

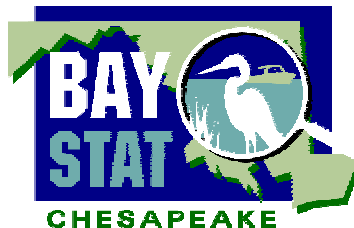


## Chesapeake and Atlantic Coastal Bays Trust Fund

FY2009 and FY2010  
Annual Work Plan  
January 2009  
(UPDATED JUNE 2009)

Report to:

The President of the Senate  
The Speaker of the House  
The Senate Education, Health, and Environmental Affairs Committee  
The Senate Budget and Taxation Committee  
The House Environmental Matters Committee  
The House Appropriations Committee



Chesapeake Bay Trust Fund:  
FY 09 Work Plan and FY 10 Expenditure Plan.  
January 27, 2009  
Updated June 2009

## PURPOSE OF THIS REPORT

Pursuant to Senate Bill 213 of the Maryland General Assembly, the BayStat Subcabinet submits this annual work and expenditure plan for the Chesapeake and Atlantic Coastal Bays 2010 Trust Fund (Trust Fund).

## BAY CABINET RECOMMENDATIONS TO THE SENATE BUDGET AND TAXATION COMMITTEE AND HOUSE APPROPRIATIONS COMMITTEE

The Bay Cabinet recommends that funding commitments for the most cost effective agricultural programs, particularly cover crop implementation, be preserved in any adopted allocation of Trust Fund dollars. This approach will ensure that the funds are used to reduce nutrient loads to the Bay in the most cost effective manner. However, in order to fully meet Bay nutrient reduction goals it is critical that urban/suburban loads are also addressed. This will be achieved by funding urban best management practices and targeted watershed-based Local Implementation Grant (LIG) projects. In addition, Maryland should work aggressively with federal and other partners to secure Farm Bill funding earmarked for the Bay, and other funds that can be targeted to implement cover crops and animal waste management in order to allow allocation of more Trust Fund support for urban best management practices and targeted watershed-based LIG projects.

For FY09 and FY10, allocation recommendations submitted in March, 2009 were as follows:

FY09 – (Based on \$9.6 million available)

- |   |                  |
|---|------------------|
| • Cover Crops                             | \$2.83 million   |
| • Animal Waste Management                 | \$3.0 million    |
| • Forest/Grass Buffer/Wetland Restoration | \$250,000        |
| • Ag BMP Implementation                   | \$850,000        |
| • Top 5 ranked MDE Urban BMP projects     | \$1.83 million   |
| • Start Local Implementation Grants       | \$340,000        |
| • Fund Innovative Technologies            | \$250,000        |
| • Fund Strategic Monitoring               | <u>\$250,000</u> |

Total \$9.6 million

FY10 – (Based on \$25 million available)

- |                           |                |
|---------------------------|----------------|
| • Cover Crops             | \$11.9 million |
| • Animal Waste Management | \$1.0 million  |



Chesapeake Bay Trust Fund:  
FY 09 Work Plan and FY 10 Expenditure Plan.  
January 27, 2009  
Updated June 2009

• Forest/Grass Buffer/Wetland Restoration	\$1.0 million
• Ag BMP Implementation	\$850,000
• Next 5 top ranked MDE Urban BMP projects	\$3.75 million
• Local Implementation Grants	\$5.38 million
• Fund Innovative Technologies	\$250,000
• Fund Strategic Monitoring	\$500,000
• Admin Fee (1.5%)	<u>\$375,000</u>
	Total \$25 million

## **INTRODUCTION**

In November 2007, Governor Martin O'Malley and Maryland lawmakers took a bold step toward restoring Maryland's waterways by creating the Chesapeake and Atlantic Coastal Bays 2010 Trust Fund (Trust Fund). It is the objective of the BayStat agencies to allocate the Fund through a process that is based on the best available scientific information regarding water quality conditions and cost-effectiveness of nutrient and sediment control measures, is transparent and accountable, and results in the greatest possible benefits to the Chesapeake Bay and its tributaries via reductions in non-point source nutrient and sediment loadings. Guiding this allocation process, the agencies outlined an approach that is designed to be focused, flexible, leveraged, competitive, innovative, engaged, accountable and adaptive. The six step process was developed to meet those objectives:

- Objective 1: Target priority areas and practices
- Objective 2: Develop initial Work and Expenditure Plans, and issue RFP's
- Objective 3: Evaluate proposals and make initial allocation decisions
- Objective 4: Legislative Review and approval
- Objective 5: Award and Administer Funds
- Objective 6: Review, report, and refine.

## **ACCOMPLISHMENTS**

Despite FY 09 and FY 10 being considered "transition years" in which the Trust Fund was allocated through an abridged process and the implementation delays caused by the current economic situation – there were several mechanisms put into place and programs that were initiated during the first two quarters of fiscal year FY 09.



Chesapeake Bay Trust Fund:  
 FY 09 Work Plan and FY 10 Expenditure Plan.  
 January 27, 2009  
 Updated June 2009

§ The establishment of the fifteen member (15) BayStat Science Advisory Panel to review and provide scientific guidance to BayStat and the state's Chesapeake Bay restoration effort.

§ The advancement of a targeting methodology that will improve nutrient reduction potential for not only Trust Fund dollars spent but other state resources.

§ The effective engagement of local governments and non-profit organizations in Chesapeake Bay restoration activities as evident by the level of response and local match offered in response to the Trust Fund solicitation for proposals. MDE received 58 urban/suburban stormwater proposals totaling \$27.1 M and state's Local Implementation Grant received 31 proposals totaling over \$100 M in requests.

§ The development of the Chesapeake Bay Innovative Technology Partnership - in partnership with the University of Maryland's Mtech Ventures Program - that will support investments in Maryland-based companies whose technology has the potential to accelerate restoration and/or reduce pollution to the Chesapeake Bay. The first two recipients of the Innovative Technology Partnership were announced by Governor O'Malley at the 2008 Executive Council Meeting. Traffax and Zymetis have the potential to support Chesapeake Bay restoration through the reduction of harmful air admissions through traffic reduction technology and biofuels advancement respectively.

§ In response to the need for greater capacity at the local level, the Watershed Assistance Collaborative (WAC) was created to prepare local governments to receive future Trust Fund dollars. It is recognized that not all jurisdictions currently have the capacity to implement the anticipated level of implementation need to restore the Chesapeake Bay. By bundling existing state administered technical assistance fund vehicles, the WAC connects Maryland communities interested in undertaking comprehensive watershed restoration projects to the

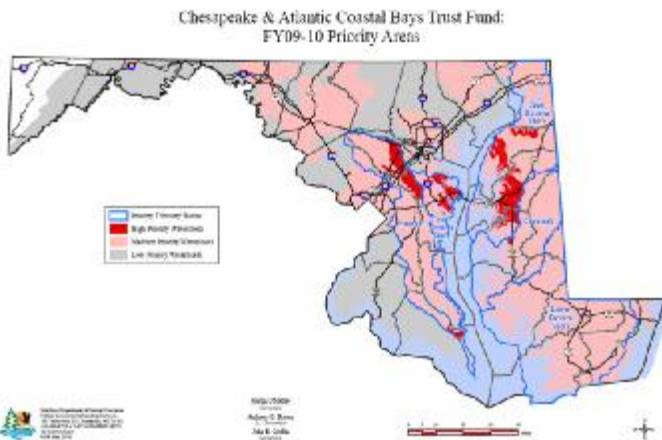


**Chesapeake Bay Trust Fund:  
FY 09 Work Plan and FY 10 Expenditure Plan.  
January 27, 2009  
Updated June 2009**

people and programs that will help them accomplish their goals. This approach would also allow Trust fund dollars to be directed as much as possible to implementation, while still developing capacity through other funding opportunities. Background on the Watershed Assistance Collaborative is attached in Appendix A.

### **ROLE OF BAYSTAT**

BayStat is a powerful new tool to assess, coordinate and target Maryland's Bay restoration programs, and to inform Maryland's citizens on progress. The BayStat agencies are collectively responsible for the administration of the Trust Fund in a manner consistent with the statute. BayStat will direct the administration of the Trust Fund in a manner that applies the best science, holds state agencies and grant recipients accountable for managing the fund, and targets activities in the most cost-effective way possible. BayStat will annually implement a technically sound geographic targeting of watersheds that are both in greatest need of non-point source pollution reduction for local water quality conditions and which have the greatest water quality impacts on the mainstem of the Chesapeake Bay. For FY 09 and FY 10, BayStat developed target funding areas using information from Maryland's Chesapeake Bay Report Card<sup>1</sup>, the USGS Sparrow model<sup>2</sup>, and best professional judgment.



<sup>1</sup> Maryland's Chesapeake Bay Report Card is an annual assessment of Chesapeake Bay ecosystem health developed by state scientists. The report card combines multiple indicators regarding water quality and habitat of ecosystem health into a single score for 15 regions of the Bay

<sup>2</sup> SPARROW is a U.S. Geological Survey model of surface water quality data. SPARROW is a regression-based model for regional interpretation of water quality monitoring data. SPARROW discriminates which watersheds are likely to contribute the highest nutrient and sediment loads to the Chesapeake Bay.



## **ROLE OF BAYSTAT SCIENCE ADVISORY PANEL**

Pursuant to Senate Bill 213 of the 2008 Session of the Maryland General Assembly, a Scientific Advisory Panel (SAP) was convened to review and provide scientific guidance to BayStat and shall 1) provide recommendations on the use of funds; 2) monitor the distribution of funds; 3) assess nutrient loading reductions and cost efficiencies from grants made in the previous year; 4) review the annual work plan and advise the BayStat Subcabinet of recommended changes; 5) review individual grant applications; and 6) review monies distributed on a noncompetitive basis and assess if they could be made competitively. The BayStat SAP Report, *“Oversight of the Strategy and Allocation Process for the Chesapeake and Atlantic Coastal Bays 2010 Trust Fund for Fiscal Year 2009”* is provided in Attachment B. The members of the Science Advisory Panel (SAP) were appointed by Governor O’Malley in June 2008. The SAP has 15 members with a diversity of experiences including water quality, resource economics, agriculture, engineering, growth, and policy. The list of current members is included in Attachment B.

## **FY09 AND FY 10 IMPLEMENTATION WORKPLAN**

Full implementation of the proposed allocation process required a transitional period, in which case the allocation process was delayed at the beginning of FY09. As a result, FY09 through FY11 will be addressed as “transition years” in which the Trust Fund will be allocated through an abridged process. Full implementation via the process described by objectives one through six above will begin in FY12.

To ensure that 2010 Trust Fund grants are put to work quickly in as effective and efficient a manner as possible, the BayStat Agencies agreed to using existing granting mechanisms at MDE, MDA and DNR, which constrained the degree of competitiveness and targeting. With the goal of targeting as much of the Trust Fund dollars in areas that will have the greatest results, the BayStat agencies used the High, Medium, and Low priority areas to target areas for increased cover crop reimbursement rates and to evaluate projects and proposals received through



**Chesapeake Bay Trust Fund:  
FY 09 Work Plan and FY 10 Expenditure Plan.  
January 27, 2009  
Updated June 2009**

competitive grant programs. FY09 funding and proposed FY10 allocations are presented according to the eight funding categories and are summarized in the table below. The table assumes available Trust Fund revenue of \$11.70 million for FY09 and \$10.05 million for FY10.

**Trust Fund FY09 and FY10 Appropriation and Planned Expenditures**

<i>Updated June 1, 2009<sup>1</sup></i>			
Category	FY 09 Amount	Planned FY 10	Estimated Load Reduction
<b>Strategic Monitoring (DNR):</b>			
Strategic Monitoring:	(\$0.25 M)	(\$0.25 M)	
<b>Total:</b>	<b>\$0.25 M</b>	<b>\$0.25 M</b>	<b>N/A</b>
<b>Agency Direct Costs (1.5%):</b>			
MDA	(\$0.00 M)	(\$0.00M)	(N/A)
MDE	(\$0.00 M)	(\$0.00 M)	
DNR	(\$0.00 M)	(\$0.00 M)	
<b>Total:</b>	<b>\$0.00 M</b>	<b>\$0.00M</b>	<b>N/A</b>
<b>Agency Technical Assistance Costs (MDA):</b>			
MDA to SCD for BMP Implementation:	(\$ .85 M)	(\$ .85 M)	
<b>Total:</b>	<b>\$0.85 M</b>	<b>\$0.85 M</b>	<b>N/A</b>
<b>Urban /Suburban Stormwater Projects (MDE):</b>			
St. Mary's SW Retrofit, Anne Arundel	(\$0.10 M)	--	(69 lbs N/yr)
Laurel High School LID, Prince Georges	(\$0.07 M)	--	(14.1 lbs N/yr)
Bear Branch Restoration, Prince Georges	(\$0.90 M)	--	(1,133 lbs N/yr)
Parkside Wetland Retrofit, Baltimore City	(\$0.65 M)	--	(333 lbs N/yr)
Rockfish Raw Bar and Grill, Anne Arundel	(\$0.11 M)	--	(5 lbs N/yr)
Tanyard Branch SW Improvement, Talbot		(\$0.49 M)	(113 lbs N/yr)
Western Branch Wetland, Prince George's		(\$0.55 M)	(150 lbs N/yr)
Moore's Run Wetlands, Baltimore City		Fund in FY11	Fund in FY11
Greenhill/Hillside, Prince George's		(\$0.14 M)	(125.9 lbs N/yr)
Back River Restoration, Baltimore		(\$0.70 M)	(606 lbs N/yr)
<b>Total:</b>	<b>\$1.83 M</b>	<b>\$1.88M</b>	<b>2,549 lbs N/yr</b>
<b>Agricultural Practices (MDA):</b>			
MDA Cover Crops:	(\$2.83 M)	(\$1.90 M)	TBD
MDA Forest / Grass Buffers / Wetlands	(\$0.25 M)	(\$0.70 M)	TBD
MDA Animal Waste Management:	(\$3.00 M)	(\$1.00 M)	TBD
<b>Total:</b>	<b>\$6.08 M</b>	<b>\$3.60 M</b>	
<b>Targeted Innovative Practices (DNR):</b>			
Little Patuxent River Watershed, Howard	(\$2.00 M) <sup>2</sup>	(\$0.00 M)	(16,348 lbs N/yr)
Magothy River Watershed, Anne Arundel	(\$0.44 M) <sup>3</sup>	(\$0.02 M)	(2,910 lbs N/yr)
Wheel Creek Watershed, Harford	--	(\$0.20 M)	(948 lbs N/yr)
Tred Avon River Watershed, Talbot	--	Fund in FY11 <sup>4</sup>	Fund in FY11
Watershed 263, Baltimore City	--	(\$0.55 M)	(834 lbs N/yr)
Middle Chester River Watershed, Kent	--	(\$0.55 M)	(90,200 lbs N/yr)
Corsica River Watershed, Queen Anne	--	Fund in FY11 <sup>5</sup>	Fund in FY11
Bay Restoration Innovative Technology	(\$ .25 M)	(\$ .25 M)	(TBD)
Natural Filters Strategic Implementation <sup>6</sup>	(\$0.00M)	(\$1.90M)	(46,132 lbs N/yr)
<b>Total:</b>	<b>\$2.69 M</b>	<b>\$3.47 M</b>	<b>157,372 lbs N/yr</b>
<b>TOTAL:</b>	<b>\$11.70 M</b>	<b>\$10.05 M</b>	<b>159,921 lbs N/yr<sup>7</sup></b>



**Chesapeake Bay Trust Fund:**  
**FY 09 Work Plan and FY 10 Expenditure Plan.**  
 January 27, 2009  
 Updated June 2009

<sup>1</sup> Reflects increase in revenue from December 2008 estimates (approximately \$2.1M in FY09)

<sup>2</sup> 340K encumbered in FY09, the remaining 1.66M to be encumbered in FY10

<sup>3</sup> Amount to be encumbered in FY10

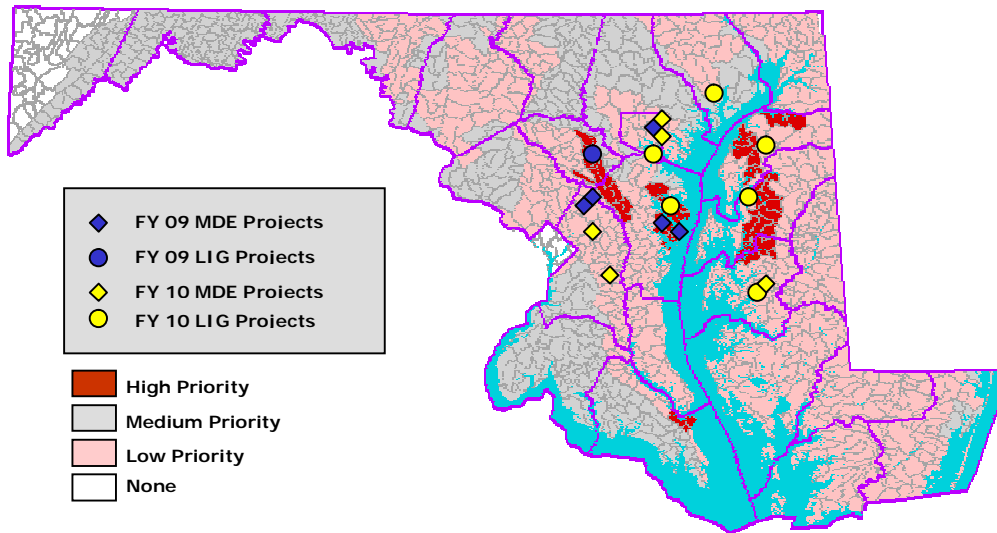
<sup>4</sup> Watershed Restoration Specialist and DNR staff will work with Talbot County to identify additional projects and funding opportunities to expand scope of original proposal. Funding to begin for this project in FY11.

<sup>5</sup> Town of Centreville to receive DNR's Coastal Community Initiative funding to begin work on the stormwater utility component of the Corsica Proposal. Funding via Trust Fund to begin FY11.

<sup>6</sup> Re-allocated Trust Fund money will go to fund the implementation of restoration projects on public lands in accordance with the State's Natural Filters 2-year milestone. The State's 2-year milestones are Governor initiated goals towards implementation of the Statewide Tributary Strategies. Work will first be focused into the 7 watersheds identified through the Local Implementation Grant to further target Trust Fund dollars.

<sup>7</sup> Estimated nutrient reduction based on completion of multi-year projects (2 -3 years). Performance data will be updated and provided in the 2009 Trust Fund Annual Report.

### Trust Fund Projects by Location



*Note: Geo-spatial data on this year's cover crop program is not yet available.*

### IMPLEMENTATION DETAILS

For FY09, the total available in the Trust Fund is \$11.7 million. Total Trust Fund allocation for agricultural best management practices (BMPs) in FY09 is \$6.93 million, including \$2.83 for cover crops, \$3.0 million for MAFO/CAFO,



**Chesapeake Bay Trust Fund:  
FY 09 Work Plan and FY 10 Expenditure Plan.  
January 27, 2009  
Updated June 2009**



\$250,000 for CREP match and \$850,000 to hire contractual staff to help implement agricultural BMPs. Urban best management practice projects would receive a total of \$1.83 million in FY09, funding the top five ranked projects: St Mary's SW Retrofit (AA Co), Laurel High School LID demonstration (PG Co), Bear Branch (PG Co), Parkside Wetland Retrofit (Balt City) and Rockfish Bar and Grill (Anne Arundel Co). In FY09, DNR will use \$340,000 to start on the highest ranked targeted Local Implementation grant in the high priority Little Patuxent watershed (Howard Co). \$1.66 million of the FY09 revenues will be provided to the Little Patuxent through a budget amendment in FY10. For the remainder of FY09, DNR will continue to work with the seven highest ranked LIG projects to refine proposals and develop business plans to be executed beginning July 2009. Innovative technologies and Strategic Monitoring would each receive \$250K.

For FY10, the appropriated budget is \$10.05 million. Cover crops will receive \$1.9 million, MAFO/CAFO \$1.0 million, CREP match \$.7 million, agricultural BMP implementation \$850,000. Urban best management practice projects will receive a total of \$1.88 million in FY10, funding the following top ranked projects: Tanyard Branch (Talbot Co.), Western Branch (PG Co.), Greenhill/Hillside Road (PG Co.), Back River-Red House Run (Balt. Co.). Moore's Run (Balt. City) will be funding utilizing FY11 dollars. DNR would continue funding the Little Patuxent, and initiate funding in the Magothy, Wheel Creek, Watershed 263, and Middle Chester. Funding for Tred Avon and Corsica would begin in FY11. Watershed Restoration Specialists and DNR will continue to work with these watersheds to identify additional projects and funding opportunities to expand the scope of the original proposal. Natural Filters Implementation will receive \$1.9M and funding will be targeted in the 7 LIG-recipient watersheds. Innovative Technologies would receive \$250,000, and Strategic Monitoring \$500,000.



## **PERFORMANCE MONITORING AND ACCOUNTABILITY METRICS**

The objective of the strategic monitoring will be to assess the performance of implemented projects in a subset of locations, with the intent of then extrapolating those findings to all funded projects. Given the short time frame and limitations in funding targeted, competitive projects in FY09, DNR has been working with UMCES and other partners as appropriate to design a strategic monitoring program in FY09 that can be applied effectively in FY10 and beyond. Accountability and project tracking for Trust Fund projects will include significant project milestones such as design start, design completion, construction advertising, award, notice to proceed, and construction completion and will be reported via BayStat and provided with the 2009 Annual Report. On an annual basis, key water quality/Bay Program metrics will be reported (i.e. lbs nutrients removed, cost effectiveness, miles of stream restored, acres of watershed restored, etc).

## **Recommendations/Next Steps**

FY11 will continue as a "transition year" in which the Trust Fund will be allocated through an abridged process. It is anticipated that FY11 funding would continue for the seven top ranked targeted watershed LIG projects. For FY12, it is anticipated that the full \$50 M Trust Fund will be restored to the Trust Fund. In FY12 there will be a greater opportunity to move toward the targeted watershed scale restoration through the LIG as envisioned by the statute. The Bay Cabinet recommends that a single RFP process be implemented for FY 2012, to implement both urban and agricultural BMPs through the LIG multi- project, targeted subwatershed approach. The agencies will work together to release a joint RFP that will focus funding resources into targeted watersheds and cost effective practices. This will require that the agencies release the joint RFP for 2012 funding in July 2010 allowing projects to be targeted and integrated, geographically coordinated, and included in the regular FY12 budget request. All agencies will work with the Scientific Advisory Panel (SAP) and local partners to evaluate targeting and project efficiencies to assure that we continue to fund the most worthy projects. Funding for agricultural practices will be prioritized, coordinated and targeted toward geographic areas related to LIG projects, to the maximum extent practicable. Innovative Technology would receive



**Chesapeake Bay Trust Fund:  
FY 09 Work Plan and FY 10 Expenditure Plan.  
January 27, 2009  
Updated June 2009**

\$500K, Strategic Monitoring would increase to \$1 million and the agencies would receive 1.5% (\$750,000) for administration. In addition, Maryland will work aggressively with federal and other partners to secure Farm Bill funding earmarked by the Bay, and other funds that can be targeted to implement cover crops and animal waste management in order to allow allocation of more Trust Fund support for targeted watershed projects.

## **List of Attachments**

**Attachment A**

**Watershed Assistance Collaborative**

**Attachment B**

**Scientific Advisory Panel Report**



**Chesapeake Bay Trust Fund:  
FY 09 Work Plan and FY 10 Expenditure Plan.  
January 27, 2009  
Updated June 2009**

## **Attachment A**

### **Watershed Assistance Collaborative Putting the Resources at the Level Where Work Gets Done**

**Meeting the Challenge of Chesapeake Bay Restoration by Ensuring that Local Communities get the Information – and the Resources – that they Need...**

**The Chesapeake and Atlantic Coastal Bays Trust Fund** was passed in response to the continued decline of water quality and natural resources in our State waters. After 25 years of dedicated effort to restore the Chesapeake and Coastal Bays, it is clear that Maryland and our partners are not achieving our goals. The Trust Fund was established to target limited financial resources to the most effective nonpoint source areas in the State, and show tangible results...

**The State's Local Implementation Grant (LIG)** has been established in response to the Trust Fund to provide implementation dollars directly to Maryland's local governments. Through this initiative, best practices of the State will be leveraged, internal resources tapped and human capital shared, to demonstrate what State and local partnerships can accomplish...

#### **What is the Watershed Assistance Collaborative?**

The State has developed a new service that will connect Maryland communities interested in undertaking comprehensive watershed restoration projects to the people and programs that will help them accomplish their goals...

√ **The Training:** The University of Maryland Environmental Finance Center, along with State partners will provide hands on trainings for communities interested in watershed targeting, planning, and the financing of long-term restoration efforts...

√ **The Resources:** In partnership with the Chesapeake Bay Trust, the State will offer planning and design grants and technical assistance to meet the needs of local governments & communities preparing to undertake a comprehensive restoration effort...



**Chesapeake Bay Trust Fund:  
FY 09 Work Plan and FY 10 Expenditure Plan.  
January 27, 2009  
Updated June 2009**

√ **The Support:** In partnership with Maryland Sea Grant and the University System of Maryland, the State will provide Regional Watershed Specialists to provide implementation assistance focused on helping local and county governments within the watershed reduce or eliminate nonpoint sources of pollution...

**Advancing Coastal Management**

Please visit us at: <http://www.dnr.state.md.us/bay/czm/index.html> for more information or

Call Carrie Decker at 410-260-8723 [cdecker@dnr.state.md.us](mailto:cdecker@dnr.state.md.us)



**Chesapeake Bay Trust Fund:  
FY 09 Work Plan and FY 10 Expenditure Plan.  
January 27, 2009  
Updated June 2009**

## **Attachment B: BayStat Science Advisory Panel**

### *BayStat Science Advisory Panel*

#### **Oversight of the Strategy and Allocation Process for the Chesapeake and Atlantic Coastal Bays Trust Fund for Fiscal Year 2009**

#### **The Science Advisory Panel**

##### **1. Members**

Pursuant to Senate Bill 213 of the 2008 Session of the Maryland General Assembly, members of the Science Advisory Panel (SAP) were appointed by Governor Martin O'Malley. The SAP has 15 members with a diversity of experience including water quality, resource economics, agriculture, engineering, growth, and policy. The current SAP membership is provided below:

Dr. Donald Boesch, Chair  
President, University of Maryland Center for Environmental Studies (UMCES)

Ms. Jennifer Aiosa  
Senior Scientist, Chesapeake Bay Foundation

Dr. Peter Bergstrom  
Underwater Grass Specialist, NOAA Chesapeake Bay Program Office

Dr. Walter Boynton  
Professor, UMCES

Dr. Russell Brinsfield  
Director, Harry Hughes Center for Agro-Ecology

Dr. Allen Davis  
Professor, University of Maryland, College Park

Dr. Jana Davis  
Chief Scientist, Chesapeake Bay Trust

Dr. Thomas Fisher  
Professor, UMCES

Dr. Thomas Jordan  
Senior Scientist, Smithsonian Environmental Research Center

Dr. Gerrit Knaap  
Professor, University of Maryland, College Park

Dr. Lori Lynch  
Professor, University of Maryland, College Park

Dr. Douglas Parker  
Associate Professor, University of Maryland, College Park



**Chesapeake Bay Trust Fund:  
FY 09 Work Plan and FY 10 Expenditure Plan.  
January 27, 2009  
Updated June 2009**

Ms. Ann Swanson  
Executive Director, Chesapeake Bay Commission

Dr. Claire Welty  
Professor, University of Maryland Baltimore County

Dr. Peter Wilcock  
Professor, Johns Hopkins University

*Staff*  
Mr. David Nemazie  
Associate Vice President, UMCES

Dr. Michael Williams  
Associate Research Scientist, UMCES

## ***2. Charge***

The charge of the Science Advisory Panel is outlined in the legislation (SB 213) that authorizes the Chesapeake and Atlantic Coastal Bays 2010 Trust Fund (2010 Trust Fund). In summary, the SAP shall: 1) provide recommendations on the use of funds; 2) monitor the distribution of funds; 3) assess nutrient loading reductions and cost efficiencies from grants made in the previous year; 4) review the annual work plan and advise the BayStat Subcabinet of recommended changes; 5) review individual grant applications; and 6) review monies distributed on a noncompetitive basis and assess if they could be made competitively.

## ***3. Meetings and deliberations***

The Science Advisory Panel met three times for the FY 2009 review. The inaugural meeting took place in conjunction with a Bay Cabinet meeting on 30 September 2008 in which Secretary John Griffin laid out the charge for the SAP. The SAP was asked to initially focus on reviewing multi-year proposals that were received in conjunction with Request for Proposals for Local Implementation Grants and Storm Water and Stream Restoration Grants. The two programs received over 80 proposals requesting over \$100M.

Two additional meetings of the SAP focused on the agency review process as well as providing comments and recommendations on a subset of the 80 proposals that the agencies identified as worthy of funding (discussed in detail below). The SAP was asked to provide such comments and recommendations on 28 proposals. Each proposal was assigned to two SAP members for in-depth review, with many proposals receiving comments from multiple SAP members.

In addition, the SAP received briefings on the agricultural conservation programs, geographical targeting methodology, and small watershed monitoring programs.



Chesapeake Bay Trust Fund:  
FY 09 Work Plan and FY 10 Expenditure Plan.  
January 27, 2009  
Updated June 2009

## Effectiveness of Program Strategy

### *1. Overall strategy and funding allocations*

The Trust Fund was established to provide financial assistance to local governments, political subdivisions, and capable nongovernmental organizations for the implementation of nonpoint source pollution control projects to achieve the State's tributary strategy goals developed in accordance with the Chesapeake 2000 Agreement and to improve the health of the Atlantic Coastal Bays and their tributaries. The BayStat Program directs the administration of the Trust Fund, with multiple State agencies eligible to receive moneys for grants and other expenditures: the Maryland Department of Environment (MDE), Department of Natural Resources (DNR), Maryland Department of Agriculture (MDA), and Maryland Department of Planning (MDP).

Initially, to ensure that Trust Fund grants are put to work quickly in as effective and efficient a manner as possible, existing granting mechanisms at MDE, MDA and DNR are being used to award funding to projects that meet the Trust Fund eligibility requirements but are not necessarily part of an existing local watershed plan. The intent is that in future years, the Trust Fund grants will be awarded as part of a single multi-program, multi-agency request for proposals that will fund projects that are part of a comprehensive, targeted watershed restoration plan.

### *2. Geographic targeting*

The BayStat Program developed priority funding areas for FY09 and FY10 using information from UMCES' Chesapeake Bay Report Card, the USGS SPARROW model, and best professional judgment (Figure 1).

The Chesapeake Bay Report Card is an annual assessment of the health of the Chesapeake Bay ecosystem developed by university, state and federal scientists. The report card combines multiple indicators (regarding water quality and habitat) of an ecosystem's health into a single health score for 15 regions in the Bay. Recent summary data from the Report Card indicate that five of Maryland's ten Tributary Basins have the poorest Chesapeake Bay health scores and are significantly impacted by nonpoint source pollution. The five impacted Tributary Basins are the Patuxent, Lower Western Shore, Upper Eastern Shore, Choptank, and Lower Eastern Shore basins.

High Priority watersheds within the five Tributary Basins were selected using the U.S. Geological Survey's SPARROW model of surface water quality. Detailed information on SPARROW is provided at <http://water.usgs.gov/nawqa/sparrow/>. SPARROW is a regression-based model for regional interpretation of water quality monitoring data. SPARROW discriminates which watersheds are likely to contribute the highest nutrient and sediment loads to the Chesapeake Bay. SPARROW estimates of delivered nitrogen yields for watersheds within the Patuxent, Lower Western Shore,

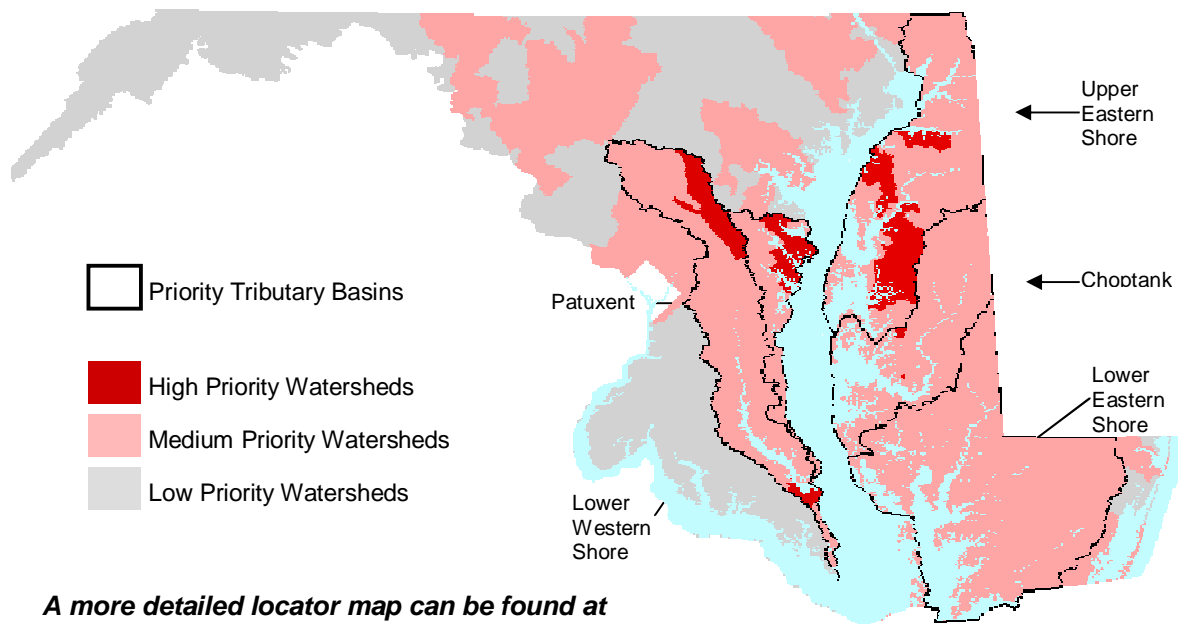




Upper Eastern Shore, Choptank and Lower Eastern Tributary Basins were compared, and 46 subwatersheds were selected as High Priority. Of these 46 watersheds, 23 have the highest delivered urban loads and 23 have the highest delivered agricultural loads on an area basis. One of the 23 agricultural watersheds was eliminated from consideration because its drainage area was less than 5000 acres.

Medium Priority watersheds were selected using three criteria. First, all of the watersheds within the Patuxent, Lower Western Shore, Upper Eastern Shore, Choptank, and Lower Eastern Shore Tributary Strategy basins that were not identified as High Priority watersheds were selected as Medium Priority watersheds. Then, SPARROW data (estimated delivered nitrogen) for all of the remaining watersheds in the Chesapeake Bay drainage area were compared, and the highest loading basins were selected as Medium Priority. And finally, professional judgment was used to select the Anacostia, Chincoteague and Isle of Wight Bay as Medium Priority watersheds. The Anacostia watershed was selected as it “connected” other Medium Priority areas. The Coastal Bay watersheds were selected based on the expertise of scientists in that region.

All of the remaining watersheds in the Chesapeake and Coastal Bay watersheds are listed as Low Priorities.



***A more detailed locator map can be found at <http://www.baystat.maryland.gov/trustfund>***

***Figure 1. FY09 and FY10 funding priority areas for the Trust Fund.***

The SAP reviewed this targeting scheme and found it to be a reasonable method for initial use, given the time constraints for implementation. The members noted that it



can be further refined as new data and methodologies, such as the Chesapeake Bay Program's Phase 5 Watershed Model, are included. In addition, priorities related to phosphorous loading should also be incorporated.

### ***3. Agricultural conservation programs***

The Trust Fund enabled significant expansion to the cover crop program administered by the Maryland Department of Agriculture. Cover crops are one of the most cost-effective and environmentally sustainable ways to control soil erosion and reduce nutrient runoff into the Chesapeake Bay and its tributaries during winter and early spring.

In FY09, \$18 million in cover crop funding was made available, more than double the FY08 cover crop budget, through the Trust Fund, the Chesapeake Bay Restoration Fund, and other programs. At this funding level farmers can plant nearly 400,000 acres in protective cover crops following the fall harvest.

MDA offers the Traditional Cover Crop Program, which does not allow for harvest, and a Commodity Cover Crop Program for farmers who harvest their cover crops. Cost-share rates have increased substantially this year following recommendations to maximize nutrient benefits from cover crops made by panels of experts convened by MDA/UMCES at the behest of BayStat. Farmers in high priority watersheds who follow all incentivized environmental guidelines (early planting; after corn, vegetables, or tobacco; maximize soil to seed contact; use of rye;) may be eligible to receive up to \$90 an acre through the Traditional Cover Crop Program. The Commodity Cover Crop Program pays eligible farmers \$30 an acre.

MDA also targeted use of the Trust Fund for animal waste management and BMPs eligible under the Conservation Reserve Enhancement Program.

The FY09 investments in cover crops and other agricultural conservation programs had already been made before the SAP was convened. Furthermore, time did not allow for an in-depth evaluation of the implementation of these programs, which would, in any case, be more effective following certification of this implementation after planting. The SAP will evaluate the agricultural conservation programs under the 2010 Trust Fund and their integration with other Trust Fund programs in the coming months.

### ***4. Local Implementation Grants (LIG)***

Maryland Department of Natural Resources assembled a request for proposals for Local Implementation Grants. The Local Implementation Grant program sought proposals for the implementation of existing local watershed plans that address nonpoint source reduction. A LIG is intended to support pilot activities to demonstrate how funds can be successfully used in the future to encourage innovative practices, and build capacity through partnerships between local governments and nongovernmental organizations. The grant is intended to fund innovative nonpoint source restoration projects that can show demonstrated results in the reduction of nutrient or sediment loading to tidal waters. Successful grants



should encourage geographic targeting, clustering of multiple projects, leveraging of funds, and projects that combine cost effective urban and/or agricultural best management practices in the same watershed.

The RFP notes that priority would be given to proposals that fall into one of the targeted subwatersheds. Grants are to be awarded on a competitive basis to local governments and nongovernmental organizations, including; bi-county agencies, municipalities, forest conservancy district boards, soil conservation districts, academic institutions and nonprofit organizations having a demonstrated ability to implement nonpoint source pollution control projects. Priority is given to multi-party applications that include their local government partner.

DNR received over 30 proposals that, if all were fully funded, would require expenditures of \$100 million over a three year period. To review these proposals DNR developed evaluation criteria that included scientific feasibility, implementation readiness, and implementation ability. To reduce the number of proposals for consideration by the Science Advisory Panel, DNR led a Bay Workgroup review of the proposals. Based on that review, the SAP provided additional comments on 12 proposals and examined the rankings for correspondence to the stated evaluation criteria and 2010 Trust Fund objectives.

#### ***5. Storm Water and Stream Restoration Grants***

The portion of the Trust Fund moneys allotted to MDE provides funds for the advancement of urban/suburban nonpoint source pollution control projects such as urban/suburban storm water practices, and stream and wetland restoration projects in all regions of the State. Local governments, bi-county agencies, municipalities, soil conservation districts, academic institutions, and nonprofit organizations with established storm water management expertise could apply for fund distribution. Multi-year, partner proposals, local, State and federal match and/or cost-share projects are encouraged. All projects must address objectives of the 2010 Trust Fund and deliver reductions in nitrogen, phosphorus and sediment loads. Projects ready to proceed to construction are preferred.

Special consideration was given to targeted and innovative watershed restoration projects within the priority subwatersheds that are comprehensive and include multiple practice initiatives. Competitive grants encourage finer scale geographic targeting, clustering of multiple projects and projects that combine cost effective urban and/or agricultural Best Management Practices (BMPs) in the same watershed. Multi-year proposals were welcomed and encouraged. Through this initiative, the State is seeking to demonstrate that measurable results can be achieved through accelerated implementation at both the State and local level in specific watersheds.

MDE received over 50 proposals for consideration of funding in both FY09 and FY10, that, if all were fully funded, would require a commitment of over \$40 million from the 2010 Trust Fund. To review these proposals, MDE developed evaluation criteria with specific consideration given to the following factors: water quality improvement; location; fund leveraging; readiness to proceed; cost-effectiveness; monitoring; and technical merit. To reduce the number of proposals for



consideration by the SAP, MDE led a Bay Workgroup review of the proposals. Based on that review, SAP provided specific comments on 16 proposals and examined the rankings for correspondence to the stated evaluation criteria and Trust Fund objectives.

## **Panel Findings and Recommendations Regarding the Trust Fund**

- 1. Agencies conducted a comprehensive review of all the proposals they received based on legitimate and appropriate criteria.***

The Maryland Departments of Natural Resources and Environment led review efforts that used expertise and incorporated evaluations from multiple state agencies. The agency reviews closely followed the criteria that they included with the Request for Proposals, developing both quantitative scores based on these criteria, as well as highlighting the positive and negative aspects of the proposals. The agencies also used standard methods to assess both nutrient and sediment reductions as well as cost effectiveness. The SAP reviewed the agency evaluation criteria and determined that they were comprehensive and closely adhered to.

- 2. Agencies only forwarded proposals containing implementation strategies that were deemed to be worthy of funding and met the following criteria: readiness to proceed; adequate partners; and significant leveraging of support.***

The SAP was asked to provide additional comments on 12 Local Implementation Grants and 16 Storm Water and Stream Restoration Grants (Figure 2). These proposals were highly ranked by the agencies in which they were deemed ready to proceed, had significant leveraging of support, present in geographical priority funding areas, and implementation partners. In addition, the SAP had access to all 80 proposals and some members read proposals that were not in the top 28 and agreed that they were not competitive for funding. The SAP concluded that the agency review process (administered by DNR and MDE) was sound and responsive to the intent of the Trust Fund legislation and generally identified strong proposals worthy of future comment and potential funding.

- 3. The SAP provided comments to the agencies regarding areas of emphasis or potential improvements for the recommended proposals.***

SAP members were assigned primary and secondary proposals to read, review and comment upon. Each of the 28 proposals was reviewed in detail by at least two SAP members. Approximately 25% of the proposals were read by at least three SAP members. Comments tended to focus directly on the following questions: 1) would the implementation strategies proposal have a significant impact on reducing nitrogen, phosphorous, or sediment from reaching streams, rivers, and estuarine waters entering the watershed; 2) could the monitoring plan even measure the effectiveness of the implementation; 3) is the project cost effective for the amount of nutrients and sediments expected to be reduced; and 4) do they have committed partners and are they all ready to proceed? SAP comments on individual proposals



were forwarded to the agencies so they can be used in determining which proposals should be funded and how they can be improved. For proposals that do not receive funding, the SAP comments can be used to strengthen a future submittal. The agency officials responsible for these programs were present during the SAP deliberations and indicated that they found this advice very useful in making the final decisions and in negotiating with potential grantees for improving the effectiveness of implementation and assessment of outcomes.

**4. *The SAP received a general overview of MDA's cover crop program which gave significant weight to fields which have the greatest potential for significant nutrient loss.***

The Maryland Department of Agriculture has modified the incentive structure of the cover crop program significantly to incorporate geographic targeting and emphasize factors maximizing nutrient uptake potential. The SAP supports these changes as they should lead to greater nitrogen reductions than the past implementation strategy. The SAP plans to work with MDA to determine if the cover crop program can be implemented on a competitive basis and effectively integrated with other 2010 Trust Fund efforts in future years. In addition, the SAP observes that careful attention will have to be given to ensuring the sustainability of the cover crop program by incorporating the use of cover crops into standard agricultural practice, with less dependency on annual payments.

### **Overarching Considerations for Trust Fund Effectiveness**

To maximize the long-term effectiveness and efficiency of Trust Fund programs, the Science Advisory Panel recommends application, to the extent practical, of the following criteria:

1. Implementation of the projects should result in significant and measurable reductions in nonpoint sources of nitrogen, phosphorus and sediment;
2. All implementation plans should include some appropriate level of accounting for outcomes in nonpoint source reductions and their cost effectiveness;
3. Subwatersheds that include multiple Trust Fund supported projects should be carefully monitored to determine effectiveness of the program;
4. Funded projects should have a mechanism to continue to achieve its nonpoint source reduction objectives beyond the years it receives Trust Fund support through sustained support of operations and maintenance or internalization of costs.
5. Projects should be targeted in the following ways:
  - a. Geographic: Trust Fund supported projects (including those funded by MDA) should preferentially be located in targeted watersheds and, to the extent practicable, be co-located with other projects in order to produce synergistic effects on water quality;



- b. **Financial:** Trust Fund supported projects should be the most cost-efficient (price/pound reduced) for the targeted source of nutrients (agricultural, urban, etc.);
- c. **Best Management Practices:** Trust Fund supported projects should use the state-of-the-art best management practices to maximize nonpoint source reduction in the most efficient manner. Novel best management practices should include monitoring at the practice level to confirm effectiveness and provide support for further implementation in other critical areas.

### **Next Steps of the Science Advisory Panel**

1. Advise the agencies on the best methods to monitor the Trust Fund proposals that receive funding to ensure that implementation strategies are measurable and measured (within three months).
2. Learn more about the implementation of the MDA cover crop program to determine if it can be implemented on a competitive basis and how that should be implemented (within six months).
3. Work with the agencies to develop a request for proposals, if one is issued in CY2009 (within six months).
4. Assess the implementation of projects that are funded in FY09 and ensure progress and/or provide further advice to ensure success (within a year and at least annually).



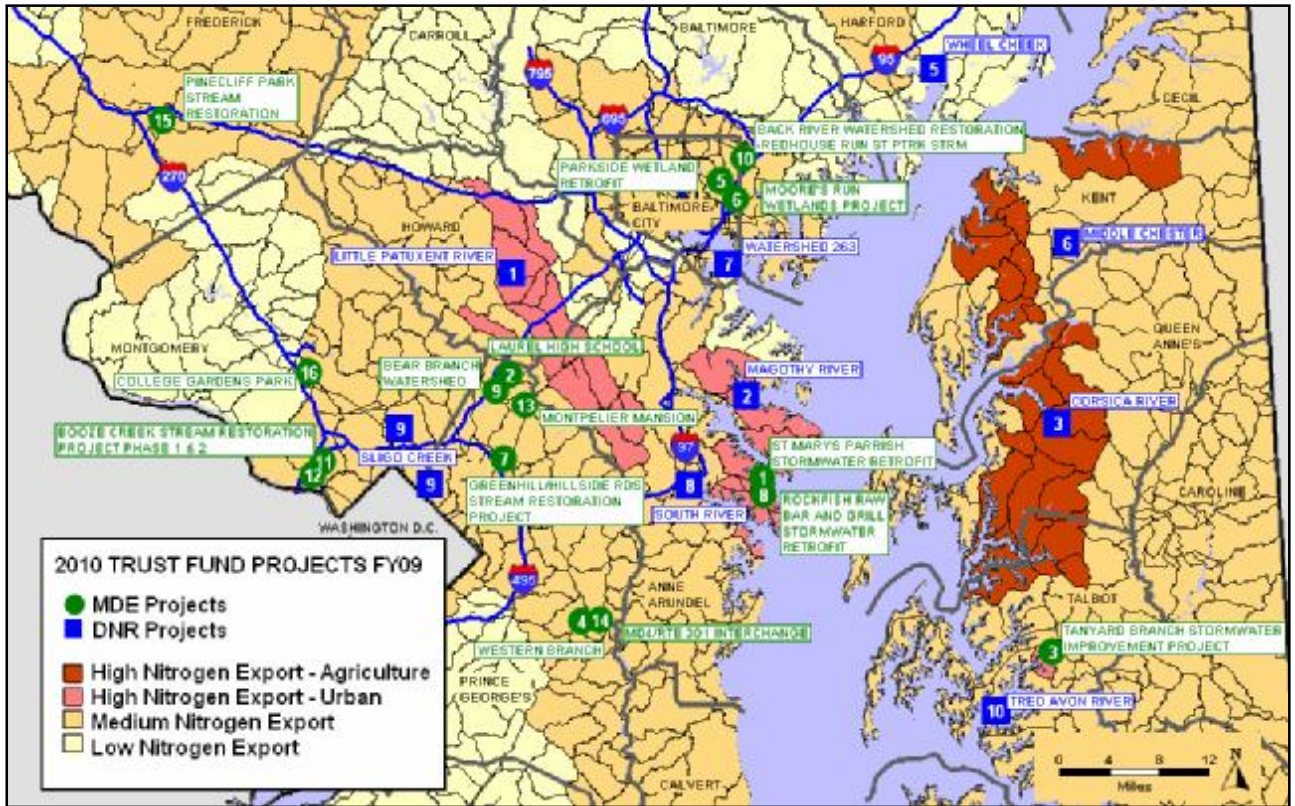


Figure 2. Locations of Local Implementation Grants and Storm Water and Stream Restoration Grants reviewed by the SAP.