Bay Restoration Fund Advisory Committee

Christopher P. Murphy, Chairman

Annual Status Report
January 2025 (20th Report)

Report to:

Wes Moore, Governor
State of Maryland

Aruna Miller, Lt. Governor
State of Maryland

Bill Ferguson, Senate President
Maryland General Assembly

Adrienne A. Jones, House Speaker
Maryland General Assembly

Brian J. Feldman, Chair
Senate Education, Energy, and the Environment Committee

Guy Guzzone, Chair
Senate Budget and Taxation Committee

Marc Korman, 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)	Anne Arundel County Department of Public Works
Serena McIlwain	Maryland Department of the Environment
Jeffrey Fretwell	Maryland Department of the Environment – WIFA
Walid Saffouri	Maryland Department of the Environment – WSA
Kevin Atticks	Maryland Department of Agriculture
Jason Keppler	Maryland Department of Agriculture
Rebecca L. Flora	Maryland Department of Planning
Ellen Mussman	Maryland Department of Planning
Josh Kurtz	Maryland Department of Natural Resources
Sarah Lane	Maryland Department of Natural Resources
Helene T. Grady	Maryland Department of Budget and Management
Laura Allen	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
Gussie Maguire	Chesapeake Bay Foundation
Timothy Male	Environmental Policy Innovation Center
J. Teigen Hall	Nemphos Braue Attorneys at Law
Douglas Abbott	Easton Utilities
Heather Moritz	St. Mary's County Health Department
Natisha Joseph	Prince George's County Health Department
Crystal Faison	Shepherd Design & Construction, LLC

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 Wes Moore and the Maryland General Assembly its 20th 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.

- As of June 30, 2024, the Comptroller of Maryland (CoM) has deposited approximately, since the 2004 program inception, $1.751 billion in the Maryland Department of the Environment (MDE) WWTP fund, $260 million in the MDE Septic Systems Upgrade fund, and $182 million in the Maryland Department of Agriculture (MDA) Cover Crop Program fund, for a total of $2.193 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 66 of the 67 major facilities currently in operation. The remaining facility, Princess Anne, Somerset County, is in the planning phase.

- Upgrades are underway for some minor sewage treatment plants (less than 0.5 million gallons per day). To date, 16 minor facilities have completed the ENR upgrade and are in operation. Three more are under construction, and 16 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 potentially a total of 80 minor facilities may meet the cost-effectiveness criteria and could 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, 2024, the BRF has funded 16,315 BAT upgrades throughout Maryland, of which 9,959 upgrades were completed within Maryland's Critical Areas. In addition, 1,646 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 (FY23) under the reauthorized program was open during summer 2022 and closed in September 2022. There has been significant interest in the program, with 36 applications received and over $90 million in funding requested. MDE, MDA and the Environmental Policy

Innovation Center (EPIC) evaluated the submitted applications and selected 16 projects to be funded. Legislation passed during the 2024 legislative session increased the flexibility for payment schedules for projects funded under the program. That payment schedule flexibility is being utilized by a number of projects funded under the FY23 solicitation. Additionally, MDE reopened the FY24 solicitation to allow for utilization of the more flexible payment schedule. MDE is in the process of finalizing scoring and ranking of these projects.

- MDA dedicates its portion of BRF for the implementation of the statewide Cover Crop Program. Now in its second year of implementation, MDA continued to offer 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 FY24, Maryland farmers applied to plant over 625,000 acres of cover crops. Typically, they enroll more acreage than they plant. Farmers planted 450,000 acres attaining an estimated nutrient reduction of 3.1 million pounds of nitrogen and 3,600 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 FY24 utilized appropriations of $14.1 million from BRF, and $11.1 million from the Chesapeake and Atlantic Coastal Bays Trust Fund (Trust Fund).

- This summer, 653,000 acres were enrolled in next year's (FY25) 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, since being introduced, MDA has received 30 applications totaling nearly 6,000 acres annually over the next three years for the Cover Crop+ Program.

- MDE and the Maryland Department of Planning (MDP) are continuing their efforts to implement the requirements of Chapter 257 of the 2007 Acts, which requires MDE and MDP, 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, MDP is continuing its analysis, and is reporting on all qualifying WWTPs, grouped by regions, found in Table 1 of this report.

- State-funded ENR upgrades created the possibility for capacity expansion beyond the original design capacity at several WWTPs (Available Capacity table, Chapter 257 Implementation section). Some of those WWTPs that received that capacity expansion opportunity are serving a

relatively low percentage of lots within Priority Funding Areas (PFAs). Although not currently required by law, MDP recommends that all lots receiving service from the new capacity obtained by those WWTPs be within PFAs, with the exception of existing homes previously served by septic systems that were connected to those WWTPs. According to MDP's State Data & Analysis Center, the population is projected to grow by 1 million between 2020 and 2050. Optimizing the use of Maryland's land is critical as we continue to grow in population and strive to minimize the loss of our remaining farmland and forest land. Land that qualifies as a PFA indicates that local planning and zoning support compact development and sustainable growth.

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, Comprehensive Flood Management Grant, 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 three to ten years. The program is responsible for ensuring 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 ensures 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 FY24, incentive payments were adjusted based on rising input costs. A maximum

payment could have reached $105/acre for those meeting all of the incentive criteria, which included a $15/acre spring delayed crop termination incentive.

Now in its third year of implementation, MDA's Cover Crop+ Program offers higher incentive payments and more perks for farmers who plant cover crops to improve soil health. To participate in this program, farmers sign a contract to grow cover crop mixes on the same field for three 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 FY24 base payment for this premium incentive program was raised to $125/acre per year. Optional add-on practices, such as cover crops following commodity grains, livestock integration, and pre-sidedress soil nitrate testing can increase the reimbursement rate to $155/acre. To qualify for payment, optional add-ons must be new practices (not used in the previous three years) for an enrolled field.

MDA is projected to receive $14.2 million in BRF support in FY25. It is projected that BRF will provide financial assistance for approximately 230,000 acres of cover crops.

Over the past nine 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 (MDP):

Maryland Department of 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 MDP carries out that relate directly or indirectly to BRF are summarized below. House Bill 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 MDP'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:

MDP 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, MDP 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. MDP 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 MDP.

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. MDP provides comments on draft local comprehensive plans and amendments. Through the Clearinghouse review process, MDP 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.

MDP works closely with and provides technical assistance to local governments in the processes leading to the adoption of local comprehensive plans. MDP 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, 2024, is as follows:

Wastewater Fund (MDE 100% - FY24):

Sources:	$ Million	Uses:	$ Million
Fee Revenue Deposits	$103.7	Grant Awards	$37.9
Interest Earnings	$7.4	Admin. Expense Allowance	$1.6
Net Bond Proceeds	$0.0	Bond DS Payments	$27.2
Total	$111.1	Total	$66.7

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

Sources:	$ Billion	Uses:	$ Billion
Fee Revenue Deposits	$1.751	Grant Awards	$1.749*
Interest Earnings	$0.048	Admin. Expense Allowance	$0.027
Net Bond Proceeds	$0.362	Bond DS Payments	$0.291
Total	$2.161	Total	$2.067

*Funds are awarded after construction bids have opened (except for planning/design) and payment disbursements are made as expenses are incurred.

As of June 30, 2024, the grants under the Wastewater Fund were awarded as follows:

MAJOR WWTP ENR GRANTS:

Aberdeen, City of	Aberdeen WWTP ENR Upgrade	14,581,773.00
Allegany Co	Georges Creek ENR Upgrade	9,875,136.00
Allegany Co	Celanese ENR Upgrade	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 Upgade	8,854,528.00
Anne Arundel Co	Patuxent WRF ENR Upgrade	3,713,000.00
Baltimore City	Back River WW ENR Upgr. (SC877)	300,885,432.00
Baltimore City	Back River WW ENR Upgr. (SC882)	46,219,057.00
Baltimore City	Patapsco ENR Upgr. (SC845 & 852)	145,503,477.36
Bowie, City of	Bowie ENR Upgrade	8,668,492.00
Brunswick,City of	WWTP ENR Upgrade	8,263,000.00
Cambridge, City of	Cambridge ENR Upgr.	8,618,255.00
Carroll Co.	Hampstead WWTP ENR Upgrade	9,651,298.00
Cecil Co.	NorhtEast River Adv WWTP ENR Upgr.	10,923,342.00
Chesapeake Beach,Town of	Chesapeake Beach WWTP ENR Upgr.	7,099,652.00
Chestertown, Town of	Chestertown BNR ENR Improvs	1,490,854.14
Crisfield, City of	Crisfield WWTP BNR ENR Upgrade	4,230,766.00
Cumberland, City of	Cumberland WWTP BNR ENR Upgrade	25,654,866.00
Delmar, Town of	Delmar WWTP BNR ENR Upgrade	2,369,464.00
Denton, Town of	Denton WWTP ENR Upgrade	4,405,615.00
Denton, Town of	Denton WWTP ENR Refinement	779,754.00
Easton, Town of	Easton WWTP ENR Upgrade	7,788,021.00
Elkton, Town of	Elkton BNR ENR Upgrade	7,403,154.00
Emmitsburg, Town of	Emmitsburg WWTP ENR Upgrade	5,517,848.00
Federalsburg, Town of	Federalsburg BNR ENR Upgrade	2,900,000.00
Frederick, City of	Gas House Pike WWTP	17,422,090.00
Frederick Co.	Ballenger Creek McKinney WWTP	29,812,509.00
Fruitland, City of	Fruitland WWTP ENR Upgrade	4,700,298.00
Hagerstown, City of	WWTP ENR Upgrade	10,191,836.00
Harford Co.	Joppatown ENR Upgrade	3,399,778.00
Harford Co.	Sod Run ENR Upgrade	36,640,567.00
Havre de Grace, City of	Havre de Grace WWTP ENR	10,474,820.00
Howard County	Little Patuxent WWTP ENR Upgr.	35,493,172.00
Hurlock, Town of	Hurlock WWTP ENR Upgrade	941,147.75
Indian Head, Town of	Indian Head ENR Upgrade	5,822,098.00
LaPlata, Town of	La Plata ENR Upgrade	9,367,610.00
Leonardtown	Leonardtown WWTP ENR Upgrade	8,667,382.00
MD Environmental Svcs	Freedom District WWTP ENR	7,483,475.00
MD Environmental Svcs	MD Correctional Instit. WWTP ENR	6,764,539.00
MD Environmental Svcs	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	7,975,325.00

Pocomoke, City of	Pocomoke WWTP ENR Upgrade	3,214,878.00
Poolesville, Town of	Poolesville WWTP ENR	223,132.00
Poolesville, Town of	Poolesville WWTP ENR Refinements	8,596,570.00
Queen Anne's County	Kent Island WWTP ENR	6,380,645.09
Salisbury, City of	Salisbury WWTP ENR Upgrade	2,553,876.86
Salisbury, City of	WWTP BNR ENR (Drain Pmp St)	11,362,766.00
Snow Hill, Town of	BNR ENR Upgrade	3,275,455.00
Somerset County	Princess Anne WWTP ENR	23,000.00
St. Mary's County	Marlay Taylor Water Reclam.	9,896,000.00
Talbot County	St Michaels WWTP ENR	1,978,698.78
Taneytown, City of	WWTP ENR Planning /Design	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/Expan.	5,550,048.00
WSSC	Western Branch WWTP ENR Upgr.	37,589,528.00
MAJOR WWTP ENR GRANT TOTAL		1,304,792,939.98

MINOR WWTP ENR GRANTS

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 Replacement	7,618,421.00
Cecilton, Town of	WWTP ENR	34,908.00
Chesapeake City, Town of	Chesapeake City WWTP ENR	6,868,900.00
College of Southern Maryland	WWTP ENR Upgrade (Charles Co.)	713,571.00
Frederick Co.	Lewistown WWTP ENR Up	2,466,000.00
Galena, Town of	Galena WWTP ENR	1,768,370.00
Garrett Co San Dist	Trout Run Oakland WWTP	1,621,035.00
Grantsville, Town of	WWTP ENR Upgrade	776,526.00
Greensboro, Town of	Greensboro WWTP ENR	2,581,838.00
Hancock, Town of	Hancock WWTP ENR Upgrade	763,208.00
Manchester, Town of	WWTP ENR Upgrade	1,257,067.00
MD Environmental Svc	Elk Neck St Park WWTP ENR	8,219,070.00
MD Environmental Svc	Victor Cullen WWTP ENR Upgrade	5,146,650.00

MD Environmental Svc	Cheltenham Village WWTP ENR	5,993,072.00
MD Environmental Svc	Point Lookout State Park WWTP ENR	53,035.00
Middletown, Town of	Middletown WWTP ENR Upgrade	49,923.00
New Windsor, Town of	New Windsor WWTP ENR Upgrade	30,604.00
Oxford, Town of	Oxford WWTP/ ENR Upgrade	6,999,116.00
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	Rising Sun WWTP ENR	1,099,268.00
Rock Hall, Town of	Rock Hall WWTP ENR	745,571.00
Secretary, Town of	Twin Cities WWTP ENR Upgrade	17,724,632.00
Somerset County	Smith Island BNR ENR Upgrade	10,012,677.00
Sudlersville, Town of	Sudlersville BNR ENR	2,299,722.00
Talbot Co., Town of	Region V (Tilghman Isl) WWTP ENR Upg.	28,990.00
Trappe, Town of	Trappe WWTP ENR Upgrade	25,975.00
Union Bridge, Town of	WWTP ENR Upgrade	99,800.00
UpperPotomac River Commission	UPRC WWTP ENR Upgrade	100,000.00
Vienna, Town of	Vienna WWTP ENR Upgrade	550,900.00

Other Expanded Use Projects (Sewer, Septic, Stormwater BMP)

Allegany Co.	Bedford Rd San Sew Rehab Ph VI	1,137,072.00
Allegany Co.	Braddock & Jennings RCS Sewer Conv.	20,381,519.00
Baltimore, City of	Patapsco SSI (SC-903)	19,869,452.00
Baltimore, City of	Herring Run SSI HR07A (SC-937)	5,055,835.00
Baltimore, City of	LowLevel SSI (SC-914)	11,834,981.00
Baltimore, City of	SSI SW SC963 & Maiden Choice	11,977,946.00
Baltimore, City of	Gwynns Falls Sewershed SC921	8,454,271.00
Baltimore, City of	Gwynns Falls Sewershed SC977	5,720,729.00
Baltimore, City of	Herring Run Sewershed II SC910	10,686,000.00
Baltimore, City of	Improvs to SS Herring Run SC956	5,882,802.00
Baltimore, City of	Improvs to SanSewer SC965	9,803,428.00
Baltimore, City of	Hydraulic Improvs HL SCS (SC940)	10,601,422.00
Carroll County	SW Mgmnt Rest (Greens of Westminster)	347,340.00
Carroll County	SW Mgmnt Rest (Woodsyde)	779,195.00
Carroll County	SW Mgmnt Rest (East West Pond)	568,973.00
Carroll County	SW Mgmnt Rest (Trevanion Terrace)	607,193.00
Cecil County	Connect Triumph Ind Park to SS	3,550,101.00
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 St Corridor	1,918,821.00
Frostburg, City of	CSO Ph IX-C Beall St Corridor	1,211,602.00
Frostburg, City of	CSO Ph X-A Geroge's Creek	981,313.00

Greensboro, Town of	Goldsboro Reg WW Ph V	2,213,095.00
Howard County	Ashleigh Knolls Sh Sew Disposal Fac	2,881,550.00
I-97 Sewer	Dover Rd Bus Bldg Sew Connection	42,220.00
I-97 Sewer	BWI Commerce Park Sewer Ext.	1,265,568.00
I-97 Sewer	Int Trade Ctr Sew Ext.(St.John's Prop)	1,131,795.00
I-97 Sewer	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 Co.	Southern Kent Island Sanitary Proj Ph II	1,918,000.00
Queen Anne's Co.	Southern Kent Island Sanitary Proj Ph III	4,187,500.00
Sudlersville, Town of	Town of Barclay Sanitary Project	1,550,000.00
WSSC	Lower Anacostia Sewer Basin PGC	3,791,375.00
WSSC	Beaverdam Sewer Basin PGC	6,062,000.00
WSSC	NorthWest Sewer Basin PGC	5,831,875.00
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
WSSC	Broad Creek Sewer Basin PGC	4,550,000.00
TOTAL MINOR WWTP & EXPANDED USE PROJECT GRANTS		314,656,903.00

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

Operation & Maintenance (O&M) Grants

Aberdeen, City of	Aderdeen WWTP O&M GY24	136,228.00
Allegany County	North Branch WWTP O&M	771,759.00
Allegany County	North Branch WWTP O&M GY24	110,360.00
Allegany County	George's Creek WWTP O&M	284,014.00
Allegany County	George's Creek WWTP O&M GY24	58,415.00
Anne Arundel County	Annapolis WWTP O&M	2,394,750.00
Anne Arundel County	Annapolis WWTP O&M GY24	488,681.00
Anne Arundel County	Broadneck WWTP O&M	1,464,945.00
Anne Arundel County	Broadneck WWTP O&M GY24	242,013.00
Anne Arundel County	Broadwater WWTP O&M	477,448.00
Anne Arundel County	Broadwater WWTP O&M GY24	107,798.00
Anne Arundel County	Cox Creek WWTP O&M	2,033,109.00
Anne Arundel County	Cox Creek WWTP O&M GY24	532,933.00
Anne Arundel County	Maryland City WWTP O&M	674,309.00
Anne Arundel County	Patuxent WWTP O&M	2,052,209.00
Anne Arundel County	Patuxent WWTP O&M GY24	225,000.00
Baltimore, City of	Back River WWTP O&M	425,000.00
Betterton, Town of	Betterton WWTP O&M GY24	20,000.00
Boonsboro, Town of	Boonsboro WWTP O&M	270,521.00
Boonsboro, Town of	Boonsboro WWTP O&M GY24	38,716.00
Bowie, City of	Bowie WWTP O&M	734,825.00
Bowie, City of	Bowie WWTP O&M GY24	126,828.00
Brunswick, City of	Brunswick WWTP O&M	469,317.00
Brunswick, City of	Brunswick WWTP O&M GY24	47,536.00
Cambridge, City of	Cambridge WWTP O&M	1,861,265.00
Cambridge, City of	Cambridge WWTP O&M GY24	264,384.00
Cecil County	Northeast River WWTP O&M	390,627.00
Cecil County	Northeast River WWTP O&M GY24	111,239.00
Cecil County	Harbour View WWTP O&M	30,202.00
Cecil County	Port Deposit WWTP O&M GY24	32,189.00
Charles County	Mattawoman WWTP O&M	816,000.00
Chesap. Beach, Town of	Chesapeake Beach WWTP O&M	71,363.00
Chesap. Beach, Town of	Chesapeake Beach WWTP O&M GY24	69,009.00
Chestertown, Town of	Chestertown WWTP O&M	315,528.00
Crisfield, City of	Crisfield WWTP O&M	118,320.00

Crisfield, City of	Crisfield WWTP O&M GY24	50,329.00
Cumberland, City of	Cumb/John Difonzo WWTP O&M	3,763,971.00
Cumberland, City of	Cumb/John Difonzo WWTP O&M GY24	494,274.00
Delmar, Town of	Delmar WWTP O&M	119,748.00
Delmar, Town of	Delmar WWTP O&M GY24	50,773.00
Denton, Town of	Denton WWTP O&M	232,256.00
Easton Utilities	Easton WWTP O&M	1,604,315.00
Easton Utilities	Easton WWTP O&M GY24	209,426.00
Elkton, Town of	Elkton WWTP O&M	1,181,705.00
Emmitsburg, Town of	Emmitsburg WWTP O&M	137,840.00
Federalsburg, Town of	Federalsburg WWTP O&M	167,503.00
Federalsburg, Town of	Federalsburg WWTP O&M GY24	40,662.00
Frederick, City of	Gas House Pike WWTP O&M	632,472.00
Frederick County	Ballenger Creek WWTP O&M	2,334,500.00
Frederick County	Ballenger Creek WWTP O&M GY24	432,232.00
Fruitland, City of	Fruitland WWTP O&M	111,612.00
Greensboro, Town of	Greensboro WWTP O&M	52,500.00
Hagerstown, City of	Hagerstown WWTP O&M	2,909,848.00
Hagerstown, City of	Hagerstown WWTP O&M GY24	319,553.00
Harford County	Aberdeen WWTP O&M	1,087,242.00
Harford County	Joppatowne WWTP O&M	299,590.00
Harford County	Joppatowne WWTP O&M GY24	48,885.00
Harford County	Sod Run WWTP O&M	2,606,058.00
Harford County	Sod Run WWTP O&M GY24	419,825.00
Havre de Grace, City of	Havre de Grace WWTP O&M	809,686.00
Havre de Grace, City of	Havre de Grace WWTP O&M GY24	99,671.00
Howard County	Little Patuxent WWTP O&M	3,011,097.00
Howard County	Little Patuxent WWTP O&M GY24	837,179.00
Hurlock, Town of	Hurlock WWTP O&M	624,879.00
Hurlock, Town of	Hurlock WWTP O&M GY24	77,573.00
Indian Head,Town of	Indian Head WWTP O&M	316,502.00
Indian Head,Town of	Indian Head WWTP O&M GY24	39,165.00
La Plata, Town of	La Plata WWTP O&M	393,556.00
Leonardtown, Town of	Leonardtown WWTP O&M	112,570.00
Leonardtown, Town of	Leonardtown WWTP O&M GY24	46,115.00
MD Environmental Svc	Dorsey Run WWTP O&M	517,876.00
MD Environmental Svc	Dorsey Run WWTP O&M GY24	60,000.00
MD Environmental Svc	Eastern Corr. Inst WWTP O&M	303,461.00
MD Environmental Svc	Eastern Corr. Inst WWTP O&M GY24	54,495.00
MD Environmental Svc	Freedom District WWTP O&M	498,477.00
MD Environmental Svc	Freedom District WWTP O&M GY24	119,108.00
MD Environmental Svc	MD Correctional Inst WWTP O&M	295,056.00
MD Environmental Svc	MD Correctional Inst WWTP O&M GY24	88,080.00
MD Environmental Svc	Rocky Gap WWTP O&M	95,561.00

MD Environmental Svc	Rocky Gap WWTP O&M GY24	32,638.00
MD Environmental Svc	So.MD Pre-Release WWTP O&M	117,827.00
Mount Airy,Town of	Mount Airy WWTP O&M	407,452.00
Mount Airy,Town of	Mount Airy WWTP O&M GY24	59,537.00
Oxford, Town of	Oxford WWTP O&M	25,000.00
Perryville, Town of	Perryville WWTP O&M	350,755.00
Perryville, Town of	Perryville WWTP O&M GY24	60,000.00
Pocomoke City, City of	Pocomoke City WWTP O&M	300,880.00
Poolesville, Town of	Poolesville WWTP O&M	13,500.00
Queen Anne County	Kent Island WWTP O&M	1,016,123.00
Queen Anne County	Kent Island WWTP O&M GY24	142,218.00
Queenstown, Town of	Queenstown WWTP O&M	128,312.00
Rising Sun, Town of	Rising Sun WWTP O&M	114,368.00
Rising Sun, Town of	Rising Sun WWTP O&M GY24	32,287.00
Salisbury, City of	Salisbury WWTP O&M	1,549,742.00
Salisbury, City of	Salisbury WWTP O&M GY24	442,072.00
Snow Hill, Town of	Snow Hill WWTP O&M	251,290.00
St.Mary's County	Marley Taylor WWTP O&M	646,784.00
Talbot County	Talbot Region II WWTP O&M	352,104.00
Talbot County	Talbot Region II WWTP O&M GY24	44,858.00
Thurmont, Town of	Thurmont WWTP O&M	319,190.00
Thurmont, Town of	Thurmont WWTP O&M GY24	41,664.00
Upper Potomac RC	Upper Potomac Rvr Comm WWTP GY24	51,079.00
Washington County	Conococheague WWTP O&M	662,155.00
Washington County	Conococheague WWTP O&M GY24	201,130.00
Washington County	Winebrenner WWTP O&M	159,672.00
Washington County	Winebrenner WWTP O&M GY24	34,302.00
WSSC	Blue Plains WWTP O&M	600,000.00
WSSC	Damascus WWTP O&M	480,171.00
WSSC	Damascus WWTP O&M GY24	73,920.00
WSSC	Parkway WWTP O&M	2,419,125.00
WSSC	Parkway WWTP O&M GY24	470,622.00
WSSC	Piscataway WWTP O&M	2,362,199.00
WSSC	Piscataway WWTP O&M GY24	1,433,375.00
WSSC	Seneca WWTP O&M	2,685,983.00
WSSC	Seneca WWTP O&M GY24	522,366.00
WSSC	Western Branch WWTP O&M	2,911,585.00
WSSC	Western Branch WWTP O&M GY24	1,259,256.00
O&M GRANT TOTAL		68,749,607.00

CWCA: Nutrient Load Reduction GRANTS

Anne Arundel Co.DPW	Muni Disch @ Broadneck/Annapolis WRF	8,181,550.00
Anne Arundel Co.DPW	Muni Disch @Cox Creek & Patuxent WRF	9,498,475.00
HGS LLC (RES)	Winters Run Stream Restoration	4,910,825.00
Howard County DPW	Little Pat Water Recl Plant (APICS)	1,818,450.00
Conservation Innovation Fund	Aggrow - Alternative Crop Environmental Practice	1,375,251.00
NUTRIENT LOAD REDUCTION/CWCA TOTAL		25,784,551.00

TREE SOLUTIONS NOW ACT:

Chesapeake Bay Trust	Urban Tree Program	10,000,000.00
MD Dept of Agriculture	Conservation Reserve Enhancement Prog	2,500,000.00
MD Dept. of Natural Res.	Ches.& Atlantic Coastal Bays Trust Fund	2,500,000.00
TREE SOLUTIONS NOW ACT- TOTAL		15,000,000.00

TOTAL BRF A0111 Grants	**$1,748,695,306.98**

Septic Fund (MDE 60% for OSDS upgrades FY24):

Sources:	$ Million	Uses:	$ Million
Fee Revenue Deposits	$ 18.3	Capital Grant Awards	$ 15.0
Interest Earnings	$ 0.5	Admin. Expense Allowance	$ 1.5
		HB-12 Local Admin Grants	$ 1.5
Total	$ 18.8	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	$258.1	Capital Grant Awards	$227.3*
Interest Earnings	$4.3	Admin. Expense Allowance	$20.8
		HB-12 Local Admin Grants	$14.2 **
Total	$262.4	Total	$262.3

*Does not include $15 million of FY24 grant awarded in June 2024. 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, 2024, the grants under the Septic Fund were awarded as follows:

	Capital Program Grant Award	HB12 Admin Grant Award
Allegany Co. Hlth Dept	1,178,724.85	270,000.00
Anne Arundel Co. Hlth Dept	40,935,285.15	795,000.00
Baltimore Co. Hlth Dept	7,186,881.16	688,000.00
Calvert Co. Hlth Dept	21,715,194.94	1,160,000.00
Caroline Co. Hlth Dept	5,462,563.46	762,000.00
Carroll Co.Hlth Dept	3,497,376.48	452,000.00
Cecil Co. Hlth Dept	11,464,642.26	504,000.00
Charles Co. Hlth Dept	6,370,797.75	613,000.00
Dorchester Co. Hlth Dept	9,780,794.75	876,500.00
Frederick Co. Hlth Dept	5,218,414.65	664,000.00
Garrett Co. Hlth Dept.	1,551,960.82	385,000.00
Harford Co. Hlth Dept	6,514,984.38	645,000.00
Howard Co. Hlth Dept	2,560,028.75	426,000.00

Kent Co. Hlth Dept.	8,146,483.64	823,000.00
Montgomery Co. Hlth Dept	3,175,657.00	120,000.00
Prince George's Co. Hlth Dept	899,348.16	192,500.00
Queen Anne's Co. Hlth Dept	18,936,249.17	696,000.00
Somerset Co. Hlth Dept.	4,899,677.36	670,000.00
St. Mary's Co. Hlth Dept.	17,403,026.57	1,138,000.00
Talbot Co. Hlth Dept	12,469,480.58	920,000.00
Washington Co. Hlth Dept	4,889,099.30	404,000.00
Wicomico Co. Hlth Dept	9,684,954.50	535,000.00
Worcester Co. Hlth Dept	4,708,347.11	252,000.00
Direct Grant Awards_Individual	17,725,266.58	-
Direct-2nd year O&M_ BAT vendor	1,384,501.25	-
Total BRF SEPTIC Grant Awards	227,759,776.62	13,991,000.00

Septic Fund (MDA 40% for Cover Crops)

Sources:		Uses:	
Cash Deposits*	$169,628,316	Grant Awards	$166,642,409
		Admin. Expense	$ 2,985,907
		Total	$169,628,316

*Cumulative revenue and expenditures as of June 30, 2024.

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	397,066	395,003
2023/2024	625,197	621,609	447,622	446,639
2024/2025	653,200	TBD	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 ten 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. There were 36 applications received and over $90 million in funding requested. MDE, MDA and the Environmental Policy Innovation Center (EPIC) evaluated the submitted applications and selected 16 projects to be funded (nine projects by MDE, five by EPIC, and two by MDA). The selected 16 projects have total of $16 million for the following categories:

Agricultural Practices:	$14,000,000
Nonagricultural Landscape Restoration Projects:	$2,000,000

HB1266/SB1144 of 2024 – *Clean Water Commerce – Contracts for the Purchase of Environmental Outcomes* - increased the flexibility for payment schedules for projects funded under the Clean Water Commerce Program. MDE determined that the flexibility can be used for projects selected in the FY23 solicitation that had not yet executed grant agreements, and a number of these projects are utilizing this new payment schedule option.

MDE also reopened our FY24 solicitation that had closed on January 31, 2024 to allow for utilization of the more flexible payment schedule. The majority of applications received during the reopened solicitation have proposed a more flexible payment schedule. MDE is in the process of finalizing scoring and ranking of these projects. MDE received 22 applications requesting more than $77M in funding. Four of the applications received were for communities disproportionately burdened by environmental harms or risks.

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.

<u>Major WWTPs:</u>

ENR upgrades of the state's major sewage treatment plants are almost completed with 66 of the 67 major facilities having been upgraded and in operation. The remaining facility, Princess Anne, Somerset County, is in planning.

Minor WWTPs:
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, 16 minor facilities have completed the ENR upgrade and are in operation. Three more are under construction, and 16 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 potentially a total of 80 minor facilities may meet the cost-effectiveness criteria and could be upgraded if they apply for BRF funding.

ENR Asset Renewal
In 2026, ENR upgrades at major WWTPs will start reaching their expected useful life of 20 years. As a result, there may be significant capital improvements necessary to ensure plants can continue to achieve ENR levels of wastewater treatment. The Department is developing an approach for a needs analysis that will assess the capital, operations and maintenance, and staffing needs for priority WWTPs. Once the needs analysis is complete, a funding strategy will be developed to fund ENR asset renewal at these WWTPs to prevent performance from declining.

The results of this needs analysis can be rolled into a similar State Revolving Fund needs assessment process as one way to allot funding towards WWTP asset renewal. The Department will also work with State legislators to identify needs assessment funding opportunities and gaps. For each WWTP, needs assessments for large WWTPs are estimated to cost up to several hundred thousand dollars, while smaller plants could cost as little as $50,000. The total cost to assess needs at all the major and minor WWTPs may approach $20 million.

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.

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 CY23:

ENR Wastewater Treatment Plant	County	CY 2023 Average Flow (MGD)	TN Reduction (Lbs)	TP Reduction (Lbs)
John J. Difonzo	Allegany	8.871	156,624.42	47,257.37
George's Creek	Allegany	0.756	36,821.43	4,326.52
North Branch	Allegany	1.260	65,204.62	7,287.58
Rocky Gap	Allegany	0.052	2,754.30	307.09
UPRC	Allegany	0.829	41,891.08	4,315.29
Annapolis	Anne Arundel	8.177	139,392.99	48,040.80
Broadneck	Anne Arundel	3.890	75,312.25	22,617.36
Broadwater	Anne Arundel	0.959	19,267.33	5,663.43
Cox Creek	Anne Arundel	9.478	187,537.87	53,953.20
Dorsey Run	Anne Arundel	0.877	43,248.75	4,671.93
Fort Mead	Anne Arundel	1.532	73,217.91	8,720.86
Maryland City	Anne Arundel	1.473	27,800.55	8,519.52
Naval Academy	Anne Arundel	0.066	2,953.39	377.71
Patuxent	Anne Arundel	5.483	88,461.24	31,712.52
Piney Orchard	Anne Arundel	0.560	11,080.52	3,255.97
Back River	Baltimore	120.583	2,018,866.91	33,036.00
Patapsco	Baltimore City	51.779	2,380,068.85	290,021.64
Chesapeake Beach	Calvert	0.774	15,079.25	4,500.21
Denton	Caroline	0.485	7,381.94	2,627.97
Federalsburg	Caroline	0.277	14,081.70	1,433.47
Greensboro	Caroline	0.167	5,897.03	945.56
Preston	Caroline	0.046	1,372.28	190.44
Freedom District	Carroll	1.965	31,104.61	11,544.60
Hampstead	Carroll	0.276	11,846.42	1,529.11
Mount Airy	Carroll	0.626	12,767.56	3,620.65
Taneytown	Carroll	0.714	9,346.00	3,738.40
Westminster	Carroll	3.741	58,078.69	21,295.52
Chesapeake City	Cecil	0.102	5,216.37	543.37
Elkton	Cecil	1.716	79,399.87	9,193.67
Harbour View	Cecil	0.047	2,103.17	281.85
Northeast River	Cecil	1.166	22,361.35	-
Perryville	Cecil	0.660	30,136.59	3,415.48
Port Deposit	Cecil	0.076	3,817.30	455.76

ENR Wastewater Treatment Plant	County	CY 2023 Average Flow (MGD)	TN Reduction (Lbs)	TP Reduction (Lbs)
Rising Sun	Cecil	0.217	9,710.37	1,037.09
Indian Head	Charles	0.433	21,221.33	2,491.20
La Plata	Charles	1.088	14,903.91	5,994.69
Mattawoman	Charles	8.561	333,574.91	1,563.63
Naval Station	Charles	0.321	15,243.64	1,768.65
Swan Point	Charles	0.070	3,025.84	385.69
Cambridge	Dorchester	2.859	46,126.33	15,926.64
Hurlock	Dorchester	1.276	63,313.63	7,574.33
Ballenger Creek	Frederick	6.726	118,752.78	40,334.99
Brunswick	Frederick	0.426	19,970.51	2,450.93
Emmitsburg	Frederick	0.372	17,099.32	1,947.74
Fort Detrick	Frederick	0.810	40,437.82	4,783.50
Frederick	Frederick	5.438	102,633.66	27,479.33
Thurmont	Frederick	0.489	9,229.10	2,843.16
Aberdeen	Harford	1.486	25,331.78	8,232.83
APG-Aberdeen	Harford	0.406	18,414.98	2,397.65
APG-Edgewood	Harford	0.729	31,068.08	4,105.43
Havre de Grace	Harford	1.548	24,975.01	8,717.69
Jopppatowne	Harford	0.753	13,982.46	4,125.97
Sod Run	Harford	9.818	176,333.15	54,394.29
Little Patuxent	Howard	17.270	331,201.12	43,108.72
Betterton	Kent	0.061	2,488.25	337.96
Chestertown	Kent	0.642	27,555.80	3,791.37
Galena	Kent	0.023	1,099.22	128.13
Damascus	Montgomery	0.760	15,037.85	4,465.09
Poolesville	Montgomery	0.479	5,395.06	2,639.20
Seneca	Montgomery	13.317	235,122.02	6,567.20
Bowie	Prince George's	1.342	24,511.09	3,635.81
Parkway	Prince George's	6.032	123,025.48	14,505.99
Piscataway	Prince George's	20.973	446,907.37	7,022.83
Western Branch	Prince George's	21.310	415,166.53	53,193.21
Kent Island	Queen Anne's	2.415	120,564.62	13,894.34
Queenstown	Queen Anne's	0.074	3,829.48	434.76
Sudlersville	Queen Anne's	0.072	3,178.04	394.52

ENR Wastewater Treatment Plant	County	CY 2023 Average Flow (MGD)	TN Reduction (Lbs)	TP Reduction (Lbs)
Blue Plains	Regional	124.265	1,664,410.38	30,262.01
Crisfield	Somerset	0.838	37,754.15	4,897.84
ECI	Somerset	0.552	28,565.83	3,209.46
Leonardtown	St. Mary's	0.614	11,401.37	3,439.10
Marlay Taylor	St. Mary's	3.190	50,495.53	16,508.15
Easton	Talbot	2.295	108,286.25	13,832.69
Oxford	Talbot	0.107	4,885.78	625.38
Talbot Region II	Talbot	0.302	15,720.34	1,801.86
Boonsboro	Washington	0.275	13,645.18	1,657.51
Conococheague	Washington	1.991	37,576.98	10,909.45
Hagerstown	Washington	4.998	91,286.47	26,320.93
MCI	Washington	0.692	15,166.92	4,065.58
Winebrenner	Washington	0.141	6,695.80	772.59
Delmar	Wicomico	0.535	27,360.37	3,208.33
Fruitland	Wicomico	0.482	7,483.01	2,714.42
Salisbury	Wicomico	5.207	267,875.63	27,580.09
Pocomoke City	Worcester	0.639	12,838.19	3,715.29
Snow Hill	Worcester	0.378	15,303.91	1,864.09
		Total	10,957,677	1,149,461

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 $\leq$ 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 $\geq$ 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 August 7, 2024, the BPW approved $11 million (under FY25 authorization) for facilities that achieved ENR level of treatment during CY23. Also, additional grants were provided for facilities achieving better than ENR level of treatment.

MDE is requesting authorization for $11 million in FY26. The upgraded facilities will be receiving O&M grants based on the above rates if they continue to achieve ENR level of treatment in CY24.

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 the 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, with climate change allocation, are 45 million pounds of nitrogen per year and 3.68 million pounds of phosphorus per year by 2025. Currently, Maryland's nutrient loads entering Chesapeake Bay are 46.9 million pounds of nitrogen per year and 3.5 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 January 1, 2023, and operational for one full calendar year:

		Design Capacity (MGD)		
Facility	**County**	**Original**	**At Upgrade**	**Flow in CY23 (MGD)**
John J. Difonzo	Allegany	15	15	8.871
George's Creek	Allegany	0.6	0.6	0.756
North Branch	Allegany	2	2	1.26
Annapolis	Anne Arundel	13	13	8.177
Broadneck	Anne Arundel	6	6	3.890
Broadwater	Anne Arundel	2	2	0.959
Cox Creek	Anne Arundel	15	15	9.478
Maryland City	Anne Arundel	2.5	2.5	1.473
Patuxent	Anne Arundel	7.5	7.5	5.483
Back River	Baltimore City	180	180	120.583
Patapsco	Baltimore City	73	81	51.779
Chesapeake Beach	Calvert	1.32	1.5	0.774
Denton	Caroline	0.8	0.8	0.485
Federalsburg	Caroline	0.75	0.75	0.277
Greensboro	Caroline	0.28	0.332	0.167
Preston	Caroline	0.115	0.115	0.046
Freedom District	Carroll	3.5	3.5	1.965
Hampstead	Carroll	0.9	0.9	0.276
Mount Airy	Carroll	1.2	1.2	0.626
Taneytown	Carroll	1.1	1.1	0.714
Elkton	Cecil	2.7	3.05	1.716
Harbour View	Cecil	.065	.065	0.047
Northeast River	Cecil	2	2	1.166
Perryville	Cecil	1.65	2	0.66

		Design Capacity (MGD)		
Facility	**County**	**Original**	**At Upgrade**	**Flow in CY23 (MGD)**
Port Deposit	Cecil	0.15	0.15	0.076
Rising Sun	Cecil	0.275	0.5	0.217
Indian Head	Charles	0.5	0.5	0.433
La Plata	Charles	1.5	1.5	1.088
Cambridge	Dorchester	8.1	8.1	2.859
Hurlock	Dorchester	2	1.65	1.276
Ballenger Creek	Frederick	6	15	6.726
Brunswick	Frederick	0.7	1.4	0.426
Emmitsburg	Frederick	0.75	0.75	0.372
Frederick	Frederick	8	8	5.438
Thurmont	Frederick	1	1	0.489
Aberdeen	Harford	4	4	1.486
Havre De Grace	Harford	1.89	3.03	1.548
Joppatowne	Harford	0.95	0.95	0.753
Sod Run	Harford	20	20	9.818
Little Patuxent	Howard	25	29	17.27
Betterton	Kent	0.2	0.146	0.061
Chestertown	Kent	0.9	0.9	0.642
Galena	Kent	0.08	0.11	0.023
Damascus (WSSC)	Montgomery	1.5	1.5	0.76
Poolesville	Montgomery	0.75	0.75	0.479
Seneca (WSSC)	Montgomery	26	26	13.317
Blue Plains	Regional	169.6	169.6	124.265
Bowie	Princes George's	3.3	3.3	1.342
Parkway (WSSC)	Prince George’s	7.5	7.5	6.032
Piscataway (WSSC)	Prince George’s	30	30	20.973
Western Branch (WSSC)	Prince George’s	30	30	21.31
Kent Narrows	Queen Anne's	2	3	2.415
Queenstown	Queen Anne’s	0.085	0.2	0.074
Sudlersville	Queen Anne’s	0.20	0.2	0.072
Crisfield	Somerset	1	1	0.838
Leonardtown	St. Mary’s	0.68	0.68	0.614
Marlay Taylor	St. Mary’s	6	6	3.19
Easton	Talbot	2.35	4	2.295
Oxford	Talbot	0.15	0.15	0.107
Talbot Region II	Talbot	0.5	0.66	0.302
Boonsboro	Washington	0.46	0.53	0.275
Conococheague	Washington	4.1	4.5	1.991
Hagerstown	Washington	8	8	4.998
MCI	Washington	1.6	1.6	0.692

Facility	County	Design Capacity (MGD)		Flow in CY23 (MGD)
		Original	At Upgrade	
Winebrenner	Washington	1	0.6	0.141
Delmar	Wicomico	0.65	0.85	0.535
Fruitland	Wicomico	0.8	0.8	0.482
Salisbury	Wicomico	6.8	8.5	5.207
Pocomoke City	Worcester	1.47	1.47	0.639
Snow Hill	Worcester	0.5	0.5	0.378

2024 BRF Analysis Findings

Methodology

MDP 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.

MDP 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. MDP has successfully conducted a BRF analysis each year since 2009 by utilizing the most recently published data from Maryland Property View and MDP's Sewer Service Data layers. It should be noted that data for each of these datasets affects the annual findings. MDP 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,

[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.

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.

MDP's Findings

For this year's reporting period, MDP reviewed development served by 70 major and minor 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) ENR upgrades completed before January 1, 2023, and (2) have been operational for one calendar year. Three new ENR WTTP upgrades are included in this year's report Hampstead (Carroll County) which is one of the last major WWTPS in the state to achieve ENR and became operational on 4/7/22; and two minor WWTPs, Port Deposit (Cecil County) became operational on 10/14/22, and Preston (Caroline County) became operational on 10/23/22. 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 by counties 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 sewershed and how many improved parcels within the PFA had connections in the sewer shed within the last year.

MDP's analysis shows the Blue Plains WWTP has had the largest total increase of connections since conversion to ENR (which was completed in 2015), with an increase of 10,170 connections (see Column I in Table 1). Overall, the Baltimore region had the largest regional total increase of new connections since conversion of WWTPs to ENR with 33,288 connections. Statewide, there was an increase of 2,975 additional improved parcels within "S1" (existing sewer) connected during this year's reporting period. Overall, 69,150 improved parcels have been connected since WWTPs statewide have been upgraded to ENR.

Regarding connections to parcels within PFAs, MDP expresses concern about those WWTPs that have connected relatively few parcels within PFAs since being upgraded to ENR compared to the majority of WWTPs. These include the Western Branch WWTP in Prince George's County (only 83.4% of connected parcels within the PFA), Kent Island WWTP in Queen Anne's County (84.0%), Talbot Region II WWTP in Talbot County (69.1%), Broadwater WWTP in Anne Arundel County (82.9%), and Chesapeake Beach WWTP in Calvert County (81.2%). State funding for WWTP improvements is not as wisely spent when the funding supports lower density growth that consumes more farmland and forest land than higher density growth supported by PFAs. It should be noted that in some cases connected parcels outside of the PFA may qualify with the requirements of the PFA law, but the local government has not formally designated the area as a PFA.

State-funded ENR upgrades created the possibility for capacity expansion beyond the original design capacity at several WWTPs (Available Capacity table, Chapter 257 Implementation section). Some of those WWTPs that received that capacity expansion opportunity are serving a relatively low percentage of lots within Priority Funding Areas (PFAs). Although not currently required by law, MDP recommends that all lots receiving service from the new capacity obtained by those WWTPs be within PFAs, with the exception of existing homes previously served by septic systems that were connected to those WWTPs. According to MDP's State Data & Analysis Center, the population is projected to grow by 1 million between 2020 and 2050. Optimizing the use of Maryland's land is critical as we continue to grow in population and strive to minimize the loss of our remaining farmland and forest land. Land that qualifies as a PFA indicates that local planning and zoning support compact development and sustainable growth.

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. MDP evaluates many factors that play a part in source data and findings, and makes adjustments or corrections, where necessary. This year's report used May 2024 Statewide Points and Polygons MDProperty View data available on the MDP 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 has reformed 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 requires 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 MDE's Onsite Disposal Systems website.

The webpage below (under financial Reports) shows BRF funded BAT installations and sewer connections for FY24. During this FY, 720 BAT installations were completed, and 173 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 FY24, MDA continued to implement a targeting strategy to maximize nutrient reduction effectiveness of cover crops. The 2024 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, 2024.

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 continued to offer 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 $169,628,316 as of June 30, 2024. In FY24, $14.1 million from BRF was supplemented by an additional $11.1 million from the Trust Fund to fund the Cover Crops Program.

Similar to last year, planting extensions were not given due to weather. Rather, MDA allowed farmers to plant cover crops between November 6 and November 15 at a reduced ($45/acre) payment rate. However, farmers were not eligible for incentives and those acres must have been planted using one of the approved incorporated planting methods and were limited to certain cover crop species.

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. 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 Connect-ions 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%	1,849	1,832	99.1%	48	16	16
Boonsboro	WASH	Oct-09	2008	1,350	1,139	1,137	99.8%	1,174	1,172	99.8%	35	1	1
George's Creek	ALLE	Nov-10	2009	2,069	1,938	1,876	96.8%	2,009	1,949	97.0%	71	1	1
City of Cumberland	ALLE	Feb-11	2010	17,656	16,412	16,243	99.0%	16,842	16,686	99.1%	430	89	88
City of Hagerstown	WASH	Dec-10	2009	21,975	18,825	17,769	94.4%	20,890	20,614	98.7%	2,065	92	92
Winebrenner	FRED/ WASH	Feb-17	2016	455	455	446	98.0%	456	447	98.0%	1	-9	-9
Conococheague	WASH	Mar-18	2017	6,550	5,980	5,980	100.0%	6,410	6,410	100.0%	430	106	106
Western Region Total				**51,968**	**46,550**	**45,245**	**97%**	**49,630**	**49,110**	**99.0%**	**3,080**	**296**	**295**
Washington Region													
City of Brunswick	FRED	Sep-08	2007	2,446	1,957	1,957	100.0%	2,288	2,288	100.0%	331	-2	-2
Town of Thurmont	FRED	Apr-13	2012	2,385	2,345	2,204	94.0%	2,397	2,270	94.7%	52	-2	14

			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 Connect-ions 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 Poolesville	MONT	Jul-10	2009	1,742	1,719	1,651	96.0%	2,029	1,958	96.5%	310	-15	-17
Damascus	MONT	Feb-13	2012	3,997	3,793	3,437	90.6%	3,823	3,462	90.6%	30	-80	-78
City of Bowie	PRIN	Feb-11	2010	20,712	20,559	20,269	98.6%	20,895	20,659	98.9%	336	44	43
Parkway	PRIN	Jul-13	2012	15,470	15,394	15,383	99.9%	15,959	15,876	99.5%	565	56	57
Piscataway	PRIN	May-13	2012	56,296	55,007	51,954	94.4%	58,881	53,907	91.6%	3,874	130	91
Western Branch (WSSC)	PRIN	Apr-16	2015	45,533	43,438	38,554	88.8%	48,412	40,382	83.4%	4,974	117	5
Blue Plains	PRIN/MONT	Apr-16	2015	330,121	327,437	319,529	97.6%	337,607	328,784	97.4%	10,170	153	372
Seneca (WSSC)	MONT	Apr-16	2015	60,161	57,387	56,911	99.2%	61,288	60,625	98.9%	3,901	118	119
Ballenger Creek	FRED	Apr-16	2015	21,554	17,110	17,105	100.0%	17,572	17,567	100.0%	462	7	518
Town of Emmitsburg	FRED	Mar-16	2015	927	824	791	96.0%	864	831	96.2%	40	2	2
Frederick	FRED	Jun-18	2017	24,627	22,666	22,666	100.0%	23,072	23,072	100.0%	406	16	18
Washington Region Total				**585,971**	**569,636**	**552,411**	**97%**	**595,087**	**571,681**	**96.1%**	**25,451**	**544**	**1,142**

			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 Connect-ions 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
Upper Eastern Shore Region													
Town of Elkton	CECI	Dec-09	2008	6,000	4,926	4,925	100%	5,171	5,168	99.9%	245	1	1
Town of Perryville	CECI	Dec-10	2009	1,704	1,508	1,508	100%	1,569	1,568	99.9%	61	4	4
Rising Sun	CECI	Apr-16	2015	1,052	856	846	98.8%	869	862	99.2%	13	0	0
Town of Chestertown	KENT	Jun-08	2007	1,772	1,742	1,562	89.7%	1,952	1,739	89.1%	210	-25	-10
Kent Island (KNSG)	QUEE	Aug-07	2006	6,590	6,401	5,974	93.3%	8,527	7,163	84.0%	2,126	157	110
Town of Denton	CARO	May-12	2011	1,508	1,097	1,095	99.8%	1,597	1,590	99.6%	500	7	7
Town of Federalsburg	CARO	Aug-10	2009	881	827	817	98.8%	863	853	98.8%	36	34	34
Town of Easton	TALB	Jun-07	2006	5,810	5,831	5,822	99.8%	6,197	6,140	99.1%	366	-526	-526
Talbot Region II	TALB	Oct-08	2007	2,289	2,214	1,981	89.5%	3,161	2,183	69.1%	947	-35	-31
Centreville	QUEE	Jul-13	2012	1,643	1,641	1,310	79.8%	1,836	1,836	100.0%	195	2	2
Northeast River	CECI	Oct-16	2015	5,714	4,459	3,931	88.2%	4,873	4,786	98.2%	414	72	71

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Town of Queenstown	QUEE	Oct-16	2015	333	300	299	99.7%	334	334	100.0%	34	0	0
Greensboro	CARO	Jun-17	2016	727	687	687	100%	834	805	96.5%	147	18	8
Sudlersville	QUEE	Mar-18	2017	187	186	186	100%	189	189	100.0%	3	0	0
Galena	KENT	Dec-18	2017	374	296	274	92.6%	308	275	89.3%	12	-36	-37
Oxford WWTP	TALB	Mar-21	2020	581	579	579	100%	576	576	100.0%	-3	-3	-3
Betterton	KENT	Mar-21	2020	258	258	256	99.2%	266	253	95.1%	8	-3	-3
Preston (new)	CARO	Oct-22	2021	383	321	311	96.9%	375	366	97.6%	54	N/A	N/A
Port Deposit (new)	CECI	Oct-22	2021	579	321	321	100.0%	331	331	100.0%	10	N/A	N/A
Upper Eastern Shore Total				**38,385**	**34,450**	**32,684**	**95%**	**39,122**	**36,320**	**93%**	**4,672**	**-333**	**-373**
Lower Eastern Shore Region													
City of Cambridge	DORC	Dec-13	2012	5,861	5,418	5,293	97.7%	5,591	5,572	99.7%	173	61	61
Town of Hurlock	DORC	May-06	2005	769	703	703	100%	805	803	99.8%	102	-4	-4

			Connections Before ENR Funding					Total Connections Upgraded since Conversion to ENR				Upgraded Connections Since Last Reporting Period	
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Town of Delmar	WICO	Sep-11	2010	1,107	932	824	88.4%	1,073	955	89.0%	141	27	28
City of Pocomoke	WORC	Oct-11	2010	1,893	1,607	1,585	98.6%	1,650	1,630	98.8%	43	-3	-3
City of Crisfield	SOME	Aug-10	2009	2,495	2,044	1,735	84.9%	2,087	1,978	94.8%	43	1	0
Town of Snow Hill	WORC	Jun-14	2013	900	930	882	94.8%	976	933	95.6%	46	0	0
City of Fruitland	WICO	Nov-16	2015	2,237	1,847	1,788	96.8%	2,083	1,934	92.8%	236	17	2
Salisbury	WICO	Jan-18	2017	10,794	10,705	10,500	98.1%	11,144	10,933	98.1%	439	81	79
Lower Eastern Shore Total				**26,056**	**24,186**	**23,310**	**96%**	**25,409**	**24,738**	**97.4%**	**1,223**	**180**	**163**
Baltimore Region													
Town of Mount Airy	CARR/FRED	Nov-10	2009	3,336	3,145	3,145	100%	3,428	3,426	99.9%	283	-5	-5
Joppatowne/Sod Run	HARF	Nov-13	2012	51,174	48,459	48,195	99.5%	52,396	52,023	99.3%	3,937	40	46
City of Havre De Grace	HARF	May-10	2009	5,098	4,898	4,782	97.6%	5,865	5,862	99.9%	967	4	4

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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 Connect-ions 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
Little Patuxent	HOWA	Sep-12	2011	56,997	50,848	50,833	100%	59,404	59,330	99.9%	8,556	47	46
City of Aberdeen	HARF	Mar-15	2014	5,098	4,524	4,443	98.2%	4,960	4,879	98.4%	436	7	7
Broadneck	ANNE	May-15	2014	30,847	21,172	20,454	96.6%	22,959	21,916	95.5%	1,787	-43	-41
Maryland City	ANNE	Mar-15	2014	4,522	4,394	4,376	99.6%	4,827	4,802	99.5%	433	-131	-131
Patuxent	ANNE	Mar-15	2014	24,037	22,886	22,440	98.1%	28,370	27,626	97.4%	5,484	-273	-274
City of Annapolis	ANNE	Apr-16	2015	31,823	28,384	27,466	96.8%	29,216	28,334	97.0%	832	0	0
Broadwater	ANNE	Apr-16	2015	4,919	4,694	3,902	83.1%	4,799	3,980	82.9%	105	38	36
City of Taneytown	CARR	Jul-16	2015	2,647	2,486	2,485	100%	2,656	2,653	99.9%	170	2	2
Back River	BACI/BACO	Sep-17	2016	313,624	311,468	309,249	99%	319,949	317,812	99.3%	8,481	2,191	2,181
Mayo	ANNE	Oct-17	2016	3,410	3,316	3,066	92%	3,446	3,142	91.2%	130	6	4
Cox Creek	ANNE	Jan-18	2017	48,105	42,688	41,792	98%	45,303	44,184	97.5%	2,615	-28	-30

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Freedom District	CARR	Mar-18	2017	8,535	7,336	7,336	100%	7,595	7,575	99.7%	259	21	21
Patapsco	BACI/BACO	Jan-20	2019	152,850	148,409	147,691	100%	149,549	148,685	99.4%	1,140	915	791
Hampstead (new)	CARR	Apr-2022	2021	2,585	2,525	2,143	85%	2,529	2,519	99.6%	4	N/A	N/A
Baltimore Region Total				**749,607**	**711,632**	**703,798**	**99%**	**744,920**	**736,449**	**98.9%**	**33,288**	**2,053**	**2,065**
Southern Maryland Region													
Town of Indian Head	CHAR	Jan-09	2008	1,409	1,317	1,317	100%	1,561	1,561	100.0%	244	40	40
Town of La Plata	CHAR	Dec-14	2013	3,164	3,213	3,132	97.5%	3,837	3,836	100.0%	624	6	6
Marlay Taylor	STMA	Aug-16	2015	12,420	7,996	7,984	99.8%	8,524	8,512	99.9%	528	185	185
Chesapeake Beach	CALV	Nov-17	2016	4,041	3,320	2,694	81.1%	3,348	2,718	81.2%	28	6	5
Leonardtown	STMA	Aug-17	2016	1,640	1,089	936	86.0%	1,101	947	86.0%	11	-2	-2
Southern Maryland Total				**22,674**	**16,935**	**16,063**	**95%**	**18,371**	**17,574**	**95.7%**	**1,436**	**235**	**234**
Statewide													

			Connections Before ENR Funding					Total Connections Upgraded since Conversion to ENR				Upgraded Connections Since Last Reporting Period	
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New Facilities Upgraded During Reporting Period			N/A	3,547	3,167	2,775	88.0%	3,235	3,213	99.4%	68	N/A	N/A
Statewide Totals				**1,474,661**	**1,430,389**	**1,373,511**	**98%**	**1,472,539**	**1,435,872**	**97.5%**	**69,150**	**2,975**	**3,526**

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. MDP has worked diligently to resolve this issue.