Bay Restoration Fund Advisory Committee

Christopher P. Murphy, Chairman

Annual Status Report
January 2023 (18th Report)

Report to:

Larry Hogan, Governor
State of Maryland

Boyd K. Rutherford, Lt. Governor
State of Maryland

Bill Ferguson, Senate President
Maryland General Assembly

Adrienne A. Jones, House Speaker
Maryland General Assembly

Paul Pinsky, Chair
Senate Education, Health, and Environmental Affairs Committee

Guy Guzzone, Chair
Senate Budget and Taxation Committee

Kumar Barve, Chair
House Environment and Transportation Committee

Ben Barnes, Chair
House Appropriations Committee

Bay Restoration Fund Advisory Committee Members

Committee Members	Affiliation
Christopher P. Murphy	Committee Chairman
Horacio Tablada	Maryland Department of the Environment
Joseph Bartenfelder	Maryland Department of Agriculture
Robert S. McCord	Maryland Department of Planning
Jeannie Haddaway-Riccio	Maryland Department of Natural Resources
David R. Brinkley	Maryland Department of Budget and Management
William P. Ball, Ph.D.	Johns Hopkins University
Bob Buglass	Washington Suburban Sanitary Commission (WSSC)
John Dinkel	DBD, LLC
Mark Hoffman	Chesapeake Bay Commission
Cheryl A. Lewis	Town of Oxford
Doug Meyers	Chesapeake Bay Foundation
Timothy Male	Environmental Policy Innovation Center
J. Teigen Hall	Nemphos Braue Attorneys at Law

PURPOSE OF THIS REPORT

Section 1605.2 of the Environment Article, *Annotated Code of Maryland*, requires that, beginning January 2006, and every year thereafter, the Bay Restoration Fund (BRF) Advisory Committee (BRFAC) 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 BRFAC is pleased to present to Governor Larry Hogan and the Maryland General Assembly its 18th Annual Legislative Update Report. Great strides have been made in implementing this historic BRF, but many challenges remain as we continue with the multi-year task of upgrading the state's wastewater treatment plants (WWTPs) and onsite sewage disposal systems (OSDSs), and planting cover crops to reduce nitrogen and phosphorus in the Chesapeake Bay.

Accomplishments

- As of June 30, 2022, the Comptroller of Maryland (CoM) has deposited approximately, since the 2004 program inception, $1.532 billion in the Maryland Department of the Environment (MDE) WWTP fund, $223 million in the MDE Septic Systems Upgrade fund, and $157 million in the Maryland Department of Agriculture (MDA) Cover Crop Program fund, for a total of $1.912 billion in BRF fees (wastewater and septic users).

- Enhanced Nutrient Removal (ENR) upgrades of the state's major sewage treatment plants are almost completed with 65 of the 67 major facilities currently in operation. For the remaining two facilities, one is currently under construction to be upgraded, and the other is in planning.

- Upgrades are underway for some minor sewage treatment plants (less than 0.5 million gallons per day). To date, 10 minor facilities have completed the ENR upgrade and are in operation. Seven more are under construction, and 18 additional plants have signed the funding agreement and have progressed into planning or design. All facilities that pay into the BRF and provide services to residential dwelling units are eligible to receive BRF grants if MDE determines that the ENR upgrade would be cost effective at the selected facility. MDE estimates that approximately 80 of those minor facilities may meet the cost-effectiveness criteria and can be upgraded if they apply for BRF funding.

- MDE is using BRF to upgrade septic systems with the Best Available Technology (BAT) for nitrogen removal. As of June 30, 2022, the BRF has funded 14,942 BAT upgrades throughout Maryland, of which 9,205 upgrades were completed within Maryland's Critical Areas. In addition, 1,242 homes have been connected to public sewers using BRF.

- During the 2021 legislative session, the Clean Water Commerce Account (CWCA) was established to allow MDE to purchase nitrogen reductions from environmental practices with a life of at least 10 years. Twenty million dollars a year will be transferred from the Wastewater Fund to the Clean Water Commerce Account to be used for these purchases. The first project solicitation (Fiscal Year (FY) 2023) under the reauthorized program was open during summer 2022 and closed in September 2022. The Department is in the process of evaluating the

project proposals received to award funding. There has been significant interest in the program, with 36 applications received and over $90M in funding requested.

- MDA dedicates its portion of BRF for the implementation of the statewide Cover Crop Program. In FY22, MDA expanded the program to include a multi-year contract option consistent with recommendations by the state's Soil Health Advisory Committee. This Cover Crop+ Program promotes soil health benefits associated with cover crop implementation. Management practices, such as, requiring at least 50% cereal grains and 25% legumes into the cover crop mix, maintaining year-round soil cover, and allowing livestock grazing on established cover crop fields not only provide water quality benefits but also improve soil health.

- In FY22, Maryland farmers applied to plant 638,226 acres of cover crops. Typically, they enroll more acreage than they plant. Farmers planted 424,616 acres attaining an estimated nutrient reduction of 3 million pounds of nitrogen and 3,400 pounds of phosphorus.

- Cover crops are planted in the fall to prevent excess nitrogen runoff from the soil after crop harvest. It is one of the Best Management Practices (BMPs) within Maryland's Watershed Implementation Plan (WIP) to meet Total Maximum Daily Loads (TMDL) nutrient reductions. The practice is recognized as one of the state's most cost effective BMPs available to prevent nitrogen movement to groundwater and subsequently the Bay. Cover crops also prevent soil erosion and improve soil quality.

- Expenditures for FY22 utilized appropriations of $10.8 million from BRF, and $11.3 million from the Chesapeake and Atlantic Coastal Bays Trust Fund (Trust Fund).

- This summer, 600,000 acres were enrolled in next years' (FY23) Cover Crop Program. The program is traditional, meaning the crop recovers unused plant nutrients in the fall then recycles the nutrients for the following spring crop. The traditional planted acres along with commodity acres reported by the U.S. Department of Agriculture (USDA) Farm Service Agency should allow Maryland farmers to reach Chesapeake Bay goals. In addition, MDA received 26 applications totaling nearly 5,500 acres annually over the next 3 years for the new Cover Crop+.

- MDE and the Maryland Department of Planning (MDP or Planning) are continuing their efforts to implement the requirements of Chapter 257 of the 2007 Acts, which requires MDE and Planning, in concert with the BRFAC and in consultation with local governments, to report on the growth influences that ENR-upgraded WWTPs may be having in the jurisdiction served. As part of this report, Planning is continuing its analysis, and is reporting on all qualifying WWTPs, grouped by regions, found in Table 1 of this report.

Conclusions and Recommendations

MDE will continue to ensure that BRF-funded projects remain on schedule to assist the state in meeting its final 2025 nutrient reduction targets for the Bay.

Programs and Administrative Functions

Comptroller of Maryland (CoM):

The role of the CoM is to act as the collection agent for BRF and make distributions to MDE and MDA as required by the law.

In the third year of administering BRF, the CoM began the compliance phase of the fee administration. The law specifies that 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 began contacting the billing authorities and users who have failed to file or pay 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 the U.S. Department of Defense (DoD) to have WWTPs upgrade their systems over a defined period of time to exempt them from BRF. A copy of the agreement was provided by MDE to CoM, and those BRF accounts were subsequently placed on inactive status.

The CoM is continuing its audits of billing authorities to ensure fees are calculated correctly and are being collected.

MDE:

Three units within MDE are involved in the implementation of BRF.

1. *Maryland Water Infrastructure Financing Administration:*
   The Maryland Water Infrastructure Financing Administration, established under Title 9, Subtitle 16 of the Maryland Code, has the primary responsibility for the capital budget development, financial management, and fund accounting of the Water Quality Revolving Loan Fund, the Drinking Water Revolving Loan Fund, and BRF. Specifically, for BRF, it is responsible for the issuance of revenue bonds, payment disbursements, and the overall financial accounting, including audited financial statements.

2. *Engineering and Capital Projects Program:*
   The Engineering and Capital Projects Program manages the engineering 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. Also, the Program manages projects funded by state grant programs, including BRF, 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 $500 million. A single project may involve as many as eight different funding sources, and multiple construction and engineering contracts over a period of 3 to 10 years. The program 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.

3. *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 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. 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 (WW) to surface waters needs a surface water discharge permit. Applicants include industrial facilities, municipalities, counties, federal facilities, schools, and commercial water and WWTPs, as well as treatment systems for private residences that discharge to surface waters.

   WWPP will ensure that the ENR goals and/or limits are included in the discharge permits of facilities upgraded under BRF. To accommodate the implementation of the OSDS portion of BRF, the program has been designated as the lead for the OSDS upgrade program.

Maryland Department of Agriculture (MDA):

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 BMPs. Programs include information, outreach, technical assistance, financial assistance, and regulatory programs such as Nutrient Management. Soil Conservation Districts (SCDs) are the local delivery system for many of these programs.

BRF provides a dedicated funding source for 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. For FY22, incentive payments were adjusted based on rising input costs. A maximum payment could have reached $95/acre for those meeting all of the incentive criteria, which included a $10/acre spring delayed crop termination incentive.

In FY22, MDA introduced a Cover Crop+, a new pilot financial incentive program for soil health farmers. Cover Crop+ offers higher incentive payments and more perks for farmers who plant cover crops to improve soil health. To participate in this new program, farmers sign a contract to grow cover crop mixes on the same field for 3 consecutive years. They also agree to maintain a living root system in enrolled fields throughout the year and manage their cover crop to achieve maximum soil health and water quality benefits.

The base payment for this premium incentive program is $115/acre per year. Optional add-on practices, such as conservation crop rotation, livestock integration, and pre-sidedress soil nitrate testing can increase the reimbursement rate to $160/acre. To qualify for payment, optional add-ons must be new practices (not used in the previous 3 years) for an enrolled field.

MDA is projected to receive $11.6 million in BRF support in FY23. It is projected that BRF will provide financial assistance for approximately 230,000 acres of cover crops.

Over the past 8 years, the Cover Crop Program has been co-funded by the BRF and Trust Fund and has worked to support the increased level of farmer participation.

MDA's outreach for the program included news releases, print ads, direct mail, posters, outdoor banners at commercial grain facilities and equipment dealer facilities, cover crop field signs, seed testing bags, bumper stickers, and educational displays targeted toward farmers.

MDA administers the Cover Crop Program through the Conservation Grants Program, which offers several incentive programs and provides financial assistance to farm operators to help them implement more than 40 BMPs. Cover crops are one of the most cost-effective methods for sequestering residual nutrients from the soil following the fall harvest of crops. They minimize nitrogen leaching, prevent soil erosion, and improve soil quality.

Maryland Department of Planning (Planning):

Planning is a statutory member of the BRFAC. Chapter 80 of the Acts of 2014 allows for the use of BRF monies for the remediation of failing septic systems, outside of the Priority Funding Area (PFA), connecting to the qualified WWTPs. Such cases must meet certain conditions and gain approval from the Smart Growth Coordinating Committee prior to using BRF. Planning works with local governments to ensure that land use plans maintain consistency with both local development goals and state growth policies, in light of these external PFA sewer extensions to remediate failing septic systems.

Specific functions that Planning carries out that relate directly or indirectly to BRF are summarized below. HB 893 enacted in 2007, added an additional BRF reporting responsibility, which is discussed later in this report.

State Clearinghouse Review:

> All state and federal financial assistance applications, including those for BRF funds, are required to be submitted for review through Planning's State Clearinghouse. 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 the interests of all reviewing parties are considered before a project is sent forward for final federal or state approval.

County Water and Sewerage Plans and Amendments:

> Planning assists local governments in the preparation of amendments and revisions to the water and sewer planning document, when requested by the local governments.
>
> Planning is directed by law to advise MDE regarding the consistency of County Water and Sewerage Plans, and amendments with regard to the "local master plan and other appropriate matters" (Environment Article § 9-507 (b) (2)).

The law requires that County Water and Sewerage Plans, and amendments be consistent with the local comprehensive plans. If a plan or amendment is not consistent, it is subject to disapproval, in whole or in part, by MDE.

Priority Funding Areas (PFAs):

PFAs 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 designations do not meet the legal requirements in the law, Planning indicates those portions as "comment areas" to indicate that not all requirements of the §5-7B-02 and 03 State Finance and Procurement Article are met. In these areas "growth-related projects" are ineligible for certain state funding until requirements are met or unless an exception is granted by the Maryland Smart Growth Coordinating Committee. 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 was enacted after the PFA law and is not included in the list of state financial programs subject to the PFA funding restrictions but is monitored so as not to negatively affect the efforts of Smart Growth policies, namely support to new development at lower densities, especially outside of designated growth areas. Even though PFA law is not directly applicable to this capacity, as highlighted in Table 1 of this report, it appears that treatment capacity has been consistently used for service connections within the PFA. Planning will continue to monitor this activity, especially in areas where major failing septic systems are increasing in numbers, and other jurisdictions where the remediation of failing septic systems for public health and safety reasons is on the rise. Where BRF septic funds are provided for these types of connections, local governments are guided and advised by MDE and Planning.

Local Comprehensive Plan Review and Comment: Local Comprehensive Plans must be prepared by every county and municipality, pursuant to the Land Use Article of the Annotated Code. Planning provides comments on draft local comprehensive plans and amendments. Through the Clearinghouse review process, Planning coordinates other state agency comments prior to being adopted by local governing bodies. While these plans are not subject to state approval and comments provided are advisory only, local governing bodies provide full consideration to the state advisory comments since state funds may later be needed to implement specific recommendations of the local plans. Planning works closely with and provides technical assistance to local governments in the processes leading to the adoption of local comprehensive plans. Planning ensures coordination with state policies, including the plans, policies, and programs of the Governor's Smart Growth Subcabinet.

BRF Status

BRF fees collected from WWTP users are identified as "Wastewater" fees, and those collected from users on individual OSDSs are identified as "Septic" fees. These fees are collected by the CoM and deposited as follows:

- Wastewater fees (net of local administrative expenses) are deposited into MDE's "Wastewater Fund."
- 60% of the Septic fees (net of local administrative expenses) are deposited into MDE's "Septic Fund."
- 40% of the Septic fees (net of local administrative expenses) are deposited into MDA's "Septic Fund."

The status of the deposits from the CoM to MDE and MDA for each of the sub-funds identified above, as of June 30, 2022, is as follows:

Wastewater Fund (MDE 100% - FY22):

Sources:	$ Million	Uses:	$ Million
Fee Revenue Deposits	$ 119.4	Grant Awards	$ 53.4
Interest Earnings	$ 0.7	Admin. Expense Allowance	$ 1.8
Net Bond Proceeds	$ 0.0	Bond DS Payments	$ 31.8
Total	$ 120.1	Total	$ 87.0

Wastewater Fund (MDE 100% - cumulative since inception 2004):

Sources:	$ Billion	Uses:	$ Billion
Fee Revenue Deposits	$ 1.532	Grant Awards	$1.655*
Interest Earnings	$ .036	Admin. Expense Allowance	$ .023
Net Bond Proceeds	$ .362	Bond DS Payments	$ .232
Total	$ 1.930	Total	$1.910

*Funds are awarded after construction bids have opened (except for planning/design) and payment disbursements are made as expenses are incurred; $100 million in additional revenue bonds issuance is projected for FY25.

As of June 30, 2022, the grants under the Wastewater Fund were awarded as follows:

MAJOR WWTP GRANTS:

Aberdeen, City of	Aberdeen WWTP ENR	$14,581,773.00
Allegany Co.	Georges Creek WWTP ENR	9,875,136.00
Allegany Co.	Celanese WWTP ENR	2,333,382.00
Anne Arundel Co.	Annapolis WRF ENR	14,683,515.00
Anne Arundel Co.	Broadneck WRF	7,762,678.00
Anne Arundel Co.	Broadwater ENR	6,044,053.00
Anne Arundel Co.	Cox Creek WRF ENR Upgrade	88,600,000.00
Anne Arundel Co.	MD City Facility ENR Upgrade	3,473,000.00
Anne Arundel Co.	Mayo WRF BNR ENR Upgrade	8,854,528.00

Anne Arundel Co.	Patuxent WRF ENR	3,713,000.00
Baltimore City	Back River WWTP ENR (SC877)	300,885,432.00
Baltimore City	Back River WWTP ENR (SC882)	46,219,057.00
Baltimore City	Patapsco WWTP ENR	158,922,000.00
Bowie, City of	Bowie WWTP ENR	8,668,492.00
Brunswick, City of	Brunswick WWTP ENR	8,263,000.00
Cambridge, City of	Cambridge ENR	8,618,255.00
Carroll Co.	Hampstead WWTP ENR	9,651,298.00
Cecil Co.	Northeast River Adv WWTP	10,923,342.00
Chesapeake Beach, Town of	Chesapeake Beach WWTP	7,099,652.00
Chestertown, Town of	Chestertown BNR ENR Improvements	1,490,854.14
Crisfield, City of	Crisfield WWTP BNR ENR	4,230,766.00
Cumberland, City of	Cumberland WWTP BNR ENR	25,654,866.00
Delmar, Town of	Delmar WWTP BNR ENR	2,369,464.00
Denton, Town of	Denton WWTP ENR	4,405,615.00
Denton, Town of	Denton WWTP ENR Refinement	779,754.00
Easton, Town of	Easton WWTP ENR	7,788,021.00
Elkton, Town of	Elkton BNR ENR	7,403,154.00
Emmitsburg, Town of	Emmitsburg WWTP ENR	5,517,848.00
Federalsburg, Town of	Federalsburg BNR ENR	2,900,000.00
Frederick, City of	Frederick Gas House	17,422,090.00
Frederick Co.	Ballenger Creek McKinney WWTP	29,812,509.00
Fruitland, City of	Fruitland WWTP ENR	4,700,298.00
Hagerstown, City of	Hagerstown WWTP ENR	10,191,836.00
Harford Co.	Joppatowne ENR	3,399,778.00
Harford Co.	Sod Run ENR	36,640,567.00
Havre de Grace, City of	Havre de Grace WWTP ENR	10,474,820.00
Howard County	Little Patuxent ENR	35,493,172.00
Hurlock, Town of	Hurlock WWTP ENR	941,147.75
Indian Head, Town of	Indian Head ENR	5,822,098.00
LaPlata, Town of	La Plata WWTP ENR	9,367,610.00
Leonardtown, Town of	Leonardtown WWTP ENR	8,667,382.00
MD Environmental Service	Freedom District WWTP ENR	7,716,359.00
MD Environmental Service	MD Correctional Institute WWTP ENR	6,764,539.00
MD Environmental Service	Dorsey Run WWTP ENR	47,986.00
Mt. Airy, Town of	Mt Airy WWTP/ENR	3,354,144.00
Perryville, Town of	Perryville ENR Upgrade	3,888,168.00
Perryville, Town of	Perryville WWTP ENR Refinement	350,493.00
Pocomoke, City of	Pocomoke WWTP ENR	3,214,878.00
Poolesville, Town of	Poolesville WWTP ENR	223,132.00
Poolesville, Town of	Poolesville WWTP ENR Refinements	249,760.00
Queen Anne's County	Kent Island ENR	6,380,645.09
Salisbury, City of	Salisbury WWTP ENR Upgrade	2,553,876.86
Salisbury, City of	Salisbury WWTP BNR ENR	11,362,766.00
Snow Hill, Town of	Snow Hill WWTP ENR	3,275,455.00
Somerset Co.	Princess Anne WWTP ENR	23,000.00
St. Mary's County	Marlay Taylor WRF	9,896,000.00
Talbot County	St Michaels WWTP ENR	1,978,698.78
Taneytown, City of	Taneytown WWTP ENR	5,381,998.00
Thurmont, Town of	Thurmont WWTP ENR	6,680,679.00

Washington County	Winebrenner WWTP ENR	2,990,607.00
Washington County	Conococheague WWTP ENR	18,725,544.00
Westminster, City of	Westminster WWTP ENR	40,347,789.00
WSSC	Blue Plains WWTP ENR	143,632,166.00
WSSC	Damascus WWTP ENR Upgrade	5,053,399.00
WSSC	Parkway WWTP ENR Upgrade	14,271,803.00
WSSC	Piscataway WWTP ENR Upgrade	6,324,000.00
WSSC	Seneca WWTP ENR Upgrade	5,550,048.00
WSSC	Western Branch WWTP ENR	37,589,528.00
MAJOR WWTP-ENR GRANT SUBTOTAL		1,302,472,704.62

MINOR WWTP & EXPANDED USE PROJECT GRANTS:

Minor WWTP Projects

Betterton, Town of	Betterton WWTP BNR ENR Upgrade	5,935,956.00
Boonsboro, Town of	Boonsboro WWTP ENR Upgrade	2,000,000.00
Cecil County	Harbour View WWTP ENR Upgrade	5,131,902.00
Cecil County	Port Deposit WWTP	7,837,445.00
Chesapeake City, Town of	Chesapeake City WWTP ENR	6,868,900.00
Frederick County	Lewistown WWTP ENR Upgrade	2,466,000.00
Galena, Town of	Galena WWTP ENR	1,768,370.00
Garrett Co SD	Trout Run-Oakland WWTP	1,621,035.00
Grantsville, Town of	Grantville WWTP	776,526.00
Greensboro, Town of	Greensboro WWTP ENR	2,581,838.00
Hancock, Town of	Hancock WWTP ENR Upgrade	56,500.00
Manchester, Town of	Manchester WWTP ENR	105,575.00
MD Environmental Svc	Elk Neck St Park WWTP ENR	400,628.00
MD Environmental Svc	Victor Cullen WWTP ENR Upgrade	5,146,650.00
MD Environmental Svc	Cheltenham Village WWTP ENR	27,565.00
MD Environmental Svc	Point Lookout State Park WWTP ENR	53,035.00
New Windsor, Town of	New Windsor WWTP ENR Upgrade	30,604.00
Oxford, Town of	Oxford WWTP/ ENR Upgrade	7,321,718.00
Preston, Town of	Preston WWTP ENR Upgrade	9,120,869.00
Queenstown, Town of	Queenstown WWTP BNR ENR	842,895.00
Rising Sun, Town of	WWTP ENR Upgrade	1,099,268.00
Rock Hall, Town of	WWTP ENT Upgrade	745,571.00
Secretary, Town of	Twin Cities WWTP ENR Upgrade	317,185.00
Somerset County	Smith Island BNR ENR Upgrade	1,121,073.00
Sudlersville, Town of	Sudlersville BNR ENR	2,299,722.00
Talbot County	Region V-Tilghman Island WWTP ENR	28,990.00
Trappe, Town of	WWTP ENR Upgrade	25,975.00
Union Bridge, Town of	Union Bridge WWTP ENR	99,800.00
Upper Potomac River Comm.	UPRC WWTP ENR	100,000.00
Vienna, Town of	Vienna WWTP ENR	23,475.00

Sewer/Septic Stormwater Projects:

Allegany Co.	Bedford Rd San Sew Rehab Ph VI	1,137,072.00

Allegany Co.	Braddock & Jennings RCS Improvements	20,381,519.00
Baltimore City	Patapsco SSI (SC-903)	19,869,452.00
Baltimore City	Herring Run SSI HR07A (SC-937)	5,055,835.00
Baltimore City	Low Level SSI (SC-914)	11,834,981.00
Baltimore City	SSI SW SC963 & Maiden Choice	12,958,000.00
Baltimore City	Gwynn's Falls Sewershed SC921	8,454,271.00
Baltimore City	Gwynn's Falls Sewershed SC977	5,720,729.00
Baltimore City	Herring Run Sewershed II SC910	10,686,000.00
Baltimore City	Improvs to SS Herring Run SC956	6,135,657.00
Baltimore City	Improvs to San Sewer SC965	9,803,428.00
Baltimore City	Hydraulic Improvement SS Coll. SC940	10,601,422.00
Carroll County	SW Management -Greens Westminster	347,340.00
Carroll County	SW Management - Woodsyde	833,739.00
Carroll County	SW Management -EastWest Pond	568,973.00
Carroll County	SW Management -Trevanion Terr.	632,010.00
Cumberland, City of	CSO Storage Facility Ph I	25,895,569.00
Frostburg, City of	CSO Ph VIII-B	2,130,050.00
Frostburg, City of	CSO Ph IX-A	1,775,478.00
Frostburg, City of	CSO Ph IX-B Stoyer Str Corridor	2,001,788.00
Frostburg, City of	CSO Ph IX-C Beall Str Corridor	1,211,602.00
Greensboro, Town of	Goldsboro Reg WW Ph V	2,213,095.00
Howard County	Ashleigh Knolls Shared Sewer Fac.	2,940,900.00
I97 Sewer/St Johns Prop.	Dover Rd Sewer Connection	42,220.00
I97 Sewer/St Johns Prop.	BWI Commerce Park Sewer Ext.	1,265,568.00
I97 Sewer/St Johns Prop.	ITC Sewer Extension	1,131,795.00
I97 Sewer/St Johns Prop.	Business Park Sewer Ext.	842,603.00
LaVale Sanitary Commission	LaVale Manhole Rehab Ph II	714,855.00
Luke, Town of	Landslide Sewer Ln Repair	65,468.00
Queen Anne's County	Southern Kent Island Sanitary Ph II	2,000,000.00
WSSC	Lower Anacostia Sewer Basin- PGC	3,791,375.00
WSSC	Beaver Dam Sewer Basic-PGC	2,219,000.00
WSSC	Northwest Sewer Basin - PGC	3,134,250.00
WSSC	Parkway Sewer Basin- PGC	159,250.00
WSSC	Piscataway Sewer Basin- PGC	2,235,311.00
WSSC	Northeast Sewer Basin PGC	5,362,875.00
TOTALMINOR WWTP & EXPANDED USE PROJECT GRANTS		252,108,550.00

SEWER PROJECTS (PRE FY10)

Allegany County	Braddock Run Interceptor	499,748.00
Baltimore City	Gwynn's Run Sewer	1,575,000.00
Baltimore City	Greenmount Br Sewer Interceptor	2,300,000.00
Baltimore City	Greenmount Br Sewer Interceptor II	1,000,000.00
Cumberland, City of	CSO Elimination-Evitts Creek	1,319,889.00
Denton, Town of	Lockerman St. Lift Station	100,000.00
Emmitsburg, Town of	South Seton Ave Sewer Line	600,000.00
Federalsburg, Town of	Maple Ave Sewer	600,000.00
Frostburg, Town of	Combined Sewer Overflow Ph IV	1,000,000.00
Frostburg, Town of	CSO - Phase V	800,000.00
Frostburg, Town of	CSO - Phase VI Elimination	1,100,000.00

Fruitland, City of	Infiltration & Inflow Sewer	800,000.00
Hagerstown, City of	Collection System Rehab	800,000.00
Havre de Grace, City of	I&I Sewer Reduction	166,500.00
Mountain Lake Park, Town of	Sewer Rehab III	731,884.00
Port Deposit, Town of	Inflow & Infiltration Reduction	178,199.00
Secretary, Town of	Gordon Street Lift Station	150,000.00
Secretary, Town of	Infiltration/Inflow Reduction	172,068.00
St. Mary's METCOM	Evergreen Park Sewer	203,714.00
St. Mary's METCOM	Piney Pt. Sewer Repair	465,559.00
Talbot County	St Michaels Sewer & Upgrade	1,000,000.00
Talbot County	St Michaels Region II Sewer & Upgrade	450,000.00
Taneytown, City of	Baltimore St Water Main	200,000.00
Thurmont, Town of	Sewer Line Rehab	947,000.00
Washington County	Halfway Inflow/Infiltration Reduction	200,000.00
Westernport, Town of	CSO	936,000.00
Westernport, Town of	CSO/ Elim Philos Ave Area	1,032,519.00
Williamsport, Town of	Inflow & Infiltration Reduction	383,226.00
SEWER GRANT SUBTOTAL (PRE FY10)		19,711,306.00

Operations and Maintenance (O&M) GRANTS

Allegany County	North Branch WWTP O&M	672,464.00
Allegany County	George's Creek WWTP O&M	216,231.00
Anne Arundel County	Annapolis WWTP O&M	1,866,641.00
Anne Arundel County	Broadneck WWTP O&M	1,248,173.00
Anne Arundel County	Broadwater WWTP O&M	367,090.00
Anne Arundel County	Cox Creek WWTP	1,304,956.00
Anne Arundel County	Maryland City WWTP O&M	544,780.00
Anne Arundel County	Patuxent WWTP O&M	1,722,878.00
Baltimore, City of	Back River WWTP O&M	425,000.00
Boonsboro, Town of	Boonsboro WWTP O&M	227,204.00
Bowie, City of	Bowie WWTP O&M	588,157.00
Brunswick, City of	Brunswick WWTP O&M	415,629.00
Cambridge, City of	Cambridge WWTP O&M	1,566,426.00
Cecil County	Northeast River WWTP O&M	255,000.00
Charles County	Mattawoman WWTP O&M	816,000.00
Chesapeake Beach, Town of	Chesapeake Beach WWTP O&M	11,250.00
Chestertown, Town of	Chestertown WWTP O&M	275,735.00
Crisfield, City of	Crisfield WWTP O&M	118,320.00
Cumberland, City of	Cumberland WWTP O&M	2,916,373.00
Delmar, Town of	Delmar WWTP O&M	70,000.00
Denton, Town of	Denton WWTP O&M	232,256.00
Easton Utilities	Easton WWTP O&M	1,349,353.00
Elkton, Town of	Elkton WWTP O&M	957,503.00
Emmitsburg, Town of	Emmitsburg WWTP O&M	96,461.00
Federalsburg, Town of	Federalsburg WWTP O&M	133,500.00
Frederick, City of	Gas House Pike WWTP O&M	632,472.00
Frederick County	Ballenger Creek WWTP O&M	1,880,676.00
Fruitland, City of	Fruitland WWTP O&M	68,211.00
Greensboro, Town of	Greensboro WWTP O&M	52,500.00

Hagerstown, City of	Hagerstown WWTP O&M	2,469,781.00
Harford County	Aberdeen WWTP O&M	862,355.00
Harford County	Joppatowne WWTP O&M	247,232.00
Harford County	Sod Run WWTP O&M	2,161,870.00
Havre de Grace, City of	Havre de Grace WWTP O&M	700,200.00
Howard County	Little Patuxent WWTP O&M	3,011,097.00
Hurlock, Town of	Hurlock WWTP O&M	532,971.00
Indian Head, Town of	Indian Head WWTP O&M	265,206.00
La Plata, Town of	La Plata WWTP O&M	341,261.00
Leonardtown, Town of	Leonardtown WWTP O&M	112,570.00
MD Environmental Svc	Dorsey Run WWTP O&M	398,276.00
MD Environmental Svc	Eastern Corr. Inst WWTP O&M	229,592.00
MD Environmental Svc	Freedom District WWTP O&M	328,913.00
MD Environmental Svc	MD Correctional Institute WWTP O&M	188,463.00
MD Environmental Svc	Rocky Gap WWTP O&M	61,867.00
MD Environmental Svc	So. MD Pre-release WWTP O&M	117,827.00
Mount Airy, Town of	Mount Airy WWTP O&M	333,215.00
Perryville, Town of	Perryville WWTP O&M	280,394.00
Pocomoke City, City of	Pocomoke City WWTP O&M	252,031.00
Poolesville, Town of	Poolesville WWTP O&M	13,500.00
Queen Anne County	Kent Island WWTP O&M	877,861.00
Queenstown, Town of	Queenstown WWTP O&M	92,750.00
Rising Sun, Town of	Rising Sun WWTP O&M	77,140.00
Salisbury, City of	Salisbury WWTP O&M	949,966.00
Snow Hill, Town of	Snow Hill WWTP O&M	220,000.00
St. Mary's County	Marlay Taylor WWTP O&M	646,784.00
Talbot County	Talbot Region II WWTP O&M	297,771.00
Thurmont, Town of	Thurmont WWTP O&M	258,459.00
Washington County	Conococheague WWTP O&M	451,958.00
Washington County	Winebrenner WWTP O&M	121,114.00
WSSC	Blue Plains WWTP O&M	600,000.00
WSSC	Damascus WWTP O&M	388,924.00
WSSC	Parkway WWTP O&M	1,875,082.00
WSSC	Piscataway WWTP O&M	2,362,199.00
WSSC	Seneca WWTP O&M	2,089,741.00
WSSC	Western Branch WWTP O&M	1,500,000.00
O&M GRANT SUBTOTAL		46,749,609.00
CWCA: Nutrient Load Reduction GRANTS		
Anne Arundel Co. DPW	Municipal Discharge Broadneck/Annapolis	8,181,550.00
Anne Arundel Co. DPW	Municipal Discharge Cox/Patuxent	9,498,475.00
HGS/Res. Env Solutions	Tributary to Winters Run Stream	4,910,825.00
Howard Co. DPW	Municipal Discharge Little Patuxent	1,818,450.00
CWCA GRANT SUBTOTAL		24,409,300.00
Chesapeake Bay Trust	**Urban Tree Program**	10,000,000.00
TOTAL BRF A0111 Grants		**$1,655,451,469.62**

Septic Fund (MDE 60% for OSDS upgrades FY22):

Sources:	$ Million	Uses:	$ Million
Fee Revenue Deposits	$ 18.6	Capital Grant Awards	$ 15.0
Interest Earnings	$ 0.1	Admin. Expense Allowance	$ 1.5
		HB-12 Local Admin Grants	$ 1.5
Total	$ 18.7	Total	$ 18.0

Septic Fund (MDE 60% for OSDS upgrades except 22.4% in FY10 - cumulative since inception 2004):

Sources:	$ Million	Uses:	$ Million
Fee Revenue Deposits	$ 222.9	Capital Grant Awards	$ 197.3*
Interest Earnings	$ 3.5	Admin. Expense Allowance	$ 17.8
		HB-12 Local Admin Grants	$ 11.2 **
Total	$ 226.4	Total	$ 226.3

*Does not include $15 million of FY23 grant awarded in June 2022. Payment disbursements are made as BATs, and public sewer connections are installed and expenses are incurred.

** HB12, passed during the 2014 session, allows for up to 10% of the MDE septic fee allocation to be used for grants to local health departments to implement and enforce the septic regulations requiring BAT for nitrogen reduction from septic systems.

As of June 30, 2022, the grants under the Septic Fund were awarded as follows:

	Capital Program Grant Award		HB12 Admin Grant Award
Allegany Co. Hlth Dept	$941,016.85		$200,000.00
Anne Arundel Co. Hlth Dept.	35,245,195.56		555,000.00
Baltimore Co. Hlth Dept.	5,955,656.41		571,000.00
Calvert Co. Hlth Dept.	18,165,070.69		920,000.00
Caroline Co. Hlth Dept.	4,667,163.46		680,000.00
Carroll Co.Hlth Dept.	3,203,329.98		327,000.00
Cecil Co. Hlth Dept.	10,050,958.50		421,000.00
Charles Co. Hlth Dept.	5,256,137.75		526,000.00
Dorchester Co. Hlth Dept.	8,671,842.75		769,000.00
Frederick Co. Hlth Dept.	4,502,157.05		531,000.00
Garrett Co. Hlth Dept.	1,364,231.28		315,000.00
Harford Co. Hlth Dept.	5,555,489.27		518,000.00
Howard Co. Hlth Dept	2,115,678.25		314,000.00
Kent Co. Hlth Dept.	7,363,204.59		718,000.00
Montgomery Co. Hlth Dept	2,810,656.50		120,000.00
Prince George's Co. Hlth Dept.	711,303.16		140,000.00
Queen Anne's Co. Hlth Dept.	15,944,804.14		491,000.00
Somerset Co. Hlth Dept.	3,947,360.36		481,000.00
St. Mary's Co. Hlth Dept.	14,533,129.94		902,000.00
Talbot Co. Hlth Dept.	10,714,295.88		764,000.00
Washington Co. Hlth Dept	4,324,981.30		317,000.00
Wicomico Co. Hlth Dept.	8,755,802.00		399,000.00
Worcester Co. Hlth Dept.	4,177,907.21		193,000.00
Direct Grant Awards_Individual	17,725,266.58		-
Direct-2nd year O&M_ BAT vendor	636,450.00		-
Total BRF SEPTIC Grant Awards	$197,339,089.46		$11,172,000.00

Septic Fund (MDA 40% for Cover Crops)

Sources:		Uses:	
Cash Deposits*	$144,250,451	Grant Awards	$141,758,062
		Admin. Expense	$2,492,389
		Total	$144,250,451

*Cumulative revenue and expenditures as of June 30, 2022.

Historically, there is attrition between acres enrolled and actual payments for cover crops planted under the Conservation Grants Program. The main cause of reduced acreage is one of time and labor availability in the fall planting of cover crops after harvest. Other causes include delays due to weather and other uncontrolled factors. There is also a smaller reduction in acres planted and those paid due to conversions from traditional to commodity cover crops or removal of acres from the program. The Table below illustrates the "typical" program attrition profile.

MDA Cover Crop Program 1 – Acres

Year	Application Acres	Approved Acres	Fall Certification	Paid Acres
2005/2006	210,258	205,268	135,328	126,245
2006/2007	451,467	290,000	243,945	238,674
2007/2008	336,800	303,364	203,497	187,479
2008/2009	398,225	387,022	237,144	238,839
2009/2010	330,469	330,469	206,810	206,810
2010/2011	508,000	492,757	400,311	381,949
2011/2012	570,183	567,154	429,818	400,795
2012/2013	607,433	604,186	415,437	414,558
2013/2014	608,427	602,481	423,212	415,550
2014/2015	631,374	617,714	475,559	473,790
2015/2016	656,173	652,594	501,205	500,022
2016/2017	691,787	689,389	561,344	558,976
2017/2018	636,904	636,904	395,862	359,873
2018/2019	617,269	604,135	362,976	359,702
2019/2020	649,89	620,900	488,214	485,206
2020/2021	640,864	634,739	433,116	429,095
2021/2022	638,226	627,778	435,628	424,616
2022/2023	600,282	582,780	TBD	TBD

Clean Water Commerce Act of 2021:

During the 2021 legislative session, the CWCA was established to allow MDE to purchase nitrogen reductions from environmental practices with a life of at least 10 years. Twenty million dollars a year will be transferred from the Wastewater Fund to this account to be used for these purchases.

In each FY, the purchase must include:

- At least 35% from agricultural practices;
- At least 20% from projects in communities disproportionately burdened by environmental harms or risks; and
- At least 10% from nonagricultural landscape restoration projects.

Any unencumbered funds not used during the FY for the above categories become available in the subsequent FYs for any eligible environmental practice.

The first project solicitation (FY23) under the reauthorized program was open during summer 2022, and closed in September 2022. The Department is in the process of evaluating the project proposals received to award funding. There has been significant interest in the program, with 36 applications received and over $90 million in funding requested.

WWTP Upgrades with Enhanced Nutrient Removal

Status of Upgrades:

MDE is implementing a strategy and is providing financial assistance to upgrade WWTPs in order to achieve ENR level of treatment. MDE's strategy and BRF set forth annual average nutrient goals of WWTP effluent quality of Total Nitrogen (TN) at 3 mg/l and Total Phosphorus (TP) at 0.3 mg/l, where feasible, for all major WWTPs with a design capacity of 0.5 million gallons per day (MGD) or greater. Other smaller WWTPs are currently being selected by MDE for upgrade on a case-by-case basis, based on the cost effectiveness of the upgrade, environmental benefits, and land use factors. Primarily, Maryland's 67 major sewage treatment facilities were targeted for the initial upgrades.

Major WWTPs:
ENR upgrades of the state's major sewage treatment plants are almost completed with 65 of the 67 major facilities having been upgraded and in operation. One of the remaining facilities is under construction, and the other one is in planning.

<u>Minor WWTPs:</u>
ENR upgrades are underway for some minor sewage treatment plants (less than 0.5 MGD). MDE and Planning have been assisting local governments in applying for BRF grants, and to date, ten minor facilities have completed the ENR upgrade and are in operation. Seven more are under construction, and 18 additional plants have signed the funding agreement and have progressed into planning or design. All facilities that pay into the BRF and provide services to residential dwelling units are eligible to receive BRF grants if MDE determines that the ENR upgrade would be cost

effective at the selected facility. MDE estimates that approximately 80 of those minor facilities may meet the cost-effectiveness criteria and can be upgraded if they apply for BRF funding.

DoD and Other Federal WWTPs:

On July 19, 2006, the State of Maryland and DoD signed a Memorandum of Understanding (MOU) to resolve a dispute regarding the applicability of BRF to DoD. The state's legal position is that the federal government is not exempt from paying the BRF fee; however, the DoD asserts that the BRF fee is a tax and that the state may not tax the federal government. 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. MDE has agreed to accept DoD's proposal to undertake ENR upgrades at certain DoD-owned WWTPs at its own expense in lieu of paying the fee.

In addition to the DoD facilities, Beltsville Agricultural Research Center, owned by USDA, has a relatively large WWTP. USDA requested to be covered under the MOU and is currently upgrading its WWTP to ENR in lieu of paying the fee.

No other federal facility is exempt from paying the BRF fee under this MOU. Many federal facilities are connected to public water or sewer systems and are paying the fee through the local billing authorities.

MDE has worked with DoD to complete the ENR upgrade of the targeted facilities as specified in the MOU. Specifically, the following targeted DoD facilities were upgraded to ENR:

DoD Facility	Date of Start Meeting ENR Goals
Aberdeen Proving Ground – Aberdeen	March 2006
Aberdeen Proving Ground – Edgewood	March 2016
Fort Detrick	June 2012
Naval Station – Indian Head	September 2011
Fort Meade	January 2015
Naval Support Activity – Annapolis	April 2021

The following are the upgraded major, minor, and federal facilities with their nitrogen and phosphorus reductions achieved in CY21:

ENR Wastewater Treatment Plant	County	CY 21 Average Flow (MGD)	TN Reduction (Lbs.)	TP Reduction (Lbs.)
Cumberland	Allegany	9.591	195,612.95	51,968.81
George's Creek	Allegany	0.750	37,670.74	4,429.17
North Branch	Allegany	1.300	62,921.55	7,123.19
Rocky Gap	Allegany	0.055	2,846.23	321.46
Annapolis	Anne Arundel	9.015	172,888.14	52,140.87

ENR Wastewater Treatment Plant	County	CY 21 Average Flow (MGD)	TN Reduction (Lbs.)	TP Reduction (Lbs.)
Broadneck	Anne Arundel	4.243	74,913.47	24,153.14
Broadwater	Anne Arundel	1.071	20,865.48	6,292.25
Cox Creek	Anne Arundel	10.784	219,944.75	62,372.39
Dorsey Run	Anne Arundel	0.934	48,049.90	5,231.47
Fort Mead	Anne Arundel	2.255	111,204.02	12,973.80
Maryland City	Anne Arundel	1.353	25,535.74	7,825.47
Naval Academy	Anne Arundel	0.103	4,232.82	595.73
Patuxent	Anne Arundel	5.600	105,691.15	31,025.47
Back River	Baltimore	114.245	417,327.85	-
Patapsco	Baltimore City	50.248	764,799.68	53,535.98
Chesapeake Beach	Calvert	0.750	12,785.22	3,881.23
Denton	Caroline	0.428	6,123.51	2,306.09
Federalsburg	Caroline	0.298	13,969.98	1,660.07
Greensboro	Caroline	0.189	8,227.29	799.72
Freedom District	Carroll	2.136	38,362.97	12,549.24
Mount Airy	Carroll	0.759	15,018.07	4,482.32
Taneytown	Carroll	0.770	7,266.27	3,890.97
Elkton	Cecil	1.796	94,035.90	9,950.31
Harbour View	Cecil	0.020	931.49	113.85
Northeast River	Cecil	1.251	25,895.55	-
Perryville	Cecil	0.617	29,112.25	3,455.91
Rising Sun	Cecil	0.269	12,938.03	1,482.14
Indian Head	Charles	0.373	18,962.00	2,157.35
La Plata	Charles	1.086	17,190.64	6,215.08
Mattawoman	Charles	9.411	401,072.35	3,151.28
Naval Station	Charles	0.328	16,674.36	1,747.31
Swan Point	Charles	0.121	5,119.87	651.95
Cambridge	Dorchester	3.087	51,684.25	16,820.87

ENR Wastewater Treatment Plant	County	CY 21 Average Flow (MGD)	TN Reduction (Lbs.)	TP Reduction (Lbs.)
Hurlock	Dorchester	1.403	67,906.87	7,730.28
Ballenger Creek	Frederick	8.148	148,819.96	48,118.45
Brunswick	Frederick	0.580	27,543.02	3,407.57
Emmitsburg	Frederick	0.484	23,131.51	2,652.02
Fort Detrick	Frederick	0.695	35,754.48	4,167.83
Frederick	Frederick	5.667	87,979.66	28,464.01
Thurmont	Frederick	0.610	12,069.86	3,546.68
Aberdeen	Harford	1.735	35,914.29	9,929.25
APG-Aberdeen	Harford	0.457	22,536.69	2,740.57
APG-Edgewood	Harford	0.704	32,145.70	4,007.50
Havre de Grace	Harford	2.767	43,799.73	15,751.06
Joppatowne	Harford	0.951	16,501.15	5,471.43
Sod Run	Harford	10.733	176,430.56	60,770.53
Little Patuxent	Howard	17.938	349,472.42	36,039.34
Chestertown	Kent	0.729	34,174.89	4,127.62
Galena	Kent	0.024	1,066.65	133.70
Damascus	Montgomery	0.810	16,520.33	4,783.50
Poolesville	Montgomery	0.513	6,090.33	2,951.47
Seneca	Montgomery	14.701	250,607.36	6,802.20
Bowie	Prince George's	1.577	28,323.22	4,032.46
Parkway	Prince George's	6.333	125,308.85	16,579.33
Piscataway	Prince George's	24.530	126,942.01	6,720.46
Western Branch	Prince George's	23.641	460,579.64	64,049.36
Centreville	Queen Anne's	0.506	22,488.59	2,017.81
Kent Island	Queen Anne's	2.395	113,733.66	13,779.27
Queenstown	Queen Anne's	0.092	4,704.96	523.71

ENR Wastewater Treatment Plant	County	CY 21 Average Flow (MGD)	TN Reduction (Lbs.)	TP Reduction (Lbs.)
Sudlersville	Queen Anne's	0.099	2,380.79	578.62
Blue Plains	Regional	131.446	1,760,592.98	28,009.43
Crisfield	Somerset	0.633	26,398.74	3,545.52
ECI	Somerset	0.622	32,377.66	3,673.25
Leonardtown	St. Mary's	0.620	8,304.30	3,567.08
Marlay Taylor	St. Mary's	3.756	56,024.83	19,322.85
Easton	Talbot	2.679	134,559.87	15,657.88
Oxford	Talbot	0.083	3,865.70	472.47
Talbot Region II	Talbot	0.345	17,958.67	2,047.92
Boonsboro	Washington	0.305	15,133.74	1,856.90
Conococheague	Washington	2.239	40,894.44	12,200.17
Hagerstown	Washington	5.957	108,802.22	31,733.98
MCI	Washington	0.671	15,523.69	4,064.76
Winebrenner	Washington	0.196	9,725.29	1,056.06
Delmar	Wicomico	0.735	35,351.13	4,362.96
Fruitland	Wicomico	0.570	9,890.28	2,967.08
Salisbury	Wicomico	5.403	277,958.90	32,565.60
Pocomoke City	Worcester	0.707	11,191.33	4,024.57
Snow Hill	Worcester	0.384	17,650.91	2,069.01
		Total	7,895,006.38	928,378.39

Annual O&M Grants for the Upgraded Facilities:

Starting in FY10, the law allows up to 10% of the annual fee generated from users of WWTPs to be earmarked for grants for O&M costs of ENR technologies. To ensure that each upgraded facility receives a reasonable and fair amount of grant, MDE, in consultation with BRFAC, is allocating the base grants at the following rates:

- Minimum annual allocation per facility (for design capacity ≤ 1 MGD) = $30,000
- For facility with design capacity between 1 and 10 MGD = $30,000 per MGD
- Maximum allocation per facility (for design capacity ≥ 10 MGD) = $300,000

In addition to the base grants specified above, on April 19, 2021, MDE adopted a change in the regulations to allow the department to provide additional funding for WWTPs achieving better than ENR. The goal is to allocate the full amount of the authorized annual O&M fund, which is approximately $11 million per year based on $110 million in annual revenue. After distributing the

base grants based on the above rates, the remaining amount of the authorized fund is allocated to each WWTP achieving beyond ENR based on the additional load reduction achieved beyond ENR.

On November 16, 2022, BPW approved $11 million (under FY23 authorization) for facilities that achieved ENR level of treatment during CY21. Also, additional grants were provided for facilities achieving better than ENR level of treatment.

MDE is requesting authorization for $11 million in FY24. The upgraded facilities will be receiving O&M grants based on the above rates if they continue to achieve ENR level of treatment in CY22.

Chesapeake Bay TMDL Implications:

In November 2009, the U.S. Environmental Protection Agency (EPA) officially transmitted the WIP guidance. EPA, in coordination with the Bay watershed jurisdictions of Maryland, Virginia, Pennsylvania, Delaware, West Virginia, New York, and Washington D.C., developed and, on December 29, 2010, established the TMDL and a nutrient and sediment pollution diet for the Chesapeake Bay, consistent with Clean Water Act requirements. Current model estimates are that the states' Bay water quality standards can be met at basin-wide loading levels of 200 million pounds of nitrogen per year and 15 million pounds of phosphorus per year. Maryland's current target loads are 45.8 million pounds of nitrogen per year and 3.68 million pounds of phosphorus per year by 2025. Currently, Maryland's nutrient loads entering the Chesapeake Bay are 52.7 million pounds of nitrogen per year and 3.62 million pounds of phosphorus per year.

Continuing to upgrade major and minor WWTPs as described above is essential for Maryland to meet its 2025 target loads. In addition, MDE is providing more incentive through the O&M grants for facilities achieving better than ENR levels of treatment.

Chapter 257 Implementation

Chapter 257 (HB 893) of 2007 - *Bay Restoration Fund - Wastewater Treatment Facilities Upgrades - Reporting Requirements* requires that "Beginning January 1, 2009, and every year thereafter, MDE and 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 law, Planning and MDE have advised the BRFAC with the best available information and data analysis to address this mandate.

Available Capacity

This report addresses the following funded facilities that were upgraded to ENR with BRF, and completed prior to Jan.1, 2021, and operational for one CY:

		Design Capacity (MGD)		
Facility	**County**	**Original**	**At Upgrade**	**Flow in CY21 (MGD)**
Cumberland	Allegany	15	15	9.591
George's Creek	Allegany	0.6	0.6	0.75
North Branch	Allegany	2	2	1.3
Annapolis	Anne Arundel	13	13	9.015
Broadneck	Anne Arundel	6	6	4.243
Broadwater	Anne Arundel	2	2	1.071
Cox Creek	Anne Arundel	15	15	10.784
Maryland City	Anne Arundel	2.5	2.5	1.353
Patuxent	Anne Arundel	7.5	7.5	5.6
Back River	Baltimore City	180	180	114.245
Patapsco	Baltimore City	73	81	50.248
Chesapeake Beach	Calvert	1.32	1.5	0.75
Denton	Caroline	0.8	0.8	0.428
Federalsburg	Caroline	0.75	0.75	0.298
Greensboro	Caroline	0.28	0.332	0.189
Freedom District	Carroll	3.5	3.5	2.136
Mount Airy	Carroll	1.2	1.2	0.759
Taneytown	Carroll	1.1	1.1	0.77
Elkton	Cecil	2.7	3.05	1.796
Northeast River	Cecil	2	2	1.251
Perryville	Cecil	1.65	2	0.617
Rising Sun	Cecil	0.275	0.5	0.269
Indian Head	Charles	0.5	0.5	0.373
La Plata	Charles	1.5	1.5	1.086
Cambridge	Dorchester	8.1	8.1	3.087

Facility	County	Design Capacity (MGD)		Flow in CY21 (MGD)
		Original	At Upgrade	
Hurlock	Dorchester	2	1.65	1.403
Ballenger Creek	Frederick	6	15	8.148
Brunswick	Frederick	0.7	1.4	0.58
Emmitsburg	Frederick	0.75	0.75	0.484
Frederick	Frederick	8	8	5.667
Thurmont	Frederick	1	1	0.61
Aberdeen	Harford	4	4	1.735
Havre De Grace	Harford	1.89	3.03	2.767
Joppatowne	Harford	0.95	0.95	0.951
Sod Run	Harford	20	20	10.733
Little Patuxent	Howard	25	29	17.938
Chestertown	Kent	0.9	0.9	0.729
Galena	Kent	0.08	0.11	0.024
Damascus (WSSC)	Montgomery	1.5	1.5	0.81
Poolesville	Montgomery	0.75	0.75	0.513
Seneca (WSSC)	Montgomery	26	26	14.701
Blue Plains	Regional	169.6	169.6	131.446
Bowie	Princes George's	3.3	3.3	1.577
Parkway (WSSC)	Prince George’s	7.5	7.5	6.333
Piscataway (WSSC)	Prince George’s	30	30	24.53
Western Branch (WSSC)	Prince George’s	30	30	23.641
Kent Narrows	Queen Anne's	2	3	2.395
Queenstown	Queen Anne’s	0.085	0.2	0.092
Sudlersville	Queen Anne’s	0.20	0.2	0.099
Crisfield	Somerset	1	1	0.633
Leonardtown	St. Mary’s	0.68	0.68	0.62
Marlay Taylor	St. Mary’s	6	6	3.756
Easton	Talbot	2.35	4	2.679
Talbot Region II	Talbot	0.5	0.66	0.345
Boonsboro	Washington	0.46	0.53	0.305
Conococheague	Washington	4.1	4.5	2.239
Hagerstown	Washington	8	8	5.957
MCI	Washington	1.6	1.6	0.671
Winebrenner	Washington	1	0.6	0.196
Delmar	Wicomico	0.65	0.85	0.735
Fruitland	Wicomico	0.8	0.8	0.57
Salisbury	Wicomico	6.8	8.5	5.403
Pocomoke City	Worcester	1.47	1.47	0.707
Snow Hill	Worcester	0.5	0.5	0.384

2022 BRF Analysis Findings

Methodology

Planning conducts a BRF analysis for each CY as directed by Chapter 257 (HB 893) of 2007 - *Bay Restoration Fund - Wastewater Treatment Facilities Upgrades - Reporting Requirements*. The purpose is to provide the BRFAC and legislature with information on the impact that ENR-upgraded WWTPs may have on growth in the municipalities and counties in which the facility is located. Growth is measured before and after ENR upgrades within existing sewer service area boundaries and PFAs using Geographical Information System mapping software. These findings help assess changes in growth patterns, the capacity of the upgraded facility to meet the demands of current, and future users, and possible changes in development patterns that could be influenced by upgrades.

Planning works with every county and many municipalities to maintain and annually update the Statewide Sewer Service Data layer to ensure as accurate a representation as possible. Planning has successfully conducted a BRF analysis each year since 2009 by utilizing the most recently published data from Maryland Property View and Planning's Sewer Service Data layers. It should be noted that data for each of these datasets affects the annual findings.

In 2018, Planning updated the BRF analysis methodology to confirm data boundary discrepancies within the existing sewer service areas both before and after ENR technology implementation, resulting in improved data outputs. Planning is committed to continuous improvement to its processes, contributing to the overarching goal of restoring water quality in the Chesapeake Bay.

Available Capacity

An ENR upgrade can create the possibility for capacity expansion beyond the original design capacity. However, the limitations of the WWTP nutrient discharge caps established by Maryland's Point Source Policy for the Bay[1] heavily influence whether that possibility can become reality, notwithstanding new treatment technologies or the use of multiple discharge means or wastewater reuse. As required by state regulations that guide county water and sewer plans, to date, all ENR upgrades and plant expansions have been found to be consistent with locally adopted and approved comprehensive plans. Our analyses show that the nutrient discharge caps following the ENR upgrades have not had any noted compromising effects on development.

Planning's Findings

For this year's reporting period, Planning reviewed development served by 63 WWTPs with ENR upgrades completed within the timeframe specified in Chapter 257 (HB 893) of 2007 - *Bay Restoration Fund - Wastewater Treatment Facilities Upgrades - Reporting Requirements*. The selection of ENR upgrades to be analyzed in this annual report is based on the following criteria: (1)

[1] Annual nutrient load caps for major WWTPs were based on an annual average concentration of 3 mg/l total nitrogen and 0.3 mg/l total phosphorus, at the approved design capacity of the plant. Design capacity for major WWTPs met both of the following two conditions: (1) A discharge permit was issued based on the plant capacity, or MDE issued a letter to the jurisdiction with design effluent limits based on the new capacity as of April 30, 2003; (2) Planned capacity was either consistent with the MDE-approved County Water and Sewer Plan as of April 30, 2003, or shown in the locally-adopted Water and Sewer Plan Update or Amendment to the County Water and Sewer Plan, which was under review by MDE as of April 30, 2003 and subsequently approved by MDE.

ENR upgrades completed before January 1, 2021, and (2) have been operational for one calendar year. One new ENR WTTP upgrade is included in this year's report, the Patapsco WWTP. which became operational in January 2020. This report also now includes the Mattawoman WWTP, which had inadvertently been left out previously; it became operational in November 2007. Table 1 (Attachment 1) summarizes the ENR upgrades that are completed, operational, and meet the criteria.

Table 1 depicts growth activity by the number of connections before and after an ENR upgrade. The starting point for each plant's reporting is the CY prior to the start of ENR funding; the year in which the ENR upgrade was completed and became operational is included. The number of connections before ENR funding, and the current number of connections, which includes connections to new development on sewer as well as connections of existing septic systems to sewer is summarized by WWTP. Existing sewer service area boundaries are depicted as "S1" in Table 1, and are typically defined as areas where a sewer system is existing, the system is under construction, or an area is in the final planning stages and service is intended within two years.

The table compares development in and outside PFAs (see Columns D, G, and K), which are designated by local governments and recognized by the state as areas to concentrate growth and development due to the presence of existing or planned infrastructure. BRF funding is not restricted to PFAs, but PFAs provide a useful geographic frame of reference for reviewing possible effects of BRF upgrades on growth as required by the legislation.

Table 1 distinguishes new ENR upgrades since the last reporting period. Columns J and K in the table show the difference between last year's data and this year's data. This indicates how many improved parcels were connected within each sewer shed and how many parcels within the PFA had connections in the sewer shed within the last year.

Planning's analysis shows the Little Patuxent WWTP has had the largest total increase of connections since conversion to ENR (which was completed in 2012), with an increase of 8,408 connections (see Column I in Table 1). Overall, the Washington D.C. region had the largest regional total increase of new connections since conversion of WWTPs to ENR with 17,613 connections. Statewide, there was an increase of 4,878 additional improved parcels within "S1" (existing sewer) connected during this year's reporting period. Overall, 46,941 improved parcels have been connected since WWTPs statewide have been upgraded to ENR.

Although every effort is made to ensure data is current and correct, there may be significant increases or decreases of new connections from year-to-year. For example, the number of total improved parcels with existing sewer (Column F) may appear to decrease from one year to the next. However, the reason for the decrease may not be related to the number of improved parcels no longer having sewer, but rather adjustments in the MDProperty View data, the PFA layer, or the sewer layer. Planning evaluates many factors that play a part in source data and findings, and makes adjustments or corrections, where necessary. This year's report used August 2022 Statewide Points and Polygons MDProperty View data available on the open data downloads site.

OSDS Upgrade Program

Program Implementation

The BRF Septic System Upgrade Program provides funding for the upgrade of OSDS to the BAT for nitrogen removal and for connecting properties to sewer for conveyance of flows to ENR/BNR WWTPs. The program is managed at the county level with MDE oversight and assistance, with day-to-day management performed mostly by county health departments, but in some counties the county environmental departments or a nonprofit consultant assists in managing the program. The Canaan Valley Institute, a nonprofit corporation based in West Virginia, provides program management for Allegany County, Carroll County, Frederick County, Howard County, Montgomery County, and Washington County.

The BRF statute (Annotated Code of Maryland under 9-1605.2) requires that funding priority for BAT installations be "first given to failing septic systems and holding tanks in the Chesapeake and Atlantic Coastal Bays Critical Areas and then to failing septic systems that the Department (MDE) determines are a threat to public health or water quality." Chapter 280 (SB 554) Acts of 2009, requires new and replacement septic systems serving property in the Critical Areas to include the BAT for removing nitrogen. In addition, Code of Maryland Regulation (COMAR) 26.04.02.07 effective Jan. 1, 2013, requires all OSDS installed in the Chesapeake Bay and Coastal Bays watersheds for new construction to include BAT.

All BATs must be inspected and have the necessary operation and maintenance performed by a certified service provider at a minimum of once per year for the life of the system. The regulations also require that both individuals that install BATs and individuals that perform operation and maintenance complete a course of study approved by MDE to maintain professional certification.

On Nov. 14, 2016, MDE finalized a regulatory change to COMAR 26.04.02.07. This regulatory change will reform the universal requirement that BAT units be installed outside of the Critical Area for all new construction, unless the local jurisdiction enacts a code in order to protect public health or waters of the state, or the system design is 5,000 gallons per day or greater.

Consistent with the above, MDE is requiring all new grant recipients to prioritize applications for financial assistance based on the following:

1. Failing OSDS or holding tanks in the Critical Areas
2. Failing OSDS or holding tanks not in the Critical Areas
3. Non-Conforming OSDS in the Critical Areas
4. Non-conforming OSDS outside the Critical Areas
5. Other OSDS in the Critical Areas, including new construction
6. Other OSDS outside the Critical Areas, including new construction

The program guidance and other information are available on our Onsite Disposal Systems website.

The webpage below (under financial Reports) shows BRF funded BAT installations and sewer connections for FY22. During this FY, 910 BAT installations were completed, and 137 septic systems were eliminated by connecting the dwellings to public sewer.

The Septic Stewardship Program was created to:

1. Allow nitrogen reduction from OSDS to be counted in the WIP only if the operation and maintenance of the systems are current;
2. Allow nitrogen reduction from pumping out of OSDS to be counted in the WIP if they are part of a local Septic Stewardship Plan;
3. Allow local jurisdictions to provide financial assistance (not to exceed 10% of their allocated funds) toward the pumping out of OSDS; and
4. Allow MDE to provide financial assistance to local jurisdictions in FY20 and FY21 to develop Septic Stewardship Plans.

The Septic Stewardship Program became effective October 2, 2018, which allows local jurisdictions the availability to develop plans with FY20 and FY21 funds. MDE introduced the program through regional workshops involving the WIP in June 2018. Conceptual septic stewardship plans have been provided to each county health department or local approving authority, acknowledging that each plan should be customized to address local goals. Despite efforts to promote the program and the availability of funding to develop plans, no counties have elected to participate in this voluntary program.

The BRF continues to promote sewer connection to BNR/ENR WWTPs. This includes working with counties on sewer planning activities, including ensuring adequate local wastewater treatment capacity and PFA compliance for areas where counties are looking to expand their sewer service and perform sewer connections.

BAT CLASSIFICATION DEFINITIONS

Effective on July 1, 2015, there are five different classifications of BAT. Each of these classifications works in conjunction with Regulation 26.04.02 for the reduction of nitrogen through OSDS. This classification is intended only to classify the use of BAT systems on domestic wastewater usage. Domestic wastewater is defined by the BAT Technical Review Committee (TRC) as having a TN influent concentration of 60 mg/L. Supporting documents that clearly and concisely define the methods in which each of these classifications can be used are on MDE's webpage for reference.

BAT Class I systems are standalone units that are approved through MDE protocols as BAT units capable of reducing TN to 30 mg/L or less. These units are currently on the approved BAT list and have successfully completed the field verification process. The flow chart for approval of BAT Class I units is available on MDE's website.

BAT Class II systems are standalone units that are undergoing field verification for BAT Class I. Upon successful completion of the field verification, they will become BAT Class I. All requirements and guidance for BAT Class I apply to BAT Class II technologies. Technologies that do not reduce the effluent nitrogen to 30 mg/l or less will be either removed from the BAT listing, enter a modified field verification process (contingent on prior approval from BAT TRC), or be classified as BAT Class III at the discretion of the BAT TRC and working with the manufacturer's representative.

BAT Class III systems are pretreatment technologies approved by MDE as capable of reducing nitrogen to 48 mg/L effluent. These technologies may only be installed as BAT when paired with a BAT Class IV soil disposal system. BAT Class III technologies must have one of the following certifications: National Sanitation Foundation (NSF) 245, NSF 40 Class I, CAN/BNQ 3680-600, CEN Standard 12566-3 or equivalent. Technologies proposed as BAT Class III, must first apply to MDE for BAT classification using the technology application found on the MDE website. The application needs to be accompanied by the final report of the verification organization. Once submitted to the BAT TRC, analysis of the data and the application will begin. The BAT TRC will analyze the TN reduction capabilities of the unit. If the analysis of data concludes, the unit will not reduce TN to 48 mg/L, the technology will be denied entry into the BAT program.

BAT Class IV systems are OSDS that are installed above, at, or just below (12-inch maximum depth) grade and are thus capable of reducing effluent TN by 30%. For inclusion as a BAT in Maryland, these units are to be paired with a BAT Class III, Class II, or Class I system. No modification of this is authorized unless applied for and approved by MDE on a case-by-case basis.

BAT Class IV systems, installed under the BAT classification, must be maintained on the same frequency as any BAT in accordance with COMAR Regulation 26.04.02.07. Since no specific manufacturer is tied to this type of system, the operation and maintenance provider of the BAT Class III, II, or I unit must successfully complete the MDE-approved course for the Installation and Operation and Maintenance of the specific system.

Sand Mound, At Grade Systems, and Low-Pressure Dosing are addressed in COMAR 26.04.02.05. All practices and criteria listed in this regulation must be applied when installing these as BAT. All installation contractors of sand mounds must be certified by MDE. The MDE Design and Construction Manual for Sand Mound Systems and the Construction Manual for At Grade systems is to be utilized for the latest and best installation practices for these systems. Information sheets are available for each system type.

SAND MOUNDS – An elevated sand mound system is an OSDS that is elevated above the natural soil surface in a suitable sand fill material. Gravel-filled absorption trenches or beds are constructed in the sand fill, and the effluent is pumped into the absorption area through a pressure distribution network. Pretreatment of sewage occurs either in a septic tank or advanced pretreatment unit, and additional treatment occurs as the effluent moves downward through the sand fill and into the underlying natural soil. The sand mound must be installed over a natural surface, A or B horizon. No BAT credit is given to sand mounds installed over sand or loamy sand soils. Please refer to, "BAT Class IV: Sand Mound," for exact details as to what is needed to qualify for BAT Classification.

AT-GRADE SYSTEMS – The at-grade system is an OSDS that utilizes a raised bed of gravel or stone over the natural soil surface with a pressure distribution system constructed to equally distribute the pre-treated effluent along the length of the gravel bed. The purpose of the design is to overcome site limitations that prohibit the use of conventional trench or seepage pit OSDS. Please refer to, "BAT Class IV: At-Grade Mound Systems," for exact details as to what is needed to qualify for BAT Classification.

SHALLOW PLACED LOW-PRESSURE DISTRIBUTION – Shallow-placed pressure dosing allows for uniform distribution of effluent at a depth not to exceed 12 inches across the entire dispersal field. Dosing allows for the creation of fluctuating aerobic/anoxic environments, which sets up the conditions for nitrification and denitrification to occur. Please refer to, "BAT Class IV: Shallow-Placed Pressure-Dosed Dispersal," for exact details as to what is needed to qualify for BAT Classification.

BAT Class V systems are technologies that mitigate the impact of TN on groundwater, but do not fit into any of the above BAT classifications. As systems are identified that will apply for classification as BAT Class V, the BAT TRC will develop a concise plan for the unit to enter the BAT classification. Examples include, but are not limited to, waterless toilets, and individually engineered peat systems.

Cover Crop Activities

Recent Program Streamlining and Targeting to Achieve Maximum Nutrient Reduction:

In FY22, MDA continued to implement a targeting strategy to maximize nutrient reduction effectiveness of cover crops. The 2022 program included incentives to:

1. Plant aerially into standing corn;
2. Plant cover crops as early as possible in the fall;
3. Use planting methods that maximize seed to soil contact to assure germination and early growth; and
4. Delay termination of the cover crop until May 1, 2022.

MDA has applied these criteria by structuring the incentive payments to reward farmers who adhered to one or more of these priorities. They are based both on historical surveys (Schaefer Center of Public Policy at the University of Baltimore) of farm operators' opinions to streamline and adapt the program to be responsive to participants while maximizing water quality benefits.

In addition, MDA expanded the program to include a multi-year contract option consistent with recommendations by the state's Soil Health Advisory Committee. This Cover Crop+ Program promotes soil health benefits associated with cover crop implementation. Management practices, such as, requiring at least 50% cereal grains and 25% legumes into the cover crop mix, maintaining year-round soil cover, and allowing livestock grazing on established cover crop fields, not only provide water quality benefits, but also improve soil health.

Status of Implementation of BRF for Cover Crop Activities:

MDA's cumulative portion of BRF is $144,250,451 as of June 30, 2022. In FY22, $10.8 million from BRF was supplemented by an additional $11.3 million from the Trust Fund to fund the Cover Crops Program.

Similar to last year, cover crop applications were mailed to past participants rather than having farmers visiting SCDs to sign up to encourage social distancing. Those farmers that did not participate last year were able to download applications from the MDA website.

Due to a late harvest and heavy fall rains resulting in saturated soil conditions, the planting deadline was extended a week to November 12, 2021.

It is with great pleasure that the BRFAC acknowledges the steadfast, commitment, and unwavering service of the professionals who have contributed their time, energy, and efforts toward the production of this report, annually for over 10 years. Thank you!

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Attachment 1

Table 1: Connections to Wastewater Treatment Facilities Upgraded to ENR

			Connections Before ENR Funding					Total Connections Upgraded since Conversion to ENR				Upgraded Connections Since Last Reporting Period	
ENR WWTP	County	ENR Upgrade Completed and Operational (Month-Year)	Column A: Reporting Year before ENR Funding	Column B: Number of Improved Parcels in the Sewer-shed	Column C: Number of Improved Parcels in Existing Service Area ("S1")	Column D: Number of Improved Parcels in "S1" within PFA	Column E: % of Connections Located in "S1" & PFA (Column D ÷ C)	Column F: Total Improved Parcels in S1	Column G: Total Improved Parcels in S1 & PFA	Column H: % Total Improved Parcels Located in "S1" within PFA (Column G ÷ F)	Column I: Total Increase Improved Parcels in S1 (Total Number New Connections)	Column J: Difference in Improved Parcels in S1	Column K: Difference in Improved Parcels in S1 & PFA
Western Region													
North Branch	ALLE	Nov-06	2005	1,913	1,801	1,794	99.6%	1,835	1,818	99.1%	34	3	3
George's Creek	ALLE	Nov-10	2009	2,069	1,938	1,876	96.8%	1,980	1,921	97.0%	42	0	0
City of Cumberland	ALLE	Feb-11	2010	17,656	16,412	16,243	99.0%	16,740	16,586	99.1%	328	10	10
City of Hagerstown	WASH	Dec-10	2009	21,975	18,825	17,769	94.4%	20,536	20,260	98.7%	1,711	87	87
Winebrenner	FRED/WASH	Feb-17	2016	455	455	446	98.0%	463	454	98.1%	8	11	11
Conococheague	WASH	Mar-18	2017	6,550	5,980	5,980	100.0%	6,187	6,187	100.0%	207	34	34
Western Region Total				**50,618**	**45,411**	**44,108**	**97%**	**47,741**	**47,226**	**98.9%**	**2,330**	**145**	**145**
Washington Region													
City of Brunswick	FRED	Sep-08	2007	2,446	1,957	1,957	100.0%	2,286	2,286	100.0%	329	7	7
Town of Thurmont	FRED	Apr-13	2012	2,385	2,345	2,204	94.0%	2,399	2,272	94.7%	54	-1	1
Town of Poolesville	MONT	Jul-10	2009	1,742	1,719	1,651	96.0%	1,802	1,731	96.1%	83	58	58

			Connections Before ENR Funding					Total Connections Upgraded since Conversion to ENR				Upgraded Connections Since Last Reporting Period	
ENR WWTP	County	ENR Upgrade Completed and Operational (Month-Year)	Column A: Reporting Year before ENR Funding	Column B: Number of Improved Parcels in the Sewer-shed	Column C: Number of Improved Parcels in Existing Service Area ("S1")	Column D: Number of Improved Parcels in "S1" within PFA	Column E: % of Connections Located in "S1" & PFA (Column D ÷ C)	Column F: Total Improved Parcels in S1	Column G: Total Improved Parcels in S1 & PFA	Column H: % Total Improved Parcels Located in "S1" within PFA (Column G ÷ F)	Column I: Total Increase Improved Parcels in S1 (Total Number New Connections)	Column J: Difference in Improved Parcels in S1	Column K: Difference in Improved Parcels in S1 & PFA
Damascus	MONT	Feb-13	2012	3,997	3,793	3,437	90.6%	3,804	3,444	90.5%	11	2	0
City of Bowie	PRIN	Feb-11	2010	20,712	20,559	20,269	98.6%	20,783	20,547	98.9%	224	54	53
Parkway	PRIN	Jul-13	2012	15,470	15,394	15,383	99.9%	15,843	15,714	99.2%	449	87	87
Piscataway	PRIN	May-13	2012	56,296	55,007	51,954	94.4%	58,516	53,663	91.7%	3,509	194	93
Western Branch (WSSC)	PRIN	Apr-16	2015	45,533	43,438	38,554	88.8%	48,159	40,371	83.8%	4,721	92	17
Blue Plains	PRIN/MONT	Apr-16	2015	330,121	327,437	319,529	97.6%	334,276	325,994	97.5%	6,839	1,136	882
Seneca (WSSC)	MONT	Apr-16	2015	60,161	57,387	56,911	99.2%	58,087	57,609	99.2%	700	274	274
Ballenger Creek	FRED	Apr-16	2015	21,554	17,110	17,105	100.0%	17,545	17,540	100.0%	435	24	24
Town of Emmitsburg	FRED	Mar-16	2015	927	824	791	96.0%	840	807	96.1%	16	2	2
Frederick	FRED	Jun-18	2017	24,627	22,666	22,666	100.0%	22,909	22,909	100.0%	243	8	8
Washington Region Total				**585,971**	**569,636**	**552,411**	**97%**	**587,249**	**564,887**	**96.2%**	**17,613**	**1,937**	**1,506**
Upper Eastern Shore Region													

			Connections Before ENR Funding					Total Connections Upgraded since Conversion to ENR				Upgraded Connections Since Last Reporting Period	
ENR WWTP	County	ENR Upgrade Completed and Operational (Month-Year)	Column A: Reporting Year before ENR Funding	Column B: Number of Improved Parcels in the Sewer-shed	Column C: Number of Improved Parcels in Existing Service Area ("S1")	Column D: Number of Improved Parcels in "S1" within PFA	Column E: % of Connections Located in "S1" & PFA (Column D ÷ C)	Column F: Total Improved Parcels in S1	Column G: Total Improved Parcels in S1 & PFA	Column H: % Total Improved Parcels Located in "S1" within PFA (Column G ÷ F)	Column I: Total Increase Improved Parcels in S1 (Total Number New Connections)	Column J: Difference in Improved Parcels in S1	Column K: Difference in Improved Parcels in S1 & PFA
Town of Elkton	CECI	Dec-09	2008	6,000	4,926	4,925	100%	5,165	5,162	99.9%	239	41	41
Town of Perryville	CECI	Dec-10	2009	1,704	1,508	1,508	100%	1,565	1,564	99.9%	57	2	2
Rising Sun	CECI	Apr-16	2015	1,052	856	846	98.8%	866	859	99.2%	10	4	4
Town of Chestertown	KENT	Jun-08	2007	1,772	1,742	1,562	89.7%	1,929	1,724	89.4%	187	11	11
Kent Island (KNSG)	QUEE	Aug-07	2006	6,590	6,401	5,974	93.3%	7,382	6,989	94.7%	981	74	72
Town of Denton	CARO	May-12	2011	1,508	1,097	1,095	99.8%	1,585	1,578	99.6%	488	21	21
Town of Federalsburg	CARO	Aug-10	2009	881	827	817	98.8%	829	818	98.7%	2	-1	1
Town of Easton	TALB	Jun-07	2006	5,810	5,831	5,822	99.8%	6,708	6,651	99.2%	877	37	37
Talbot Region II	TALB	Oct-08	2007	2,289	2,214	1,981	89.5%	3,185	2,203	69.2%	971	14	11
Northeast River	CECI	Oct-16	2015	5,714	4,459	3,931	88.2%	4,795	4,709	98.2%	336	26	25
Town of Queenstown	QUEE	Oct-16	2015	333	300	299	99.7%	334	334	100.0%	34	9	10
Greensboro	CARO	Jun-17	2016	727	687	687	100%	691	691	100.0%	4	1	1

			Connections Before ENR Funding					Total Connections Upgraded since Conversion to ENR				Upgraded Connections Since Last Reporting Period	
ENR WWTP	County	ENR Upgrade Completed and Operational (Month-Year)	Column A: Reporting Year before ENR Funding	Column B: Number of Improved Parcels in the Sewer-shed	Column C: Number of Improved Parcels in Existing Service Area ("S1")	Column D: Number of Improved Parcels in "S1" within PFA	Column E: % of Connections Located in "S1" & PFA (Column D ÷ C)	Column F: Total Improved Parcels in S1	Column G: Total Improved Parcels in S1 & PFA	Column H: % Total Improved Parcels Located in "S1" within PFA (Column G ÷ F)	Column I: Total Increase Improved Parcels in S1 (Total Number New Connections)	Column J: Difference in Improved Parcels in S1	Column K: Difference in Improved Parcels in S1 & PFA
Sudlersville	QUEE	Mar-18	2017	187	186	186	100%	186	186	100.0%	0	1	1
Galena	KENT	Dec-18	2017	374	296	274	92.6%	296	274	92.6%	0	0	0
Upper Eastern Shore Total				**34,941**	**31,330**	**29,907**	**95%**	**35,516**	**33,742**	**95%**	**4,186**	**240**	**237**
Lower Eastern Shore Region													
City of Cambridge	DORC	Dec-13	2012	5,861	5,418	5,293	97.7%	5,421	5,402	99.6%	3	9	9
Town of Hurlock	DORC	May-06	2005	769	703	703	100%	809	807	99.8%	106	2	2
Town of Delmar	WICO	Sep-11	2010	1,107	932	824	88.4%	1,024	906	88.5%	92	37	37
City of Pocomoke	WORC	Oct-11	2010	1,893	1,607	1,585	98.6%	1,633	1,607	98.4%	26	5	0
City of Crisfield	SOME	Aug-10	2009	2,495	2,044	1,735	84.9%	2,043	1,810	88.2%	9	2	0
Town of Snow Hill	WORC	Jun-14	2013	900	930	882	94.8%	955	913	95.6%	25	51	50
City of Fruitland	WICO	Nov-16	2015	2,237	1,847	1,788	96.8%	2,043	1,929	94.4%	196	67	31
Salisbury	WICO	Jan-18	2017	10,794	10,705	10,500	98.1%	11,036	10,827	98.1%	331	97	97

			Connections Before ENR Funding					Total Connections Upgraded since Conversion to ENR				Upgraded Connections Since Last Reporting Period	
ENR WWTP	County	ENR Upgrade Completed and Operational (Month-Year)	Column A: Reporting Year before ENR Funding	Column B: Number of Improved Parcels in the Sewer-shed	Column C: Number of Improved Parcels in Existing Service Area ("S1")	Column D: Number of Improved Parcels in "S1" within PFA	Column E: % of Connections Located in "S1" & PFA (Column D ÷ C)	Column F: Total Improved Parcels in S1	Column G: Total Improved Parcels in S1 & PFA	Column H: % Total Improved Parcels Located in "S1" within PFA (Column G ÷ F)	Column I: Total Increase Improved Parcels in S1 (Total Number New Connections)	Column J: Difference in Improved Parcels in S1	Column K: Difference in Improved Parcels in S1 & PFA
Lower Eastern Shore Total				**26,056**	**24,186**	**23,310**	**96%**	**24,974**	**24,201**	**96.9%**	**778**	**270**	**231**
Baltimore Region													
Town of Mount Airy	CARR/FRED	Nov-10	2009	3,336	3,145	3,145	100%	3,439	3,437	99.9%	294	4	4
Joppatowne/Sod Run	HARF	Nov-13	2012	51,174	48,459	48,195	99.5%	49,253	48,987	99.5%	794	26	26
City of Havre De Grace	HARF	May-10	2009	5,098	4,898	4,782	97.6%	5,682	5,679	99.9%	784	13	13
Little Patuxent	HOWA	Sep-12	2011	56,997	50,848	50,833	100%	59,256	59,183	99.9%	8,408	265	265
City of Aberdeen	HARF	Mar-15	2014	5,098	4,524	4,443	98.2%	4,551	4,470	98.2%	27	8	8
Broadneck	ANNE	May-15	2014	30,847	21,172	20,454	96.6%	21,867	21,066	96.3%	695	22	13
Maryland City	ANNE	Mar-15	2014	4,522	4,394	4,376	99.6%	4,564	4,539	99.5%	170	1	-15
Patuxent	ANNE	Mar-15	2014	24,037	22,886	22,440	98.1%	23,915	23,529	98.4%	1,029	20	94
City of Annapolis	ANNE	Apr-16	2015	31,823	28,384	27,466	96.8%	28,846	27,922	96.8%	462	752	752

			Connections Before ENR Funding					Total Connections Upgraded since Conversion to ENR				Upgraded Connections Since Last Reporting Period	
ENR WWTP	County	ENR Upgrade Completed and Operational (Month-Year)	Column A: Reporting Year before ENR Funding	Column B: Number of Improved Parcels in the Sewer-shed	Column C: Number of Improved Parcels in Existing Service Area ("S1")	Column D: Number of Improved Parcels in "S1" within PFA	Column E: % of Connections Located in "S1" & PFA (Column D ÷ C)	Column F: Total Improved Parcels in S1	Column G: Total Improved Parcels in S1 & PFA	Column H: % Total Improved Parcels Located in "S1" within PFA (Column G ÷ F)	Column I: Total Increase Improved Parcels in S1 (Total Number New Connections)	Column J: Difference in Improved Parcels in S1	Column K: Difference in Improved Parcels in S1 & PFA
Broadwater	ANNE	Apr-16	2015	4,919	4,694	3,902	83.1%	4,745	3,940	83.0%	51	14	14
City of Taneytown	CARR	Jul-16	2015	2,647	2,486	2,485	100%	2,500	2,499	100.0%	14	3	3
Back River	BACI/BACO	Sep-17	2016	313,624	311,468	309,249	99%	312,894	310,929	99.4%	1,426	604	607
Mayo	ANNE	Oct-17	2016	3,410	3,316	3,066	92%	3,387	3,130	92.4%	71	21	17
Cox Creek	ANNE	Jan-18	2017	48,105	42,688	41,792	98%	42,991	42,027	97.8%	303	90	83
Freedom District	CARR	Mar-18	2017	8,535	7,336	7,336	100%	7,574	7,554	99.7%	238	72	72
Patapsco (new)	BACI/BACO	Jan-20	2019	152,850	148,409	147,691	100%	148,634	147,894	99.5%	225	N/A	N/A
New Facilities Upgraded During Reporting Period				152,850	148,409	147,691	100%	148,634	147,894	99.5%	225	N/A	N/A
Baltimore Region Total				**747,022**	**709,107**	**701,655**	**99%**	**724,098**	**716,785**	**99.0%**	**14,991**	**1,915**	**1,956**
Southern Maryland Region													
Mattawoman	CHAR/PRIN	Nov-07	2006	29,453	27,029	23,576	87.2%	32,960	27,481	83.4%	5,931	112	21

			Connections Before ENR Funding					Total Connections Upgraded since Conversion to ENR				Upgraded Connections Since Last Reporting Period	
ENR WWTP	County	ENR Upgrade Completed and Operational (Month-Year)	Column A: Reporting Year before ENR Funding	Column B: Number of Improved Parcels in the Sewer-shed	Column C: Number of Improved Parcels in Existing Service Area ("S1")	Column D: Number of Improved Parcels in "S1" within PFA	Column E: % of Connections Located in "S1" & PFA (Column D ÷ C)	Column F: Total Improved Parcels in S1	Column G: Total Improved Parcels in S1 & PFA	Column H: % Total Improved Parcels Located in "S1" within PFA (Column G ÷ F)	Column I: Total Increase Improved Parcels in S1 (Total Number New Connections)	Column J: Difference in Improved Parcels in S1	Column K: Difference in Improved Parcels in S1 & PFA
Town of Indian Head	CHAR	Jan-09	2008	1,409	1,317	1,317	100%	1,479	1,479	100.0%	162	75	75
Town of La Plata	CHAR	Dec-14	2013	3,164	3,213	3,132	97.5%	3,775	3,759	99.6%	562	151	151
Marlay Taylor	STMA	Aug-16	2015	12,420	7,996	7,984	99.8%	8,336	8,324	99.9%	340	28	28
Chesapeake Beach	CALV	Nov-17	2016	4,041	3,320	2,694	81.1%	3,345	2,714	81.1%	25	5	4
Leonardtown	STMA	Aug-17	2016	1,640	1,089	936	86.0%	1,102	948	86.0%	13	0	0
Southern Maryland Total				**52,127**	**43,964**	**39,639**	**90%**	**50,997**	**44,705**	**87.7%**	**7,033**	**371**	**279**
Statewide													
New Facilities Upgraded During Reporting Period			N/A	152,850	148,409	147,691	100%	148,634	147,660	99.3%	225	N/A	N/A
Statewide Totals				**1,496,735**	**1,423,634**	**1,391,030**	**98%**	**1,470,575**	**1,431,546**	**97.3%**	**46,941**	**4,878**	**4,349**

Notes:

(new) = Facilities upgraded to ENR during the reporting period.

There are a few instances since reporting began in 2009 where the total number of improved parcels in Column C varied slightly due to service boundary discrepancies. Planning has worked diligently to resolve this issue.