



## **Bay Restoration Fund Advisory Committee**

**Robert M. Summers, Ph.D., Acting Chairman**

## **Annual Status Report January 2009**

**Report to:**

**Governor Martin O'Malley**

**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**

## **PURPOSE OF THIS REPORT**

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.

## **EXECUTIVE SUMMARY**

The Bay Restoration Advisory Committee is pleased to present to Governor Martin O'Malley and the Maryland Legislature, its fourth 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 and onsite sewage disposal systems and the planting of cover crops to reduce nitrogen and phosphorus pollution in Chesapeake Bay.

### **Accomplishments**

- As of September 30, 2008, the Comptroller of Maryland has deposited \$188.80 million to the Maryland Department of the Environment for the Wastewater Treatment Plant fund, \$21.60 million to the Maryland Department of Environment for the Septic Systems Upgrade fund, and \$14.40 million to the Maryland Department of Agriculture for Cover Crop Program.
- Enhanced Nutrient Removal (ENR) upgrades of the State's major sewage treatment plants are currently underway. Nine facilities have been completed and are in operation. Two other facilities are currently meeting the ENR treatment level, Dorsey Run and North East River, but require further evaluation to ensure that they will continue to achieve ENR without additional improvements as they approach their design capacity. Nine facilities are under construction, 19 are in design, and 22 are in planning. MDE is continuing to work to bring the remaining five major systems into the program by urging the facilities to proceed with the ENR upgrade and/or by adding nutrient loading limits and compliance schedule in the discharge permits. The committee is proposing to add Hampstead to the funding list as it is required to upgrade by Maryland's Tributary Strategy – Statewide Implementation Plan.
- BRF 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. 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. A review team, comprised of two engineers from MDE and one County Environmental Health Director, is reviewing applications to ensure that each technology has been third party evaluated to a standard at least as stringent as the EPA/ETV's. Currently thirteen proprietary technologies have been evaluated by the program and are eligible for BRF funding in Maryland.

- MDE continues to distribute 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.
- The Maryland Department of Agriculture dedicates its portion of BRF funds for the implementation of the statewide Cover Crop Program. In FY2009 farmers applied for 400,000 acres, over 50% of Maryland’s Chesapeake Bay Program 2010 goal. Funds projected from BRF annually will support approximately 100,000 acres of cover crops in the program. Additional funding was made available from the 2010 Chesapeake Bay Trust Fund in 2009 to support increased level of participation. 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.
- Through contracts with Salisbury University and Towson University, as well as continued support from the Maryland Department of Planning, MDE now has a geographic information system (GIS) data layer capable of identifying locations of individual onsite sewage disposal systems in Maryland.
- Through increased outreach efforts in the BRF septic system upgrade program; program expenditures now approximate program revenue. Over 350 septic systems were upgraded through the BRF in 2008 bringing the total to 450. The 450 upgraded septic systems result in a decrease of approximately 6,840 pounds of nitrogen per year that would be discharged to the waters of the State. In 2007 MDE received less than 25 applications per month for upgrading septic systems. During the last quarter of 2008 MDE received an average of 150 applications per month.
- MDE and Maryland Department of Planning (MDP) have initiated efforts to implement the requirements of House Bill 893, which was passed in the 2006 session and requires MDE and MDP, in consultation with local governments, to report on the impact that an ENR upgraded wastewater treatment plant has on growth in the jurisdiction it serves. As part of this report, MDE and MDP evaluated the impact during 2007 as required by the legislation.

## **Challenges**

- Wastewater treatment plant construction costs on recently opened bids are significantly higher than the original pre-planning level estimates. As a result the total capital cost for the ENR Upgrades is likely to be higher than the \$750 million to \$1 billion range estimated at the time of legislation. The escalating costs can be attributed to increasing energy, steel and concrete costs. Also, these estimates were made as an order of magnitude estimate prior to the passage of the Bay Restoration Fund legislation and before the performance of any detailed engineering analyses at any of the facilities. Based on the estimated revenue projections and bond issuance, it is estimated the current fee schedule (\$30/year) can help finance approximately \$868 million in ENR upgrades by 2018. The current ENR capital cost is estimated at \$1.113 billion leaving a potential deficit of \$245 million. Since the funding gap is not expected to occur until 2012, the Committee believes that we should allow two years to get better cost estimates on some of the larger ENR projects, before making any recommendation on how to address the anticipated funding shortfall.

- There is a concern that individuals having their septic systems upgraded with the BRF will be subject to taxation based on the value of the upgrade or grant. This serves as a deterrent to property owners who may otherwise want to participate in a voluntary program. The Federal tax code allows the Secretary of the U.S. Department of Agriculture (USDA) to declare grant programs, which are for the purpose of improving the environment, as actions that do not result in income for the property owner. Hence, these grants are considered tax-exempt. In a letter to the U.S. Secretaries of Agriculture and Treasury, Secretary Wilson requested a ruling in favor of Maryland's position that these grants meet the requirements of federal law for a tax exemption. USDA Under Secretary Mark Rey responded that we should send additional information to John Dondero, Branch Chief, Environmental Improvement Programs, Natural Resources Conservation Services (NRCS) for review. The NRCS has been provided with the requested information.
- Advanced septic systems that remove nitrogen require electricity and have moving parts that require regular maintenance. MDE has evaluated the electrical use of the different advanced systems and can now provide property owners with more complete information. The EPA strongly recommends that management systems be in place to ensure the long-term performance of advanced septic systems. The BRF has no provisions for ongoing management of nitrogen reducing septic systems.

### **Conclusions**

The implementation of the Bay Restoration Fund program is proceeding in the right direction at a good pace, which is expected to further improve in the upcoming years.

With the development and implementation of the BayStat process MDE has improved its benchmarks and tracking of implementation efforts to ensure that projects remain on schedule.

As Patapsco's design is being finalized, better cost estimates have been provided for the project showing even higher costs and more program deficit. Due to the lack of detailed engineering cost estimates for the other two largest sewage treatment plants (Blue Plains and Back River), the Committee believes that it is still too early to determine what, if any, modifications should be made to the Bay Restoration Fund fee structure.

## **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.

In the third year of administering the BRF, the CoM began the compliance phase of the fee administration. The law specifies that the BRF shall be administered under the same provisions allocable to administering the sales and use tax. Granted that authority, the CoM began the audit process for both filers and non-filers of BRF quarterly reports.

For non-filers, CoM has begun contacting the billing authorities and users who have failed to file or pay the BRF and is obtaining sufficient documentation to make an assessment and begin collection activity. Federal government billing authorities and users have to date refused to participate in the BRF process. MDE secured an agreement with several defense organizations having wastewater treatment plants to upgrade their systems over a defined period of time and they were then exempted from the BRF by MDE. A copy of the agreement was provided by MDE to CoM, and those BRF accounts were subsequently placed on inactive status. The CoM has begun to audit billing authorities who are not collecting the BRF from federal agencies and will make assessments as appropriate against those billing authorities for those uncollected fees.

Additionally, the CoM is working with MDE to obtain historical flow data from billing authorities and users, which will be compared to returns filed by billing authorities and users to ensure accurate BRF returns have been filed and paid.

The CoM completed two compliance audits in FY2008. These audits resulted in additional assessments and subsequent collections of over \$14 thousand dollars. Additional compliance audits are scheduled for FY2009.

## **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 Title 9, Subtitle 16 of the Maryland Code. MWQFA has 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 special federal appropriation grants and state revolving loan funds for water quality and drinking water projects. The Program also manages State grant programs, including Special Water Quality/Health, Small Creeks and Estuaries Restoration, Stormwater, Biological Nutrient Removal, and Water Supply Financial Assistance. 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 three to ten 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: (1) the Bay Restoration Fund Program Division; (2) the Project Management Division; and (3) the Planning Division.

### **III. Wastewater Permits Program:**

The Wastewater Permits Program (WWPP) 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.

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

## **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. Results from a 2005 survey of 3000 farm operators, who had previously participated in MDA Water Quality Incentive programs, indicated that changing Cover Crop Program guidelines and funding uncertainty discouraged participation. The survey and a follow up 2006 survey were used to make program adjustments, with a goal to maximizing program 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. In SFY 2009 new eligibility requirements were introduced consistent with findings from a scientific panel under the auspices of BayStat. The incentive structure was adjusted to maximize nutrient reductions. In addition to incentives for early planting, farmers could receive increased payments for planting cover crops after corn or vegetables, planting cover crops on fields where manure was used as a nutrient source, planting rye, using certain tillage methods or planting in priority watersheds. With added incentives payments ranged from \$30 per acre to \$90 per acre.

FY2009 saw application requests for approximately 400,000 acres. MDA approved all eligible applications for 387,000 acres. BRF funds approximately 100,000 acres in cover crops. A separate commodity cover crop program was also available allowing farmers to harvest the crop for a reduced payment provided they do not use fertilizer in the fall. The 2010 Chesapeake Bay Trust Fund was used to supplement existing funds, and in conjunction with general funds and limited watershed specific funding helped expand program availability. Tributary strategies call for 600,000 acres of traditional cover crops and 150,000 acres of commodity cover crops annually.

In FY2007, an agreement with the Maryland Grain Producers Utilization Board (MGPIB) resulted in MDA and the MACS Office administering a Hulless Barley Program within the commodity cover crop program, which does not utilize BRF. The purpose is to provide experience for producers who plant hulless barley as a cover crop for its use in the future as a feedstock to produce ethanol. The MGPIB has interest to construct an ethanol plant using hulless barley as a feedstock in Maryland has been impacted by economic conditions unfavorable to the venture. Recently other entities are expressing interest in pursuing an ethanol facility using barley. The added incentive for operators who choose to grow hulless barley was available in 2009. There has been limited response to the 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 caused by leaching into nearby streams and aquifers, prevent soil erosion and improve soil quality.

## **Maryland Department of Planning:**

The Maryland Department of Planning (MDP) is a statutory member of Bay Restoration Fund Advisory Committee (BRFAC). The Department's general mandate is to advise State agencies, local governments, the General Assembly, and others on planning matters. More specifically, the Department is focused on implementation of Smart Growth policies and programs at all levels of government. Generally, the BRF program supports State Planning and Smart Growth policies to the degree that WWTP capacity is allocated to serve existing and new development in locally certified and State recognized Priority Funding Areas (PFAs).

Specific functions that MDP carries out that relate directly or indirectly to the BRF programs are summarized below. HB 893 enacted by the 2007 legislative session, added an additional BRF reporting responsibility which is discussed in another section.

### **1. State Clearinghouse Review**

All State and federal financial assistance applications, including those for BRF funds are required to be submitted for review through the State Clearinghouse which is part of MDP. The Clearinghouse solicits comments on these applications from all relevant State agencies and local jurisdictions. The applicant and funding agency are subsequently notified of any comments received. This review ensures that the interests of all reviewing parties are considered before a project is sent forward for final federal or State approval.

### **2. Review and Comment on County Water and Sewerage Plans and Amendments**

MDP is directed by law to advise MDE regarding the consistency of County Water and Sewerage Plans and amendments with "local master plan and other appropriate matters" (Environment Article § 9-507 (b)(2)). This includes review for consistency with State Smart Growth policy. MDP carries out this review and provides advisory comments to MDE for consideration before MDE makes an approval decision on Water and Sewerage Plans or amendments.

The law also requires that County Water and Sewerage Plans and amendments be consistent with the local master or comprehensive plans. Therefore, if a plan or amendment is not consistent with a comprehensive plan, it is subject to disapproval by MDE. Since facility construction, discharge, and other permits must also be consistent with the County Water and Sewerage Plans, the legal chain, from comprehensive plans to Water and Sewerage Plans to permits, helps to assure that all BRF projects are consistent with local comprehensive plans before funding is approved and construction can begin.

### **3. Priority Funding Areas (PFA)**

One specific feature of State Smart Growth policy is the designation of Priority Funding Areas (PFAs). These areas are delineated by local governments in accordance with statutory criteria that focus on concentrating high density growth in and near existing communities. If the local PFA boundaries do not meet the legal requirements in the law, MDP overlays a "comment area" delineation to so indicate. The PFA statute lists the specific State financial assistance programs that are required to focus their funding on projects inside the PFA, with certain specified exceptions. BRF funds and projects are not listed as a PFA



covered program. The rationale for this was that BRF funds will only pay to upgrade existing treatment capacity and will not pay for any capacity expansions.

HB 893, which is discussed further in another section, raises certain issues related to the BRF exclusion from the PFA requirement.

#### 4. Local Comprehensive Plan Review and Comment

Local Comprehensive Plans must be prepared by every county and municipality in Maryland, pursuant to Article 66B of the Annotated Code. MDP provides comments on all draft local Comprehensive Plans and amendments. Through the Clearinghouse review process, other State agencies are also provided the opportunity to comment before they can be adopted by local governing bodies. However, since these plans are not subject to State approval, comments provided are advisory only. Depending on the wishes of the jurisdiction, MDP works closely with, and provides technical assistance to, local governments in the processes leading to adoption of local comprehensive plans. MDP advises them on planning issues and methods supporting State Planning and Smart Growth policies and practices.

HB 1141, enacted by the 2006 General Assembly, added new required elements to local comprehensive plans. One of these is a Water Resources Element which must be completed by every jurisdiction by October 1, 2009. This element is required to address water supply and wastewater infrastructure, and water quality issues to assure that these considerations are more fully integrated into comprehensive planning. In addition to the comprehensive plan interagency review process described above, MDE is specifically mandated to establish criteria for this element and to review the element for consistency with these criteria and MDE's overall water resources programs. However, as with all local comprehensive plans, there is no provision for State approval. It is expected that preparation and local adoption of these elements will further improve guidance for effective use of BRF funds for all of its authorized purposes.

## 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 local administrative expenses) are deposited into MDE’s “Wastewater Fund.”
- Sixty percent (60%) of the Septic fees (net of local administrative expenses) are deposited into MDE’s “Septic Fund.”
- Forty percent (40%) of the Septic fees (net of local 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 September 30, 2008, is as follows:

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

<u>Sources:</u>		<u>Uses:</u>	
Cash Deposits	\$188,795,088	Capital Grant Awards	\$115,490,175
Cash Interest Earnings	\$ 12,619,540	Admin. Expense Allowance	\$ 2,831,926
Net Bond Proceeds	<u>\$ 51,623,877</u>	FY '09 Bond DS Allowance	<u>\$ 4,654,963</u>
Total	\$253,038,505	Total	\$122,977,064

Applicant/WWTP Fund	Grant Award
<b>ENR PROJECTS</b>	
Aberdeen ENR	200,000.00
Alleghany Co/ Georges Creek ENR	10,588,000.00
Alleghany Co/ Celanese ENR	2,333,382.00
Anne Arundel Co/ Annapolis WRF	200,000.00
Anne Arundel Co/ Broadneck WRF	200,000.00
Baltimore City/Patapsco ENR	10,000,000.00
Baltimore City/Back River WWTP ENR	5,000,000.00
Bowie ENR	600,000.00
City of Brunswick/WWTP ENR	8,263,000.00
Cambridge ENR	100,000.00

<b>Applicant/WWTP Fund</b>	<b>Grant Award</b>
Chestertown ENR	2,000,000.00
Crisfield WWTP ENR	4,231,000.00
Cumberland WWTP ENR	1,000,000.00
Delmar WWTP ENR	200,000.00
Denton WWTP ENR	200,000.00
Easton WWTP ENR	8,660,000.00
Elkton ENR	7,960,000.00
Emmitsburg WWTP ENR	50,000.00
Federalsburg ENR	3,360,000.00
City of Hagerstown/WWTP ENR	650,000.00
Havre de Grace WWTP ENR	11,289,000.00
Harford Co./ Sod Run ENR	50,000.00
Howard County/Little Patuxent ENR	530,000.00
Hurlock WWTP ENR	941,147.75
Indian Head ENR	6,484,000.00
La Plata ENR	110,000.00
Leonardtown WWTP ENR	510,000.00
MD Env Serv/Freedom District WWTP ENR	100,000.00
Mt Airy ENR	200,000.00
Perryville ENR	4,000,000.00
Queen Anne's/ Kent Island ENR	6,380,645.09
Salisbury WWTP ENR	3,000,000.00

<b>Applicant/WWTP Fund</b>	<b>Grant Award</b>
St. Mary's Co./Marley Taylor Water Reclam.	200,000.00
Talbot Co/St Michaels ENR	2,000,000.00
Thurmont WWTP ENR	300,000.00
Washington Co./Winebrenner	100,000.00
Westminster ENR	20,000.00
WSSC/Damascus WWTP ENR	325,000.00
WSSC/Western Branch WWTP ENR	1,000,000.00
WSSC/Blue Plains WWTP ENR	2,000,000.00
<b>ENR SUBTOTAL</b>	<u>105,335,174.84</u>
<b>SEWER PROJECTS</b>	
Balto City Gwynns Run Sewer	1,575,000.00
Balto. City Greenmount Branch Sewer Interc.	2,300,000.00
Balto. City Greenmount Branch Sewer Interc. II	1,000,000.00
Emmitsburg/South Seton Ave Sewer Line	600,000.00
Frostburg Combined Sewer Overflow Phase IV	1,000,000.00
Frostburg CSO - Phase V	800,000.00
City of Fruitland Infiltration & Inflow Sewer	300,000.00
Port Deposit Inflow & Infiltration Reduction	200,000.00
Secretary/Gordon Street Lift Station	150,000.00
Secretary Infiltration/Inflow Reduction	200,000.00
St. Mary's METCOM/Evergreen Park Sewer	230,000.00
Talbot/St Michaels Sewer & Upgrade	1,000,000.00
Talbot/St Michaels Sewer & Upgrade	400,000.00

<b>Applicant/WWTP Fund</b>	<b>Grant Award</b>
City of Taney Town/Balt St Water Main	200,000.00
Washington Co. Halfway Inflow/Infiltration Reduction	200,000.00
<b>SEWER SUBTOTAL</b>	10,155,000.00
<b>TOTAL (ENR &amp; SEWER)</b>	<b>115,490,174.84</b>

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

Sources:

Cash Deposits	\$21,600,504
Cash Interest Earnings	<u>\$ 1,550,934</u>
<b>Total</b>	<b>\$23,151,438</b>

Uses:

Capital Grant Awards	\$17,029,391
Admin. Expense Allowance	<u>\$ 1,728,040</u>
<b>Total</b>	<b>\$18,757,431</b>

<b>Applicant/Septic Fund</b>	<b>Grant Award</b>
Anne Arundel Co Health Dept.	2,644,000.00
Calvert Co Dept of Planning/Zoning Phase I	933,000.00
Calvert Co Dept of Planning/Zoning Phase II	1,948,000.00
Canaan Valley Institute/Frederick Co	712,000.00
Canaan Valley Institute/Washington Co	750,000.00
Caroline Co Health Dept. Phase I	144,000.00
Caroline Co Health Dept. Phase II	277,000.00
Cecil County Health Dept.	650,000.00
Charles Co Health Dept.	604,000.00
Dorchester County Health Dept.	409,000.00
Harford County Health Dept.	1,038,000.00
Kent Co Dept. of Water/WW	597,000.00
Maryland Dept. of Natural Resources	287,000.00
Talbot Co Dept. of Natural Resources	1,168,000.00
Wicomico Co Health Dept. Phase I	771,000.00
Wicomico Co Health Dept. Phase II	1,948,000.00
Worcester Co Dept. of Environ. Programs	1,142,000.00
<b>SUBTOTAL SEPTIC</b>	<b>16,022,000.00</b>
Individual Septic Upgrades (78) thru 9/08	1,007,390.76
<b>TOTAL SEPTIC</b>	<b>17,029,390.76</b>



### **Potential Funding Gap and Recommended Action:**

Based on current total estimated ENR capital cost of \$1.113 billion and BRF wastewater (WW) fund projected cash flow, the WW fund can provide \$868 million in grants and is expected to have a funding deficit of \$245 million by 2018. Under the current ENR project schedule and anticipated cash flow needs, the WW fund will be able to provide up to 100% grants for ENR expenditures through FY 2011. This will be accomplished by issuing approximately \$530 million in revenue bonds in addition to using the Bay fee cash balances (See Attachment 1 for details). The primary reasons for the anticipated funding gap are the higher ENR project costs and the 15-year term limitation on the bay bonds, as required under the Maryland Constitution for State supported debt. MDE investigated the issuance of 20-year bonds, which would have allowed the State to issue \$100 million more in revenue bonds than the 15-year term. However, it was later determined by the State Treasurer that since the BRF fee is assessed practically from all State residents, any bonds leveraged against the fee must have the same terms as the General Obligation debt, which is set by the State Constitution not to exceed 15 years.

Since the ENR funding deficit of \$245 million is not anticipated until FY 2012 and the ENR project costs for the big three projects (Back River, Patapsco, and Blue Plains WWTPs) are very preliminary, the Advisory Committee will evaluate the following options in more detail prior to making any recommendations:

- a. Increasing the Bay fee, which is currently \$2.50 per month per Equivalent Dwelling Unit;
- b. Reducing the ENR grant, which currently is at 100% of eligible costs;
- c. Reprioritizing the upgrade of the 67 ENR projects while delaying or not undertaking the upgrade of certain WWTPs;
- d. Seeking Bay Restoration Fund statutory changes that allow the Bay fees to make debt service payment on bonds issued by local governments (for ENR eligible cost) that have a term of up to 30 years.

## **Update on Fees from Federal Facilities**

On July 19, 2006, the State of Maryland and the Department of Defense (DoD) signed a Memorandum of Understanding (MOU) to resolve a dispute regarding the applicability of the Bay Restoration Fee to DoD. The State's legal position is that the federal government is not exempt from paying the Bay Restoration Fund (BRF) fee; however, the DoD asserts that the BRF fee is a tax and that the State may not tax the federal government. On July 19, 2006, with the advice of counsel, the State chose to settle the matter with DoD rather than to litigate. In the MOU, neither party concedes any legal position with respect to the BRF fee. The MDE has agreed to accept DoD's proposal to undertake nutrient removal upgrades at certain DoD-owned wastewater treatment plants at its own expense (estimated cost \$22.5 million) in lieu of paying the BRF fee. No other Federal agency is exempt from paying the BRF fee.

One DoD facility, Aberdeen Proving Ground – Aberdeen, has been upgraded to achieve ENR level of treatment. MDE will continue to work with DoD to upgrade the other facilities as specified in the MOU. The goal is complete the targeted DoD facilities by 2012. Specifically, the following are the targeted DoD facilities with their projected construction completion dates:

<b>DoD Facility</b>	<b>Projected Construction Completion Date</b>
Fort Detrick	June 2011
Fort Mead	December 2012
Aberdeen Proving Ground – Edgewood	December 2012
Naval Station – Indian Head	December 2011

## **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, 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 of the BNR program. 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, nine facilities have been completed and are in operation. Two other facilities are currently meeting the ENR treatment level,



Dorsey Run and North East River, but require further evaluation to ensure that they will continue to achieve ENR without additional improvements as they approach their design capacity. Nine facilities are under construction, 19 are in the design stage, and 22 are in the planning stage. MDE is continuing to work to bring the remaining five major systems into the program by urging the facilities to proceed with the ENR upgrade and/or by including nutrient loading limits and a compliance schedule in the discharge permits. The committee is proposing to add Hampstead to the funding list as it is required to upgrade by Maryland's Tributary Strategy – Statewide Implementation Plan.

The following are the facilities that have completed the upgrade and are in operation:

<b>Facility</b>	<b>Design Flow in Million Gallons Per Day</b>	<b>Date Completed</b>	<b>Total Cost</b>	<b>BRF Cost</b>	<b>Nitrogen Load Reduction At Design Flow (Lbs/year)</b>	<b>Phosphorus Load Reduction At Design Flow (Lbs/year)</b>
Hurlock	1.65	May 2006	\$7,585,000	\$1,000,000	75,000	3,500
Celanese	1.66	Nov. 2006	\$15,833,000	\$2,022,000	91,000	4,200
Easton	4.00	June 2007	\$37,453,000	\$8,000,000	60,000	8,500
Kent Narrows	3.00	Aug. 2007	\$35,019,000	\$6,493,000	137,000	6,300
APG-Aberdeen	2.80	Mar. 2006	\$6,300,000	\$0	127,000	5,900
Swan Point	0.60	May 2007	\$8,080,000	\$0	27,000	1,200
Chestertown	0.90	June 2008	\$9,802,000	\$2,000,000	68,000	3,100
Brunswick	1.40	Sept. 2008	\$14,945,000	\$8,263,000	63,000	2,900
Salisbury	8.5	Dec. 2008	\$78,021,000	\$3,000,000	388,000	18,100
<i>Total</i>	24.51		\$213,038,000	\$30,778,000	1,036,000	53,700

As an estimate of the total benefit of these capital projects, the above load reductions were determined based on the difference between what would be the facility's load without the upgrade versus the load with the upgrade at the ultimate design capacity. These load reductions would allow the upgraded facilities to maintain their Tributary Strategy loading caps of nitrogen and phosphorus even after reaching their design capacity and the 20-year projected growth.

## House Bill 893 Implementation

House Bill 893, enacted on April 24, 2007, requires that: “[b]eginning January 1, 2009, and every year thereafter, the Department (MDE) and the Department of Planning shall jointly report on the impact that a wastewater treatment facility that was upgraded to Enhanced Nutrient Removal during the calendar year before the previous calendar year with funds from the Bay Restoration Fund had on Growth within the municipality or county in which the wastewater treatment facility is located.”

As required by this legislation, MDP and MDE have advised the Bay Restoration Fund Advisory Committee regarding the best available information to address this mandate. The results of this analysis are presented below. This first Report addresses the following Bay Restoration Fund financed facilities which were completed prior to January 1, 2008:

Facility	Design Capacity (MGD)		Actual 2007 Flow	% of Original
	Original	At Upgrade		
Celanese, Allegany County	2.00	1.66	1.319	66.0%
Town of Easton, Talbot County	2.35	4.00	2.161	92.0%
Town of Hurlock, Dorchester County	2.00	1.65	1.025	51.3%
Kent Island (KNSG), Queen Anne's County	2.00	3.00	1.368	68.4%

As of 2007, actual flows for the subject facilities have been below the original design capacity before the ENR upgrade. Therefore, growth at these facilities during 2007, if any, cannot be attributable to the Bay Restoration Fund.

### **MDP Methodology**

Even though the Bay Restoration Fund does not fund additional treatment capacity, and growth would have been supported by these facilities with or without the ENR upgrades, for reasons discussed below, the analysis completed by MDP shows that connections to systems served by BRF upgraded facilities do occur outside of the PFA. This will be explained further below.

To estimate growth at these facilities the MDP BRF Analysis uses the following Data:

1. Sewer Service Area Data derived from the latest County Comprehensive Water and Sewerage Plans. These boundaries are updated regularly based on approved amendments or updates of the county plans.
2. Locally certified PFAs, excluding the PFA “comment areas” that have been identified by MDP. A “comment area” refers to an area certified by a county that does not meet the PFA statutory criteria. They are delineated by MDP on the PFA maps. Their purpose is to advise other State agencies that cover State

financial assistance programs that they should avoid targeting these areas. PFA boundaries are also updated regularly.

3. Parcel Point Data from Maryland Property View (specifically, MDPV 2006 and 2007). This data identifies new construction on parcels during the reporting year. MDPV is a tax map and parcel information collection of county-wide data sets which are maintained and updated on an annual rotation cycle. The update cycle varies for any particular county due to the fact that updates occur as a complete set of county data records are received. The update cycles may not match perfectly the calendar year for the reporting cycle. However, MDPV is still a valuable resource for tracking parcel changes over a 12 month period. MDP employs its best efforts to provide a consistent analysis when comparing reporting cycles with the specified calendar year. However, over a multi-year reporting period, new connection trends will become apparent.

For each wastewater treatment plant (WWTP) service area, this analysis results in identifying the number of 2007 connections inside and outside of the PFA. This is the baseline against which the annual future changes in the number of connections will be measured. The analysis assumes (based on the County Water and Sewerage Plans) that any improved properties inside of existing service areas are connected to the WWTP. No distinction is made among types of uses – residential, commercial, etc.

An “improved parcel” is defined as any parcel with an improvement value greater or equal to \$10,000.

**Alternative Empirical Methodology**

A parallel methodology using empirical data is also being initiated. BRF grant agreements require each grant recipient to report all new connections to completed BRF funded ENR plants. As this data becomes available in future years to compare to the results generated by the MDP analysis, a determination will be made whether to continue to use only one or both methodologies.

Maps showing each service area and PFAs were prepared with newly improved parcels highlighted with a yellow dot. These maps appear in Attachment 2 of this Report. These newly improved parcels are then simply counted with respect to their location inside and outside of the PFA to produce the data shown in the table below.

**Base Year Connections To 2007 Completed ENR Upgraded WWTPs  
Inside and Outside of PFAs**

WWTP	Start of Operation Date	Number of Connections Inside PFA – 2007	Number and Percent of All Connections Outside PFA - 2007
<b>Celanese, Allegany County</b>	11/2/2006	1854	64 / 3.3%
<b>Town of Easton, Talbot County</b>	6/30/2007	5899	102 / 1.7%
<b>Town of Hurlock, Dorchester County</b>	5/15/2006	796	6 / 0.7%
<b>Kent Island, Queen Anne’s County</b>	8/20/2007	6134	504 / 7.6%

This table shows that the number and percentages of connections outside of the PFA varies significantly, at least for these first service areas. Connections occur outside of the PFA for a number of reasons, one of which is that Comprehensive Plans and Water and Sewerage Plans are not required to be consistent with PFAs. The sole purpose of PFAs is to focus State investment programs listed in the PFA statute into PFAs. As discussed elsewhere, the BRF is not a listed program.

County Water and Sewerage Plans, however, are required by law to be consistent with local comprehensive plans. This means that the use of BRF funds is consistent with those linked plans. Notwithstanding the lack of consistency requirement between these two plans and PFAs, MDP and MDE make their best efforts in using the County Water and Sewerage and local comprehensive planning processes to ensure that growth, which may be directly or indirectly attributable to the Bay Restoration Fund program, be within State designated Priority Funding Areas. During the next year, staff will evaluate the following issues and report any findings or recommendations for improvements for consideration by the Advisory Committee in time for the 2010 Annual Report.

- There is no mandated link between the County Water and Sewer Plans and State Smart Growth policies including PFAs.
- There is no mandated link between the Bay Restoration Fund program and State Smart Growth policies including PFAs.
- The Bay Restoration Fund does not pay for any treatment capacity above the Approved Design Capacity in the Maryland's Tributary Strategy Statewide Implementation Plan. However the use of BRF funds may be indirectly linked to where and how growth occurs.
- Most facilities have design capacity above current flow, which can be used for growth either inside or outside of the PFA, with or without the ENR upgrade. Hence, measuring a direct link between BRF funds and the support of development not consistent with PFAs and State Smart Growth policies will be difficult.

## **Onsite Sewage Disposal System (OSDS) Upgrade Program**

### **OSDS Identification and Billing**

There are an estimated 420,000 OSDS's in Maryland that needed to be identified by local jurisdictions and billed. Working with the Advisory Committee, Maryland Department of Planning and the State Department of Assessment and Taxation, all jurisdictions have identified and are now billing septic system users.

### **Use of the OSDS BRF**

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

With priority first given to failing systems and holding tanks located in the Chesapeake and Atlantic Coastal Bays Critical Area and then to failing systems that the Department determines are a threat to public health or water quality, 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;
- 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;
- C. For a low income user the cost of repairing or replacing a failing onsite sewage disposal system with a system that uses the best available technology for nitrogen removal
- D. The cost, up to the sum of the costs authorized under item A of this item for each individual system, of replacing multiple onsite sewage disposal systems located in the same community with a new community sewerage system that is owned by a local government and that meets enhanced nutrient removal standards.

Above items C and D were not included in the initial legislation; rather they were added in subsequent legislative sessions. MDE developed procedures, guidelines and an application for low income users to apply for the full cost of repairing or replacing a failing OSDS with a system that includes BAT. The MDE website has been updated to include this information. An applicant qualifies for a full cost BAT complete disposal system replacement when the applicant meets one of the following conditions:

- Receives energy assistance subsidy;
- Receives public assistance - supplemental security income (SSI) or food stamps;
- Receives veterans or social security disability benefits;
- Meets the following guidelines:

<b>Household Size</b>	<b>Maximum Monthly Income Standards</b>	<b>Maximum Yearly Income Standards</b>
1	\$1,516.65	\$18,200.00
2	\$2,041.65	\$24,500.00
3	\$2,566.65	\$30,800.00
4	\$3,091.65	\$37,100.00
5	\$3,616.65	\$43,400.00
6	\$4,141.65	\$49,700.00
For each additional person, add	\$525.00	\$6,300.00

### **Best Available Technology (BAT)**

The Department developed a procedure for determining which technologies should be considered grant eligible, and the BRF Advisory Committee 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 was 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 workgroup 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.

The BAT Workgroup adopted a protocol used by the Environmental Protection Agency for Environmental Technology Verification (EPA/ETV) to establish a procedure to verify the performance of proprietary nitrogen reducing OSDS. During the past year one new technology was added to the approved list bringing the total number of proprietary technologies that have been evaluated by the EPA/ETV program and are eligible for BRF funding in Maryland to thirteen. A review team comprised of two engineers from MDE and one County Environmental Health Director review applications to ensure that each technology has been third party evaluated to a standard at least as stringent as the EPA/ETV's.

For non-proprietary technologies the vendor/applicant must provide a detailed description of the technology process illustrating sound scientific fundamentals and engineering practice. Acceptable technologies may be approved as a highly managed system. Highly managed systems must have either a renewable operating permit or be managed as part of a service district. No jurisdictions have availed themselves of the use of highly managed systems.

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 not undergone independent third-party verification or certification indicating consistent reduction of more than 50 percent of the nitrogen, the technology will be allowed a limited number of types of installations. These technologies will be monitored for a one to two 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. This evaluation period will allow the Department to further define what should be considered a BAT and to perform cost benefits analyses.

## 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. 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. Only as a lesser priority for low income users can the BRF provide funding for an entire OSDS replacement or repair that includes BAT and other material (gravel & pipe) and labor costs related to the directly the repair or replacement. The Department recognizes that operation and maintenance, design review, installation inspection and project management are essential parts of the cost 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 has outsourced some elements of the OSDS portion of the BRF implementing OSDS upgrades using the BRF funds granted to county and municipal government agencies. These agencies may, with approval from MDE, 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.

The following table summarizes outsourcing approved by the Board of Public Works in 2008:

<b>Recipient</b>	<b>County</b>	<b>Grant</b>
Calvert County Planning & Zoning	Calvert	\$1,582,000
Canaan Valley Institute	Washington	\$750,000
Caroline County Health Department	Caroline	\$277,000
Cecil County Health Department	Cecil	\$650,000
Dorchester County Health Department	Dorchester	\$409,000
Harford County Health Department	Harford	\$1,038,000
<u>Wicomico County Health Department</u>	<u>Wicomico</u>	<u>\$1,948,000</u>
	<b>TOTAL</b>	<b>\$6,654,000</b>

## Prioritization

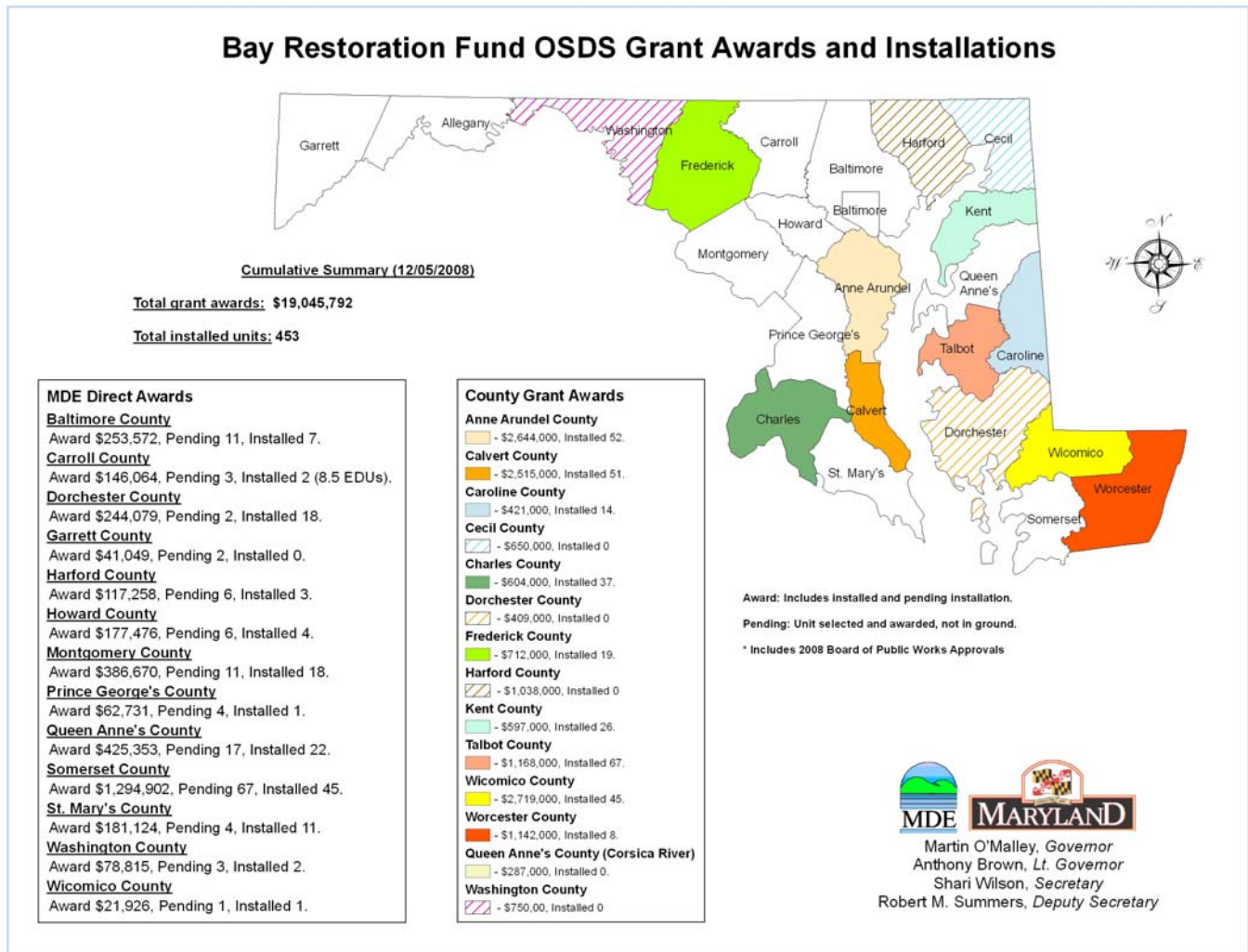
MDE has developed the following prioritization scheme:

<b>FACTOR</b>	<b>POINTS</b>	<b>SCORE</b>
Critical area upgrade only	20	
Failing system upgrade only	20	
holding tank upgrade only	20	
<b>Income</b>		
low income upgrade only	10	
any income upgrade only	9	
complete system replacement and upgrade for low income*	1	
<b>Environmental and Public Health</b>		
1,000 feet from shellfish harvesting waters	1	
1,000 feet from non-tidal surface water	1	
well head protection area	1	
carbonate rock geology	1	
<b>Water Supply</b>		
unconfined aquifer well	2	
confined aquifer well	1	
<b>TOTAL</b>		

\* The applicant qualifies for a full cost BAT complete disposal system replacement only when the low income requirements are met.



The following figure summarizes system installation and application by County:



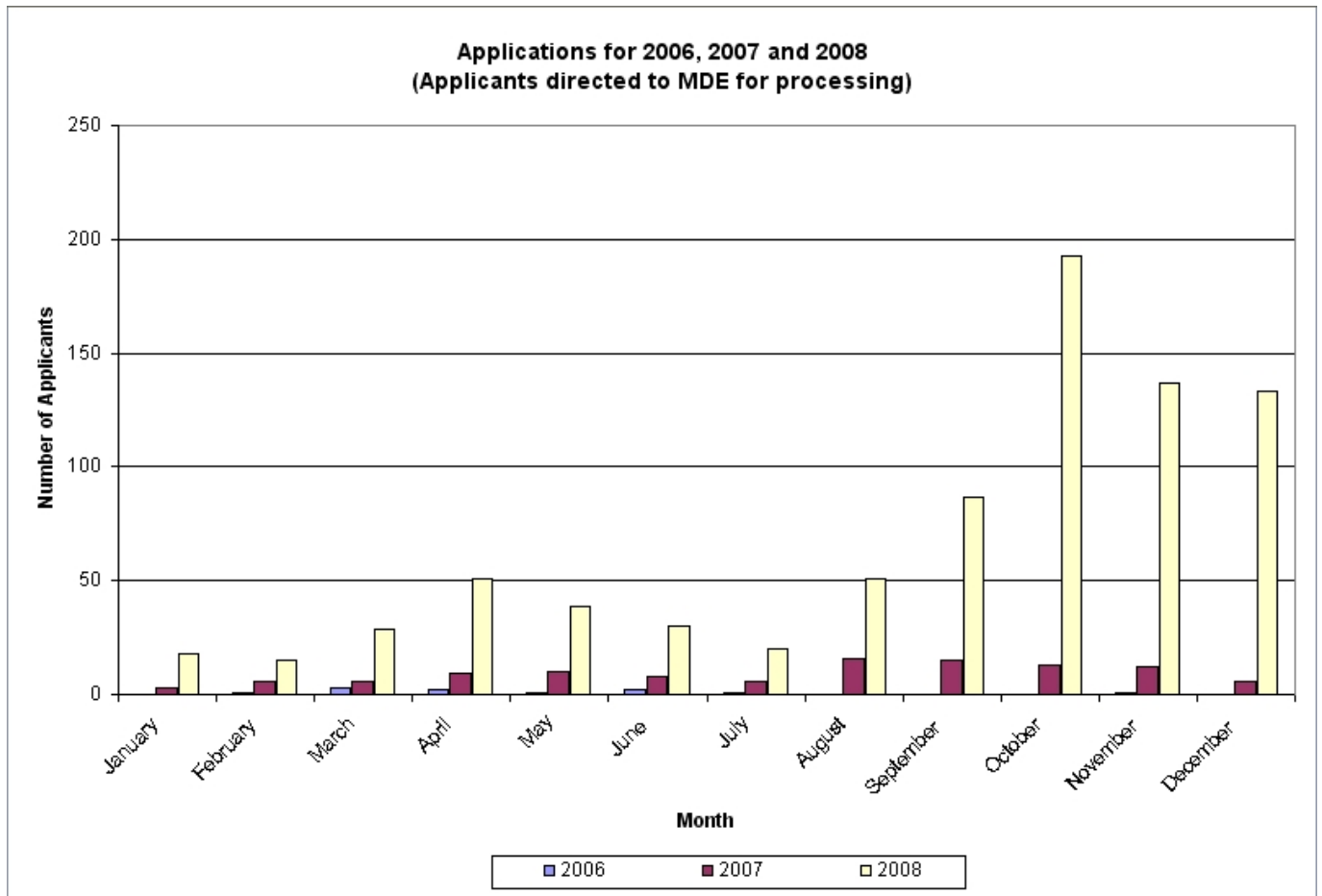
## Outreach

Please note that the demand for upgrading septic systems is now equal to the available revenue, however there remains an excess of accumulated funds due to the slow start-up of the program. MDE is addressing the excess accumulation of funds through the following initiatives:

- 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.
- In the fall of 2005, 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, and is being distributed to local health departments. Also, the brochure is being distributed as part of MDE’s inspection of onsite sewage disposal systems adjacent to shellfish harvesting waters.

- In the winter of 2006, 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 the video can be viewed on MDE’s website.
- In the fall of 2008, with assistance from the Governor’s Office and featuring the Governor, MDE produced a radio advertisement promoting the Bay Restoration Fund. The advertisement, which aired throughout the State, encourages Marylander’s to take advantage of the free septic system upgrades to protect their property and to help cleanup the Bay. MDE also airs this advertisement when citizens are put on hold on the MDFE phone system.
- Training of MDE field staff to enable them to inform property owners of the availability and advantages of the BRF Septic System Upgrade Program. As of December 13, 2008, four training sessions have been completed.
- Identify high-profile State-owned facilities in the critical area for Bay Restoration Fund (BRF) septic system upgrades to serve as demonstration projects. Projects have been identified at the University of Maryland Wye Center, Jefferson Patterson Park, Martinak State Park, at the Wye Oak. These and an additional ten DNR facilities should be completed by December 30, 2008.
- 134 State-owned septic systems have been identified in the Critical Area. MDE is to work with the appropriate agencies to upgrade these systems using the BRF. Over 100 of the identified systems are DNR-owned. MDE is working with the State agencies to target and upgrade State-owned facilities in the critical Area.
- MDE has identified all properties in the critical area on septic. We plan, on a rolling basis, to send a post card to these properties promoting the BRF. Mail-outs are scheduled to commence December 24, 2008.
- MDE began targeting large septic systems with individual State discharge permits to notify them of the availability of the BRF for upgrading their system.
- MDE prepared an RFP for a social marketing study to help guide future marketing efforts. The proposed RFP was revised as per DBM comments and resubmitted to DBM the second week of December 2008.
- MDE worked more closely with the press resulting in several stories in local papers.
- MDE let an RFP to obtain a list of pre-approved vendors and installers at a pre-determined cost. This will free property owners from having to go through the bid process. Vendor responses are due January 21, 2009.

The following chart summarizes applications received by MDE (partial data for 12/08):



## **Cover Crop Activities (Maryland Department of Agriculture)**

### **Recent Program Streamlining and Targeting to Achieve Maximum Nutrient Reduction:**

In 2005, the Maryland Department of Agriculture engaged the Schaefer Center for Public Policy to assist with a series of focus groups across the State and sent questionnaires 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 were incorporated into the Cover Crop Program the following year. A follow up survey of participants that year was then used to evaluate how streamlining affected enrollment and contract completion.

In FY2008, a separate commodity cover crop program continued to be available allowing farmers to harvest the crop for sale in the spring in return for a reduced payment provided they do not fertilize the acres in the fall.

Under the auspices of the BayStat management strategy, MDA working in conjunction with the University of Maryland Center for Estuarine Studies, organized a group of scientists to provide information on how best to utilize available funds for cover crops to achieve the greatest nutrient reductions. The findings included:

1. planting cover crops as early as possible in the fall
2. planting after crops that need higher fertilizer rates such as corn and vegetables
3. using cover crops on fields that were fertilized using manure
4. planting method
5. use of rye

MDA applied these criteria by structuring the incentive payments to reward farmers who adhered to one or more of these priorities. Additional incentives were also provided for farmers who planted cover crops in priority watersheds selected in the BayStat process for a targeted effort by State agency actions. Funds available from the 2010 Chesapeake Bay Trust Fund will more than double the resources available to the Cover Crop Program in FY2009.

MDA has subcontracted with University of Baltimore, Schaefer Policy Center again in FY2009 to evaluate changes made to the program and to better understand barriers to participation.

### **Status of Implementation of BRF for Cover Crop Activities:**

The Maryland Department of Agriculture portion of BRF funds is \$ 14,400,335 as of September 30, 2009. MDA budget appropriations have not kept pace with revenue earnings due to challenges in projecting annual revenue during BRF start up. MDA will request DBM action in FY2009 to resolve this issue and bring in all available revenue. This one-time opportunity will help offset FY09 general fund cuts to the Cover Crop Program.

# **Potential Funding Gap**



Maryland Department of the Environment  
 Maryland Water Quality Financing Administration  
 Bay Restoration Fund  
 WWTP Upgrade Capital/Prediction (does not include S&P's)

FY 2010 Budget (August 2008)

Current Fee \$20.00 New Fee \$ 30.00  
 0% <= % Increase

Fiscal Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
<b>Revenues</b>															
Net WWTP Revenue Transfer Non-COMP	\$ 7,022,687	\$ 57,688,874	\$ 57,463,812	\$ 50,968,045	\$ 50,818,725	\$ 58,174,915	\$ 90,736,862	\$ 57,344,028	\$ 57,877,069	\$ 58,459,820	\$ 59,040,268	\$ 59,620,802	\$ 60,227,110	\$ 60,829,281	\$ 750,138,125
Net Bond Sale Proceeds (1)	-	-	-	-	-	78,300,000	140,300,000	170,300,000	-	-	-	-	-	-	\$ 526,620,000
Est. Interest Investment Earnings (6%)	\$ 30,726	\$ 961,410	\$ 3,954,467	\$ 6,022,110	\$ 5,175,701	\$ 2,250,126	\$ 2,694,649	\$ 3,046,007	\$ 1,202,919	\$ 1,270,696	\$ 1,210,759	\$ 1,160,913	\$ 1,179,497	\$ 1,165,442	\$ 21,611,221
Total Revenue for B&R/Sewer Upgrades	\$ 7,061,405	\$ 58,650,284	\$ 61,428,279	\$ 57,990,155	\$ 55,994,426	\$ 137,724,026	\$ 201,131,511	\$ 201,131,511	\$ 59,100,988	\$ 60,730,516	\$ 60,251,027	\$ 60,781,715	\$ 61,406,607	\$ 62,024,723	\$ 1,317,773,225
<b>Expenditures</b>															
EM&C Capital Grants WWTPs - All/RCDS	\$ -	\$ 30,000,000	\$ 43,000,000	\$ 20,000,000	\$ 217,000,000	\$ 150,000,000	\$ 195,000,000	\$ 207,000,000	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000	\$ 665,000,000
Sewer Infrastructure Grants	\$ -	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 20,000,000
EM&C/CM Grants to WWTPs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 500,000	\$ 1,000,000	\$ 2,000,000	\$ 4,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 32,500,000
0%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Cost Share Incentive (if applicable)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Admin. Expenses Allocated (up to 1.5%)	\$ 105,340	\$ 665,200	\$ 867,937	\$ 626,021	\$ 624,201	\$ 642,624	\$ 651,050	\$ 659,500	\$ 663,690	\$ 670,520	\$ 674,400	\$ 679,280	\$ 684,160	\$ 689,040	\$ 684,917,400
Total Expenditure for B&R/Sewer Upgrades	\$ 105,340	\$ 35,665,200	\$ 48,867,937	\$ 33,626,021	\$ 227,424,201	\$ 145,026,624	\$ 216,441,050	\$ 244,367,500	\$ 60,300,690	\$ 61,370,520	\$ 61,525,400	\$ 61,520,802	\$ 61,520,107	\$ 61,277,441	\$ 1,376,304,472
<b>Fund Balances</b>															
Operating Balance	\$ -	\$ 6,996,065	\$ 29,723,840	\$ 42,297,141	\$ 121,165,160	\$ 171,168,100	\$ 18,697,000	\$ 10,218,161	\$ 4,604,426	\$ 3,234,465	\$ 1,600,785	\$ 624,916	\$ 125,463	\$ 271,260	\$ -
Ending Balance	\$ 6,996,065	\$ 20,738,449	\$ 42,297,141	\$ 121,165,160	\$ 25,700,986	\$ 18,497,800	\$ 10,218,161	\$ 4,404,526	\$ 3,284,468	\$ 1,668,760	\$ 634,916	\$ 125,868	\$ 271,368	\$ 668,791	\$ -
<b>Bonds Issued</b>															
Bonds Sold (2) (Details below)	\$ -	\$ -	\$ -	\$ -	\$ 50,000,000	\$ 60,000,000	\$ 70,000,000	\$ 150,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 500,000,000
Unamortized Bond Premium	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Bond Proceeds	\$ -	\$ -	\$ -	\$ -	\$ 50,000,000	\$ 60,000,000	\$ 70,000,000	\$ 150,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 500,000,000
<b>Total Available for B&amp;R/Sewer Upgrades</b>	\$ 7,061,405	\$ 58,650,284	\$ 61,428,279	\$ 57,990,155	\$ 55,994,426	\$ 137,724,026	\$ 201,131,511	\$ 201,131,511	\$ 59,100,988	\$ 60,730,516	\$ 60,251,027	\$ 60,781,715	\$ 61,406,607	\$ 62,024,723	\$ 1,317,773,225

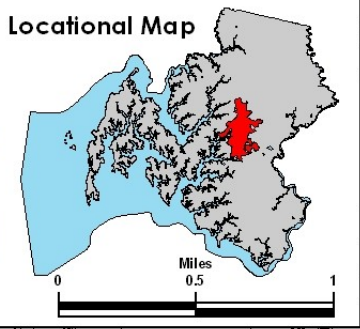
(1) Net Bond Sale Proceeds, estimated at 1.0% of bond issue. (See 491100000)  
 (2) Assumes 15-year term at 5% interest rate with level debt service for 15-year bond issue

Contact: Raj Khanna, Director, MWQCA  
 Email: Rajk@mda.state.md.us  
 Phone: 410-326-3113

# **Sewer Service Areas**



# Easton Wastewater Treatment Plant Sewer Service Area 2007 & Improved Parcels



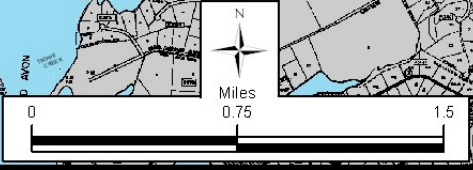
**Legend:**

- Improved Parcels within "S1" 2006  
Total Parcel Count - 5649
- Improved Parcels within "S1" 2007  
Total Parcel Count - 5827

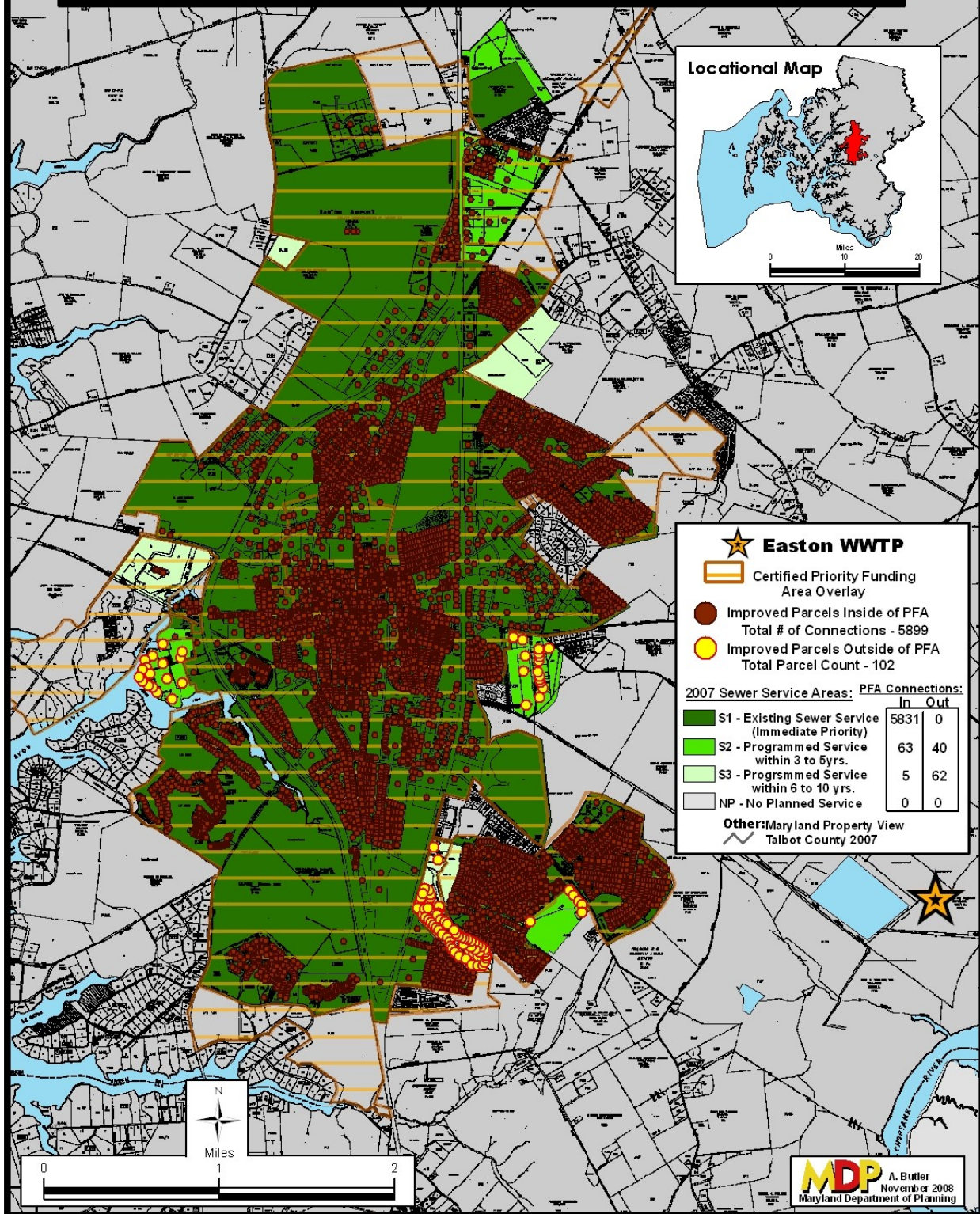
**2007 Sewer Service Areas:**

- S1 - Existing Sewer Service (Immediate Priority Status)
- S2 - Programmed Service within 3 to 5 yrs.
- S3 - Programmed Service within 6 to 10 yrs.
- NP - No Planned Service

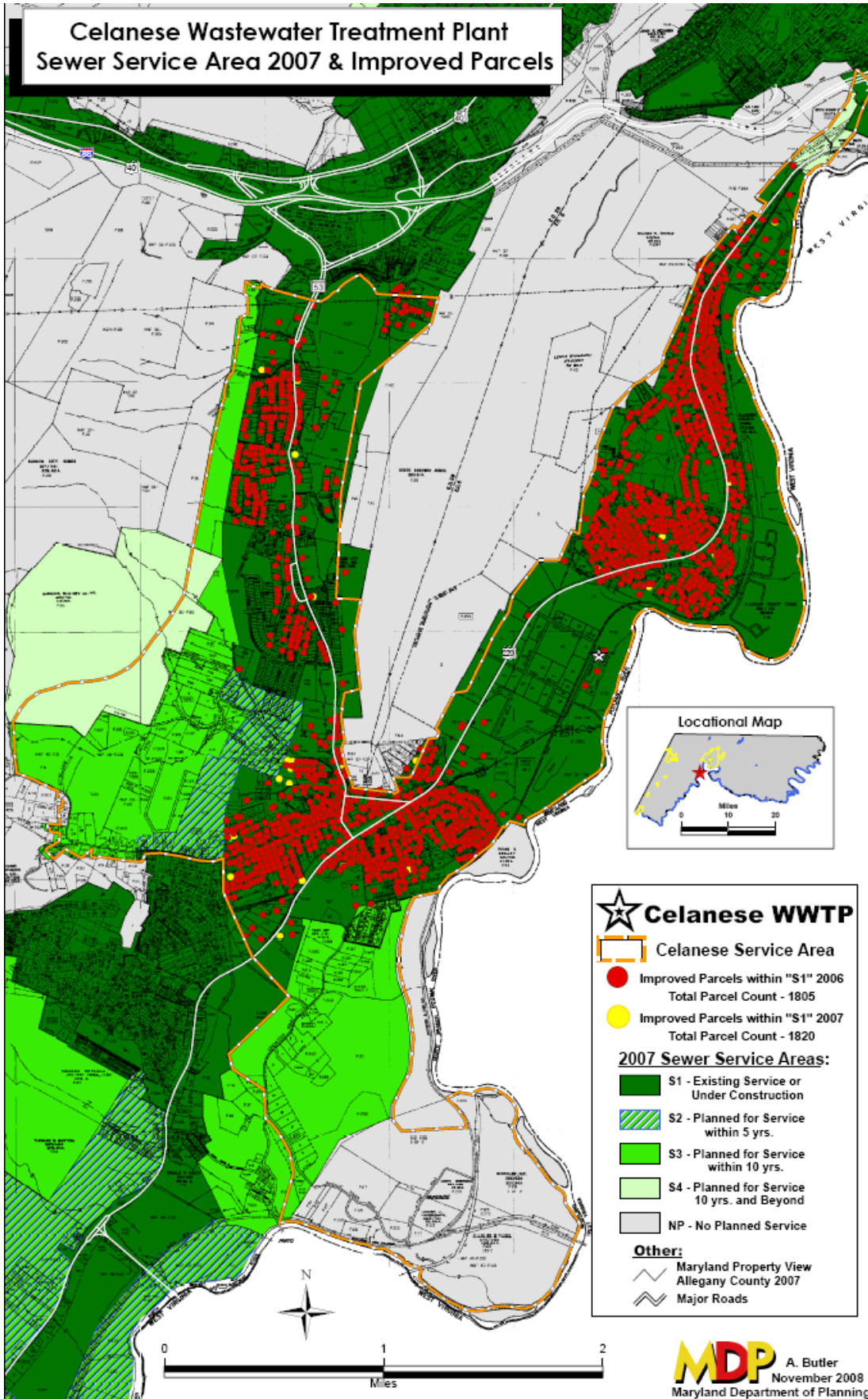
**Other:** Maryland Property View  
Talbot County 2007



# Easton Wastewater Treatment Plant Sewer Service Area 2007 & Certified Priority Funding Area Overlay



# Celanese Wastewater Treatment Plant Sewer Service Area 2007 & Improved Parcels



**★ Celanese WWTP**

**○ Celanese Service Area**

- Improved Parcels within "S1" 2006  
Total Parcel Count - 1805
- Improved Parcels within "S1" 2007  
Total Parcel Count - 1820

**2007 Sewer Service Areas:**

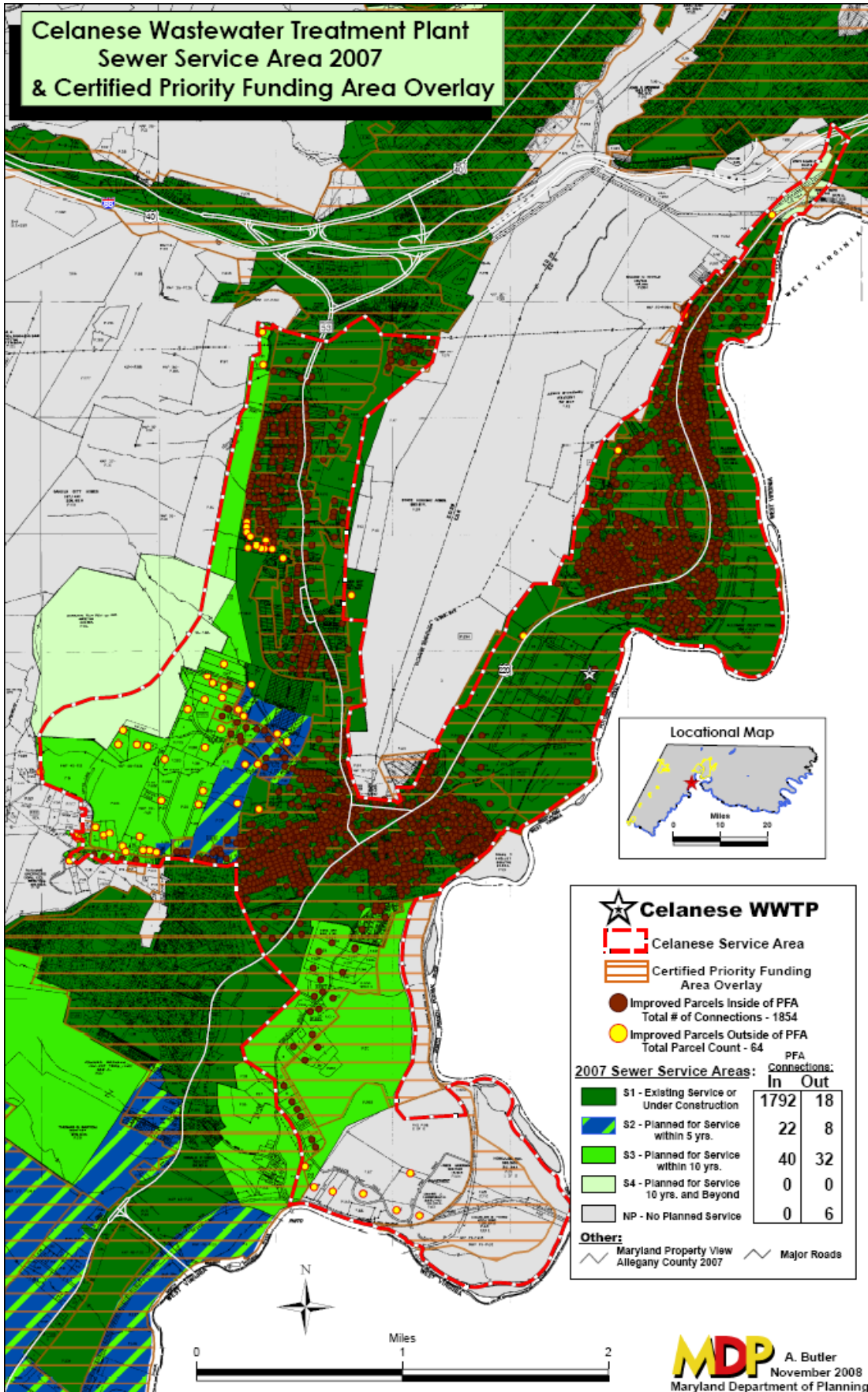
- S1 - Existing Service or Under Construction
- ▨ S2 - Planned for Service within 5 yrs.
- S3 - Planned for Service within 10 yrs.
- S4 - Planned for Service 10 yrs. and Beyond
- NP - No Planned Service

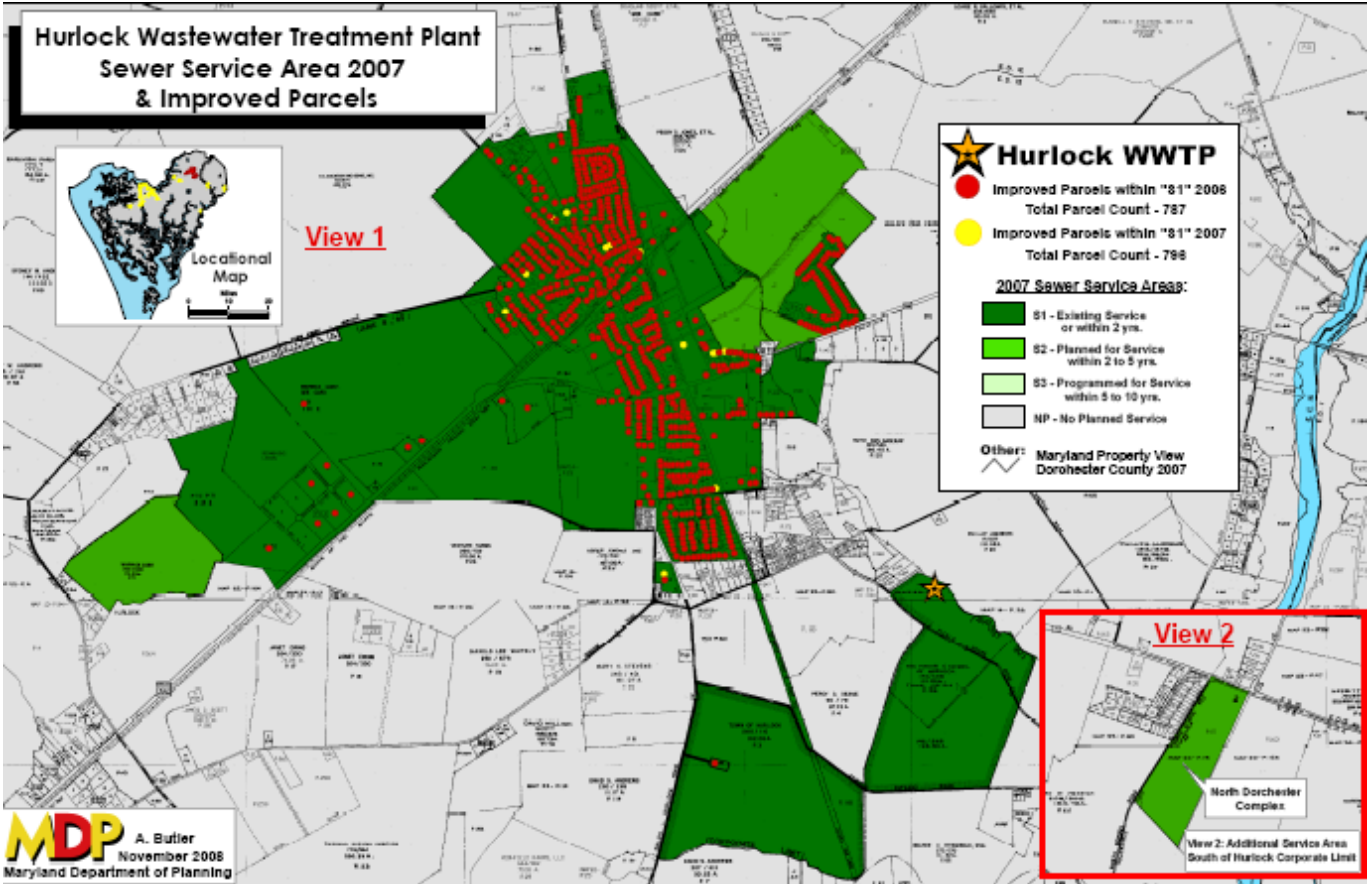
**Other:**

- Maryland Property View Allegany County 2007
- Major Roads

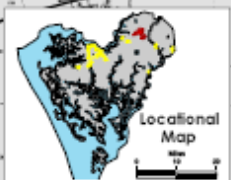
**MDP** A. Butler  
November 2008  
Maryland Department of Planning

# Celanese Wastewater Treatment Plant Sewer Service Area 2007 & Certified Priority Funding Area Overlay





**Hurlock Wastewater Treatment Plant  
Sewer Service Area 2007  
& Certified Priority Funding Area Overlay**

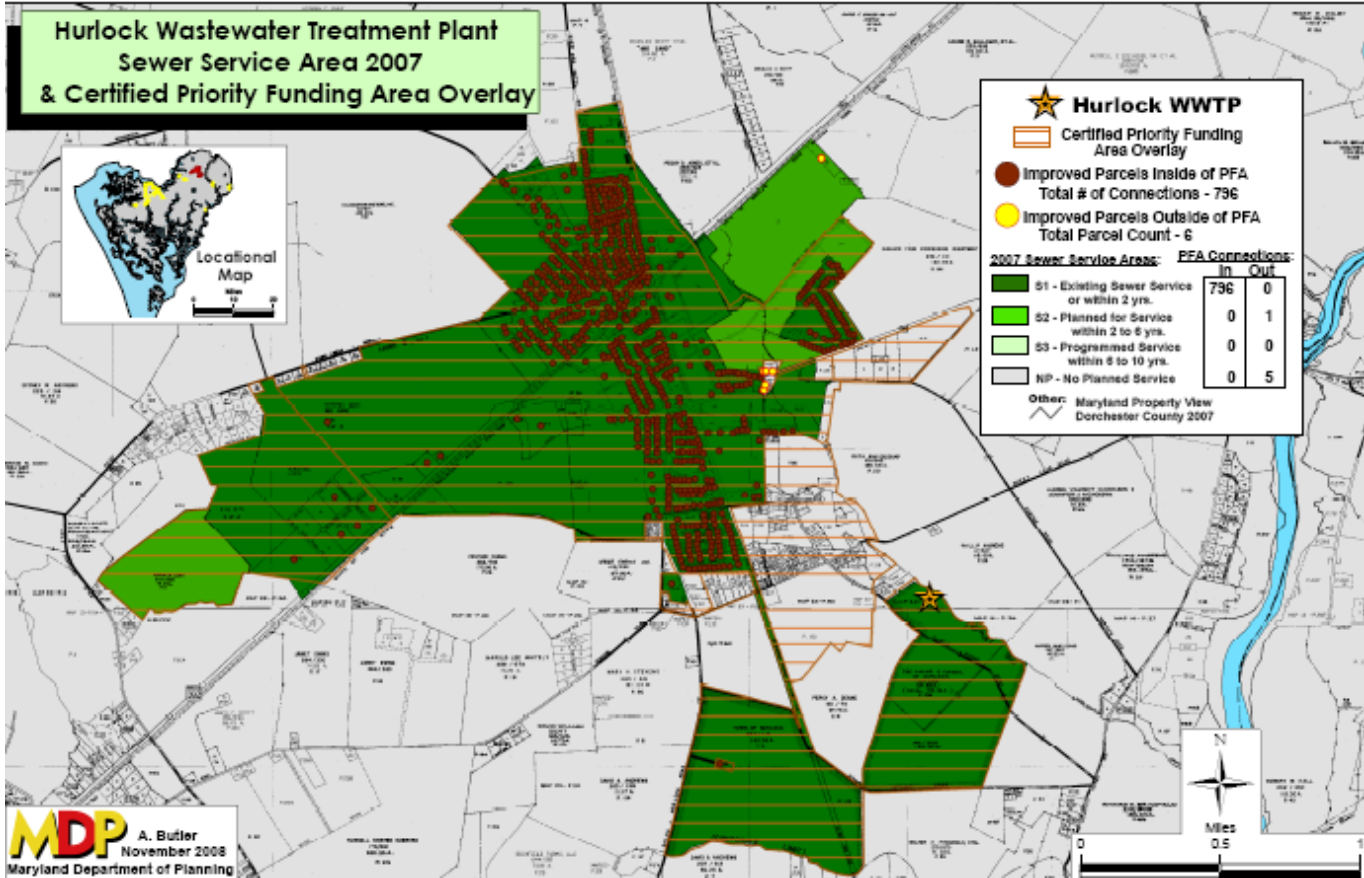


**Hurlock WWTP**

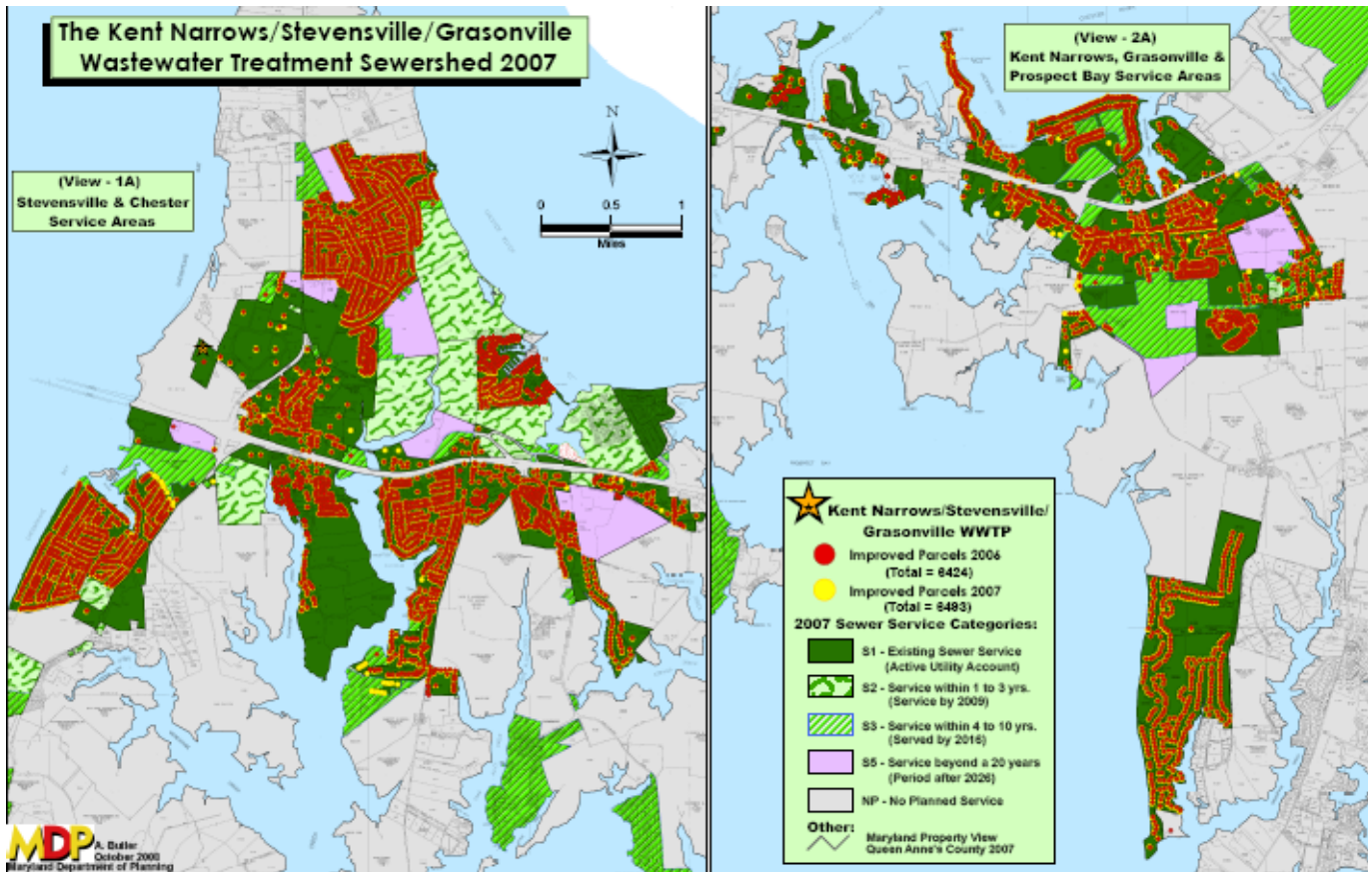
- Certified Priority Funding Area Overlay
- Improved Parcels Inside of PFA  
Total # of Connections - 796
- Improved Parcels Outside of PFA  
Total Parcel Count - 6

2007 Sewer Service Areas	PFA Connections:	
	In	Out
S1 - Existing Sewer Service or within 2 yrs.	796	0
S2 - Planned for Service within 2 to 5 yrs.	0	1
S3 - Programmed Service within 6 to 10 yrs.	0	0
NP - No Planned Service	0	5

Other: Maryland Property View  
Dorchester County 2007

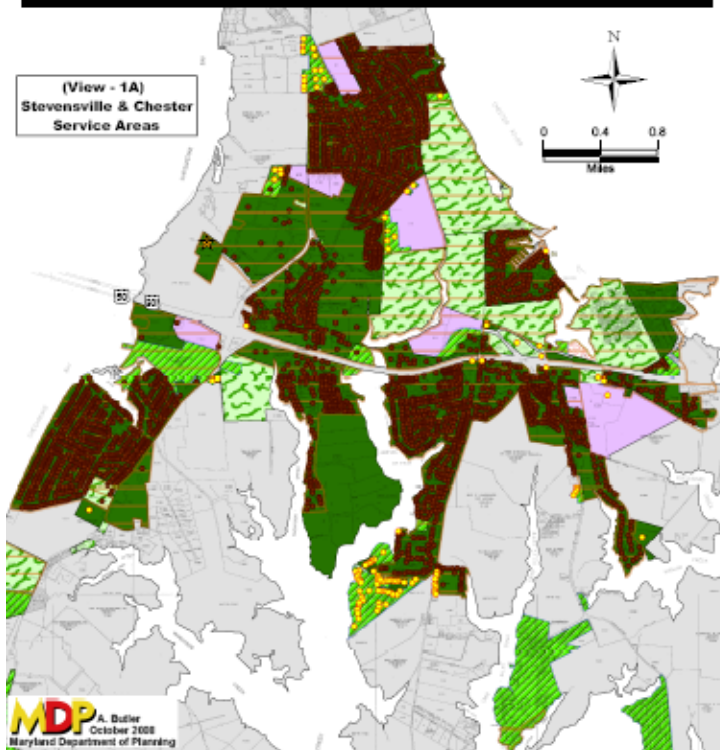


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November 2008  
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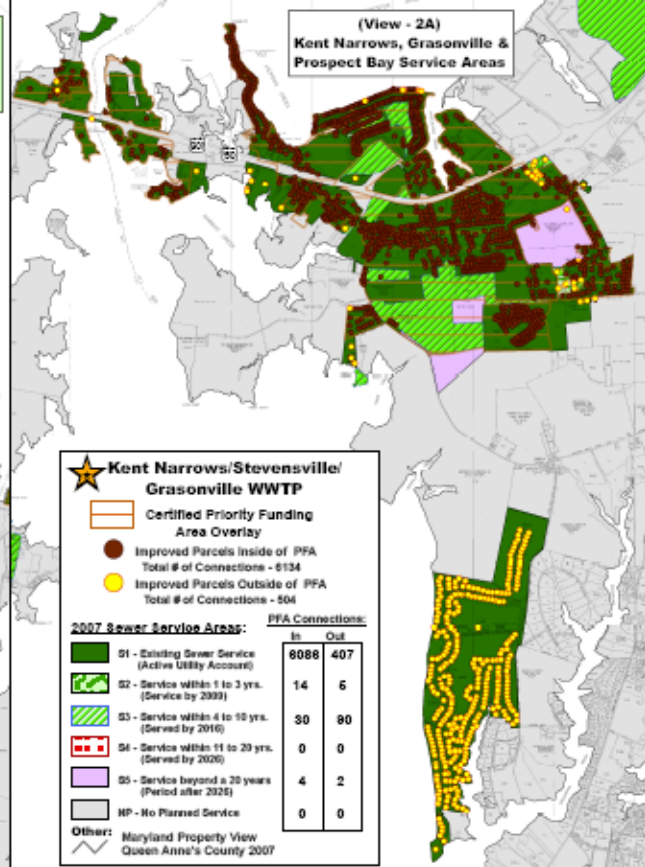
**The Kent Narrows/Stevensville/Grasonville Wastewater Treatment Plant Sewer Service Area 2007 & Certified Priority Funding Area Overlay**

(View - 1A)  
Stevensville & Chester Service Areas



**MDP** A. Butler  
October 2008  
Maryland Department of Planning

(View - 2A)  
Kent Narrows, Grasonville & Prospect Bay Service Areas



**Kent Narrows/Stevensville/Grasonville WWTP**

- Certified Priority Funding Area Overlay
- Improved Parcels Inside of PFA  
Total # of Connections - 6134
- Improved Parcels Outside of PFA  
Total # of Connections - 504

2007 Sewer Service Areas:	PFA Connections:	
	In	Out
S1 - Existing Sewer Service (Active Utility Account)	6088	407
S2 - Service within 1 to 3 yrs. (Service by 2009)	14	6
S3 - Service within 4 to 10 yrs. (Served by 2016)	30	80
S4 - Service within 11 to 20 yrs. (Served by 2026)	0	0
S5 - Service beyond a 20 years (Period after 2026)	4	2
NP - No Planned Service	0	0

**Other:**  
 Maryland Property View  
 Queen Anne's County 2007