



Bay Restoration Fund Advisory Committee

Christopher P. Murphy, Chairman

Annual Status 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**

EXECUTIVE SUMMARY

- 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 wastewater treatment plants (WWTP) 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.

Maryland Department of Planning (MDP)

MDP is a statutory member of the Bay Restoration Fund Advisory Committee (BRFAC). Chapter 80 of the Acts of 2014 allows for the use of Bay Restoration Fund (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. MDP 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. HB 893 enacted in 2007, added an additional BRF reporting responsibility, which is discussed later in this report.

State Clearinghouse Review:

All state and federal financial assistance applications, including those for BRF funds, are required to be submitted for review through 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 their water and sewer planning document, when requested by the local government.

MDP 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 State 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.

2023 BRF Analysis Findings

Methodology

MDP conducts a BRF analysis for each calendar year as directed by Chapter 257 (HB 893) of 2007 - *Bay Restoration Fund - Wastewater Treatment Facilities Upgrades - Reporting Requirements*. The purpose is to provide the BRAC and legislature with information on the impact that enhanced nutrient reduction (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 (GIS) 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 GIS map 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 *MdProperty View* and MDP's sewer service data layers. It should be noted that data for each of these datasets affects the annual findings.

In 2018, MDP updated the BRF analysis methodology to confirm data boundary discrepancies within the existing sewer service areas both before and after ENR technology implementation, resulting in improved data outputs. 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 Bay¹ heavily influence whether that possibility can become reality, notwithstanding new treatment technologies or the use of multiple discharge means or wastewater reuse. As required by state regulations that guide county water and sewer plans, to date, all ENR upgrades and plant expansions have been found to be consistent with locally adopted and approved comprehensive plans. Our analyses show that the nutrient discharge caps following the ENR upgrades have not had any noted compromising effects on development.

MDP's Findings

For this year's reporting period (calendar year 2022), MDP reviewed development served by 67 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, 2022, and (2) have

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.

been operational for one calendar year. Two new ENR WWTP upgrades are included in this year's report: Betterton (Kent County) became operational on March 23, 2021, and Oxford (Talbot County) became operational on March 1, 2021. This report also now includes the Boonsboro and Centreville WWTPs, which had inadvertently been left out previously. Boonsboro became operational in October 2009 and Centreville became operational in July 2013. 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 calendar year 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 there is ENR funding and the current number of connections, which includes connections to new development on sewer as well as connections of existing septic systems to sewer, is summarized by WWTP. Existing sewer service area boundaries are depicted as "S1" in Table 1 and are typically defined as areas where a sewer system is existing, the system is under construction, or an area is in the final planning stages and service is intended within two years.

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

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

MDP's analysis shows the Mattawoman WWTP has had the largest total increase of connections since conversion to ENR (which was completed in 2007), with an increase of 10,270 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 33,760 connections. Statewide, there was an increase of 35,373 additional improved parcels within "S1" (existing sewer) connected during this year's reporting period. Overall, 80,449 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 83.6% of connected parcels within the PFA), Kent Island WWTP in Queen Anne's County (84.3%), Talbot Region II WWTP in Talbot County (69.3%), Broadwater WWTP in Anne Arundel County (82.8%), Mattawoman WWTP in Charles County (83.8%), 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.

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 2023 Statewide Points and Polygons *MdProperty View* data available on the open data downloads site.

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Table 1: Connections to Wastewater Treatment Facilities Upgraded to ENR

			Connections Before ENR Funding					Total Connections Upgraded since Conversion to ENR				Upgraded Connections Since Last Reporting Period	
ENR WWTP	County	ENR Upgrade Completed and Operational (Month-Year)	Column A: Reporting Year before ENR Funding	Column B: Number of Improved Parcels in the Sewer-shed	Column C: Number of Improved Parcels in Existing Service Area ("S1")	Column D: Number of Improved Parcels in "S1" within PFA	Column E: % of Connections Located in "S1" & PFA (Column D ÷ C)	Column F: Total Improved Parcels in S1	Column G: Total Improved Parcels in S1 & PFA	Column H: % Total Improved Parcels Located in "S1" within PFA (Column G ÷ F)	Column I: Total Increase Improved Parcels in S1 (Total Number New Connections)	Column J: Difference in Improved Parcels in S1	Column K: Difference in Improved Parcels in S1 & PFA
Western Region													
North Branch	ALLE	Nov-06	2005	1,913	1,801	1,794	99.6%	1,833	1,816	99.1%	32	-2	-2
Boonsboro	WASH	Oct-09	2008	1,350	1,139	1,137	99.8%	1,173	1,171	99.8%	34	3	1
George's Creek	ALLE	Nov-10	2009	2,069	1,938	1,876	96.8%	2,008	1,948	97.0%	70	28	27
City of Cumberland	ALLE	Feb-11	2010	17,656	16,412	16,243	99.0%	16,753	16,598	99.1%	341	13	12
City of Hagerstown	WASH	Dec-10	2009	21,975	18,825	17,769	94.4%	20,798	20,522	98.7%	1,973	262	262
Winebrenner	FRED/ WASH	Feb-17	2016	455	455	446	98.0%	465	456	98.1%	10	2	2
Conococheague	WASH	Mar-18	2017	6,550	5,980	5,980	100.0%	6,304	6,304	100.0%	324	117	117
Western Region Total				51,968	46,550	45,245	97%	49,334	48,815	98.9%	2,784	1,593	1,589

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Washington Region													
City of Brunswick	FRED	Sep-08	2007	2,446	1,957	1,957	100.0%	2,290	2,290	100.0%	333	4	4
Town of Thurmont	FRED	Apr-13	2012	2,385	2,345	2,204	94.0%	2,399	2,256	94.0%	54	0	-16
Town of Poolesville	MONT	Jul-10	2009	1,742	1,719	1,651	96.0%	2,044	1,975	96.6%	325	242	244
Damascus	MONT	Feb-13	2012	3,997	3,793	3,437	90.6%	3,903	3,540	90.7%	110	99	96
City of Bowie	PRIN	Feb-11	2010	20,712	20,559	20,269	98.6%	20,851	20,616	98.9%	292	68	69
Parkway	PRIN	Jul-13	2012	15,470	15,394	15,383	99.9%	15,903	15,819	99.5%	509	60	105
Piscataway	PRIN	May-13	2012	56,296	55,007	51,954	94.4%	58,751	53,816	91.6%	3,744	235	153
Western Branch (WSSC)	PRIN	Apr-16	2015	45,533	43,438	38,554	88.8%	48,295	40,377	83.6%	4,857	136	6
Blue Plains	PRIN/MONT	Apr-16	2015	330,121	327,437	319,529	97.6%	337,454	328,412	97.3%	10,017	3,178	2,418
Seneca (WSSC)	MONT	Apr-16	2015	60,161	57,387	56,911	99.2%	61,170	60,506	98.9%	3,783	3,083	2,897
Ballenger Creek	FRED	Apr-16	2015	21,554	17,110	17,105	100.0%	17,565	17,049	97.1%	455	20	-491

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Town of Emmitsburg	FRED	Mar-16	2015	927	824	791	96.0%	862	829	96.2%	38	22	22
Frederick	FRED	Jun-18	2017	24,627	22,666	22,666	100.0%	23,056	23,054	100.0%	390	147	145
Washington Region Total				585,971	569,636	552,411	97%	594,543	570,539	96.0%	24,907	7,294	5,652

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Upper Eastern Shore Region													
Town of Elkton	CECI	Dec-09	2008	6,000	4,926	4,925	100%	5,170	5,167	99.9%	244	5	5
Town of Perryville	CECI	Dec-10	2009	1,704	1,508	1,508	100%	1,565	1,564	99.9%	57	0	0
Rising Sun	CECI	Apr-16	2015	1,052	856	846	98.8%	869	862	99.2%	13	3	3
Town of Chestertown	KENT	Jun-08	2007	1,772	1,742	1,562	89.7%	1,977	1,749	88.5%	235	48	25
Kent Island (KNSG)	QUEE	Aug-07	2006	6,590	6,401	5,974	93.3%	8,370	7,053	84.3%	1,969	988	64
Town of Denton	CARO	May-12	2011	1,508	1,097	1,095	99.8%	1,590	1,583	99.6%	493	5	5
Town of Federalsburg	CARO	Aug-10	2009	881	827	817	98.8%	829	819	98.8%	2	0	1
Town of Easton	TALB	Jun-07	2006	5,810	5,831	5,822	99.8%	6,723	6,666	99.2%	892	15	15
Talbot Region II	TALB	Oct-08	2007	2,289	2,214	1,981	89.5%	3,196	2,214	69.3%	982	11	11
Centreville	QUEE	Jul-13	2012	1,643	1,641	1,310	79.8%	1,834	1,834	100.0%	193	2	2
Northeast River	CECI	Oct-16	2015	5,714	4,459	3,931	88.2%	4,801	4,715	98.2%	342	6	6

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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	June-17	2016	727	687	687	100%	816	797	97.7%	129	125	106
Sudlersville	QUEE	Mar-18	2017	187	186	186	100%	189	189	100.0%	3	3	3
Galena	KENT	Dec-18	2017	374	296	274	92.6%	344	312	90.7%	48	48	38
Oxford WWTP (new)	TALB	Mar-21	2020	581	579	579	100%	579	579	100%	0	N/A	N/A
Betterton (new)	KENT	Mar-21	2020	258	258	256	99.2%	269	256	95.2%	11	N/A	N/A
New Facilities Upgraded During Reporting Period				839	837	835	99.8%	848	835	98.5%	11	N/A	N/A
Upper Eastern Shore Total				36,584	32,971	32,052	97%	39,455	36,693	93%	6,484	3,939	2,951
Lower Eastern Shore Region													
City of Cambridge	DORC	Dec-13	2012	5,861	5,418	5,293	97.7%	5,530	5,511	99.7%	112	109	109
Town of Hurlock	DORC	May-06	2005	769	703	703	100%	809	807	99.8%	106	2	2
Town of Delmar	WICO	Sep-11	2010	1,107	932	824	88.4%	1,046	927	88.6%	114	22	21
City of Pocomoke	WORC	Oct-11	2010	1,893	1,607	1,585	98.6%	1,653	1,633	98.8%	46	20	26

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City of Crisfield	SOME	Aug-10	2009	2,495	2,044	1,735	84.9%	2,086	1,978	94.8%	42	33	168
Town of Snow Hill	WORC	Jun-14	2013	900	930	882	94.8%	976	933	95.6%	46	21	20
City of Fruitland	WICO	Nov-16	2015	2,237	1,847	1,788	96.8%	2,066	1,932	93.5%	219	23	3
Salisbury	WICO	Jan-18	2017	10,794	10,705	10,500	98.1%	11,063	10,854	98.1%	358	27	27
Lower Eastern Shore Total				26,056	24,186	23,310	96%	25,229	24,575	97.4%	1,043	255	374
Baltimore Region													
Town of Mount Airy	CARR/FRED	Nov-10	2009	3,336	3,145	3,145	100%	3,433	3,431	99.9%	288	-6	-6
Joppatowne/Sod Run	HARF	Nov-13	2012	51,174	48,459	48,195	99.5%	52,356	51,977	99.3%	3,897	3,103	2,990
City of Havre De Grace	HARF	May-10	2009	5,098	4,898	4,782	97.6%	5,861	5,858	99.9%	963	179	179
Little Patuxent	HOWA	Sep-12	2011	56,997	50,848	50,833	100%	59,357	59,284	99.9%	8,509	101	101
City of Aberdeen	HARF	Mar-15	2014	5,098	4,524	4,443	98.2%	4,953	4,872	98.4%	429	402	402
Broadneck	ANNE	May-15	2014	30,847	21,172	20,454	96.6%	23,002	21,957	95.5%	1,830	1,135	891

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Maryland City	ANNE	Mar-15	2014	4,522	4,394	4,376	99.6%	4,958	4,933	99.5%	564	394	394
Patuxent	ANNE	Mar-15	2014	24,037	22,886	22,440	98.1%	28,643	27,900	97.4%	5,757	4,728	4,371
City of Annapolis	ANNE	Apr-16	2015	31,823	28,384	27,466	96.8%	29,216	28,334	97.0%	832	370	412
Broadwater	ANNE	Apr-16	2015	4,919	4,694	3,902	83.1%	4,761	3,944	82.8%	67	16	4
City of Taneytown	CARR	Jul-16	2015	2,647	2,486	2,485	100%	2,654	2,651	99.9%	168	154	152
Back River	BACI/BACO	Sep-17	2016	313,624	311,468	309,249	99%	317,758	315,631	99.3%	6,290	4,864	4,702
Mayo	ANNE	Oct-17	2016	3,410	3,316	3,066	92%	3,440	3,138	91.2%	124	53	8
Cox Creek	ANNE	Jan-18	2017	48,105	42,688	41,792	98%	45,331	44,214	97.5%	2,643	2,340	2,187
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
Baltimore Region Total				747,022	709,107	701,655	99%	742,867	734,384	98.9%	33,760	17,854	16,808

			Connections Before ENR Funding					Total Connections Upgraded since Conversion to ENR				Upgraded Connections Since Last Reporting Period	
ENR WWTP	County	ENR Upgrade Completed and Operational (Month-Year)	Column A: Reporting Year before ENR Funding	Column B: Number of Improved Parcels in the Sewer-shed	Column C: Number of Improved Parcels in Existing Service Area ("S1")	Column D: Number of Improved Parcels in "S1" within PFA	Column E: % of Connections Located in "S1" & PFA (Column D ÷ C)	Column F: Total Improved Parcels in S1	Column G: Total Improved Parcels in S1 & PFA	Column H: % Total Improved Parcels Located in "S1" within PFA (Column G ÷ F)	Column I: Total Increase Improved Parcels in S1 (Total Number New Connections)	Column J: Difference in Improved Parcels in S1	Column K: Difference in Improved Parcels in S1 & PFA
Southern Maryland Region													
Mattawoman	CHAR/PRIN	Nov-07	2006	29,453	27,029	23,576	87.2%	37,299	31,250	83.8%	10,270	4,339	3,769
Town of Indian Head	CHAR	Jan-09	2008	1,409	1,317	1,317	100%	1,521	1,521	100.0%	204	42	42
Town of La Plata	CHAR	Dec-14	2013	3,164	3,213	3,132	97.5%	3,831	3,830	100.0%	618	56	71
Marlay Taylor	STMA	Aug-16	2015	12,420	7,996	7,984	99.8%	8,339	8,327	99.9%	343	3	3
Chesapeake Beach	CALV	Nov-17	2016	4,041	3,320	2,694	81.1%	3,342	2,713	81.2%	22	-3	-1
Leonardtown	STMA	Aug-17	2016	1,640	1,089	936	86.0%	1,103	949	86.0%	14	1	1
Southern Maryland Total				52,127	43,964	39,639	90%	55,435	48,590	87.7%	11,471	4,438	3,885
Statewide													
New Facilities Upgraded During Reporting Period			N/A	839	837	835	99.8%	848	835	98.5%	11	N/A	N/A
Statewide Totals				1,499,728	1,426,414	1,394,312	98%	1,506,863	1,463,596	97.1%	80,449	35,373	31,259

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.