Bay Restoration Fund Advisory Committee

Robert Warfield, Chairman

Annual Status Report

January 2006

Report to Governor Robert L. Ehrlich, Jr.
The Senate Education, Health, and Environmental Affairs Committee
And the House Environmental Matters Committee

EXECUTIVE SUMMARY

The Bay Restoration Advisory Committee is pleased to present to Governor Robert L. Ehrlich, Jr. and the Maryland Legislature, its first annual Legislative Update Report. Great strides have been made in implementing this historic Bay Restoration Fund, but many challenges remain as we begin the multi-year task of upgrading the State's wastewater treatment plants, onsite sewage disposal systems and plant cover crops to reduce nitrogen pollution in Chesapeake Bay.

Maryland's Bay Restoration Fund (BRF) is generating significant interest around the Country. The Bay Restoration Fund has been the feature of an article in the Cape Codder newspaper. MDE staff has been invited to travel to Minnesota and Virginia to participate in workshops on funding water quality restoration. The BRF was selected to be a finalist in the Southern Legislative Conference's Innovations in Government awards program, held in Mobile, Alabama. Most recently, MDE staff participated in development of a web-cast focused on the water quality problems associated with excessive nutrient loading and the innovate approaches being taken by Maryland and other States to address the problem. The web cast, sponsored by the journal, Engineering News-Record, is being broadcast on the web beginning October 1, 2005.

The accomplishments we have to report so far are impressive, but many challenges remain as we move forward in implementing the nutrient controls that have been made possible by Maryland's Bay Restoration Fund.

2004-2005 Accomplishments

- The Comptroller's Office and the Maryland Department of the Environment, in cooperation with local government wastewater billing authorities, established procedures and implemented the Bay Restoration Fund fee collection process on time, beginning January 1, 2005.

- As of December 31, 2005, the Comptroller of Maryland has collected $40,917,822, of which $40,263,134 has been deposited into Maryland Department of the Environment and Maryland Department of Agriculture's - Wastewater, Septic and Cover Crop Funds.

- Enhanced Nutrient Removal upgrades of the State's major sewage treatment plants are currently underway. One facility, Celanese in Allegany County, has been completed and is in operation. Six facilities are under construction, 11 are under design and 30 are in planning. MDE is continuing to work to bring the remaining 18 major systems into the program.

- The State Department of Assessment and Taxation and the Maryland Department of the Environment, with assistance from the Department of Planning and the Department of Natural Resources, has worked in cooperation with local government agencies to produce a database of the names and addresses of approximately 420,000 OSDS users in Maryland and develop and implement the OSDS billing system.

- All 23 counties and Baltimore City now have an OSDS billing plan in place. Eight counties sent the bills with their July 2005 tax bill; 8 counties will send a separate bill in November 2005; 2 counties will send a second tax bill in December 2005; 3 counties will send bills with the July 2006 tax bill and the three remaining jurisdictions will bill by July 2006.

- BRF Advisory Committee's OSDS Subcommittee has established a workgroup including local health and public works agencies and industry representatives, to develop specifications for approved OSDS technologies. Referred to as Best Available Technology (BAT) Workgroup, this group of professionals is responsible for establishing the procedures for determining what specific types of systems will be eligible for grants under the OSDS portion of the BRF.

- In cooperation with the OSDS Subcommittee, MDE has developed a Request for Proposals (RFP) for local governments to obtain funding through the BRF to support the planning, design and construction of BAT OSDS systems in targeted watersheds, with priority to failing systems in the Critical Area of the Chesapeake Bay and the Coastal Bays.

- The Maryland Department of Agriculture dedicates their portion of BRF funds to implementation of the statewide Cover Crop Program. This year 200,000 acres were enrolled in the program following a commitment from the Governor to provide supplemental funds to address financial needs unmet by BRF. Cover crops are planted in the fall to tie up nitrogen remaining from the previous crop. They are recognized as the single most cost effective best management practice (BMP) available to control nitrogen movement to groundwater and subsequently the Bay. Cover crops also prevent soil erosion and improve soil quality.

Challenges

- Wastewater treatment plant construction costs on recently opened bids are coming in between 20 and 30 percent higher than the original planning-level estimates. As a result, costs are likely to be much closer to the upper end of the $750 million to $ 1 billion range estimated at the time the legislation was being considered. The escalating costs can be attributed to increasing energy, steel and concrete costs. The Committee believes we should allow for more a few more quarterly collection cycles before any decision can be made on how to address this issue. Actual collections may be less and we may have higher deficit to offset, or collections may be more than projected because projections are based on only a 1% growth rate, which may be overly conservative.

- The BRF funded wastewater treatment plant upgrades to achieve Enhanced Nutrient Removal (ENR) levels are dependent on the plant having already been upgraded to Biological Nutrient Removal (BNR) levels. During the 2005 legislative session, the General Assembly cut the BNR program by $3 million. MDE was able to mitigate for this cut in the short-term by shifting available funding and maintain the momentum of the upgrade program, however, any additional cuts in the BNR program will also affect the BRF implementation of ENR upgrades.

- MDE is seeing increasing requests for allocation of BRF funding to assist minor facilities with upgrade costs and some have suggested that a portion of the funding be redirected to minor facilities, which are not as cost-effective in terms of nutrient removal.

- Education and outreach efforts need to be strengthened for the OSDS portion of the fund since many OSDS users do not recognize the connection between their systems and the pollution problem in Maryland's Bays.

- The OSDS upgrades require the development and implementation of a full-scale grants program and establishment of engineering, operation and maintenance procedures to ensure that the BRF investment in OSDS upgrades actually results in the intended nitrogen reductions. The legislation did not provide much time to implement such an ambitious program.

Recommendations

The implementation of the Bay Restoration Fund program has been initiated successfully and is proceeding in the right direction at a good pace. The Committee believes it is too early to determine what, if any, modifications should be made to the Bay Restoration Fund implementation effort.

Purpose

Section 1605.2 of Chapter 9 of Environment Article requires that beginning January 2006, and every year thereafter, the Bay Restoration Fund (BRF) Advisory Committee must provide an update to the Governor and the General Assembly on the implementation of the BRF program, and report on its findings and recommendations.

Programs and Administrative Functions

Comptroller's Office:

The role of the Comptroller of Maryland (CoM) is to act as the collection agent for the Bay Restoration Fund (BRF) and make distributions to the Maryland Department of the Environment (MDE) and the Maryland Department of Agriculture (MDA) as required. As such, the Comptroller, in cooperation with MDE, designed a working document that would act as a return for the reporting and payment of the BRF and FAQ information. The CoM and MDE conducted joint information sessions around the State, presenting ideas and plans regarding the BRF to the various stakeholders. Input from these sessions was used to finalize the BRF process for reporting and collection purposes. Additionally, the CoM designed information for the agency's Internet site linking to the MDE BRF information.

The CoM created a new fee type for the integrated tax processing system. The fee is required to be administered under the same provisions of the sales and use tax provisions in the Tax General Article. Creating the new fee type took advantage of the advanced technology of the integrated tax system for processing and reporting and allowed the CoM to use existing database information for the majority of the accounts identified by MDE as potential BRF filers. The system also allows for the capture of any state debts prior to the reimbursement of costs.

The CoM notified all accounts identified by MDE of the new fee and the procedures for reporting and paying the same via the sending of two informational letters. Draft forms and instructions and FAQ information were sent to every potential filer prior to the due date of the first BRF returns. The final return form, the BRF-1, was developed to allow the BRF filer to report amounts collected from water or sewer bills and on-site disposal (septic) systems on the same form yet allow for the distribution of the funds as mandated by legislation. Additionally, the form allows for the reimbursement of a portion of the fee to filers who had incremental costs associated with the creation of a BRF billing system. Such costs are allowed for up to 5 percent of the amount of BRF collected. The CoM and MDE anticipated initial start up costs not being able to be recaptured with the early collections, and therefore allowed for the carryover of un-reimbursed costs. The CoM established a procedure to track these expenses and report them back to the BRF filer on pre-printed returns mailed to each filer in the first week of the month in which the BRF return is to be filed.

Maryland Department of the Environment:

Three units within the Maryland Department of the Environment (MDE) are involved in the implementation of the Bay Restoration Fund.

I. *Maryland Water Quality Financing Administration:*

The Maryland Water Quality Financing Administration (MWQFA) was established under Annotated Code of Maryland, Title 9, Subtitle 16 with the primary responsibility for the financial management and fund accounting of the Water Quality Revolving Loan Fund, the Drinking Water Revolving Loan Fund and the newly created Bay Restoration Fund. Specifically for the Bay Restoration Fund, the MWQFA is responsible for the issuance of revenue bonds, payment disbursements, and the overall financial accounting including audited financial statements.

II. *Water Quality Infrastructure Program:*

The Water Quality Infrastructure Program (WQIP) manages the engineering planning and project management of federal capital funds consisting of federal EPA construction grants, special federal appropriations grants, and state revolving loan funds for water quality and drinking water projects. The Program also manages State grant programs of $18-20 million annually including Special Water Quality/Health, Small Creeks and Estuaries Restoration, Stormwater, Biological Nutrient Removal, Water Supply Financial Assistance and the state match to the federal grants. There may be as many as 250 active capital projects ranging in levels of complexity at any given time. Individual projects range in value from $10,000 to $50 million. A single project may involve as many as eight different funding sources and multiple construction and engineering contracts over a period of years. WQIP is responsible for assuring compliance with the requirements for each funding source while achieving the maximum benefit of funds to the recipient and timely completion of the individual projects. WQIP consists of three divisions, two project management divisions, and a planning division.

To accommodate the implementation of the Bay Restoration Fund (BRF), WQIP has reorganized its project management divisions and dedicated one of the divisions to handle only the wastewater treatment plant enhanced nutrient removal upgrades under the BRF.

III. *Wastewater Permits Program:*

The Wastewater Permits Program (WPP) issues permits for surface and groundwater discharges from municipal and industrial sources and oversees onsite sewage disposal and well construction programs delegated to local approving authorities. Large municipal and all industrial discharges to the groundwater are regulated through individual groundwater discharge permits. All surface water discharges are regulated through combined state and federal permits under the National Pollutant Discharge Elimination System (NPDES). These permits are issued for sewage treatment plants, some water treatment plants and industrial facilities that discharge to State surface waters. These permits are designed to protect the quality of the body of water receiving the discharge.

Anyone who discharges wastewater to surface waters needs a surface water discharge permit. Applicants include industrial facilities, municipalities, counties, federal facilities, schools, and commercial water and wastewater treatment plants, as well as, treatment systems for private residences that discharge to surface waters.

To accommodate the implementation of the Onsite Sewage Disposal System (OSDS) portion of the Bay Restoration Fund, the WPP Deputy Program Manager has been designated as the lead for the onsite sewage disposal system upgrade program. Program staff needs are being met through the Onsite Systems Division. WPP will ensure that the enhanced nutrient removal goals and/or limits are included in the discharge permit of facilities upgraded under the BRF.

Maryland Department of Agriculture:

The Maryland Department of Agriculture (MDA) delivers soil conservation and water quality programs to agricultural landowners and operators using a number of mechanisms to promote and support the implementation of best management practices (BMPs). Programs include information, outreach, technical assistance, financial assistance and regulatory requirements under the Water Quality Improvement Act. Soil Conservation Districts are the local delivery system for many of these programs.

The Chesapeake Bay Restoration Fund provides a dedicated fund source to support the Cover Crop Program. In prior years, funding fluctuated and program guidelines were modified accordingly to try to get the best return on public investment. A 2005 survey of 3000 farm operators, who have previously participated in MDA water quality incentive programs, indicated that changing Cover Crop Program guidelines and funding uncertainty discouraged participation. The survey was used to make program adjustments, with a goal to maximizing participation and water quality benefits. Program adjustments included increasing the acreage enrollment cap, on-line access to application forms, increased incentives for early planting and split payments. Since funding will be more predictable in the future and response to this year's program exceeded expectations, future program adjustments should be minimal. 2005 was the first year in the program's history that farmers from every county enrolled cropland into this program.

MDA administers the Cover Crop Program through the Maryland Agricultural Water Quality Cost Share Program or MACS. MACS provides financial assistance to farm operators to help them implement approximately 30 BMPs. Cover crops are one of the most cost effective methods for tying up excess nitrogen from the soil following the fall harvest of crops. They minimize nitrogen loss by leaching into nearby streams and aquifers, prevent soil erosion and improve soil quality.

USDA, Natural Resource Conservation Service provides a $10 per acre incentive to Maryland Cover Crop participants who plant by October 1. Their program is jointly administered with MDA and delivered through local soil conservation districts.

Bay Restoration Fund Status

The Bay Restoration Fund (BRF) fees collected from wastewater treatment plant users are identified as "Wastewater" fees and those collected from users on individual onsite septic systems as "Septic" fees. These fees are collected by the State Comptroller's Office and deposited as follows:

- Wastewater fees (net of administrative expenses) are deposited into MDE's "Wastewater Fund."
- Sixty percent (60%) of the Septic fees (net of administrative expenses) are deposited into MDE's "Septic Fund."
- Forty percent (40%)of the Septic fees (net of administrative expenses) are deposited into Maryland Department of Agriculture's (MDA) "Septic Fund."

The status of the cash deposits from the State Comptroller's Office to MDE and MDA for each of the sub-funds identified above, as of December 31, 2005, is as follows:

Wastewater Fund (MDE 100% for ENR & Sewer Infrastructure)

Sources:		Uses:	
Cash Deposits	$37,795,919	Capital Grant Awards	$29,559,000
Interest Earnings	$ 342,947	Admin. Expense Allowance	$ 566,539
Total	$38,138,866	Total	$30,125,539

Septic Fund (MDE 60% for On-Site Disposal System upgrades)

Sources:		Uses:	
Cash Deposits	$1,480,329	Capital Grant Awards	$ 0
Interest Earnings	$ 10,409	Admin. Expense Allowance	$ 118,426
Total	$1,490,738	Total	$ 118,426

Septic Fund (MDA 40% for Cover Crops)

Sources:		Uses:	
Cash Deposits	$ 986,886	Grant Awards	$ 298,115
Interest Earnings*	$ 6,939	Admin. Expense	$ 19,586
Total	$ 993,825	Total	$ 317,701

* Estimated

Maryland farmers have submitted applications to plant over 200,000 acres of cover crops, which equates to a maximum payment of over $8M. Given the normal slippage (later plantings, fewer acres, etc., than planned), the anticipated actual expenditure this program year is $5.4M.

Update on Fees from Federal Facilities:

Many federal facilities are paying the Bay Restoration fee as part of their regular water and sewer bills; however, some federal agencies perceive the BRF fee as a state tax and have taken the position that they are not responsible for paying it. The Maryland Attorney General's Office has written a 12-page legal opinion that was sent to a the Department of Defense in March, 2005 explaining Maryland's position that the fee is not a state tax and that federal facilities are obligated to contribute their fair share of the cost of restoring water quality in the Bay and its tributaries. Maryland is working cooperatively with the Department of Defense (DoD) to develop a Memorandum of Understanding that will provide a mechanism for DoD to contribute its fair share toward Maryland's Bay Restoration effort and at the same time avoid legal issues associated with the perception of "taxation" of the Federal government by State government.

Wastewater Treatment Plant Upgrades
With Enhanced Nutrient Removal (ENR)

Status of Upgrades:

The Maryland Department of the Environment (MDE) is implementing a strategy known as Enhanced Nutrient Removal (ENR) and is providing financial assistance to upgrade wastewater treatment facilities in order to achieve ENR. The ENR Strategy and the Bay Restoration Fund set forth annual average nutrient goals of WWTP effluent quality of Total Nitrogen (TN) at 3 mg/l as "N" and Total Phosphorus (TP) at 0.3 mg/l as "P", where feasible, for all significant wastewater treatment plants with a design capacity of 0.5 million gallons per day (MGD) or greater. Other wastewater treatment plants may be selected by the Department for upgrade on a case-by-case basis and based on the cost effectiveness of the upgrade, environmental benefits and other factors. Specifically, Maryland's 66 major sewage treatment facilities are targeted for the initial upgrades.

MDE has taken advantage of the momentum generated by the existing biological nutrient removal (BNR) program and has proceeded with the ENR strategy as a continuation to the BNR. Facilities that were in the planning or design phase to upgrade to BNR (achieving 8 mg/l total nitrogen) were asked to revise their plans to include ENR capability to achieve 3 mg/l total nitrogen and 0.3 mg/l total phosphorus. Consequently, ENR upgrades are underway at many plants, and to date, one facility, Celanese in Allegany County, has initiated the ENR operation, 6 facilities are under construction, 11 are under design, and 30 are in planning. Fact-sheets for projects in construction and operation are attached.

Estimated Cost of the Upgrades:

The cost of the upgrades continue to be estimated between $750 million and $1 billion. Based on these estimates and recently opened construction bids coming between 20 - 30 percent above the original estimates, it is becoming evident that the cost of the upgrades may be closer to the $1 billion than $750 million. Increasing costs have been attributed to increasing energy, supplies and materials, and labor costs. MDE's staff is working with local officials and their consultant engineers to find ways to cut these costs. However, if this trend continues, the committee will need to initiate the discussion on how to cover the funding gap as the fund and its associated bonds can only generate about $750 million for these upgrades (depending on interest rates).

Impacts of Budget Cut from Other Funding Programs:

During the last legislative session, the General Assembly cut the BNR program by $3 million. MDE was able to mitigate for this cut on a short-term basis to maintain the momentum of implementation; however, future cuts in the BNR program will adversely impact the implementation of ENR under the Bay Restoration Fund. The state financial assistance provided under the Bay Restoration Fund is limited to eligible project costs that would be attributable to upgrading a wastewater facility from BNR to ENR. BNR will allow the treatment facility to reduce nitrogen discharge from approximately 18 mg/l total nitrogen (secondary treatment level) to 8 mg/l total nitrogen (the BNR/advanced treatment level). ENR continues the progress to upgrade the BNR facilities to reduce nitrogen discharge from 8 mg/l to 3 mg/l total nitrogen (the limit of wastewater treatment technology). Therefore, ENR cannot be implemented without achieving BNR first.

In addition, the BRF does not pay for expansion or non-ENR related items being replaced due to deterioration. Traditionally, these items are covered by the State Revolving Loan Fund (SRF), which is subsidized by federal capitalization grants and state match allowing low interest loans currently at 0.4 to 1 percent. Maintaining the level of federal and state funding for this program is critical to the success of ENR implementation.

Minor Facilities:

Under the ENR strategy, minor facilities (with design flow of less than 0.5 MGD) will be targeted for funding under the BRF only after the upgrade of the 66 targeted major facilities is completed. Likewise, minor facilities were not targeted for upgrade under the original BNR program. Most minor facilities are currently achieving the secondary treatment level of approximately 18 mg/l total nitrogen. Some of these minor facilities (more than 0.11 MGD flow) will be discharging more pounds of nitrogen per year than major facilities that have an average flow of 0.5 MGD and are upgraded to the ENR level of treatment. Accordingly, MDE in consultation with the Advisory Committee, the Department of Budget and Management and subject to the approval of the Governor's Office, is considering a policy to continue the BNR program in future years to allow funding for BNR upgrades at these minor facilities.

Onsite Sewage Disposal System (OSDS) Upgrade Program

OSDS Identification and Billing

There are an estimated 420,000 OSDS's in Maryland that need to be identified by local jurisdictions and billed. All jurisdictions now have a plan for billing. The entire plan is currently underway to collect by each county, as follows:

- 8 counties sent the bill with their July, 2005 tax bill.
- 10 counties billed in November 2005.
- 2 counties will bill with a second tax bill in December 2005.
- 4 counties will bill with their July 2006 with tax bill.

Best Available Technology (BAT)

The Bay Restoration Fund legislation states that funds generated by the OSDS users fee may be used for the following:

" With priority given to failing systems and holding tanks located in the Chesapeake Bay and Atlantic Coastal Bays Critical Area, grants or loans for up to 100% of:

A. The costs attributable to upgrading an onsite sewage disposal system to the best available technology for removal of nitrogen; or
B. The cost difference between a conventional onsite sewage disposal system and a system that utilizes the best available technology for the removal of nitrogen;"

The Department, working with stakeholders, has formed a BAT subcommittee to develop a protocol to determine which technologies should be considered BAT, and thus be eligible for BRF funding. MDE and the BAT subcommittee have reviewed programs in other states, published research and third party verification programs. Current research indicates that nitrogen discharges from OSDS's can be reduced by 50 to 60 percent. Findings and recommendations of the BAT subcommittee are presented to the Bay Restoration Fund Advisory Committee for comment.

The BAT protocol requires an application for technology review to be submitted to MDE. A technical review team with experts in the field will review each application for approval of a particular technology and information collected to verify the effectiveness of that technology. If the technology has undergone independent third-party verification or certification indicating consistent reduction of better than 50 percent of the nitrogen, the technology will be allowed an unlimited number of installations. These technologies will be monitored for a 2 to 3 year field evaluation period. After this period the technical review team will determine if the technology receives an unconditional approval, is further field tested or is rejected from the program.

Technologies that have not been through third-party verification/certification but have undergone independent field verification through national demonstration projects, university research studies or other formal state verification programs, may either be conditionally approved or be approved as a highly managed system. Conditionally approved systems will be grant eligible for 12 to 25 systems that must undergo a rigorous 12 to 18 month verification process. If the technology successfully completes the

verification process an unlimited number of installations will be allowed, subject to the same 2 to 3 year field evaluation period as for systems having undergone third party verification. Highly managed systems must have either renewable operating permits or a responsible management entity. These systems must perform to the same nitrogen removal standards as third party verified systems.

BAT Project Selection

The goal of the OSDS portion of the BRF is to curtail the amount of nitrogen discharged from OSDS into the waters of the State. This benefits the State by helping to restore the estuarine environment and provides for better protection of drinking water supplies. It is the Department's intent to outsource the implementation of the OSDS upgrades using the BRF funds to county and municipal government agencies, state government agencies, academic institutions and non-profit agencies to make grants to OSDS users who agree to upgrade their systems and provide the necessary ongoing operation and maintenance. As mandated by the legislation, addressing failing systems in either the Chesapeake Bay Critical Area or the Maryland Coastal Bay's Critical Area is highest priority

County, municipal, or state government agencies, academic institutions and non-profit agencies are eligible to apply for funding to implement local OSDS upgrade programs using Bay Restoration Funds. Preference will be given to applicants that form partnerships with state and/or local governmental entities that regulate OSDS. Non-profit agencies and academic institutions will be required to form partnerships with a governmental unit.

The Bay Restoration Fund statute states that funds may be used to provide grants for the incremental cost of upgrading OSDS to BAT for nitrogen removal. The BRF cannot provide funding for an entire OSDS replacement or repair and any material (gravel & pipe) and labor costs not directly associated with the BAT unit installation are not eligible. The Department recognizes that operation and maintenance, design review, installation inspection and project management are part of the costs of upgrading OSDS to BAT for nitrogen removal. The BRF grant funds will cover the initial cost of purchasing and installing the BAT unit. The cost for the initial 5 years of operation and maintenance may also be included in the cost of purchasing the BAT technology. The local implementing entity may also use a portion of the BRF funds for reasonable costs associated with identifying individual applicants, reviewing plans, and inspecting BAT unit installations.

The highest priority is given to proposals that directly address failing OSDS in both the Chesapeake Bay Critical Area and the Maryland Coastal Bay's Critical Area, although grants are not limited to these areas only. Other factors that receive priority points include:

- Proximity to shellfish harvesting areas,
- Watersheds that are known to be nutrient impaired due to OSDS,
- Areas that are within 2500' of reservoirs or recreational lakes,
- Areas that are within wellhead protection zones,
- Areas where private wells and OSDS are concentrated on lots smaller than 1 acre,
- Areas that are underlain with karst geology,
- Projects that create responsible management entities,
- Projects that utilize renewable operating permits,
- Projects that create management (sanitary) districts,
- Household income below median household income for the county of residence; and
- Readiness to proceed.

A key component of a successful proposal is the level of management the project will have. Without proper scheduled maintenance, the units will not produce a consistently high quality effluent. A responsible management entity, as defined by the U.S. Environmental Protection Agency (EPA), is "an entity responsible for managing a comprehensive set of activities delegated by the regulatory authority; a legal entity that has the managerial, financial, and technical capacity to ensure long-term, cost effective operation of onsite and/or cluster water treatment systems in accordance with applicable regulations and performance (e.g., a wastewater utility or wastewater management district)." Other management examples that may garner a higher award potential may be the issuance of operating permits, similar to State Groundwater Discharge Permits that have reporting limits, or enforceable maintenance contracts to be recorded by some County authorized process.

Outreach

MDE has developed a brochure entitled "The Bay Restoration Fund Onsite Sewage Disposal System User Information Guide". The brochure explains the Bay Restoration Fund and informs citizens how to apply for funding. The brochure is available on MDE's website, is being distributed to local health departments and is being distributed as part of MDE's inspection of onsite sewage disposal systems adjacent to shellfish harvesting waters.

MDE has also developed a pre-application form for property owners interested in upgrading their onsite sewage disposal system. This form, available on MDE's website, will allow potential participants to enter the system and be considered for funding as funds become available.

Cover Crop Activities (Maryland Department of Agriculture)

Recent Program Streamlining Activities in Preparation for the BRF Program:

The Maryland Department of Agriculture engaged the Schaefer Center for Public Policy to assist with a series of focus groups across the state and questionnaires sent to over 3,000 agricultural operators across the state. The purpose was to assess the Cover Crop Program and identify improvements that would result in additional acreage enrolled in the program. The recommendations have been evaluated and many of the recommendations incorporated in the current program. Specific streamlining actions include putting the application and certification forms on the MDA website so they can be downloaded by the applicants and faxed into the local Soil Conservation District offices.

Status of Implementation of BRF for Cover Crop Activities:

The Maryland Department of Agriculture has $986,886 on their books from BRF to date from the $3.6 million projected as its 40% during SFY2006. The General Assembly imposed an $854,349 spending affordability cap on this MDA revenue source. Since program demand has exceeded BRF availability, MDA encumbered unspent 2005 funds and will utilize federal funds in certain approved watershed. The Administration may submit a deficiency request for any anticipated shortfall for payments in the spring of 2006.

Attachment 1

CELANESE WASTEWATER TREATMENT PLANT (WWTP)
FACT SHEET

PROJECT DESCRIPTION:

The project involves planning, design, and construction of new activated sludge Enhanced Nutrient Removal (ENR) facility to replace the existing lagoon system, and achieve effluent concentration goal of 3 mg/l for Total Nitrogen and 0.3 mg/l for Total Phosphorous. The project also involves the expansion of the existing 1.25 million gallons per day (MGD) Celanese Wastewater Treatment Plant to 1.66 MGD. The upgrade also includes the installation of denitrification filters for additional nitrogen and phosphorous removal. The original project included only the upgrade with a biological nutrient removal (BNR). However, after the passage of the Bay Restoration Fund Bill, a change order to the construction contract was issued to include the ENR upgrade.

RECEIVING STREAM/BODIES OF WATER: Potomac River

NUTRIENT REMOVAL GOAL:

Nitrogen

	Total Nitrogen (Without Upgrade)	**Total Nitrogen (With Upgrade)**	**% Reduction**
Concentration (mg/l)	18	3	
Loading (Lbs/year)	91,000	15,200	83%

Phosphorus

	Total Phosphorus (Without Upgrade)	**Total Phosphorus (With Upgrade)**	**% Reduction**
Concentration (mg/l)	3	0.3	
Loading (Lbs/year)	15,200	1,500	90%

BUDGET:	Total Project Cost	$15,833,000
	State BNR Grant	$3,566,000
	Bay Restoration Fund	$2,022,000
	State Supplemental Grant	$1,110,000
	SRF Loan	$8,910,000
	Other Local Funding	$225,000

MILESTONES:	**CONSTRUCTION START:**	March 2003
	CONSTRUCTION COMPLETION:	August 2005

CRISFIELD WASTEWATER TREATMENT PLANT (WWTP)
FACT SHEET

PROJECT DESCRIPTION:

The project consists of the planning, design and construction to upgrade the existing activated sludge system with enhanced nutrient removal (ENR) facilities, including denitrification filters, at the existing 1 million gallons per day (MGD) wastewater treatment plant to achieve a goal of 3 mg/l total nitrogen and 0.3 mg/l total phosphorus in effluent water quality. The project also involves other improvements to the plant's disinfection and head works treatment systems.

RECEIVING STREAM/BODIES OF WATER: Chesapeake Bay

NUTRIENT REMOVAL GOAL:

Nitrogen

	Total Nitrogen (Without Upgrade)	**Total Nitrogen (With Upgrade)**	**% Reduction**
Concentration (mg/l)	18	3	
Loading (Lbs/year)	54,800	9,100	83%

Phosphorus

	Total Phosphorus (Without Upgrade)	**Total Phosphorus (With Upgrade)**	**% Reduction**
Concentration (mg/l)	2	0.3	
Loading (Lbs/year)	6,100	900	85%

BUDGET:	Total Project Cost	$10,100,000
	State BNR Grant	$2,000,000
	Bay Restoration Fund	$4,200,000
	State Supplemental Grant	$600,000
	EPA Grant	$2,400,000
	Local Share (SRF Loan)	$900,000

MILESTONES: **CONSTRUCTION START:** July 2005
CONSTRUCTION COMPLETION: July 2007

EASTON WASTEWATER TREATMENT PLANT (WWTP)
FACT SHEET

PROJECT DESCRIPTION:

The project consists of planning, design and construction of a new activated sludge enhanced nutrient removal system to replace the existing Overland Flow treatment system, and achieve effluent concentration goal of 3 mg/l for Total Nitrogen and 0.3 mg/l for Total Phosphorous. Also, the project involves the expansion of the plant capacity from 2.35 to 4.0 million gallons per day (MGD).

RECEIVING STREAM/BODIES OF WATER: Choptank River

NUTRIENT REMOVAL GOAL:

Nitrogen

	Total Nitrogen (Without Upgrade)	**Total Nitrogen (With Upgrade)**	**% Reduction**
Concentration (mg/l)	18	3	
Loading (Lbs/year)	219,000	36,600	83%

Phosphorus

	Total Phosphorus (Without Upgrade)	**Total Phosphorus (With Upgrade)**	**% Reduction**
Concentration (mg/l)	3	0.3	
Loading (Lbs/year)	36,500	3,600	90%

BUDGET:

Total Project Cost	$38,913,000
State BNR Grant	$9,730,000
Bay Restoration Fund	$8,660,000
Local Share (SRF Loan)	$20,523,000

MILESTONES:

CONSTRUCTION START:	December 2004
CONSTRUCTION COMPLETION:	November 2006

Attachment 4

HURLOCK WASTEWATER TREATMENT PLANT (WWTP)
FACT SHEET

PROJECT DESCRIPTION:

The project consists of planning, design and construction of a new activated sludge enhanced nutrient removal (ENR) system to replace the existing lagoon system, and achieve effluent concentration goal of 3 mg/l for Total Nitrogen and 0.3 mg/l for Total Phosphorous at the existing design capacity of 1.65 million gallons per day. The original project included only the upgrade with a biological nutrient removal (BNR). However, after the passage of the Bay Restoration Fund Bill, a change order to the construction contract was issued to include the ENR upgrade.

RECEIVING STREAM/BODIES OF WATER: Marshyhope Creek

NUTRIENT REMOVAL GOAL:

Nitrogen

	Total Nitrogen (Without Upgrade)	**Total Nitrogen (With Upgrade)**	**% Reduction**
Concentration (mg/l)	18	3	
Loading (Lbs/year)	90,500	15,100	83%

Phosphorus

	Total Phosphorus (Without Upgrade)	**Total Phosphorus (With Upgrade)**	**% Reduction**
Concentration (mg/l)	3	0.3	
Loading (Lbs/year)	15,100	1500	90%

BUDGET:

Total Project Cost	$7,285,000
State Supplemental Grant	$300,000
State BNR Grant	$2,300,000
Bay Restoration Fund	$1,000,000
Local Share (SRF Loan)	$2,734,000
EPA Grant	$951,000

MILESTONES: **CONSTRUCTION START:** June 2004
CONSTRUCTION COMPLETION: August 2006

Attachment 5

KENT ISLAND WASTEWATER TREATMENT PLANT (WWTP)
FACT SHEET

PROJECT DESCRIPTION:

The project involves the planning, design and construction of enhanced nutrient removal (ENR) upgrade to achieve total nitrogen removal to a yearly average of 3 mg/l, and phosphorus of 0.3 mg/l. The upgrade also involves the expansion of the treatment capacity of the plant from 2.0 million gallon per day (MGD) to 3.0 MGD. A new activated sludge process will replace the existing rotating biological contactor (RBC) system with an increased capacity of 3.0 MGD.

RECEIVING STREAM/BODIES OF WATER: Chesapeake Bay

NUTRIENT REMOVAL GOAL:

Nitrogen

	Total Nitrogen (Without Upgrade)	**Total Nitrogen (With Upgrade)**	**% Reduction**
Concentration (mg/l)	18	3	
Loading (Lbs/year)	164,400	27,400	80%

Phosphorus

	Total Phosphorus (Without Upgrade)	**Total Phosphorus (With Upgrade)**	**% Reduction**
Concentration (mg/l)	1	0.3	
Loading (Lbs/year)	9,100	2,700	70%

BUDGET:

Total Project Cost	$33,200,000
State BNR Grant	$7,900,000
Bay Restoration Fund	$6,500,000
SRF Loan (Local Share)	$18,800,000

MILESTONES:

CONSTRUCTION START: March 2005
CONSTRUCTION COMPLETION: December 2006

Attachment 6

SALISBURY WASTEWATER TREATMENT PLANT (WWTP)
FACT SHEET

PROJECT DESCRIPTION:

This project consists of planning, design and construction of full-scale Enhanced Nutrient Removal facilities at the existing 6.8 million gallons per day (MGD) Salisbury WWTP and expansion of the plant to 8.5 MGD. The upgrade will include modifications to the existing trickling filter systems and installation of new denitrification filters for additional nitrogen and phosphorus removal. In addition, upgrading the North Side and South Side Pumping Stations is necessary for the plant expansion.

RECEIVING STREAM/BODIES OF WATER: Wicomico River

NUTRIENT REMOVAL GOAL:

Nitrogen

	Total Nitrogen (Without Upgrade)	**Total Nitrogen (With Upgrade)**	**% Reduction**
Concentration (mg/l)	20	3	
Loading (Lbs/year)	517,800	77,700	85%

Phosphorus

	Total Phosphorus (Without Upgrade)	**Total Phosphorus (With Upgrade)**	**% Reduction**
Concentration (mg/l)	1	0.3	
Loading (Lbs/year)	25,900	7,800	70%

BUDGET:	Total Project Cost (Pilot, and Phase I & II)	$81,658,000
	State BNR Grant	$22,817,000
	Bay Restoration Fund	$2,904,000
	Federal EPA Grant	$7,031,000
	Local Share (SRF Loan)	$48,906,000

MILESTONES:	**CONSTRUCTION START:**	August 2005
	CONSTRUCTION COMPLETION:	September 2008

Attachment 7

TALBOT COUNTY REGION II WASTEWATER TREATMENT PLANT (WWTP)
FACT SHEET

PROJECT DESCRIPTION:

The project involves the planning, design and construction of enhanced nutrient removal (ENR) upgrade to achieve total nitrogen removal to a yearly average of 3 mg/l, and total phosphorus of 0.3 mg/l. The upgrade also involves the expansion of the treatment capacity of the plant from 0.5 million gallon per day (MGD) to 0.66 MGD. A new activated sludge process will replace the existing rotating biological contactor (RBC) process with an increased capacity of 0.66 MGD.

RECEIVING STREAM/BODIES OF WATER: Miles River

NUTRIENT REMOVAL GOAL:

Nitrogen

	Total Nitrogen (Without Upgrade)	**Total Nitrogen (With Upgrade)**	**% Reduction**
Concentration (mg/l)	18	3	
Loading (Lbs/year)	36,200	6,000	83%

Phosphorus

	Total Phosphorus (Without Upgrade)	**Total Phosphorus (With Upgrade)**	**% Reduction**
Concentration (mg/l)	3	0.3	
Loading (Lbs/year)	6,000	600	90%

BUDGET:

Total Project Cost	$13,747,000
State BNR Grant	$2,747,000
Bay Restoration Fund	$2,000,000
SRF Loan (Local Share)	$9,000,000

MILESTONES:

CONSTRUCTION START: October 2005
CONSTRUCTION COMPLETION: November 2007