Bay Restoration Fund Advisory Committee

Robert Warfield, Chairman

Report on Implementation of On-site Sewage Disposal System Education Outreach and Upgrade Program

January 2007

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, this report on the implementation of the Bay Restoration Fund (BRF) as it relates to onsite sewage disposal system (OSDS) education, outreach and upgrade program and an analysis of administrative costs incurred by the Department.

The OSDS program of the Bay Restoration Fund required identifying and billing all users of OSDS and identifying individuals willing to participate in the OSDS upgrade program. The Governor's Advisory Committee, working with MDE, has focused its efforts on billing, education and identifying participants. All 23 counties and Baltimore City now have in place a system for identifying and billing users of OSDS. MDE has issued a Request for Proposals (RFP) to allow local jurisdictions to participate in the implementation of the OSDS grants program. Following review by a subcommittee of the Bay Restoration Fund Advisory Committee, MDE obtained Board of Public Works approval on December 6, 2006 for 7 proposals totaling $9,000,000 to be used by local governments to upgrade approximately 700 OSDS, with priority on failing systems in the Critical Area, as required by the Bay Restoration Act.

Identifying and Billing OSDS Users

- Beginning immediately after the signing of the Bay Restoration Act in April, 2004, MDE worked with the Governor's Advisory Committee, the State Department of Assessment and Taxation and Maryland Department of Planning, the Maryland Municipal League, the Maryland Association of Counties and all 23 Maryland Counties and Baltimore City to identify all OSDS owners in Maryland and establish a billing program to collect the required $30 per year fee. The billing program was successfully implemented beginning in October, 2005, as required by the Act.

- As of October 31, 2006, the Comptroller of Maryland has collected a total of $14,997,256, of which $8,998,353 (60%) has been allocated to the Maryland Department of the Environment for the Septic System upgrade fund and $5,998,902 (40%) to the Maryland Department of Agriculture for Cover Crop initiatives.

- MDE began negotiations with State agencies and universities to develop a statewide geographic information system (GIS) data layer that will provide the geographic location and significant information for all septic systems in the State. This data will allow for improved modeling on septic system impacts, help direct available funding to areas where upgrading septic system will make the biggest impact and improve the accuracy of billing OSDS users.

Identifying Participants for OSDS Upgrade

The goal of the OSDS portion of the Bay Restoration Fund 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. The Bay Restoration Fund statute states that funds may be used to provide grants for the incremental cost of upgrading OSDS to best available technology (BAT) for nitrogen removal. The Bay Restoration Fund cannot provide funding for an entire OSDS replacement or repair and any material (gravel, pipe, etc.) and labor costs not directly associated with the BAT unit installation. 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 Department intends to outsource some elements of upgrading OSDS by providing 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

In cooperation with the Advisory Committee, MDE 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 highest priority was given to proposals that directly address failing OSDS in either the Chesapeake Bay Critical Area or the Maryland Coastal Bay's Critical Area, although grants are not limited to these areas only. Other factors that received priority points included:

- 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 (limestone) 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 was 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 were given higher award points were 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.

A review panel consisting of personnel from MDE and the Governor's Advisory Committee evaluated and ranked the proposals. A project score sheet was developed to rate how well each proposal addressed elements that included: readiness to proceed; addressing failing systems in the critical area; addressing other health and environment based factors; identifying onsite sewage disposal systems to be upgraded; partnerships and available resources to implement the proposal and how long-term issues of management are to be addressed. Ten proposals were submitted to MDE prior to the stated deadline and proposed awards were based on their project scores. On December 6, 2006, the Board of Public Works approved MDE's request to fund the proposals and awarded a total of over 9 million dollars to ten different jurisdictions to upgrade approximately 700 septic systems.

The following table summarizes the awards:

Recipient	County	Grant Award
Anne Arundel County Health Department	Anne Arundel	$2,644,000
Calvert County Department of Planning and Zoning	Calvert	$933,000
Charles County Health Department	Charles	$604,000
Frederick County Health Department	Frederick	$712,000
Kent County Department of Water and Wastewater	Kent	$597,000
Maryland Department of Natural Resources	Queen Anne's	$287,000
Caroline County Health Department	Caroline	$144,000
Talbot County Department of Public Works	Talbot	$1,168,000
Wicomico County Health Department	Wicomico	$771,000
Worcester County Department of Environmental Programs	Worcester	$1,142,000
	Total	$9,002,000

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;"

It was necessary to develop a procedure for determining which technologies should be considered grant eligible. The Governor's Advisory Committee 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. MDE and the BAT subcommittee reviewed programs in other states, published research and third party verification programs. Current research indicates that nitrogen discharges from OSDS can be reduced by 50 to 60 percent. The BAT workgroup has adopted a protocol used by the Environmental Protection Agency/Environmental Technology Verification (EPA/ETV) to establish a procedure to verify the performance of nitrogen reducing OSDS. Six proprietary technologies have been evaluated by the EPA/ETV program and are eligible for BRF funding in Maryland. Four additional proprietary technologies have submitted application to be eligible for BRF funds. A review team comprised of three engineers from MDE and one County Environmental Health Director are reviewing the applications to ensure that each technology has been third party evaluated to a standard at least as stringent as the EPA/ETV's.

The BAT protocol requires an application for technology review to be submitted to MDE. The 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, needs further field testing or is rejected from the program.

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 produced the video, "Onsite Sewage Disposal Systems – Protecting Your System – Preserving the Bay". This video, which won a prestigious Aegis Award for video production, teaches homeowners about the care of septic systems and about the connection between septic systems and the Bay while also informing property owners about the availability of BRF funds to upgrade septic systems. To date approximately 5,000 copies of this video have been distributed to homeowners and demand for the video remains high.

- MDE staff is working with the Chesapeake Bay Tributary Teams, community groups and environmental groups to promote the onsite system upgrade program and has attended meetings, environmental fairs and other events organized by these groups to make presentations and distribute grant program materials.

Status of Administrative Costs

The legislation allows MDE to use up to 8% of the Septic fees for purposes of administering the OSDS program. The fund status is as follows:

	BRF Septic Fee Revenue (MDE)	Available (8%) for Administrative Exp.	Total Administrative Expenses (MDE)
FY 05 Actual	$ 156,580	$ 12,526	$ 0
FY 06 Actual	$ 5,538,991	$ 443,119	$ 255,913
FY 07 Projected	$ 8,400,000	$ 672,000	$ 500,000

Since the OSDS program is still in its initial implementation stage, the administrative expenses are expected to increase in future years due to the costs associated with advising individual OSDS system owners regarding the most appropriate systems for their particular application, the review of specific OSDS project design and construction, inspection and monitoring to ensure that the systems are being properly maintained and operated, assisting system owners in resolving disputes with vendors, etc. Based on experience to date, MDE believes the 8% allowance will be sufficient to administer the OSDS program in future years.