EPA would be sued. On January 10, 2011, the American Farm Bureau Federation and the Pennsylvania Farm Bureau filed a federal lawsuit in a court in Harrisburg, Pennsylvania.

Timeline

Some key TMDL and plan dates are as follows:

- **December 31, 2010:** Final bay TMDL published by EPA;
- **December 15, 2011:** Draft Phase II plans submitted to EPA;
- **January 6, 2012:** Final Maryland calendar 2013 milestones submitted to EPA;
- **January 25 – March 7, 2012:** Draft Phase II plans 45-day comment period;
- **March 30 – June 30, 2012:** Continued refinement of local draft Phase II plans;
- **July 2, 2012:** Final Phase II plans and two-year milestones submitted to EPA;
- **November 2017:** Interim target reached for actions to be in place to meet loads at 60% level and Final Phase III plans submitted to EPA for detailing calendar 2018 to 2025 actions; and
- **December 2025:** Final target for actions to be in place to meet loads.

Issues

1. Concern about Local Jurisdiction Commitment to Chesapeake Bay Restoration

Maryland's draft Phase II WIP submission reflects a certain reticence among local jurisdictions as shown by low percentages for two out of the three nutrient and sediment reduction strategy submissions shown in **Exhibit 2**. The Administration temporarily has addressed the shortfall in the nutrient and sediment reduction submissions from certain local jurisdictions by including (1) a 60% septic system upgrade or connection strategy in the Critical Area; and (2) a 20% stormwater retrofit provision on developed lands with little or no management. Of note, if a final WIP fails to meet federal requirements, EPA may take action to ensure pollution reductions, including increasing oversight of state-issued pollution permits, requiring additional pollution reductions, prohibiting new or expanded pollution discharges, redirecting federal grants, and revising water quality standards to better protect local and downstream waters. While there is time for local jurisdictions to submit revisions to their plans, and the State has pushed back its expedited compliance deadline to calendar 2025, lack of commitment shown by the draft Phase II WIP submission statistics raises concerns about the willingness of local jurisdictions to fund the necessary strategies for meeting the TMDL.

Exhibit 2
Draft Phase II Watershed Implementation Plan Submissions by Counties and Baltimore City

Calendar 2017 MAST Strategies Submitted	Calendar 2020 MAST Strategies Submitted	Narrative Strategies and Two-year Milestones Submitted
54%	63%	100%

MAST: Maryland Assessment and Scenario Tool

Note: This exhibit primarily reflects stormwater and septic system strategies in urban areas since wastewater treatment plant upgrades to enhanced nutrient removal technology are funded by the State and agricultural strategies were submitted on-time through a separate process run by Soil Conservation District offices located in each county.

Source: Maryland Department of the Environment

The Department of Legislative Services (DLS) recommends that the BayStat agencies comment on the commitment level of local jurisdictions to both plan for and fund the necessary strategies for meeting the TMDL.

2. Chesapeake and Atlantic Coastal Bays 2010 Trust Fund Allocation

Chapter 6 of the 2007 special session (House Bill 5) established a Chesapeake Bay 2010 Trust Fund to be used to implement the State's tributary strategy. The fund is financed with a portion of existing revenues from the motor fuel tax and the sales and use tax on short-term vehicle rentals. Subsequently, Chapters 120 and 121 of 2008 established a framework for how the trust fund money must be spent by specifying that it be used for nonpoint source pollution control projects and by expanding it to apply to the Atlantic Coastal Bays. The Acts also established a Chesapeake and Atlantic Coastal Bays Nonpoint Source Fund, administered by the Maryland Department of the Environment (MDE), to provide financial assistance for the implementation of urban and suburban stormwater management practices and stream and wetland restoration.

Pursuant to Chapters 120 and 121 of 2008, money in the trust fund must be distributed by the BayStat Subcabinet agencies as follows:

- to counties, bicounty agencies, municipalities, forest conservation district boards, soil conservation districts, academic institutions, and nonprofit organizations having demonstrated ability to implement nonpoint source pollution control projects through competitive grants;
- to the Maryland Agricultural Water Quality Cost Share Program within the Maryland Department of Agriculture (MDA);
- to the Woodland Incentives Fund within the Department of Natural Resources (DNR); and
- to the Chesapeake and Atlantic Coastal Bays Nonpoint Source Fund, a new special fund administered by the Water Quality Financing Administration within MDE to provide financial assistance for urban and suburban stormwater management practices and stream/wetland restoration.

Fiscal 2012 and 2013 Funding Overview

After all fiscal 2011 transfers to the general fund and agency spending, the Chesapeake and Atlantic Coastal Bays 2010 Trust Fund ended fiscal 2011 with a $3.23 million fund balance. For fiscal 2012, revenues currently are projected to be $43.5 million. However, Chapter 397 of 2011 (the Budget Reconciliation and Financing Act (BRFA) of 2011) transferred $20.2 million to the general fund leaving $26.6 million in available revenue. Of this $26.6 million in available revenue, the BayStat agencies have allocated $22.9 million. After all of these actions, there is projected to be a $3.7 million balance at the end of fiscal 2012.

For fiscal 2013, there is a projected opening fund balance of $3.7 million, and revenues are projected to be $45.1 million. However, a combination of the provisions from Chapter 397 and the Governor's proposed BRFA of 2012 reduce this revenue by $23.1 million, leaving $25.6 million in available revenue. On the spending side, the BayStat agencies have submitted a draft work plan showing $25.6 million in expenditures including $0.6 million that will not be spent in fiscal 2012. As a result, there is anticipated to be a negligible fund balance at the end of fiscal 2013 as long as revenue projections are met. **Exhibit 3** provides a summary of the trust fund history.

Exhibit 3
Chesapeake and Atlantic Coastal Bays 2010 Trust Fund History
Fiscal 2009-2013
($ in Millions)

Appropriation	2009	2010	2011	2012	2013
Opening Balance	$0.00	$3.63	$5.84	$3.23	$3.65
Revenue	$38.23	$41.50	$43.10	$43.50	$45.05
Transfers to the General Fund					
Chapter 414 of 2008	-$25.00				
Chapter 487 of 2009		-$21.49			
Chapter 484 of 2010		-10.50	-$22.10		
Chapter 397 of 2011			-0.97	-$20.17	-$15.08
BRFA of 2012					-8.00
Subtotal GF Transfers	**-$25.00**	**-$31.99**	**-$23.07**	**-$20.17**	**-$23.08**
Available Revenue	**$13.23**	**$13.14**	**$25.87**	**$26.56**	**$25.62**
Spending					
MDA	-$6.93	-$3.92	-$12.34	-$13.18	-$15.60
MDE	-1.83	-1.65	-2.10	0.00	0.00
DNR	-0.84	-1.73	-8.20	-9.73	-10.00
Subtotal Agency Spending	**-$9.60**	**-$7.30**	**-$22.64**	**-$22.91**	**-$25.60**
Available Balance	**$3.63**	**$5.84**	**$3.23**	**$3.65**	**$0.02**

BRFA: Budget Reconciliation and Financing Act
DNR: Department of Natural Resources
GF: general fund
MDA: Maryland Department of Agriculture
MDE: Maryland Department of the Environment

Note: Under transfers, the $10.5 million transferred by the BRFA of 2010 included $8.0 million in fiscal 2010 revenues and $2.5 million in fund balance. Numbers may not sum due to rounding.

Source: Department of Legislative Services

BRFA of 2012 Provisions

The BRFA of 2012 increases the transfer of fiscal 2013 projected revenue from the motor vehicle fuel tax by $8.0 million for a total transfer of $23.1 million. This leaves $25.6 million for fiscal 2013. The revenue changes reflected in the BRFA are shown in **Exhibit 4.**

Exhibit 4
Provisions for Trust Fund Transfers to the General Fund
BRFA of 2011 and 2012

Fiscal Year	BRFA of 2011	BRFA of 2012	Total
2013	$15,076,582	$8,000,000	$23,076,582
2014	11,535,845		11,535,845
2015	8,049,199		8,049,199
2016	4,624,687		4,624,687

BRFA: Budget Reconciliation and Financing Act

Source: Department of Legislative Services

Fiscal 2013 Allocation for the Chesapeake and Atlantic Coastal Bays 2010 Trust Fund

The Chesapeake and Atlantic Coastal Bays 2010 Trust Fund began funding nonpoint source pollution control projects for fiscal 2009 to 2011 based on a 2008 request for proposals (RFP). All projects identified in fiscal 2009 have been funded, and a new RFP was completed for fiscal 2012. The RFP opened on March 3, 2010, and closed on June 1, 2010, and reflects funding for the next two-year milestone period of July 1, 2011, to June 30, 2013, which coincides with fiscal 2012 and 2013.

Exhibit 5 provides an overview of the trust fund allocations for fiscal 2013 as compared with fiscal 2009, 2010, 2011, and 2012. Of note, the fiscal 2013 allocation may change if the Bay Restoration Fund (BRF) fee is doubled in the 2012 legislative session since this would increase the amount of funding available to cover crops under the 40% cover crops and 60% septic system upgrade distribution of septic system user fee revenue.

Exhibit 5
Chesapeake and Atlantic Coastal Bays 2010 Report Planned Expenditures
Fiscal 2009-2013
($ in Millions)

	2009	2010	2011	2012	2013
Maryland Department of Agriculture					
Agency Technical Assistance	$0.85	$0.75	$0.68	$1.20	$2.80
Cover Crops	3.08	1.90	10.06	11.98	12.00
Forest/Grass Buffers/Restoration	0.00	0.27	0.80	0.00	0.80
Animal Waste Management	3.00	1.00	0.80	0.00	0.00
Subtotal	***$6.93***	***$3.92***	***$12.34***	***$13.18***	***$15.60***
Maryland Department of the Environment					
Urban/Suburban SWM	$1.83	$1.65	$2.10	$0.00	0.00
Subtotal	***$1.83***	***$1.65***	***$2.10***	***$0.00***	***$0.00***
Department of Natural Resources					
Agency Direct Costs	$0.00	$0.00	$0.30	$0.35	$0.38
Strategic Monitoring (with UM)	0.25	0.09	0.40	0.15	0.40
Innovative Technology (with UM)	0.25	0.25	0.25	0.25	0.25
Natural Filters	0.00	0.00	2.40	1.70	8.97
Local Implementation Grant	0.34	1.39	4.85	7.28	0.00
Subtotal	***$0.84***	***$1.73***	***$8.20***	***$9.73***	***$10.00***
Total	**$9.60**	**$7.30**	**$22.64**	**$22.91**	**$25.60**

SWM: stormwater management
UM: University of Maryland

Note: The Conservation Reserve Enhancement Program agreement was not signed until late in fiscal 2009; therefore, the $250,000 that originally was planned for the Maryland Department of Agriculture (MDA) Forest/Grass Buffers/Wetlands was not spent. Instead, this funding was used for cover crops. The Administration notes in its draft work plan that $0.6 million of the $2.8 million in fiscal 2013 agency technical assistance funding in MDA will come from funding that is not spent in fiscal 2012. Numbers may not sum to total due to rounding.

Source: Department of Natural Resources; Department of Legislative Services

The main components of the fiscal 2013 allocation of the Chesapeake and Atlantic Coastal Bays 2010 Trust Fund are as follows:

- ***Cover Crops*** – $12.0 million for cover crops in order to fund a portion of the fiscal 2012 to 2013 milestone goal of 355,000 acres, although if the BRF fee is doubled during the 2012 legislative session, then the BayStat agencies plan to redirect $5.0 million of the $12.0 million as follows:

  - ***Alternative Manure Use Technologies*** – $2.5 million for a Maryland Farm Manure to Energy program issuing grants and loan guarantees for facilities that turn poultry or dairy manure into energy;

  - ***Grants to Farmers*** – $2.0 million for implementing new nutrient management regulations proposed by the Administration but not yet adopted, including manure storage structures for animal waste and both poultry and dairy manure incorporation technology; and

  - ***Manure Transport Program*** – $0.5 million for supporting the manure transport program in order to assist with the adoption of the refined phosphorus site index in calendar 2012.

- ***Natural Filters*** – $8.97 million for riparian buffers and wetlands in priority watersheds in 15 counties.

- ***Agricultural Technical Assistance*** – $2.8 million is allocated for Soil Conservation District position grant funding, which reflects an increase of 23 new positions relative to the fiscal 2012 working appropriation of $1.2 million for a total of 39 total positions supported by the Chesapeake and Atlantic Coastal Bays 2010 Trust Fund.

DLS recommends that the BayStat agencies comment on the long-term impact of the proposed doubling of the BRF fee on the uses of the Chesapeake and Atlantic Coastal Bays 2010 Trust Fund.

3. Overall Chesapeake Bay Restoration Funding

An understanding of overall Chesapeake Bay restoration funding needs and sources is slowly developing. Understanding comes from a look at Maryland's Chesapeake Bay restoration spending along with a plan for the fiscal 2012 to 2013 two-year milestones period, as well as the proposed augmentation of the BRF as a potential funding mechanism for bay restoration as highlighted in the recommendations of the Task Force on Sustainable Growth and Wastewater Disposal.

Requested Funding Reports

Section 45 of the fiscal 2012 budget bill expressed the General Assembly's intent that DNR and the Department of Budget and Management submit two reports on Chesapeake Bay restoration expenditures as follows:

- ***Overall Chesapeake Restoration Spending*** – operating and capital expenditures by agency, fund type, and particular fund source based on programs that have over 50% of their activities directly related to Chesapeake Bay restoration for the fiscal 2011 actual, fiscal 2012 working appropriation, and fiscal 2013 allowance; and

- ***Two-year Milestones*** – a plan for tracking the two-year milestone funding for the first period, including a discussion of how funding responsibility will be allocated and tracked in the Phase II portion of the WIP development.

Chesapeake Bay Restoration Expenditures

The Chesapeake Bay restoration expenditures exhibit was first included in the Governor's budget books in fiscal 2009. The idea behind the exhibit is to be able to understand the overall scope of Chesapeake Bay restoration funding. The current version of overall Chesapeake Bay restoration funding is Appendix S of the Governor's budget books, as shown in **Exhibit 6**.

Exhibit 6
Overview of Maryland's Funding for Chesapeake Bay Restoration
Fiscal 2011-2013

Total Funds

Agency	2011 Actual	2012 Approp.	2013 Allowance	$ Change 2012-2013	% Change 2012-2013
Department of Natural Resources	$58,142,268	$68,428,721	$112,051,076 [1]	$43,622,355	63.8%
Program Open Space	12,196,626	8,923,000	22,817,000 [2]	13,894,000	155.7%
Rural Legacy	6,318,000	4,515,000	14,889,000 [3]	10,374,000	229.8%
Department of Planning	6,096,402	5,364,753	5,091,509	-273,244	-5.1%
Department of Agriculture	45,000,141	39,865,512	22,258,433	-17,607,079	-44.2%
Maryland Agricultural Land Preservation Foundation	16,486,344	10,474,863	24,576,529 [4]	14,101,666	134.6%
Maryland Department of the Environment	226,977,532	256,662,274	383,629,179	126,966,905	49.5%
Maryland State Department of Education	919,455	919,455	919,455	0	0.0%
Maryland Higher Education	21,837,119	18,657,869	19,483,027	825,158	4.4%
Maryland Department of Transportation	139,924,453	163,796,429	137,517,000	-26,279,429	-16.0%
Total	**$533,898,340**	**$577,607,876**	**$743,232,208**	**$165,624,332**	**28.7%**

[1] Adjusted to reflect $8,000,000 contingent reduction of the fiscal 2013 allowance for the Chesapeake and Atlantic Coastal Bays 2010 Trust Fund.
[2] Adjusted to reflect $14,724,961 contingent reduction of the fiscal 2013 allowance.
[3] Adjusted to reflect $12,799,044 contingent reduction of the fiscal 2013 allowance.
[4] Adjusted to reflect $16,253,258 contingent reduction of the fiscal 2013 allowance.

Fund Type Summary

	2011 Actual	2012 Approp.	2013 Allowance	$ Change 2012-2013	% Change 2012-2013
General Fund	$38,308,494	$35,141,125	$35,453,625	$312,500	0.9%
Special Fund	160,131,465	159,619,088	354,760,473 [5]	195,141,385	122.3%
Federal Fund	46,731,676	78,695,468	62,560,785	-16,134,683	-20.5%
Reimbursable Funds	14,566,133	20,636,897	18,625,298	-2,011,599	-9.8%
Current Unrestricted	8,288,400	5,871,000	6,792,000	921,000	15.7%
Current Restricted	13,548,719	12,786,869	12,691,027	-95,842	-0.8%
General Obligation Bonds	112,399,000	101,061,000	114,832,000	13,771,000	13.6%
Maryland Department of Transportation Funds	139,924,453	163,796,429	137,517,000	-26,279,429	-16.0%
Total	**$533,898,340**	**$577,607,876**	**$743,232,208**	**$165,624,332**	**28.7%**

[5] Adjusted to reflect $51,777,263 in contingent special fund reductions noted above for the fiscal 2013 allowance.

This presentation only includes state agency programs that have over 50% of their activities directly related to Chesapeake Bay Restoration.

Source: Department of Budget and Management

Appendix S in the Governor's budget books reflects general obligation bond (GO) capital funding for the first time. The major changes between the fiscal 2012 working appropriation and the fiscal 2013 allowance are as follows:

- ***DNR*** – increases due to $27.8 million in GO bonds for stormwater projects in the Chesapeake and Atlantic Coastal Bays 2010 Trust Fund; $14.7 million in special funds from the Chesapeake and Atlantic Coastal Bays 2010 Trust Fund (Adjusted for the $8.0 million contingent reduction in the BRFA of 2012); and $8.1 million in general obligation bonds for the Oyster Restoration Program, which is partially offset by a decrease in federal funding trends.

- ***Program Open Space, Rural Legacy, Maryland Agricultural Land Preservation Foundation*** – increases in GO bond replacement funding for prior year transfer tax diversions to the general fund adjusted for the contingent reductions in the BRFA of 2012.

- ***MDA*** – decreases due to the timing of the approximately $13.0 million in Chesapeake and Atlantic Coastal Bays 2010 Trust Fund allocation, which for the time being is budgeted in DNR's fiscal 2013 allowance, and a reduction of $6.0 million in Maryland Agricultural Water Quality Cost-Share Program general obligation bond funding in fiscal 2013.

- ***MDE*** – increases due to the reflection of the doubling of the BRF fee for wastewater treatment and septic systems upgrades, as proposed by the Administration, and an approximately $70.0 million increase in Water Quality Revolving Loan Fund special funds due to a balance and planned activity level.

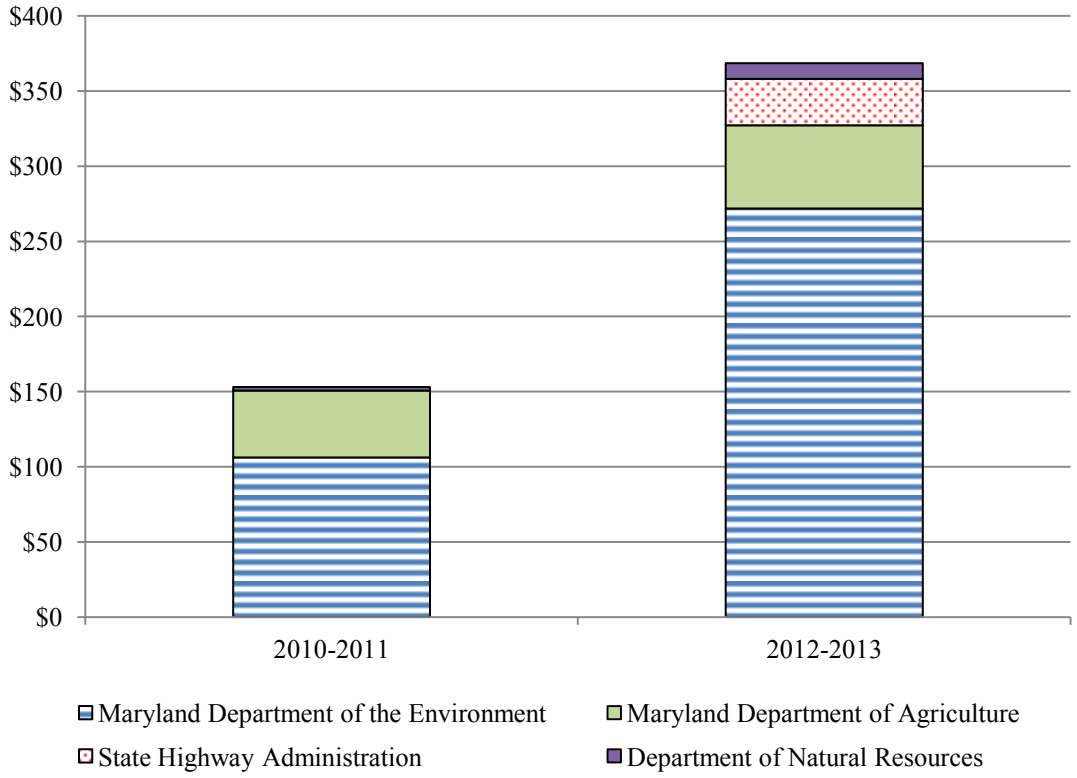
- ***Maryland Department of Transportation*** – decreases due to the completion of a number of transportation alternatives projects – such as the Owings Mills transit-oriented development project – bike and pedestrian improvements, stormwater retrofits, wetland restoration, and forest mitigation.

Two-year Milestone Funding

The two-year milestones funding is reflected in **Exhibits 7** and **8**. Funding is reflected for DNR, MDA, MDE, and the State Highway Administration (SHA), and all fund sources. The funding reflects the approximately 1.2 million pounds of nitrogen loading that will be decreased over the fiscal 2012 to 2013 time period relative to the fiscal 2010 to 2011 two-year milestone period.

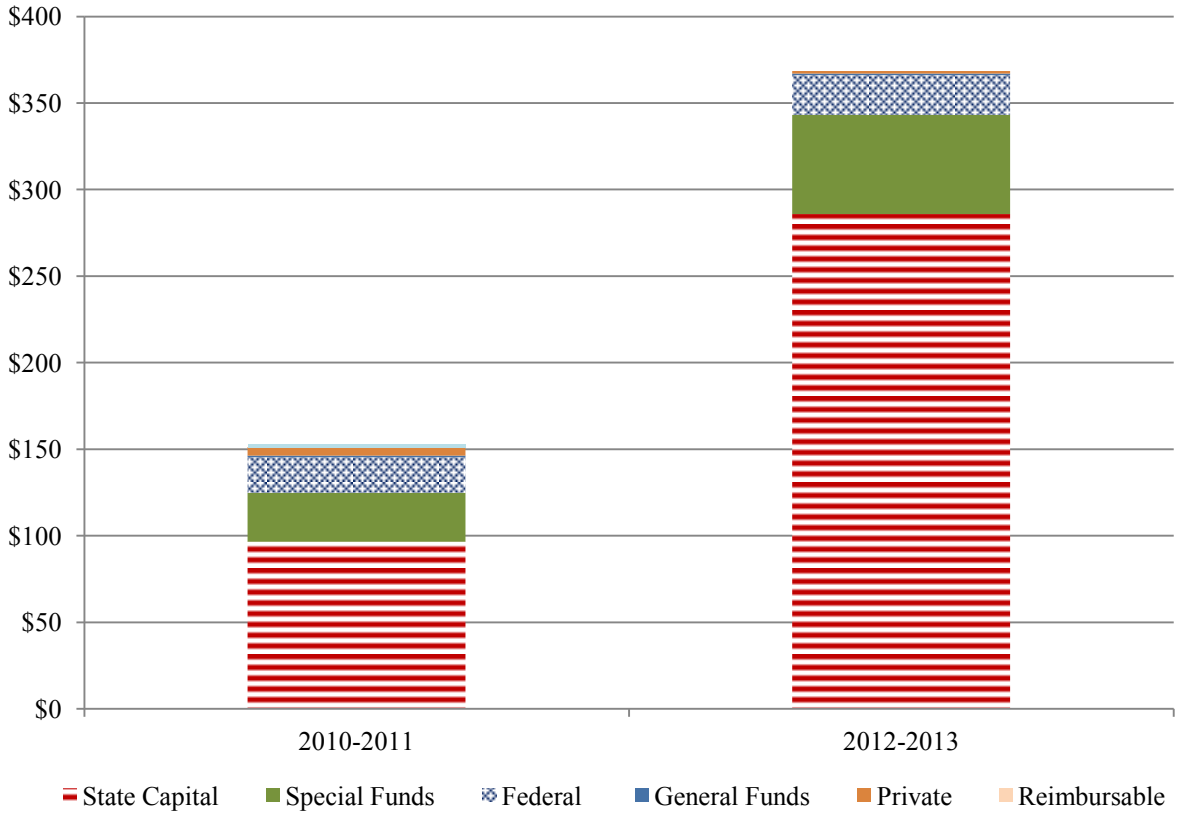
The two major trends reflected in the data are the $215.6 million increase in funding between the two milestone periods and the substantial increase in funding for MDE, which is mirrored in the increase in State capital funds. The reason for these increases is the Blue Plains wastewater treatment plant upgrade, which is estimated to cost approximately $200.0 million in fiscal 2012 and will be responsible for the reduction of approximately 355,000 pounds of nitrogen loading. Other changes include increases in cover crop special funds in MDA in order to meet or exceed the 355,000-acre annual goal, the increase in tree planting special funds in DNR, and stormwater management federal funds in SHA.

Exhibit 7
Two-year Milestones Funding by Program
Fiscal 2010-2013
($ in Millions)



Source: Department of Legislative Services

Exhibit 8
Two-year Milestones Funding by Fund Source
Fiscal 2010-2013
($ in Millions)



Source: Department of Legislative Services

Task Force on Sustainable Growth and Wastewater Disposal Considers Costs

DLS has estimated that the total cost associated with implementing the Phase I WIP, covering calendar 2010 to 2017, is $11.1 billion. The fiscal 2012 costs to the State, local governments, and other entities are not separately identified in either the Final Phase I WIP or the Draft Phase II WIP and are not known at this time. However, there are a number of current State programs that provide funding for actions identified in the plan. Existing State funding sources are projected by DLS to provide approximately $2.8 billion between fiscal 2010 and 2017, leaving a projected funding shortfall of about $8.3 billion over this time period.

Two major sectors will likely require significant State and local government funding during the calendar 2012 to 2017 period: wastewater treatment plant upgrades and stormwater retrofits. Additional implementation costs will be borne in future years.

During the 2011 session, the General Assembly considered the Sustainable Growth and Agricultural Preservation Act of 2011 (Senate Bill 846/House Bill 1107), which would have prohibited major residential subdivisions served by septic systems or minor subdivisions served by septic systems that do not use Best Available Technology (BAT) for nitrogen removal. To continue the discussions initiated by that legislation, Governor Martin J. O'Malley established the Task Force on Sustainable Growth and Wastewater Disposal. The task force made findings and recommendations related to the following in its December 20, 2011 report including the BRF as an overall Chesapeake Bay restoration funding source:

- ***Septic Systems*** – require BAT for new construction in Chesapeake and Coastal Bays watersheds and other nitrogen impaired watersheds and replacement systems in Critical Areas.

- ***Priority Funding Areas (PFAs)*** – direct growth and create incentives for developing in PFAs and streamline State building codes to encourage redevelopment of PFAs.

- ***Comprehensive Plan Tier Approach*** – require local jurisdictions to specify in their comprehensive plans four tiers – PFAs per the 1997 law, designated growth areas outside of the PFA, existing areas not planned for public sewer or preservation, and areas planned for rural protection.

- ***TMDL Deadline*** – extend Maryland's TMDL compliance deadline to calendar 2025.

- ***BRF*** – restructure the BRF to not only address the existing deficit in the fund but also to address other solutions for reducing nutrient and sediment runoff from developed lands as identified in the WIP as follows:

    - ***Fee*** – double the fee to $60/year/dwelling unit in fiscal 2013 and triple the fee to $90/year/dwelling unit in fiscal 2015 with an annual inflationary factor beginning in fiscal 2016 of between 1 and 3% with a progress review in fiscal 2017 and a sunset when obligations are met; and

    - ***Authority*** – amend statute to permit funding of stormwater retrofits including guaranteed grants to local governments from the increased fee and competitive solicitations of funding by local governments from State funding.

The intent behind the proposed BRF increase is to fully fund the projected $382 million BRF shortfall in funding for upgrading the State's 67 major wastewater treatment plants to enhanced nutrient removal technology and to fund approximately half of the estimated $3.3 billion stormwater

retrofit costs for the WIP. This would be accomplished by funding $6,250/acre (half of the average cost of $12,500/acre) for the 262,000 acres that need stormwater retrofits.

DLS recommends that (1) the Administration continue to publish the overall Chesapeake Bay restoration data in the Governor's budget books and two-year milestones funding and progress for the period that began July 1, 2011, and ends June 30, 2013; and (2) the BayStat agencies comment on the proposed doubling of the BRF fee and in general the potential for seeking legislative approval of the Task Force on Sustainable Growth and Wastewater Disposal's Chesapeake Bay restoration funding recommendations.

4. Menhaden Fishery Management Concerns

Menhaden is a filter feeding fish of substantial ecological importance to the Chesapeake Bay. According to the Atlantic States Marine Fisheries Commission, which has jurisdiction over the fishery, the menhaden fishery experienced overfishing in calendar 2008, and a total of 32 times over the last 54 years because a fishing mortality threshold was exceeded. However, the menhaden was not overfished because the population is still able to replenish itself. In response, the Atlantic States Marine Fisheries Commission has initiated a process that will result in a reduction in menhaden harvest of approximately 34% of calendar 2010 fishing levels. However, menhaden abundance may be most influenced by factors such as climate and weather patterns, which challenge the new ecosystem-based fishery management model designed to help manage fish like menhaden.

Ecosystem-based fishery management looks at fish for their role as providers of ecosystem services, of which one service is the economic benefit to the fishing industry. Single-species management is the alternative and current dominant management model for fisheries and primarily focuses on the maximum sustainable yield of the fishery, an economic consideration. The ecosystem-based fishery management model makes sense for managing menhaden due to the complexity of their life history and role in the Chesapeake Bay ecosystem.

Menhaden adults spawn on the continental shelf, and the larvae then appear to be pushed into the Chesapeake Bay by offshoots of the Gulf Stream current. While larvae feed on zooplankton, the adults feed on phytoplankton blooms that impact Chesapeake Bay water quality. The main factors for the decline in menhaden appear to be the following:

- ***Weather*** – Atlantic Multidecadal Oscillation sea-surface temperature trends influence whether a Bermuda-Azores high pressure system moves to the west and pushes menhaden larvae into the Chesapeake Bay.

- ***Climate Change*** – adults may be spawning further north and thus producing larvae that are not reaching the Chesapeake Bay.

- ***Natural Predators*** – rockfish, osprey, and other predators are rebounding due to wildlife restoration policy decisions.

- ***Fishing*** – pound netters for fish bait, five small "snapper rig" boats, and the 10 boats of Reedville, Virginia-based Omega Protein – operator of the last "fish reduction" plant on the East Coast – all fish for menhaden as either baitfish or as industrial product ingredients such as fertilizer, fish meal, and fish oil.

Under an ecosystem-based fishery management model, it may make sense to reduce the harvest pressure on menhaden in order to take advantage of any increase in population recruitment from greater spawning, but it is unclear whether this will be enough to restore the menhaden population in the Chesapeake Bay given the weather and climate change factors impinging on the population.

DLS recommends that the agencies comment on what the impact of the decline in menhaden numbers may be to Chesapeake Bay health and restoration efforts, and on how ecosystem-based fisheries management could play a role in restoring the menhaden population and associated ecosystem services.

Recommended Actions

1. Add the following section:

   SECTION XX. AND BE IT FURTHER ENACTED, That it is the intent of the General Assembly that the Department of Budget and Management, the Department of Natural Resources, and the Maryland Department of the Environment provide two reports on Chesapeake Bay restoration spending. The reports shall be drafted subject to the concurrence of the Department of Legislative Services (DLS) in terms of both electronic format to be used and data to be included. The scope of the reports is as follows:

   (1) Chesapeake Bay restoration operating and capital expenditures by agency, fund type, and particular fund source based on programs that have over 50% of their activities directly related to Chesapeake Bay restoration for the fiscal 2012 actual, fiscal 2013 working appropriation, and fiscal 2014 allowance, which is to be included as an appendix in the fiscal 2014 budget volumes and submitted electronically in disaggregated form to DLS; and

   (2) two-year milestones funding by agency, best management practice, and fund type along with associated nutrient and sediment reductions for fiscal 2011, 2012, 2013, and 2014, which is to be submitted electronically in disaggregated form to DLS.

   Explanation: This language expresses intent that the Department of Budget and Management (DBM), the Department of Natural Resources (DNR), and the Maryland Department of the Environment (MDE) continue to provide at the time of the fiscal 2014 budget submission information on (1) overall Chesapeake Bay restoration spending; and (2) two-year milestones funding and annually thereafter.

Information Request	**Authors**	**Due Date**
Summary of overall Chesapeake Bay restoration expenditures and two-year milestones expenditures	DBM DNR MDE	Fiscal 2014 State budget submission and annually thereafter