Prince George's County

Countywide TMDL Stormwater Implementation Plan

Fiscal Year 2025 Annual Progress Report

NPDES Permit No: 20-DP-3314 MD0068284
Part IV.F.3.[a, b, c, d]

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Credit: Clean Water Partnership

Patuxent River Shoreline Restoration

Prepared by
Stormwater Management Division
Department of the Environment
Prince George's County, MD
1801 McCormick Drive. Suite 500
Largo, MD 20774

Prince George's County
DEPARTMENT OF THE ENVIRONMENT

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List of Key Terms and Acronyms

BAT	best available technology
BSID	biological stressor identification
BMP	best management practice
BOD	biological oxygen demand
CIP	Capital Improvement Program
CWP	Clean Water Partnership
DoE	[Prince George's County] Department of the Environment
DPIE	[Prince George's County] Department of Permitting, Inspections and Enforcement
DPW&T	[Prince George's County] Department of Public Works and Transportation
EIA	equivalent impervious acres
EFC	Environmental Finance Center
EPA	[U.S.] Environmental Protection Agency
ESD	environmental site design
FAP	Financial Assurance Plan
FY	fiscal year
HOA	homeowner's association
IDDE	illicit discharge detection and elimination
lb	pound
LBC	Lower Beaverdam Creek
MDE	Maryland Department of the Environment
MS4	municipal separate storm sewer system
MST	microbial source tracking
MWCOG	Metropolitan Washington Council of Governments
NRCR	Natural Resource & Climate Resilience Programs
NPDES	National Pollutant Discharge Elimination System
O&M	operation and maintenance
PAXMH	Patuxent River Mesohaline
PAXOH	Patuxent River Oligohaline
PAXTF	Patuxent River Tidal Fresh
PCB	polychlorinated biphenyl
PGCPS	Prince George's County Public Schools
QAPP	Quality Assurance Project Plan
SAP	Sampling and Analysis Plan
SR3	Sewer Repair, Replacement and Rehabilitation
SSO	sanitary sewer overflow
SD	[Prince George's County] Sustainability Division
SW-WLA	stormwater wasteload allocation
SWM	stormwater management
TBD	to be determined

TMDL	total maximum daily load
TIPP	TMDL Implementation Progress and Planning (TIPP Tool)
TN	total nitrogen
TP	total phosphorus
TSS	total suspended solids
WIP	Watershed Implementation Plan
WLA	wasteload allocation
WS	watershed
WSSC	Washington Suburban Sanitary Commission

1 Introduction

On December 2, 2022, the Maryland Department of the Environment (MDE) issued Prince George's County (the County) its fifth-generation permit (Permit Number: 20-DP-3314 MD0068284) for its National Pollutant Discharge Elimination System (NPDES) municipal separate storm sewer system (MS4), which is a series of stormwater sewers owned by a municipal entity (e.g., the County) that discharges the conveyed stormwater runoff into a waterbody (e.g., Piscataway Creek). The permit covers the period of December 2, 2022, through December 1, 2027. The MS4 permits are generally issued in five year cycles enabling regulators and permit holders to adjust permit objectives and expectations.

The County's 2022 MS4 permit requires that the County develop local restoration plans to address each U.S. Environmental Protection Agency (EPA)-approved total maximum daily load (TMDL) with a stormwater wasteload allocation (SW-WLA). The SW-WLA is the portion of the TMDL that is allocated to permitted dischargers such as wastewater treatment plants or MS4s. The MS4 permit stipulates that the County must develop additional restoration plans within one (1) year of the EPA approval of a new TMDL.

Local TMDL restoration plans were previously developed in 2014 for the County portions of the watersheds associated with the Anacostia River (nutrients, fecal coliform, sediment, polychlorinated biphenyls [PCBs], and trash); Mattawoman Creek (nutrients); Piscataway Creek (fecal coliform bacteria); the Upper Patuxent River and Rocky Gorge Reservoir (phosphorus, sediment, and fecal coliform bacteria); and PCB-impacted water bodies (Anacostia River, Mattawoman Creek, Piscataway Creek, and Potomac River). Additional plans were developed in 2019 for the Prince George's County portions of the Middle and Lower Patuxent River (sediment in nontidal streams) and the Patuxent River tidal segments (PCBs).

In 2024, the County updated its TMDL restoration plans (now referred to by MDE as watershed implementation plan [WIP]) to follow the 2022 MDE guidance documents. These plans were approved by MDE on May 12, 2025. Along with the 2022 MS4 permit, MDE released multiple guidance on addressing TMDLs.

- *Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated: Guidance for National Pollutant Discharge Elimination System Stormwater Permits* (November 2021)
- *General Guidance for Local TMDL (Total Maximum Daily Load) Stormwater Wasteload Allocation (SW-WLA) Watershed Implementation Plans (WIPs)* (February 2022)
- *Guidance for Developing Local Nutrient and Sediment TMDL (Total Maximum Daily Load) Stormwater Wasteload Allocation (SW-WLA) Watershed Implementation Plans (WIPs)* (March 2022)
- *Guidance for Developing Bacteria TMDL (Total Maximum Daily Load) Stormwater Wasteload Allocation (SW-WLA) Watershed Implementation Plans (WIPs)* (February 2022)
- *Guidance for Developing Local PCB TMDL (Total Maximum Daily Load) Stormwater Wasteload Allocation (SW-WLA) Watershed Implementation Plans (WIPs)* (August 2022)
- *TMDL Implementation Progress and Planning (TIPP) Tool* (Original version: June 2021, Most recent version: April 2022)

From these guidance documents, the County is using official MDE land use/cover data, land use loading rate data, and best management practice (BMP) efficiencies for reporting in this countywide stormwater TMDL implementation plan and its individual watershed WIPs. To comply with its permit (Section 1.1), the County restoration program goal is to treat untreated impervious area (Part IV.E of the permit), with the secondary benefit and goal of load reductions.

1.1 Permit Requirements

As previously stated, the County received its 5th generation permit in December 2022. As with the prior MS4 permit, this permit focuses on treating untreated impervious surfaces. The permit requires restoration to be reported as equivalent impervious acres (EIAs). This is how the County must measure restoration progress based on our MS4 permit. The County measures and reports calculated nutrient and sediment load reductions using MDE's TIPP tool methodology, as per MDE's *Guidance for Developing Local Nutrient and Sediment TMDL (Total Maximum Daily Load) Stormwater Wasteload Allocation (SW-WLA) Watershed Implementation Plans (WIPs)* in this document and our annual NPDES MS4 report and geodatabase. Progress towards TMDLs other than nutrients and sediment are tracked and reported by other means, as described in their respective sections of this document.

There are two sections of the permit that relate to this document: Part IV.E on stormwater restoration and Part IV.F on the Countywide TMDL Stormwater Implementation Plan. The text from each Part is provided below. The County's permit can be viewed on MDE's website at https://mde.maryland.gov/programs/water/StormwaterManagementProgram/pages/storm_gen_permit.aspx.

1.1.1 Part IV.E – Stormwater Restoration

In compliance with §402(p)(3)(B)(iii) of the CWA, MS4 permits must require stormwater controls to reduce the discharge of pollutants to the MEP and such other provisions as the Department determines appropriate for the control of such pollutants. Additionally, by regulation at 40 CFR §122.44, BMPs and programs implemented pursuant to this permit must be consistent with applicable stormwater WLAs developed under EPA established or approved TMDLs (see list of EPA established or approved TMDLs attached and incorporated as Appendix A). The impervious acre restoration requirements and associated pollutant reductions described below for Prince George's County are consistent with Maryland's Phase III Watershed Implementation Plan (WIP) for the Chesapeake Bay TMDL and 2025 nutrient load targets, and for local TMDL implementation targets described by the County in its MS4 Restoration and TMDL Watershed Implementation Plan.

1. *Annual alternative control practices used by Prince George's County to meet its prior MS4 permit's impervious acre restoration requirement including the conditions of the Consent Decree issued by the Department (Case No. CAC21- 05834, signed on December 1, 2021, hereinafter the "Consent Decree") shall be:*
    a. *Continued annually at the same level of implementation (e.g., street lane miles swept, catch basin cleaning) under this permit;*
    b. *Replaced with 309 impervious acres using stormwater management BMPs, programmatic initiatives, or alternative control practices in accordance with the 2021 Accounting Guidance; or*

c. A combination of a and b above.

2. *The impervious acre restoration requirements described below are in addition to the requirements listed in PART IV.E.1 of this permit.*
3. *By December 1, 2027, Prince George's County shall commence and complete the restoration of 2,137 impervious acres that have not been treated to the MEP by implementing stormwater BMPs, programmatic initiatives, or alternative control practices in accordance with the 2021 Accounting Guidance.*
4. *By December 1, 2023, Prince George's County shall complete the stormwater BMPs, programmatic initiatives, or alternative control practices listed in the Year 1 BMP Portfolio provided in Appendix B. Prince George's County may replace individual practices listed in Appendix B with others that meet the requirements of the 2021 Accounting Guidance as long as the total restoration at the end of year one meets the implementation benchmark schedule in Table 1.*

   "Benchmark" as used in this permit is a quantifiable goal or target to be used to assess progress toward the impervious acre restoration requirement or WLAs, such as a numeric goal for stormwater control measure implementation. If a benchmark is not met, the County should take appropriate corrective action to improve progress toward meeting permit objectives. Benchmarks are intended as an adaptive management aid and generally are not considered to be enforceable.
5. *Prince George's County may acquire Nutrient Credits for Total Nitrogen (TN), Total Phosphorus (TP), and Total Suspended Solids (TSS) in accordance with COMAR 26.08.11 to meet its impervious acre restoration requirement in PART IV.E.3 of this permit. For acquiring Nutrient Credits in place of impervious acre restoration, an equivalent impervious acre shall be based on reducing 18.08 pounds of TN, 2.23 pounds of TP, and 8,046 pounds of TSS. The maximum allowable credits obtained from trades with wastewater treatment plants shall not exceed 1,440 equivalent impervious acres restored.*
6. *Any Nutrient Credits acquired by Prince George's County for meeting the restoration requirements of this permit shall be maintained and verified in accordance with COMAR 26.08.11 and reported to the Department in annual reports unless they are replaced at a one to one acre ratio by local stormwater management BMPs, programmatic initiatives, or alternative control practices in accordance with the 2021 Accounting Guidance.*
7. *Prince George's County shall use the annual restoration benchmark schedule provided in Table 1 below to achieve its impervious acre implementation requirement by the end of the permit term.*

Annual Restoration Benchmark Schedule, Table 1

Metric	*Year 1*	*Year 2*	*Year 3*	*Year 4*	*Year 5*
Cumulative Percent Impervious Acre Restoration Completed	*5%*	*10%*	*20%*	*40%*	*100%*

8. *In each year's annual report, Prince George's County shall:*

a. Submit to the Department a list of BMPs, programmatic initiatives, and alternative control practices to be completed in the following year to work toward meeting its impervious acre restoration benchmark:

i. The list of BMPs, programmatic initiatives, or alternative control practices shall be submitted in the Year 1 BMP Portfolio format provided in Appendix B; and

ii. Prince George's County may replace individual practices listed in its annual BMP Portfolio as long as the total implementation rate at the end of each year meets the annual restoration benchmark schedule in Table 1.

b. Evaluate progress toward meeting its annual restoration benchmark according to the schedule in Table 1 and adjust the benchmark appropriately based upon:

9. Actual BMP implementation rates; and

10. Anticipated implementation rates and annual restoration benchmark schedule needed in the remaining years of this permit for meeting the final impervious acre restoration requirement by December 1, 2027.

1.1.2 Part IV.F – Countywide TMDL Stormwater Implementation Plan

As per Part IV.F.2.c. of the 2022 MS4 permit (20-DP-3314 MD0068284), "Once approved by the Department, any new TMDL implementation plan shall be incorporated in the Countywide TMDL Stormwater Implementation Plan and subject to the annual progress report requirements under PART IV.F.3 of this permit."

As per Part IV.F.3.

For all TMDLs and WLAs listed in Appendix A, the County shall annually document, in one Countywide Stormwater TMDL Implementation Plan, updated progress toward meeting these TMDL WLAs. This Countywide Stormwater TMDL Implementation Plan shall include:

a) A summary of all completed BMPs, programmatic initiatives, alternative control practices, or other actions implemented for each TMDL stormwater WLA;

b) An analysis and table summary of the net pollutant reductions achieved annually and cumulatively for each TMDL stormwater WLA;

c) An updated list of proposed BMPs, programmatic initiatives, and alternative control practices, as necessary, to demonstrate adequate progress toward meeting the Department's approved benchmarks and final stormwater WLA implementation dates; and

d) Updates on the County's efforts to reduce trash, floatables, and debris and show progress toward achieving the annual trash reduction allocation required by the Anacostia trash TMDL

i. Quantifying annual trash reductions using the Department's TMDL analysis or an equivalent and comparable County trash reduction model

ii. The public education and outreach strategy to initiate or increase residential and commercial recycling rates, improve trash management, and reduce littering

iii. An annual evaluation of the local trash reduction strategy including any modifications necessary to improve source reduction and proper disposal.

1.2 Document Structure

This document fulfills Part IV.F.3 of the County's 2022 MS4 permit (20-DP-3314 MD0068284), which was described in Section 1.1 of this document. Much of the information contained in this document is also provided in the County's annual MS4 permit report. This countywide annual plan is organized by major pollutant group (nutrients/sediment, bacteria, polychlorinated biphenyls (PCBs), trash and then by the permit requirements set in Part IV.F.3. For nutrients and sediment, the Chesapeake Bay TMDL allocations are discussed before local TMDLs for the three permit-required topics. The overall organization of this report is as follows.

- Section 1 – Introduction
  - Permit Requirements
  - List and maps of TMDLs
- Section 2 – Nutrient and Sediment TMDLs
  - Part IV.F.3.a. Summary of all Completed BMPs
    - Chesapeake Bay TMDL
    - Local TMDLs
  - Part IV.F.3.b. Summary Analysis of net Pollutant Reductions Achieved
    - Chesapeake Bay TMDL
    - Local TMDLs
  - Part IV.F.3.c. List of Proposed BMPs Towards Annual Progress Benchmarks
    - Chesapeake Bay TMDL
    - Local TMDLs
- Section 3 – Bacteria Local TMDLs
  - Part IV.F.3.a. Summary of all Completed BMPs
  - Part IV.F.3.b. Summary Analysis of net Pollutant Reductions Achieved
  - Part IV.F.3.c. List of Proposed BMPs Towards Annual Progress Benchmarks
- Section 4 – PCB Local TMDLs
  - Part IV.F.3.a. Summary of all Completed BMPs
  - Part IV.F.3.b. Summary Analysis of net Pollutant Reductions Achieved
  - Part IV.F.3.c. List of Proposed BMPs Towards Annual Progress Benchmarks
- Section 5 – Trash Local TMDL
  - Part IV.F.3.d. Summary Reduction of Trash, Floatables, and Debris
- Section 6 – Restoration Planning, Tracking, and Adaptive Management
- Attachment A –Approved TMDL Restoration Plans
- Attachment B – County Access Database Documentation
- Attachment C – List of Planned Structural and Alternative BMPs

- Attachment D – Estimated BMPs Required to Meet Local TMDL Load Reduction Targets

1.3 List of TMDLs in Prince George's County

A TMDL is a *pollution diet* that establishes the amount of a pollutant a waterbody can assimilate without exceeding its water quality standard for that pollutant and is represented as a mass per unit of time (e.g., pounds per day). A SW-WLA is the portion of a TMDL that is assigned to permitted dischargers, such as the County's MS4. The County's MS4 permit requires the County to develop local WIPs to address each EPA-approved TMDL with SW-WLAs.

There are several EPA-approved TMDLs covering Prince George's County that were established between 2005 and 2019. The Chesapeake Bay TMDL is a multi-state TMDL that was established in 2010 for total nitrogen (TN), total phosphorus (TP), and total suspended solids (TSS), which apply to all watersheds in the County. This TMDL focuses on improving water quality in the Chesapeake Bay, not local streams. There are also TMDLs that focus on local water quality in the County for TN, TP, and TSS, as well as for bacteria and toxics. These TMDLs are referred to as local TMDLs in this document.

A discussion of the Chesapeake Bay TMDL and the local TMDLs is presented below. The EPA-approved TMDL documents may be searched on the MDE's TMDL website (https://wlat.mde.state.md.us/ByTmdl.aspx). The County's SW-WLA and percent reductions by pollutant/watershed can be searched on MDE's TMDL Data Center (https://wlat.mde.state.md.us/WLASearch.aspx). The County's restoration plans, TMDL factsheets, and other information are available on the County's *Watershed Assessment and Studies* web page (https://www.pgcdoe.net/pgc_watershedassesments).

Progress towards nutrients and sediment Chesapeake Bay and local TMDLs is provided in **Section 2**, **Section 3** for bacteria local TMDLs, **Section 4** for toxics local TMDLs, and **Section 5** for the trash local TMDL. **Attachment A** contains the current approved restoration plans. The County updated these plans to follow the new MDE WIP guidance for meeting nutrient and sediment TMDLs, bacteria TMDLs, and PCB TMDLs. The updated plans were approved by MDE on May 12, 2025. The 2025 WIPs are included as attachments.

1.3.1 Chesapeake Bay TMDL

The Chesapeake Bay TMDL was established in 2010 by the EPA. The TMDL was established to address water quality in the Chesapeake Bay, not local waterways. This means that even if the Chesapeake Bay targeted load reductions are met, local waterways could still be considered impaired by nutrients or sediment. In addition to urban stormwater runoff, the Chesapeake Bay WIP covered agricultural practices and upgrades to wastewater systems (i.e., municipal wastewater treatment plants and on-site wastewater systems). In the Chesapeake Bay TMDL, EPA assigned nutrient (TN, TP) and TSS load reductions by basin (e.g., Potomac River) and MDE allocated those reductions to smaller segmentsheds, which are what the Chesapeake Bay model calls watersheds (**Figure 1**). **Table 1** lists the County's Chesapeake Bay TMDL segmentsheds and their required percent load reduction. The percent load reductions needed in **Table 1** were obtained from the MDE TMDL Data Center WLA search function.

For the Chesapeake Bay TMDL, MDE did not set local target reductions for TSS. The Maryland Phase II Chesapeake Bay WIP states that "In meeting its nutrient targets, the State will also achieve its sediment goals. Because phosphorus attaches to sediment, practices that reduce phosphorus tend to drive sediment reductions as well." Therefore, in this document, the TSS target load reductions for the Chesapeake Bay TMDL are not provided. To address the load reduction targets, MDE issued Prince George's County a permit that is focused on treating untreated impervious surfaces. The County NPDES permit requires restoration to be reported as EIAs as the main measurement of progress.

In 2011, the County developed a countywide Chesapeake Bay WIP in response to the 2010 Chesapeake Bay Nutrient and Sediment TMDL. The County's Phase II Chesapeake Bay WIP was finalized in 2012 and laid out a plan for BMP implementation and other restoration activities through two target years: 2017 and 2025. MDE subsequently adjusted goals in 2018. During early implementation of the WIP, the County 2-year milestones to MDE and provided progress on past 2-year milestones. The last 2-year milestone required by MDE was the 2016–2017 milestones.

Table 1. Required Percent Load Reduction Needed by Segmentshed for the Chesapeake Bay TMDL

Chesapeake Bay Model Segmentshed ID / Name	Nitrogen: Percent Load Reduction Needed	Phosphorus: Percent Load Reduction Needed
Segmentshed ANATF_DC/ Anacostia River Tidal Fresh DC	26%	41%
Segmentshed ANATF_MD/Anacostia River Tidal Fresh Maryland	21%	40%
Segmentshed MATTF/Mattawoman Creek Tidal Fresh	10%	33%
Segmentshed PAXMH/Lower Patuxent River Mesohaline	26%	42%
Segmentshed PAXOH/Middle Patuxent River Oligohaline	27%	44%
Segmentshed PAXTF/Upper Patuxent River Tidal Fresh	21%	34%
Segmentshed PISTF/Piscataway Creek Tidal Fresh	23%	41%
Segmentshed POTMH_MD/Lower Potomac River Mesohaline Maryland	16%	37%
Segmentshed POTTF_DC/Upper Potomac River Tidal Fresh DC	27%	42%
Segmentshed POTTF_MD/Upper Potomac River Tidal Fresh Maryland	26%	42%
Segmentshed WBRTF/Western Branch Patuxent River Tidal Fresh	20%	35%

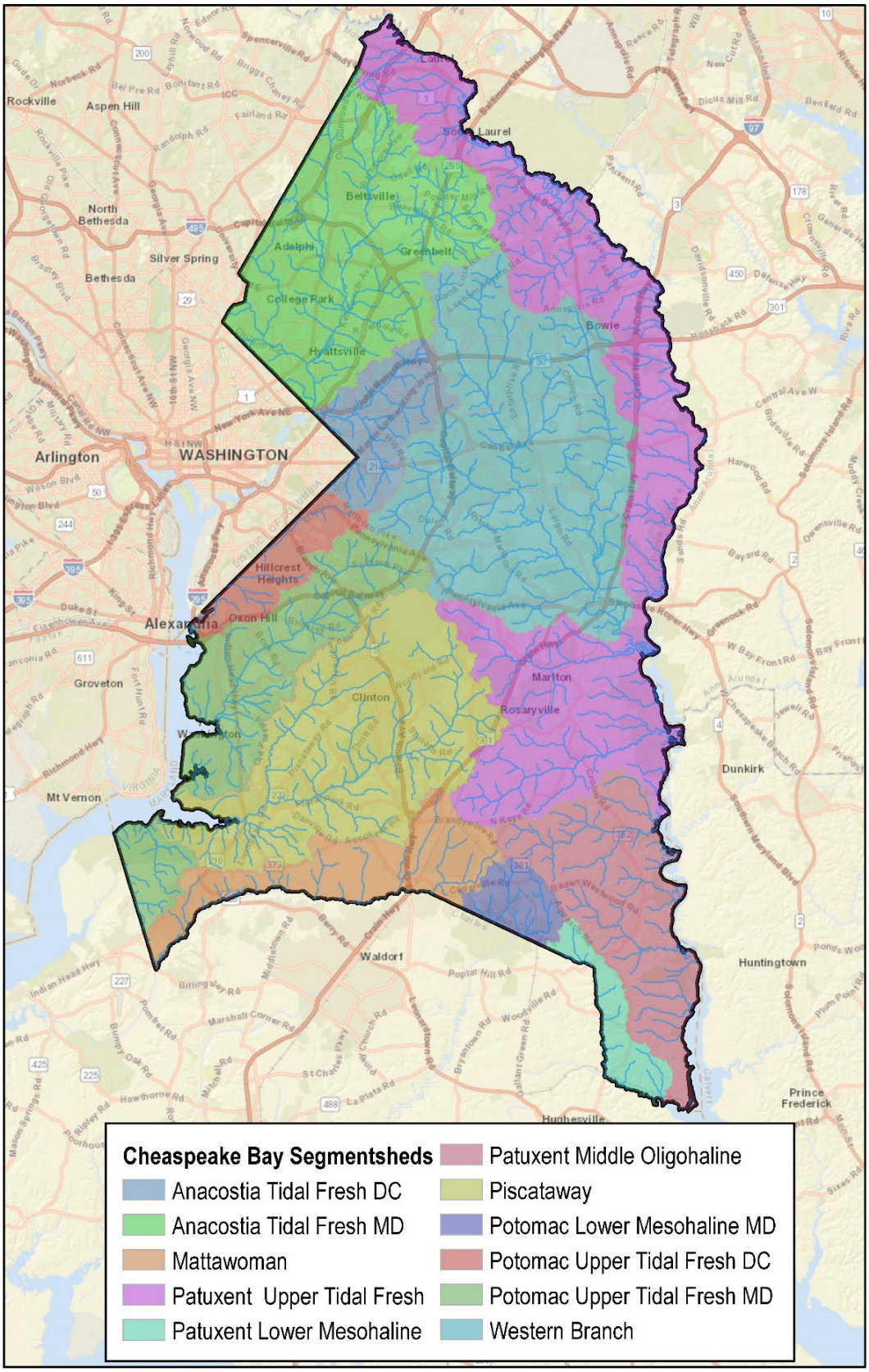


Figure 1. Map of Chesapeake Bay TMDL Segmentsheds.

1.3.2 Local TMDLs

The County must meet various local TMDLs for nutrients (TN, TP, biological oxygen demand [BOD]), sediment, bacteria, PCBs, and trash along with their required percent load reduction (**Table 2**). **Figure 2** through **Figure 5** show the extents of the watersheds for each category of TMDLs (nutrients/sediment, bacteria, PCBs, trash).

These TMDLs were developed to address local water quality impairments and might not fully address the needs of the Chesapeake Bay TMDL. The percent load reductions needed in **Table 2** were obtained from the MDE TMDL Data Center wasteload allocation search function. To address the nutrient and sediment load reduction targets, MDE issued Prince George's County a permit that focused on treating untreated impervious surfaces. The County NPDES permit requires restoration to be reported as EIAs as the main measurement of progress.

There are a few TMDLs on **Table 2** that do not have a County MS4 SW-WLA.

- *Western Branch BOD:* This TMDL was developed to address low flow water conditions. It only contains a wasteload allocation for wastewater treatment plants and not the County MS4. Therefore, the County is not required to reduce nutrient loads from its MS4 are part of this TMDL.
- *Cash Lake Mercury:* Cash Lake is in the federally-owned Patuxent Research Refuge. The WLAs in the TMDL are for a small on-site wastewater treatment facility and industrial stormwater facility. Both wasteload allocations are based on mercury contributions from atmospheric deposition only. Therefore, the County is not required to reduce nutrient loads from its MS4 are part of this TMDL.
- *Piscataway and Mattawoman PCBs:* There are two TMDLs covering PCBs in the Piscataway and Mattawoman watersheds. The first was the Tidal Potomac and Anacostia River PCB TMDL. This TMDL applied a 5% reduction for both watersheds. There was also a separate PCB TMDL for the Piscataway and Mattawoman watersheds with a similar 5% reduction. Both TMDLs concluded that the proposed 93% reduction in atmospheric deposition of PCBs should adequately address the reductions in the MS4 stormwater loads, which do not need to be addressed directly.

Table 2. EPA-Approved Local TMDLs.

TMDL Report	Location	Impairment	Percent Load Reduction Needed	Year TMDL approved by EPA
Anacostia River Nutrients	Subsegment of 8 Digit WS 02140205/Anacostia River - Tidal (Not incl. loads from Watts Br & Lower Beaverdam Creek [LBC])	BOD	58%	2008
Anacostia River Nutrients	Subsegment of 8 Digit WS 02140205/Anacostia River - Non-Tidal - Lower Beaverdam Creek	BOD	58%	2008
Anacostia River Nutrients	Subsegment of 8 Digit WS 02140205/Anacostia River - Non-Tidal - Northeast Branch	BOD	58%	2008
Anacostia River Nutrients	Subsegment of 8 Digit WS 02140205/Anacostia River - Non-Tidal - Watts Branch	BOD	58%	2008
Anacostia River Nutrients	Subsegment of 8 Digit WS 02140205/Anacostia River - Non-Tidal - Northwest Branch	BOD	58%	2008

TMDL Report	Location	Impairment	Percent Load Reduction Needed	Year TMDL approved by EPA
Anacostia River Nutrients	Subsegment of 8 Digit WS 02140205/Anacostia River - Tidal (Not incl. loads from Watts Br & LBC)	Nitrogen	81%	2008
Anacostia River Nutrients	Subsegment of 8 Digit WS 02140205/Anacostia River - Non-Tidal - Lower Beaverdam Creek	Nitrogen	81%	2008
Anacostia River Nutrients	Subsegment of 8 Digit WS 02140205/Anacostia River - Non-Tidal - Northeast Branch	Nitrogen	81%	2008
Anacostia River Nutrients	Subsegment of 8 Digit WS 02140205/Anacostia River - Non-Tidal - Watts Branch	Nitrogen	81%	2008
Anacostia River Nutrients	Subsegment of 8 Digit WS 02140205/Anacostia River - Non-Tidal - Northwest Branch	Nitrogen	81%	2008
Anacostia River Nutrients	Subsegment of 8 Digit WS 02140205/Anacostia River - Tidal (Not incl. loads from Watts Br & LBC)	Phosphorus	81%	2008
Anacostia River Nutrients	Subsegment of 8 Digit WS 02140205/Anacostia River - Non-Tidal - Lower Beaverdam Creek	Phosphorus	81%	2008
Anacostia River Nutrients	Subsegment of 8 Digit WS 02140205/Anacostia River - Non-Tidal - Northeast Branch	Phosphorus	81%	2008
Anacostia River Nutrients	Subsegment of 8 Digit WS 02140205/Anacostia River - Non-Tidal - Watts Branch	Phosphorus	81%	2008
Anacostia River Nutrients	Subsegment of 8 Digit WS 02140205/Anacostia River - Non-Tidal - Northwest Branch	Phosphorus	81%	2008
Anacostia River Sediments	Subsegment of 8 Digit WS 02140205/Anacostia River - Tidal (Not incl. loads from Watts Br & LBC)	TSS	85%	2012
Anacostia River Sediments	Subsegment of 8 Digit WS 02140205/Anacostia River - Non-Tidal - Lower Beaverdam Creek	TSS	85%	2012
Anacostia River Sediments	Subsegment of 8 Digit WS 02140205/Anacostia River - Non-Tidal - Northeast Branch	TSS	85%	2012
Anacostia River Sediments	Subsegment of 8 Digit WS 02140205/Anacostia River - Non-Tidal - Watts Branch	TSS	85%	2012
Anacostia River Sediments	Subsegment of 8 Digit WS 02140205/Anacostia River - Non-Tidal - Northwest Branch	TSS	85%	2012
Mattawoman Creek Nutrients	8 Digit WS 02140111/Mattawoman Creek	Nitrogen	54%	2005
Mattawoman Creek Nutrients	8 Digit WS 02140111/Mattawoman Creek	Phosphorus	47%	2005
Patuxent River Middle Sediment	8-Digit WS 02131102/Patuxent River Middle	TSS	56%	2018
Patuxent River Upper Sediment	8 Digit WS 02131104/Patuxent River Upper	TSS	11%	2011
Rocky Gorge and Triadelphia Reservoirs Phosphorus and Sediment	8 Digit WS 02131107/Rocky Gorge Reservoir	Phosphorus	15%	2008
Western Branch Patuxent River BOD	8 Digit WS 02131103/Western Branch	BOD	n/a[a]	2000
Anacostia River Bacteria	Subsegment of 8 Digit WS 02140205/Anacostia River - Downstream of Confluence of Northwest Branch and Northeast Branch and Upstream of MD/DC line	Enterococci	99%	2007
Anacostia River Bacteria	Subsegment of 8 Digit WS 02140205/Anacostia River -	Enterococci	80%	2007

TMDL Report	Location	Impairment	Percent Load Reduction Needed	Year TMDL approved by EPA
	Upstream of Confluence of Northwest Branch and Northeast Branch			
Patuxent River Upper Bacteria	Subsegment of 8 Digit WS 02131104/Patuxent River Upper	*E. coli*	53%	2011
Piscataway Creek Bacteria	Subsegment of 8 Digit WS 02140203/ Piscataway Creek - Non-Tidal	*E. coli*	43%	2007
Piscataway Creek Non-Tidal Sediment	8-Digit WS 02140203 / Piscataway Creek	TSS	51%	2019
Non-Tidal Anacostia River PCBs	Subsegment of 8 Digit WS 02140205/Anacostia River - Non-Tidal - Northeast Branch	PCBs	99%	2011
Non-Tidal Anacostia River PCBs	Subsegment of 8 Digit WS 02140205/Anacostia River - Non-Tidal - Northwest Branch	PCBs	98%	2011
Patuxent River PCBs	Segmentshed PAXMH/Patuxent River Mesohaline	PCBs	0%	2017
Patuxent River PCBs	Segmentshed PAXOH/Patuxent River Oligohaline	PCBs	0%	2017
Patuxent River PCBs	Segmentshed PAXTF/Patuxent River Tidal Fresh	PCBs	100%	2017
Piscataway Creek and Mattawoman Creek PCBs	Segmentshed MATTF/Mattawoman Creek Tidal Fresh	PCBs	5%[b]	2019
Piscataway Creek and Mattawoman Creek PCBs	Segmentshed PISTF/Piscataway Creek Tidal Fresh	PCBs	5%[b]	2019
Tidal Potomac and Anacostia River PCBs	8 Digit WS 02130304/ Wicomico (incl. subsegments of Gilbert, Zekiah)	PCBs	n/a[c]	2007
Tidal Potomac and Anacostia River PCBs	8 Digit WS 02140102/Potomac River, Middle	PCBs	5%[b]	2007
Tidal Potomac and Anacostia River PCBs	8 Digit WS 02140201/Potomac River, Upper	PCBs	92%	2007
Tidal Potomac and Anacostia River PCBs	8 Digit WS 02140204/Oxon Creek	PCBs	81%	2007
Tidal Potomac and Anacostia River PCBs	Subsegment of 8 Digit WS 02140111/ Mattawoman Creek - Direct Drainage	PCBs	n/a[c]	2007
Tidal Potomac and Anacostia River PCBs	Subsegment of 8 Digit WS 02140203/ Piscataway Creek - Direct Drainage	PCBs	5%[b]	2007
Tidal Potomac and Anacostia River PCBs	Subsegment of 8 Digit WS 02140205/Anacostia - Tidal Portion	PCBs	100%	2007
Anacostia River Trash	Subsegment of 8 Digit WS 02140205/Anacostia Watershed - Prince George's County - Non-Tidal Allocation	Trash	100%	2010
Anacostia River Trash	Subsegment of 8 Digit WS 02140205/Anacostia Watershed - Prince George's County - Tidal Allocation	Trash	100%	2010
Cash Lake Mercury	Cash Lake Watershed	Mercury	n/a[a]	2010

Notes:

[a] The County was not provided a stormwater reduction for this TMDL. See text for more detail.

[b] The 2022 MDE PCB SW-WLA guidance does not list this location as requiring reductions. See text for more detail.

[c] The County permit lists these percent reductions as N/A or not applicable. See text for more detail.

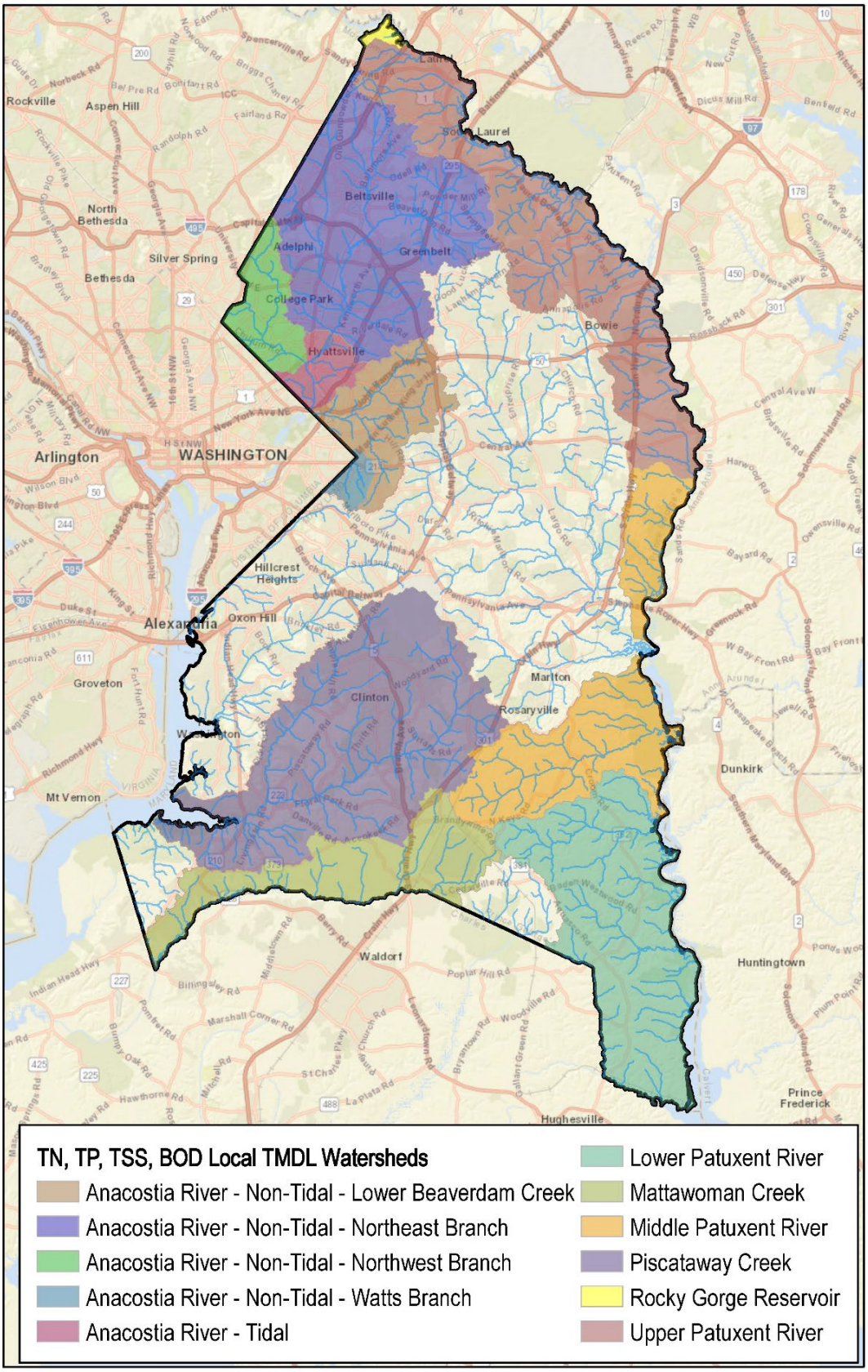


Figure 2. Map of Local Nutrient and Sediment TMDLs.

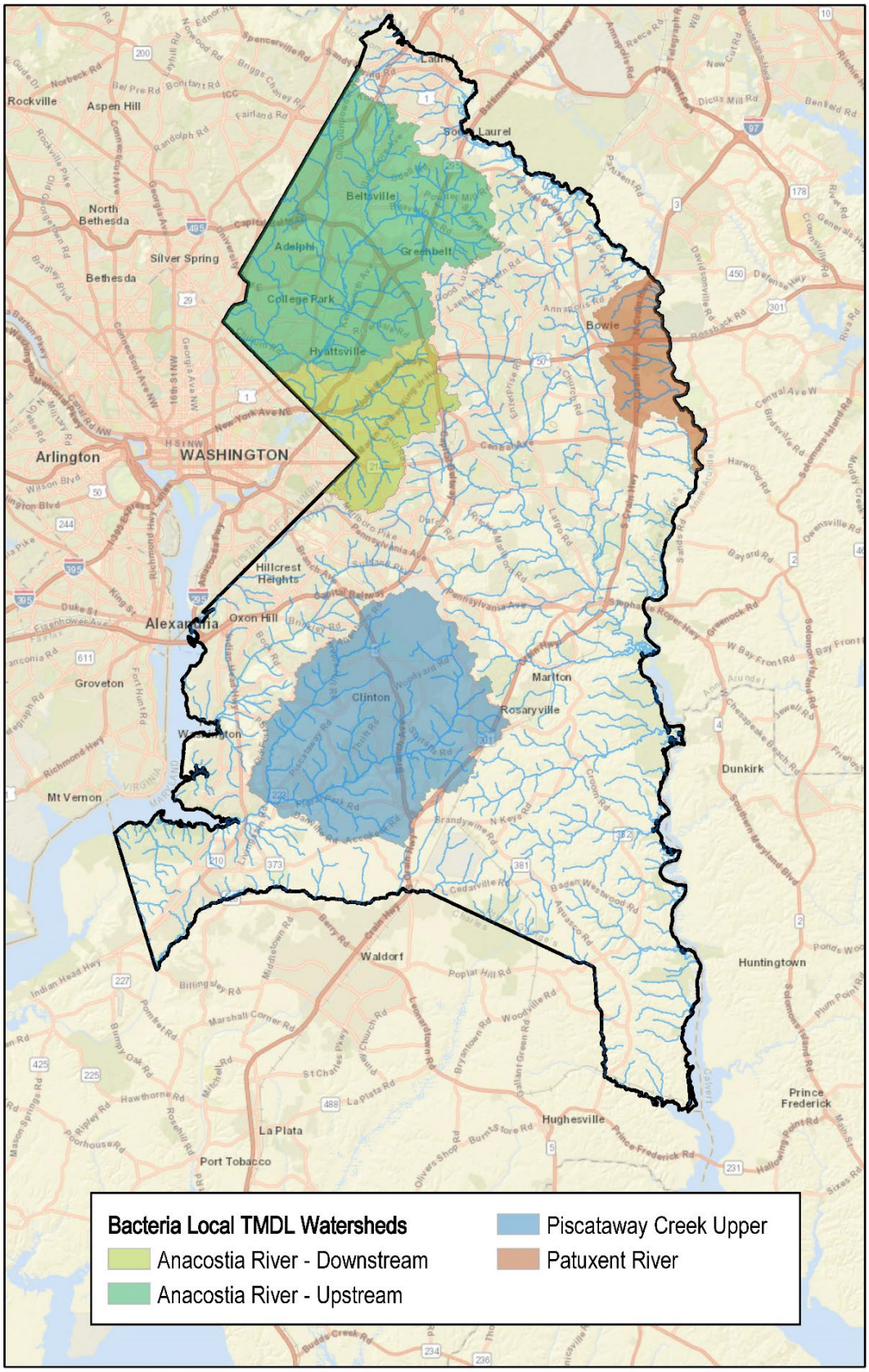


Figure 3. Map of Local Bacteria TMDLs.

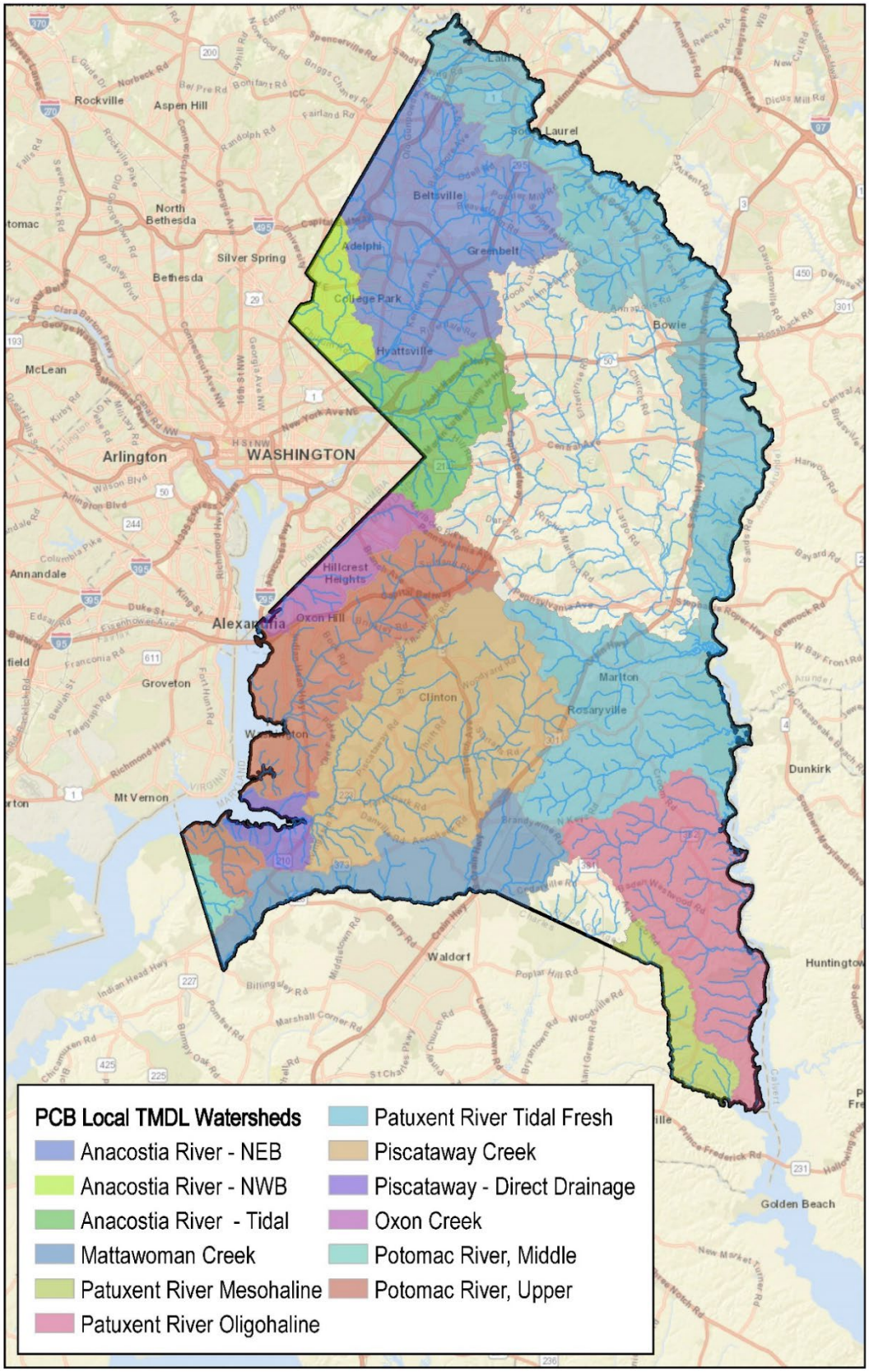


Figure 4. Map of Local PCB TMDLs.

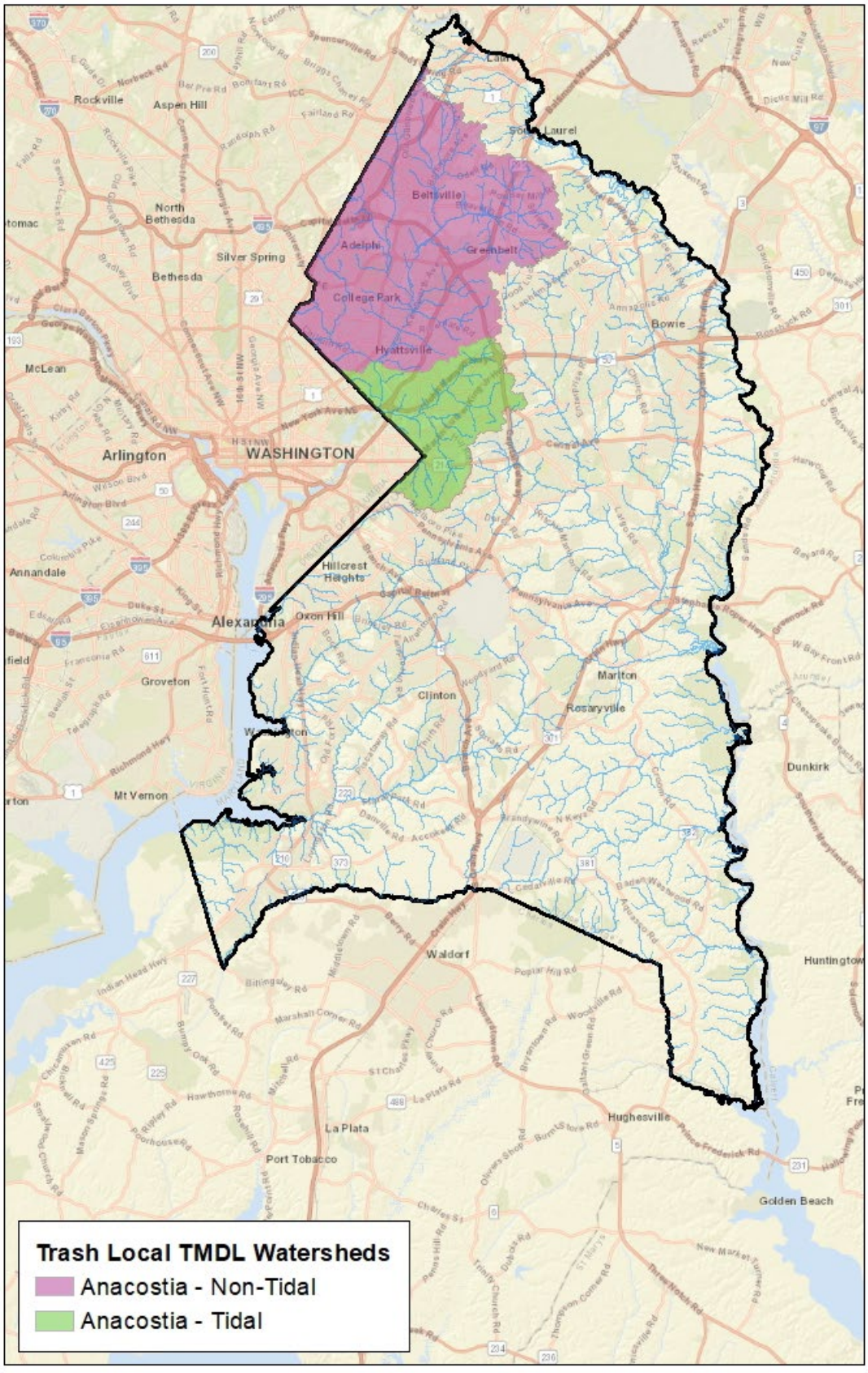


Figure 5. Map of Local Trash TMDLs.

2 Nutrient and Sediment Chesapeake Bay and Local TMDLs

Permit Conditions Part IV.F.3

For all TMDLs and WLAs listed in Appendix A, the County shall annually document, in one Countywide Stormwater TMDL Implementation Plan, updated progress toward meeting these TMDL WLAs. This Countywide Stormwater TMDL Implementation Plan shall include:

a. A summary of all completed BMPs, programmatic initiatives, alternative control practices, or other actions implemented for each TMDL stormwater WLA;
b. An analysis and table summary of the net pollutant reductions achieved annually and cumulatively for each TMDL stormwater WLA;
c. An updated list of proposed BMPs, programmatic initiatives, and alternative control practices, as necessary, to demonstrate adequate progress toward meeting the Department's approved benchmarks and final stormwater WLA implementation dates.

The following subsections describe the nutrient and sediment load reductions for the Chesapeake Bay TMDL (**Table 1**, **Figure 1**) and local TMDLs (**Table 2**, **Figure 2**).

- Subsection 2.1 describes the load calculation methodology that was used to create the progress tables and plots throughout Subsections 2.2, 2.3, and 2.4.
- Subsections 2.2, 2.3, and 2.4 are organized by permit conditions **Part IV.F.3a-c** (text box above), respectively. The nutrient and sediment data are presented first for the Chesapeake Bay TMDL by watershed, then by the local TMDL watersheds for each section.
- Subsection 2.5 presents the current County programs that contribute to nutrient and sediment reduction. All current programs are expected to continue in the future. This section includes information that covers conditions **Part IV.F.3a** and **Part IV.F.3c**.

For the Chesapeake Bay TMDL, **MDE did not set local target reductions for TSS**. The Maryland Phase II Chesapeake Bay Watershed Implementation Plan states that "In meeting its nutrient targets, the State will also achieve its sediment goals. Because phosphorus attaches to sediment, practices that reduce phosphorus tend to drive sediment reductions as well." Therefore, in this document, the target TSS reduction and percent reduction for the Chesapeake Bay TMDL are listed as "N/A" or not reported at all.

In this document, Chesapeake Bay loads are reported as edge-of-tide instead of the edge-of-stream loads, as local TMDL loads are reported. Edge-of-tide loads are those nutrient loads that reach the Chesapeake Bay. For some watersheds and analytes, the edge-of-tide and edge-of- stream loads are the same. One example of this is the Mattawoman Creek watershed for phosphorus and sediment, but not nitrogen. In most cases for Prince George's County watersheds, the edge-of-tide loads are less than the watershed loads reporting for local TMDLs, which are based on edge-of-stream loads.

The Anacostia River watershed has a local TMDL for BOD, which is related to nutrient levels in waterbodies. Because MDE will not develop BOD loading rates or BMP efficiencies, they have stated that if a permittee meets its nutrient reduction goal, the BOD reduction for that watershed will be met. Therefore, BOD loads are not presented in this document for the Anacostia River watershed. The BOD

local TMDL for Western Branch is specific to the wastewater treatment plant and did not contain a SW-WLA for the County's MS4, therefore it is not considered in this document.

2.1 Load Calculation Methodology

According to MDE's August 2022 *Guidance for Developing Local Nutrient and Sediment TMDL (Total Maximum Daily Load) Stormwater Wasteload Allocation (SW-WLA) Watershed Implementation Plans (WIPs)*, "MDE requires the use of TIPP to ensure consistency among load reduction calculation methods" for "meeting Phase I MS4 permit implementation planning and reporting requirements" for applicable TMDLs. The County has updated its TMDL accounting methodology to align nutrient and sediment baseline, target, and progress loads with the MDE methodology and data in the MDE's TIPP Tool and MDE's November 2021 *Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated* guidance. The load calculations rely on TMDL information, land cover loading rates, and land cover information from MDE and the County's BMP information.

To facilitate inherent limitations in the TIPP spreadsheet tool for analysis of multiple watersheds at once, the County uses a Microsoft Access database in its load calculation process that uses the data and methodology of MDE's April 2022 TIPP Tool. The TIPP Tool only allows for reductions from one watershed and one pollutant, but the County's tool allows for all the County restoration data in one file instead of 44 TIPP Tool files representing each watershed subdivision and analyte.

MDE released updated geospatial land cover data associated with the TIPP tool. The geospatial data matches the land cover categories from the TIPP tool. In conversations, MDE indicated that the land cover was from 2014. This land cover source is used to maintain consistency with MDE. Like the MDE tool, the County's load calculations do not include loads generated from agriculture, wetlands, forested areas, or mixed open land areas, which are considered outside the County's MS4 area (turf, impervious area, tree canopy over turf, and tree canopy over impervious).

In developing its loads, the County used the land cover-specific loading rates provided by MDE in its TIPP Tool, which is in Microsoft Excel. The MDE rates were derived from the latest Chesapeake Bay model data and include loading contributions from stream bed and bank erosion. ***Chesapeake Bay TMDL loadings in this document are in edge-of-tide, while local TMDL loadings are in edge-of-stream, therefore they are not directly comparable.*** The Chesapeake Bay loadings will not match the loads in local TMDLs because of the different data and methodology that were used to calculate the loads.

The loads from the TIPP Tool were compared to those from the County Access database. Using MDE's loading rates from the TIPP tool, the County's Access tool results are within 0.12% of the TIPP Tool results. **Attachment B** provides additional details on the County Access database.

2.2 IV.F.3.a. Summary of Completed BMPs, Programmatic Initiatives, And Alternative Control Practices

Permit Conditions Part IV.F.3;

a. A summary of all completed BMPs, programmatic initiatives, alternative control practices, or other actions implemented for each TMDL stormwater WLA;

The County continues to conduct restoration activities throughout the County, following MDE's directive to prioritize installation of BMPs and track progress through equivalent impervious acres treatment credits. Progress towards meeting the Chesapeake Bay and local TMDLs are presented in this section.

- **Figure 6** through **Figure 11** show the locations of existing and planned restoration BMPs, along with the allocation of watershed divisions, and MS4 regulated areas. There is a map for each corresponding major watershed.
- **Table 3** through
- **Table 5** present the existing restoration practices including alternative practices, such as stream restoration and land conversion BMPs to reduce nutrient and sediment loads. These tables are organized by major watershed. Chesapeake Bay and local TMDLs are presented on the same tables. The BMPs tallied for Chesapeake Bay and local TMDL overlap BMP tallies. Differences in total numbers are due to differences in TMDL dates. For example, the Chesapeake Bay TMDL considers restoration BMPs since 2010, while the local sediment Piscataway TMDL only considers restoration BMPs since 2019. Therefore, a BMP installed in 2013 counts towards the Chesapeake Bay TMDL, but not the local sediment TMDL. A complete list of BMPs implemented in the watershed is available in the County's annual NPDES MS4 geodatabase.
- **Sections 2.2.1 and 2.2.2** present the overall summary of progress (Permit condition IV.F.3.a) for the Chesapeake Bay and local nutrient and sediment TMDLs allocation watershed divisions. The summary tables are based on the result table from the TIPP Tool.
- **Section 2.5** of this document describes some of the programmatic activities in the County. Many of these activities help reduce nutrient and sediment loads.

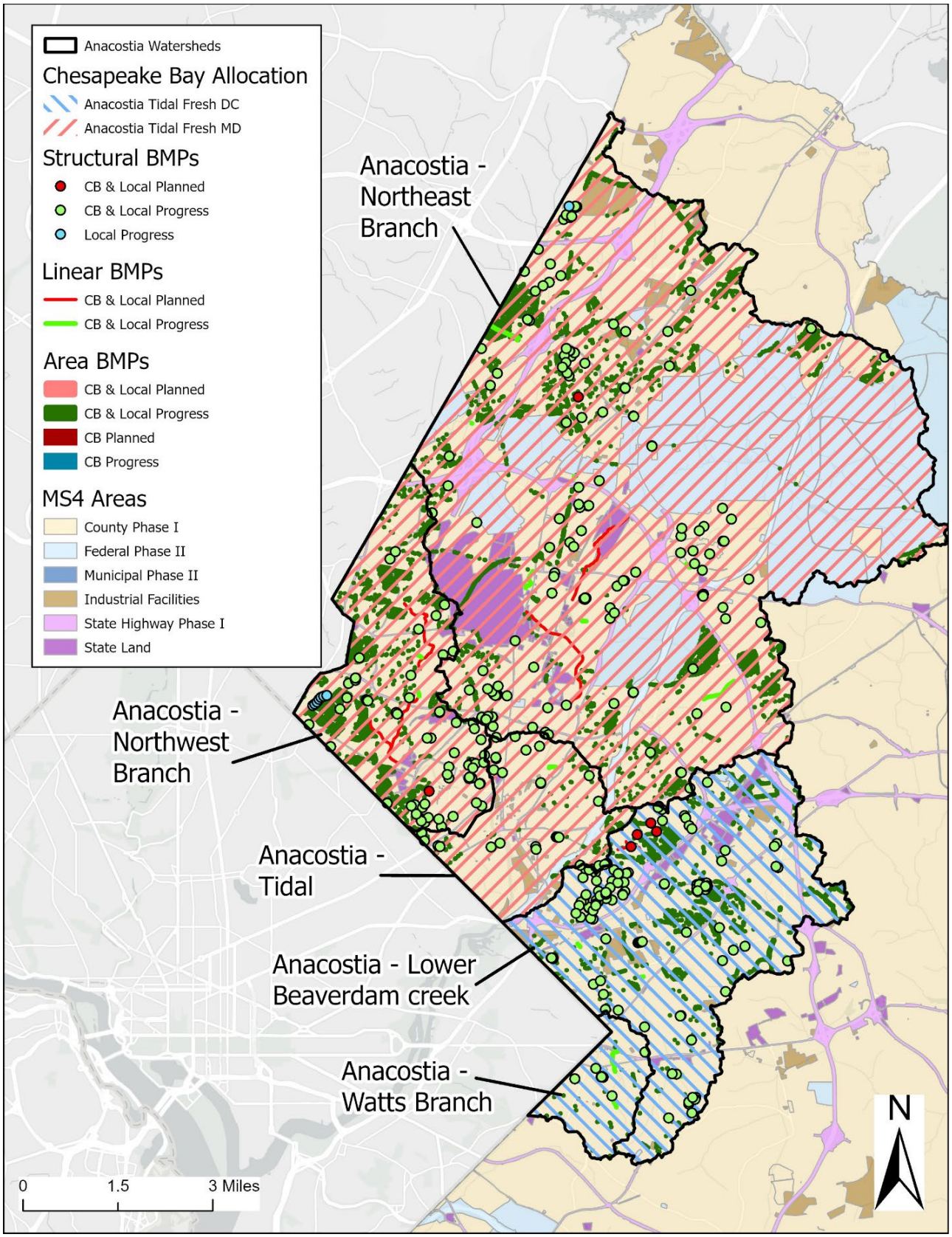


Figure 6. TMDL Progress – Restoration BMPs in the Anacostia River Watershed.

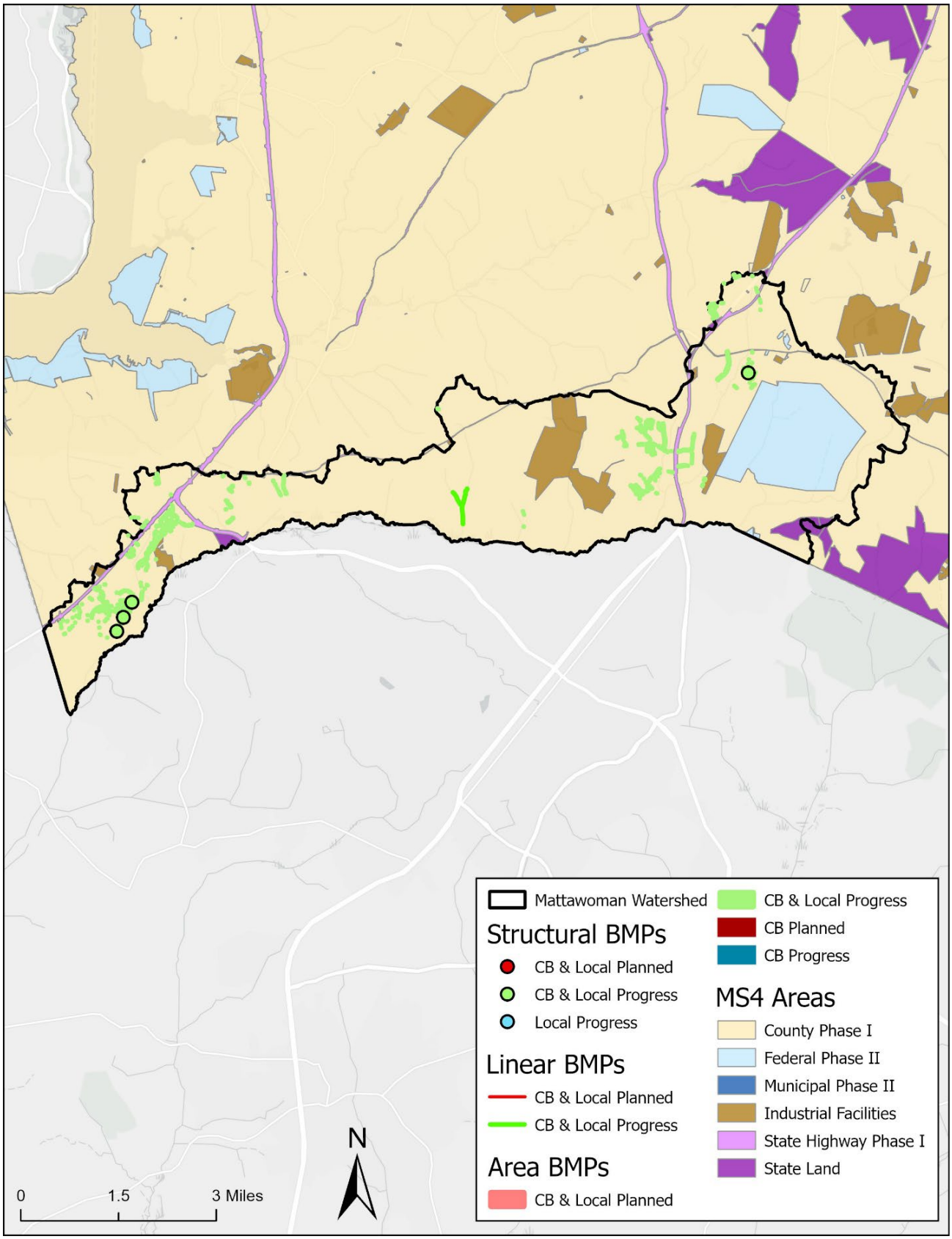


Figure 7. TMDL Progress – Restoration BMPs in the Mattawoman Creek Watershed.

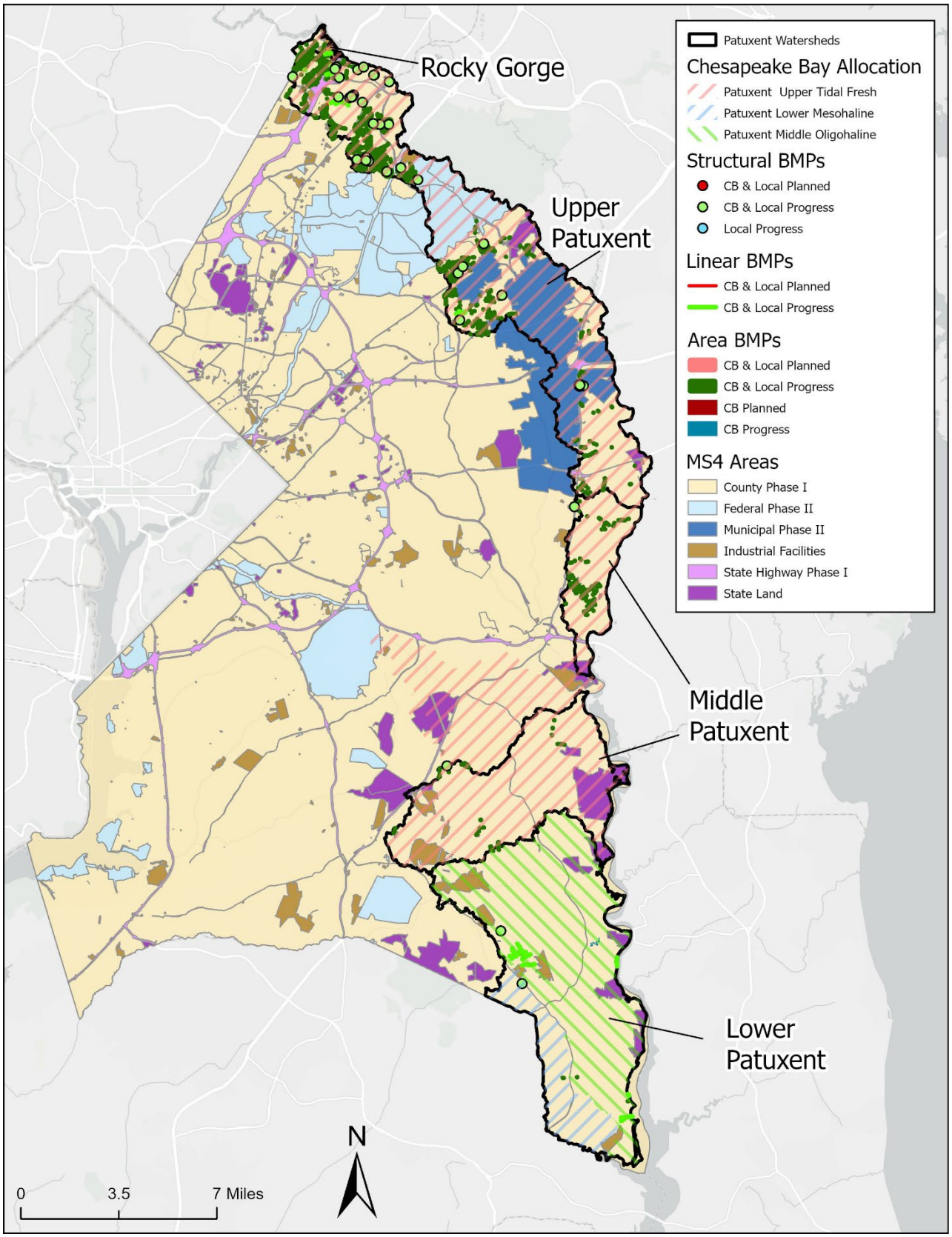


Figure 8. TMDL Progress – Restoration BMPs in the Patuxent River (including Rocky Gorge) Watershed.

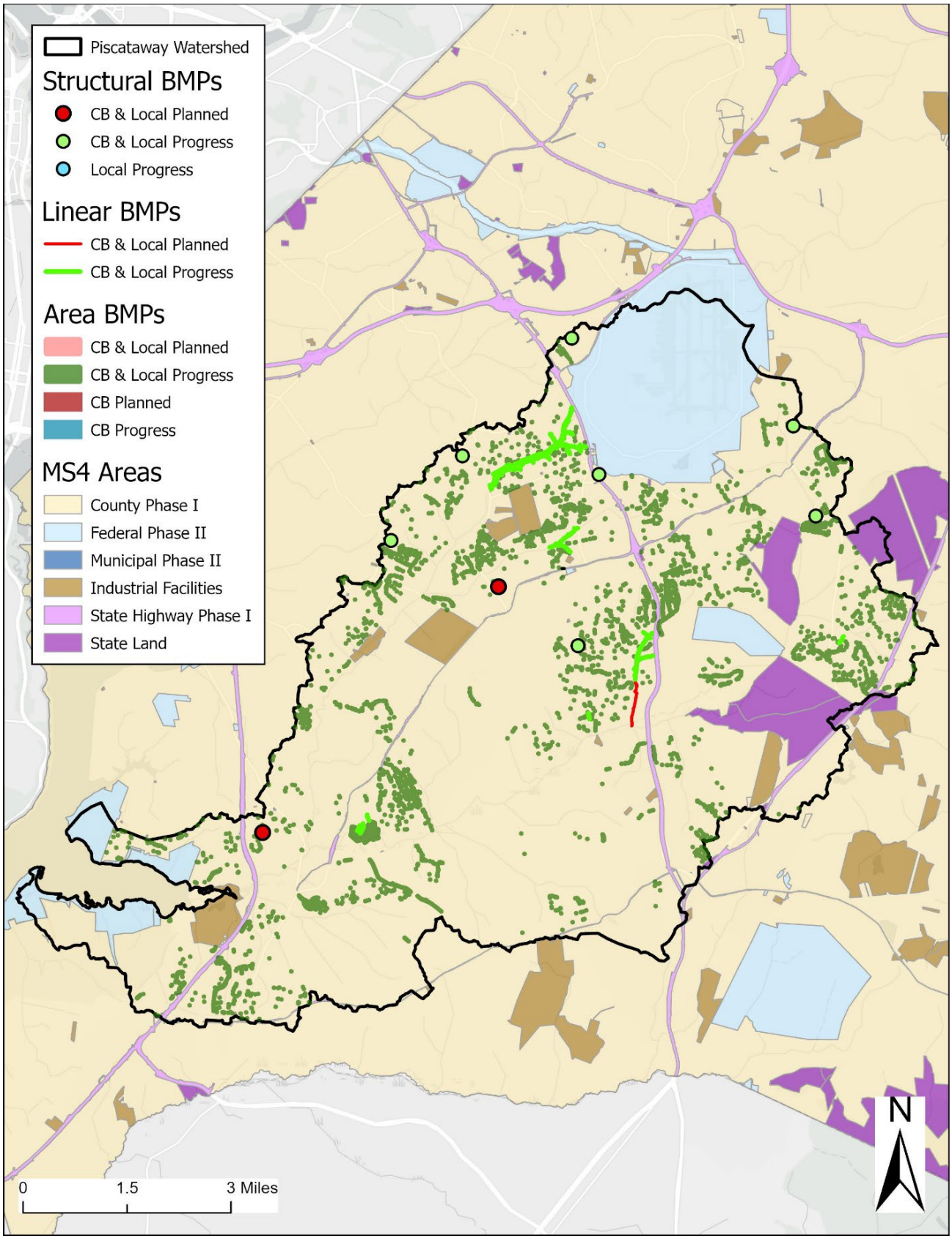


Figure 9. TMDL Progress – Restoration BMPs in the Piscataway Creek Watershed.

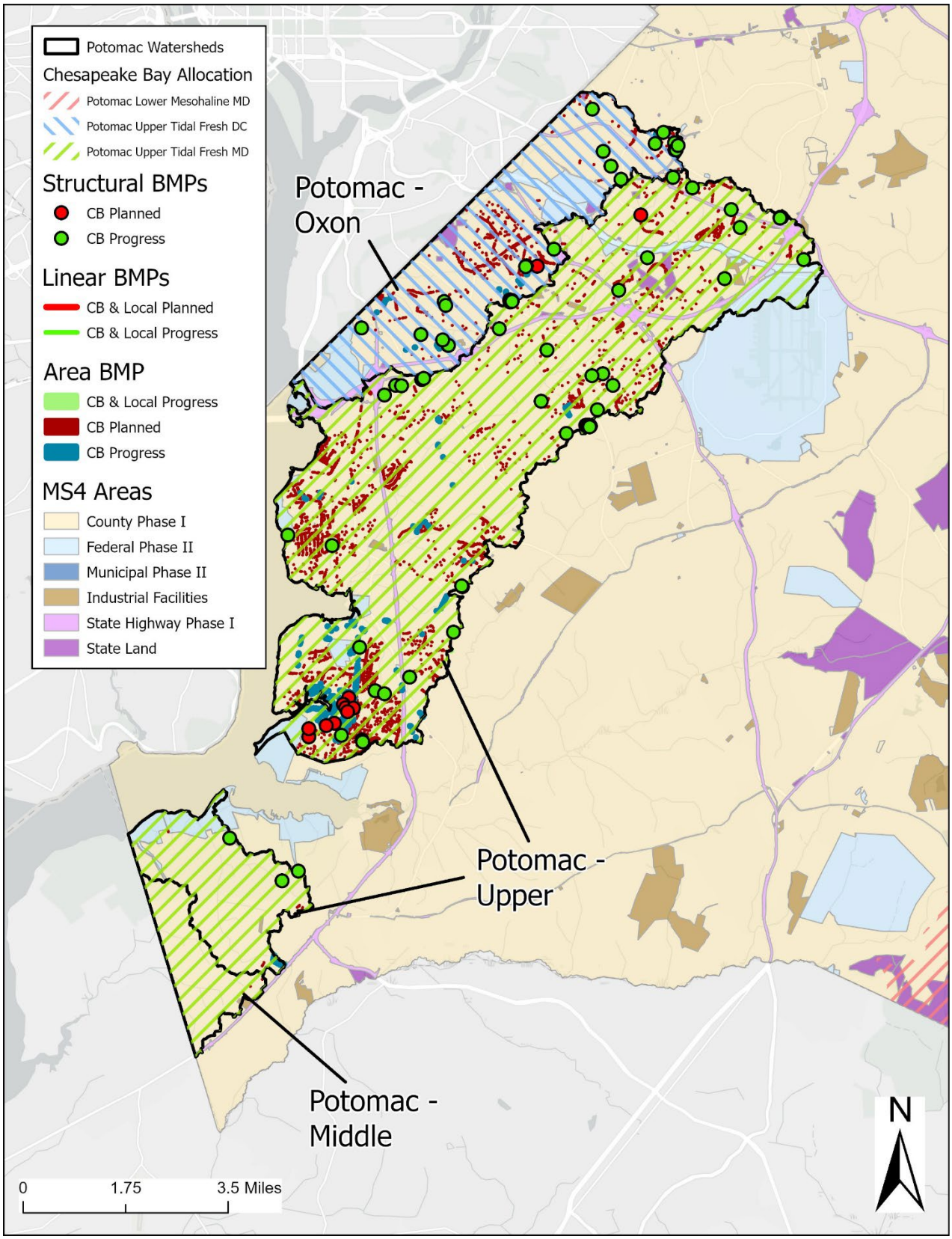


Figure 10. TMDL Progress – Restoration BMPs in the Potomac River Watershed.

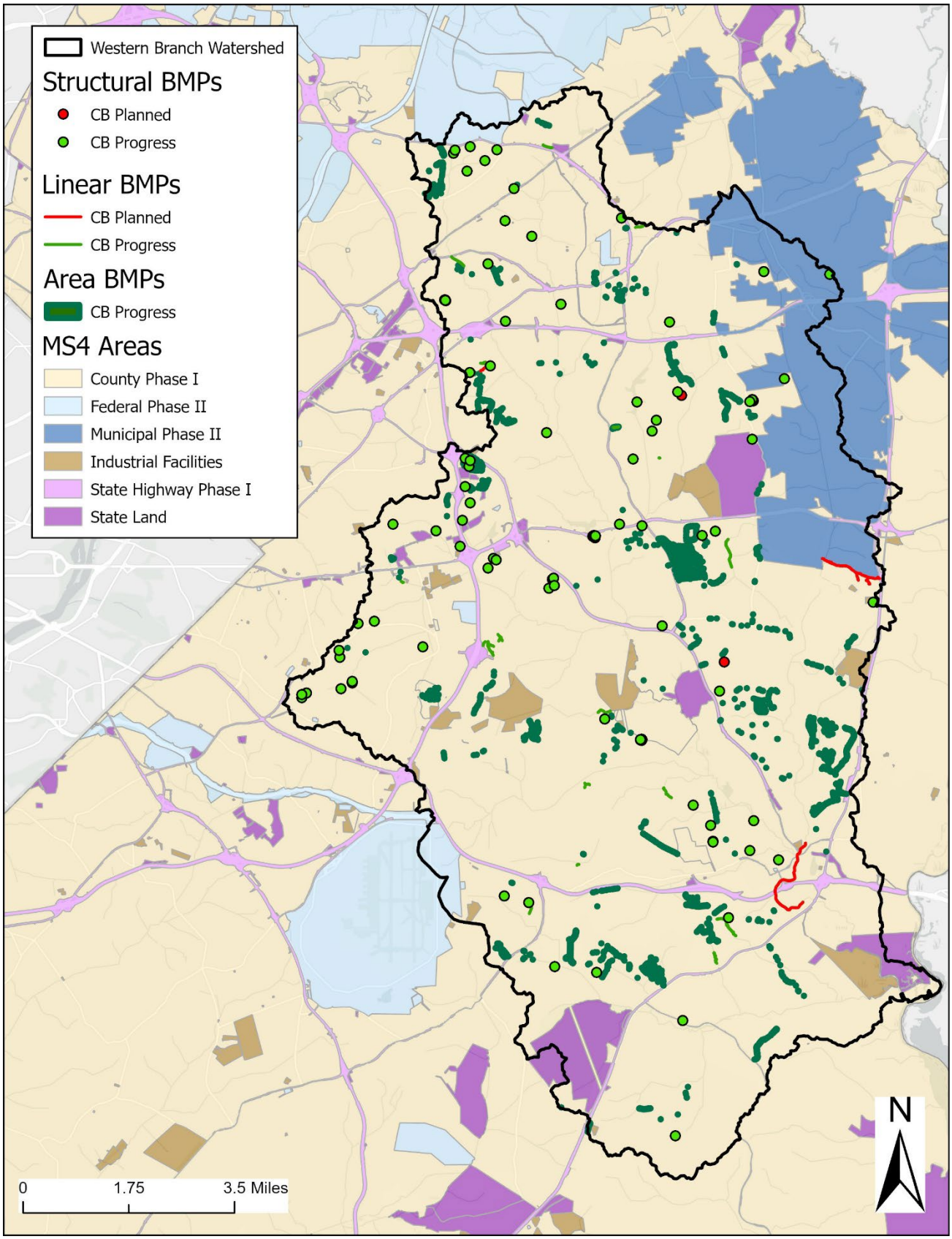


Figure 11. TMDL Progress – Restoration BMPs in the Western Branch Watershed.

Table 3. Summary of Installed Restoration BMPs in the Anacostia River Watershed.

BMP Type	Ches Bay: Anacostia River Tidal Fresh DC	Ches Bay: Anacostia River Tidal Fresh Maryland	Local: Anacostia River - Non-Tidal - Lower Beaverdam Creek	Local: Anacostia River - Non-Tidal - Northeast Branch	Local: Anacostia River - Non-Tidal - Northwest Branch	Local: Anacostia River - Non-Tidal - Watts Branch	Local: Anacostia River - Tidal
bioretention	13	7	13	1	6	--	2
bio-swale	2	1	2	1	--	--	--
disconnection of non-rooftop runoff	11	21	5	--	21	6	--
dry swale	--	--	--	--	6	--	--
extended detention structure, wet	2	3	1	2	--	1	1
impervious surface elimination (to pervious)	25	52	24	16	27	1	9
landscape infiltration	--	1	--	--	1	--	--
micro-bioretention	33	51	32	39	8	1	5
outfall stabilization	2	2	1	2	--	1	--
permeable pavements	20	27	20	10	12	--	5
rain gardens	9	16	9	6	7	--	3
rainwater harvesting	52	84	50	43	29	2	12
retention pond (wet pond)	4	17	4	16	1	--	--
sand filter	3	13	3	12	--	--	1
stream restoration	6	13	4	10	2	2	1
street trees	2,543	11,207	2,481	7,571	3,467	62	169
submerged gravel wetlands	--	8	--	2	3	--	3
underground filter	--	15	--	13	2	--	--
urban tree canopy	--	63	--	--	63	--	--

Table 4. Summary of Installed Restoration BMPs in the Patuxent River Watershed.

BMP Type	Ches Bay: Lower Patuxent River Mesohaline	Ches Bay: Middle Patuxent River Oligohaline	Ches Bay: Upper Patuxent River Tidal Fresh	Ches Bay: Western Branch Patuxent River Tidal Fresh	Local: Lower Patuxent	Local: Middle Patuxent	Local: Rocky Gorge	Local: Upper Patuxent
bioretention	--	1	8	5	1	1	--	4
bio-swale	--	--	1	1	--	--	--	1
disconnection of rooftop runoff	--	--	--	21	--	--	--	--
extended detention structure, wet	--	--	--	2	--	--	--	--

BMP Type	Ches Bay: Lower Patuxent River Mesohaline	Ches Bay: Middle Patuxent River Oligohaline	Ches Bay: Upper Patuxent River Tidal Fresh	Ches Bay: Western Branch Patuxent River Tidal Fresh	Local: Lower Patuxent	Local: Middle Patuxent	Local: Rocky Gorge	Local: Upper Patuxent
grass swale	--	--	1	--	--	--	--	1
impervious surface elimination (to pervious)	--	--	6	5	--	--	--	5
micro-bioretention	1	--	11	16	1	1	--	9
outfall stabilization	--	--	1	--	--	--	--	--
permeable pavements	--	--	3	4	--	--	--	2
planting trees or forestation on previous urban	--	1	1	6	--	--	--	--
rain gardens	--	--	6	3	--	--	--	4
rainwater harvesting	--	1	8	18	--	--	--	5
retention pond (wet pond)	--	--	14	28	--	--	--	9
sand filter	--	--	1	4	--	--	--	1
shoreline stabilization	--	4	--	--	4	--	--	--
stream restoration	--	3	14	14	3	--	2	9
street trees	10	41	7,964	18,999	31	361	86	5,231
submerged gravel wetlands	--	--	1	--	--	--	--	1

Table 5. Summary of Installed Restoration BMPs in the Mattawoman Creek, Piscataway Creek, and Potomac River Watersheds.

BMP Type	Ches Bay: Mattawoman Creek Tidal Fresh	Ches Bay: Piscataway Creek Tidal Fresh	Ches Bay: Lower Potomac River Mesohaline Maryland	Ches Bay: Upper Potomac River Tidal Fresh DC	Ches Bay: Upper Potomac River Tidal Fresh Maryland	Local: Mattawoman	Local: Piscataway
bioretention	--	1	--	2	4	--	--
disconnection of non-rooftop runoff	--	--	--	12	4	--	--
disconnection of rooftop runoff	--	1	--	5	14	--	--
extended detention structure, wet				1			
forest conservation	--	1	--	--	--	--	1
grass swale	--	--	--	--	1	--	--

BMP Type	Ches Bay: Mattawoman Creek Tidal Fresh	Ches Bay: Piscataway Creek Tidal Fresh	Ches Bay: Lower Potomac River Mesohaline Maryland	Ches Bay: Upper Potomac River Tidal Fresh DC	Ches Bay: Upper Potomac River Tidal Fresh Maryland	Local: Mattawoman	Local: Piscataway
impervious surface elimination (to forest)	--	--	--	--	1	--	--
impervious surface elimination (to pervious)	--	3	--	5	4	--	--
micro-bioretention	--	3	--	10	8	--	2
micropool extended detention pond	--	--	--	--	1	--	--
outfall stabilization	--	2	--	1	1	--	2
permeable pavements	--	1	--	3	1	--	--
planting trees or forestation on previous urban	--	1	--	--	1	--	1
rain gardens	--	--	--	1	5	--	--
rainwater harvesting	--	7	--	1	11	--	--
retention pond (wet pond)	4	9	--	--	7	4	1
sand filter	--	5	--	1	3	--	1
stream restoration	1	26	--	2	6	1	24
street trees	1,766	11,105	--	1,418	6,701	1,766	5,367
submerged gravel wetlands	--	2	--	--	1	--	2

The tables in the remainder of this subsection are modeled after the summary table from the TIPP Tool. The explanation of the terms in the table are below.

- **Impairment Baseline Load**: This load is the pollutant load from the land surface at baseline period. It includes contributions from restoration BMPs installed prior to the TMDL (2010 for Chesapeake Bay TMDL and varies by local TMDL [**Table 2**]) and developer BMPs installed prior to the date of the land use (2015).
- **Target Reduction %**: This is the percent reduction required to meet TMDL targets. This value was obtained from MDE's TMDL Data Center website wasteload allocation search function.
- **Target Load**: This is the load that is met once load reductions specified in the TMDLs are met. This is determined using the baseline load and required percent reduction from the TMDL Data Center.
- **Total Reduction Required**: This is the load that will need to be reduced through restoration BMPs. This load is the difference between the baseline load and the target load.
- **Permit Load**: This is the load at the beginning of the current permit. For this report, this is considered the 2014 4th generation permit. This accounts for load reductions from restoration BMPs installed after the TMDL was developed to the permit date.

- **Permit % Reduction**: This is the percent of loads reduced from the baseline load to the permit load.
- **Progress Load**: This is the current load accounting for these BMPs and is the difference between baseline loads and the loads treated by restoration BMPs after the date of the TMDL.
- **Progress % Reduction**: This is the percent of loads reduced from the baseline load to the progress load.
- **Milestone Total Load after Implementation**: This value is the load reduction from restoration BMPs not yet constructed but in the planning or design phases. These BMPs are reported in the County's Financial Assurance Plan (FAP), which contains BMPs for the next 4 years. There are two milestone periods. For this report, they are considered 2026 and 2028 to correspond to the FAP.
- **Implementation % Reduction**: This is the percent of loads reduced from the baseline load to the milestone load.

2.2.1 Chesapeake Bay TMDL – Summary of Completed Actions

This section contains a summary of restoration activities toward meeting the Chesapeake Bay TMDL. Tables are organized by major watershed. There is one Chesapeake Bay TMDL (Middle Patuxent Oligohaline total phosphorus) that has reached its target load reductions. The County will discuss TMDLs that appear to be met through BMP reductions with MDE as to the next steps and direction.

Anacostia River

Table 6. Summary of Progress for Chesapeake Bay TMDL – Anacostia Tidal Fresh DC.

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
Baseline	-	-
Impairment Baseline Load	50,718	5,444
Target Reduction %	26.2%	41.2%
Target Load	37,430	3,201
Total Reduction Required	13,288	2,243
Permit	-	-
Permit Load	49,458	5,004
Permit % Reduction	2.5%	8.1%
Progress	-	-
Total Progress Load	49,285	4,985
Progress % Reduction	2.8%	8.4%
Milestone 1 (BMPs by 2025)	-	-
Total Load after Implementation	49,136	4,959
Implementation % Reduction	3.1%	8.9%
Milestone 2 (BMPs by 2027)	-	-
Total Load after Implementation	49,136	4,959
Implementation % Reduction	3.1%	8.9%

Table 7. Summary of Progress for Chesapeake Bay TMDL – Anacostia Tidal Fresh MD.

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
Baseline	-	-
Impairment Baseline Load	122,235	19,204
Target Reduction %	18.1%	39.3%
Target Load	100,110	11,657
Total Reduction Required	22,124	7,547
Permit	-	-
Permit Load	112,341	16,512
Permit % Reduction	8.1%	14.0%
Progress	-	-
Total Progress Load	113,424	16,771
Progress % Reduction	7.3%	12.8%
Milestone 1 (BMPs by 2025)	-	-
Total Load after Implementation	109,805	14,318
Implementation % Reduction	10.2%	25.4%
Milestone 2 (BMPs by 2027)	-	-
Total Load after Implementation	109,805	14,318
Implementation % Reduction	10.2%	25.4%

Mattawoman Creek

Table 8. Summary of Progress for Chesapeake Bay TMDL – Mattawoman Creek.

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
Baseline	-	-
Impairment Baseline Load	13,849	2,361
Target Reduction %	10.3%	32.7%
Target Load	12,422	1,589
Total Reduction Required	1,426	771.9
Permit	-	-
Permit Load	12,772	1,801
Permit % Reduction	7.8%	23.7%
Progress	-	-
Total Progress Load	12,772	1,801
Progress % Reduction	7.8%	23.7%
Milestone 1 (BMPs by 2025)	-	-
Total Load after Implementation	12,772	1,801

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
Implementation % Reduction	7.8%	23.7%
Milestone 2 (BMPs by 2027)	-	-
Total Load after Implementation	12,772	1,801
Implementation % Reduction	7.8%	23.7%

Patuxent River

Table 9. Summary of Progress for Chesapeake Bay TMDL – Lower Patuxent Mesohaline.

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
Baseline	-	-
Impairment Baseline Load	3,274	625
Target Reduction %	26.2%	41.9%
Target Load	2,416	363
Total Reduction Required	857.7	262
Permit	-	-
Permit Load	3,270	624
Permit % Reduction	0.1%	0.1%
Progress	-	-
Total Progress Load	3,270	624
Progress % Reduction	0.1%	0.1%
Milestone 1 (BMPs by 2025)	-	-
Total Load after Implementation	3,270	624
Implementation % Reduction	0.1%	0.1%
Milestone 2 (BMPs by 2027)	-	-
Total Load after Implementation	3,270	624
Implementation % Reduction	0.1%	0.1%

Table 10. Summary of Progress for Chesapeake Bay TMDL – Middle Patuxent Oligohaline.

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
Baseline	-	-
Impairment Baseline Load	13,701	1,925
Target Reduction %	26.9%	43.6%
Target Load	10,016	1,086
Total Reduction Required	3,686	839
Permit	-	-

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
Permit Load	11,811	736
Permit % Reduction	13.8%	61.8%
Progress	-	-
Total Progress Load	11,811	736
Progress % Reduction	13.8%	61.8%
Milestone 1 (BMPs by 2025)	-	-
Total Load after Implementation	11,811	736
Implementation % Reduction	13.8%	61.8%
Milestone 2 (BMPs by 2027)	-	-
Total Load after Implementation	11,811	736
Implementation % Reduction	13.8%	61.8%

Note: The County will discuss TMDLs that appear to be met through BMP reductions with MDE.

Table 11. Summary of Progress for Chesapeake Bay TMDL – Upper Tidal Fresh Patuxent.

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
Baseline	-	-
Impairment Baseline Load	82,914	15,568
Target Reduction %	17.5%	32.1%
Target Load	68,404	10,571
Total Reduction Required	14,510	4,997
Permit	-	-
Permit Load	76,002	13,017
Permit % Reduction	8.3%	16.4%
Progress	-	-
Total Progress Load	76,002	13,017
Progress % Reduction	8.3%	16.4%
Milestone 1 (BMPs by 2025)	-	-
Total Load after Implementation	76,002	13,017
Implementation % Reduction	8.3%	16.4%
Milestone 2 (BMPs by 2027)	-	-
Total Load after Implementation	76,002	13,017
Implementation % Reduction	8.3%	16.4%

Piscataway Creek

Table 12. Summary of Progress for Chesapeake Bay TMDL – Piscataway.

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
Baseline	-	-
Impairment Baseline Load	85,643	70,246
Target Reduction %	22.2%	41.0%
Target Load	66,631	41,445
Total Reduction Required	19,013	28,801
Permit	-	-
Permit Load	74,957	64,901
Permit % Reduction	12.5%	7.6%
Progress	-	-
Total Progress Load	74,957	64,901
Progress % Reduction	12.5%	7.6%
Milestone 1 (BMPs by 2025)	-	-
Total Load after Implementation	74,953	64,896
Implementation % Reduction	12.5%	7.6%
Milestone 2 (BMPs by 2027)	-	-
Total Load after Implementation	74,814	64,753
Implementation % Reduction	12.6%	7.8%

Potomac River

Table 13. Summary of Progress for Chesapeake Bay TMDL – Potomac River Lower Mesohaline.

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
Baseline	-	-
Impairment Baseline Load	2,347	441
Target Reduction %	16.1%	36.7%
Target Load	1,969	279
Total Reduction Required	377.9	162
Permit	-	-
Permit Load	2,347	441
Permit % Reduction	0.0%	0.0%
Progress	-	-
Total Progress Load	2,347	441
Progress % Reduction	0.0%	0.0%
Milestone 1 (BMPs by 2025)	-	-
Total Load after Implementation	2,347	441

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
Implementation % Reduction	0.0%	0.0%
Milestone 2 (BMPs by 2027)	-	-
Total Load after Implementation	2,347	441
Implementation % Reduction	0.0%	0.0%

Table 14. Summary of Progress for Chesapeake Bay TMDL – Potomac River Upper Tidal Fresh DC.

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
Baseline	-	-
Impairment Baseline Load	27,448	30,200
Target Reduction %	26.5%	41.8%
Target Load	20,174	17,576
Total Reduction Required	7,274	12,624
Permit	-	-
Permit Load	27,356	30,087
Permit % Reduction	0.3%	0.4%
Progress	-	-
Total Progress Load	26,842	29,322
Progress % Reduction	2.2%	2.9%
Milestone 1 (BMPs by 2025)	-	-
Total Load after Implementation	26,584	29,066
Implementation % Reduction	3.1%	3.8%
Milestone 2 (BMPs by 2027)	-	-
Total Load after Implementation	26,584	29,066
Implementation % Reduction	3.1%	3.8%

Table 15. Summary of Progress for Chesapeake Bay TMDL – Potomac River Upper Tidal Fresh MD.

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
Baseline	-	-
Impairment Baseline Load	74,774	10,437
Target Reduction %	26.4%	42.1%
Target Load	55,034	6,043
Total Reduction Required	19,740	4,394
Permit	-	-
Permit Load	72,571	9,937

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
Permit % Reduction	2.9%	4.8%
Progress	-	-
Total Progress Load	72,571	9,937
Progress % Reduction	2.9%	4.8%
Milestone 1 (BMPs by 2025)	-	-
Total Load after Implementation	66,003	8,284
Implementation % Reduction	11.7%	20.6%
Milestone 2 (BMPs by 2027)	-	-
Total Load after Implementation	56,195	5,016
Implementation % Reduction	24.8%	51.9%

Western Branch

Table 16. Summary of Progress for Chesapeake Bay TMDL – Western Branch of Patuxent River.

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
Baseline	-	-
Impairment Baseline Load	103,293	44,653
Target Reduction %	20.2%	35.3%
Target Load	82,428	28,891
Total Reduction Required	20,865	15,763
Permit	-	-
Permit Load	96,326	38,805
Permit % Reduction	6.7%	13.1%
Progress	-	-
Total Progress Load	94,802	37,701
Progress % Reduction	8.2%	15.6%
Milestone 1 (BMPs by 2025)	-	-
Total Load after Implementation	93,054	35,628
Implementation % Reduction	9.9%	20.2%
Milestone 2 (BMPs by 2027)	-	-
Total Load after Implementation	93,054	35,628
Implementation % Reduction	9.9%	20.2%

2.2.2 Local TMDLs – Summary of Completed Actions

This section contains a summary of restoration activities towards meeting the local nutrient and sediment TMDLs. Tables are organized by major watershed. There are three local TMDLs (Upper

Patuxent sediment, Lower Patuxent sediment, Rocky Gorge total phosphorus) that have reached their target load reductions. The County will discuss TMDLs that appear to be met through BMP reductions with MDE as to the next steps and direction.

The MDE's *General Guidance for Local TMDL (Total Maximum Daily Load) Stormwater Wasteload Allocation (SW-WLA) Watershed Implementation Plans (WIPs)* provides guidance on attaining SW-WLAs. When load reductions have been shown to be met through BMP implementation and using the TIPP tool to calculate load reductions, MDE states that "monitoring plans should be developed to feed into MDE's biological stressor identification (BSID) and biological assessment methodologies. The BSID estimates the likelihood that an aquatic life impairment (as defined by benthic index of biotic integrity (BIBI) and fish index if biotic integrity (FIBI) scores) is caused by a specific type of stressor." MDE has guidance on attainment plans once attainment of the SW-WLA is shown through water quality data. For monitoring, MDE refers municipalities to its water quality assessment methodologies.

Anacostia River

Table 17. Summary of Progress for Anacostia River Local TMDLs – Tidal (not incl. loads from Watts Br & LBC).

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
Baseline	--	--	--
Impairment Baseline Load	20,174	2,471	6,926,180
Target Reduction %	81.0%	81.2%	85.0%
Target Load	3,833	464.5	1,038,927
Total Reduction Required	16,341	2,006	5,887,253
Permit	-	-	-
Permit Load	19,684	2,351	6,622,817
Permit % Reduction	2.4%	4.9%	4.4%
Progress	-	-	-
Total Progress Load	19,684	2,351	6,622,817
Progress % Reduction	2.4%	4.9%	4.4%
Milestone 1 (BMPs by 2025)	-	-	-
Total Load after Implementation	19,684	2,351	6,622,817
Implementation % Reduction	2.4%	4.9%	4.4%
Milestone 2 (BMPs by 2027)	-	-	-
Total Load after Implementation	19,684	2,351	6,622,817
Implementation % Reduction	2.4%	4.9%	4.4%

Table 18. Summary of Progress for Anacostia River Local TMDLs – Non-Tidal: Lower Beaverdam Creek.

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
Baseline	--	--	--

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
Impairment Baseline Load	55,164	6,738	18,408,665
Target Reduction %	81.0%	81.2%	85.0%
Target Load	10,481	1,267	2,761,300
Total Reduction Required	44,683	5,471	15,647,365
Permit	-	-	-
Permit Load	53,972	6,312	17,667,400
Permit % Reduction	2.2%	6.3%	4.0%
Progress	-	-	-
Total Progress Load	53,972	6,312	17,667,170
Progress % Reduction	2.2%	6.3%	4.0%
Milestone 1 (BMPs by 2025)	-	-	-
Total Load after Implementation	53,787	6,275	17,551,795
Implementation % Reduction	2.5%	6.9%	4.7%
Milestone 2 (BMPs by 2027)	-	-	-
Total Load after Implementation	53,787	6,275	17,551,795
Implementation % Reduction	2.5%	6.9%	4.7%

Table 19. Summary of Progress for Anacostia River Local TMDLs – Non-Tidal: Northeast Branch.

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
Baseline	--	--	--
Impairment Baseline Load	103,179	12,838	34,022,180
Target Reduction %	81.0%	81.2%	85.0%
Target Load	19,604	2,413	5,103,327
Total Reduction Required	83,575	10,424	28,918,853
Permit	-	-	-
Permit Load	93,842	10,638	26,969,127
Permit % Reduction	9.0%	17.1%	20.7%
Progress	-	-	-
Total Progress Load	93,841	10,638	26,968,818
Progress % Reduction	9.1%	17.1%	20.7%
Milestone 1 (BMPs by 2025)	-	-	-
Total Load after Implementation	92,292	9,237	21,856,463
Implementation % Reduction	10.6%	28.1%	35.8%
Milestone 2 (BMPs by 2027)	-	-	-
Total Load after Implementation	92,292	9,237	21,856,463
Implementation % Reduction	10.6%	28.1%	35.8%

Table 20. Summary of Progress for Anacostia River Local TMDLs – Non-Tidal: Northwest Branch.

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
Baseline	--	--	--
Impairment Baseline Load	36,199	4,616	12,000,029
Target Reduction %	81.0%	81.2%	85.0%
Target Load	6,878	867.9	1,800,004
Total Reduction Required	29,321	3,749	10,200,025
Permit	-	-	-
Permit Load	33,107	4,142	11,644,584
Permit % Reduction	8.5%	10.3%	3.0%
Progress	-	-	-
Total Progress Load	33,107	4,142	11,644,584
Progress % Reduction	8.5%	10.3%	3.0%
Milestone 1 (BMPs by 2025)	-	-	-
Total Load after Implementation	31,345	3,267	8,723,296
Implementation % Reduction	13.4%	29.2%	27.3%
Milestone 2 (BMPs by 2027)	-	-	-
Total Load after Implementation	31,345	3,267	8,723,296
Implementation % Reduction	13.4%	29.2%	27.3%

Table 21. Summary of Progress for Anacostia River Local TMDLs – Non-Tidal: Watts Branch.

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
Baseline	--	--	--
Impairment Baseline Load	7,968	1,029	2,639,407
Target Reduction %	81.0%	81.2%	85.0%
Target Load	1,514	193.4	395,911
Total Reduction Required	6,454	835.5	2,243,496
Permit	-	-	-
Permit Load	7,591	827.7	1,932,293
Permit % Reduction	4.7%	19.6%	26.8%
Progress	-	-	-
Total Progress Load	7,376	799.8	1,373,693
Progress % Reduction	7.4%	22.3%	48.0%
Milestone 1 (BMPs by 2025)	-	-	-
Total Load after Implementation	7,376	799.8	1,373,693
Implementation % Reduction	7.4%	22.3%	48.0%
Milestone 2 (BMPs by 2027)	-	-	-

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
Total Load after Implementation	7,376	799.8	1,373,693
Implementation % Reduction	7.4%	22.3%	48.0%

Mattawoman Creek

Table 22. Summary of Progress for Mattawoman Local TMDLs.

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
Baseline	--	--
Impairment Baseline Load	17,331	2,361
Target Reduction %	54.0%	47.0%
Target Load	7,972	1,251
Total Reduction Required	9,359	1,109
Permit	-	-
Permit Load	15,984	1,801
Permit % Reduction	7.8%	23.7%
Progress	-	-
Total Progress Load	15,984	1,801
Progress % Reduction	7.8%	23.7%
Milestone 1 (BMPs by 2025)	-	-
Total Load after Implementation	15,984	1,801
Implementation % Reduction	7.8%	23.7%
Milestone 2 (BMPs by 2027)	-	-
Total Load after Implementation	15,984	1,801
Implementation % Reduction	7.8%	23.7%

Piscataway Creek

Table 23. Summary of Progress for Piscataway Creek Local TMDL.

Label	Total Suspended Solids (lbs./year)
Baseline	--
Impairment Baseline Load	34,114,056
Target Reduction %	51.0%
Target Load	16,715,888
Total Reduction Required	17,398,169
Permit	-
Permit Load	24,357,266

Label	Total Suspended Solids (lbs./year)
Permit % Reduction	28.6%
Progress	-
Total Progress Load	24,357,266
Progress % Reduction	28.6%
Milestone 1 (BMPs by 2025)	-
Total Load after Implementation	24,354,742
Implementation % Reduction	28.6%
Milestone 2 (BMPs by 2027)	-
Total Load after Implementation	23,747,142
Implementation % Reduction	30.4%

Rocky Gorge

Table 24. Summary of Progress for Rocky Gorge Local Phosphorus TMDL.

Label	Total Phosphorus (lbs./year)
Baseline	--
Impairment Baseline Load	83.6
Target Reduction %	15.0%
Target Load	71.1
Total Reduction Required	12.5
Permit	-
Permit Load	0.0
Permit % Reduction	185.4%
Progress	-
Total Progress Load	0.0
Progress % Reduction	185.4%
Milestone 1 (BMPs by 2025)	-
Total Load after Implementation	0.0
Implementation % Reduction	185.4%
Milestone 2 (BMPs by 2027)	-
Total Load after Implementation	0.0
Implementation % Reduction	185.4%

Note: The County will discuss TMDLs that appear to be met through BMP reductions with MDE.

Lower Patuxent River

Table 25. Summary of Progress for Lower Patuxent Local TMDL.

Label	Total Suspended Solids (lbs./year)
Baseline	--
Impairment Baseline Load	5,916,475
Target Reduction %	61.0%
Target Load	2,307,425
Total Reduction Required	3,609,050
Permit	-
Permit Load	1,120,162
Permit % Reduction	81.1%
Progress	-
Total Progress Load	1,120,162
Progress % Reduction	81.1%
Milestone 1 (BMPs by 2025)	-
Total Load after Implementation	1,120,162
Implementation % Reduction	81.1%
Milestone 2 (BMPs by 2027)	-
Total Load after Implementation	1,120,162
Implementation % Reduction	81.1%

Note: The County will discuss TMDLs that appear to be met through BMP reductions with MDE.

Middle Patuxent River

Table 26. Summary of Progress for Middle Patuxent Local TMDL.

Label	Total Suspended Solids (lbs./year)
Baseline	--
Impairment Baseline Load	6,452,599
Target Reduction %	56.0%
Target Load	2,839,143
Total Reduction Required	3,613,455
Permit	-
Permit Load	6,443,263
Permit % Reduction	0.1%
Progress	-
Total Progress Load	6,443,263
Progress % Reduction	0.1%
Milestone 1 (BMPs by 2025)	-
Total Load after Implementation	6,443,263

Label	Total Suspended Solids (lbs./year)
Implementation % Reduction	0.1%
Milestone 2 (BMPs by 2027)	-
Total Load after Implementation	6,443,263
Implementation % Reduction	0.1%

Upper Patuxent River

Table 27. Summary of Progress for Upper Patuxent Local TMDL.

Label	Total Suspended Solids (lbs./year)
Baseline	--
Impairment Baseline Load	17,045,243
Target Reduction %	11.4%
Target Load	15,102,085
Total Reduction Required	1,943,158
Permit	-
Permit Load	11,926,569
Permit % Reduction	30.0%
Progress	-
Total Progress Load	11,926,569
Progress % Reduction	30.0%
Milestone 1 (BMPs by 2025)	-
Total Load after Implementation	11,926,569
Implementation % Reduction	30.0%
Milestone 2 (BMPs by 2027)	-
Total Load after Implementation	11,926,569
Implementation % Reduction	30.0%

Note: The County will discuss TMDLs that appear to be met through BMP reductions with MDE.

2.3 IV.F.3.b. Net Pollution Reduction Achieved Annually and Cumulatively

b. An analysis and table summary of the net pollutant reductions achieved annually and cumulatively for each TMDL stormwater WLA;

Sections 2.3.1 and 2.3.2 present the annual and cumulative progress (Permit condition IV.F.3.b) for the Chesapeake Bay and local nutrient and sediment TMDLs allocation watershed divisions. Annual progress is based on the County's fiscal year (July to June).

2.3.1 Chesapeake Bay TMDLs – Annual/Cumulative Pollution Reductions

This section contains the annual and cumulative progress toward meeting the Chesapeake Bay TMDL. Tables are organized by major watershed.

Anacostia River

Table 28. Annual Progress for Chesapeake Bay TMDL – Anacostia Tidal Fresh DC.

Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
TMDL Issuance Date	2010	2010
Target Load Reduction	13,288	2,243
3rd Generation Permit		
BMP Reduction – FY 2010	133.2	104.9
BMP Reduction – FY 2011	23.4	10.3
BMP Reduction – FY 2012	0.00	0.00
BMP Reduction – FY 2013	26.0	2.75
4th & 5th Generation Permit		
BMP Reduction – FY 2014	0.02	0.00
BMP Reduction – FY 2015	0.26	0.03
BMP Reduction – FY 2016	3.47	0.41
BMP Reduction – FY 2017	231.1	36.9
BMP Reduction – FY 2018	290.8	55.2
BMP Reduction – FY 2019	1.90	0.13
BMP Reduction – FY 2020	130.3	24.1
BMP Reduction – FY 2021	360.4	173.9
BMP Reduction – FY 2022	25.4	19.3
BMP Reduction – FY 2023	34.1	11.3
BMP Reduction – FY 2024	0.00	0.00
BMP Reduction – FY 2025	173.5	19.7
Total BMP Reduction	**1,434**	**459.0**
Percent Reduction of Target	**10.8%**	**20.5%**

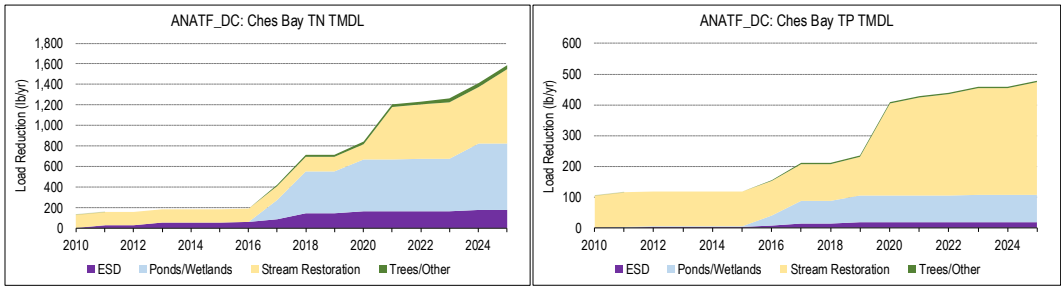


Figure 12. Cumulative Reductions for Chesapeake Bay TMDL – Anacostia Tidal Fresh DC.

Table 29. Annual Progress for Chesapeake Bay TMDL – Anacostia Tidal Fresh MD.

Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
TMDL Issuance Date	2010	2010
Target Load Reduction	22,124	7,547
3rd Generation Permit		
BMP Reduction – FY 2010	61.1	15.8
BMP Reduction – FY 2011	8.35	1.27
BMP Reduction – FY 2012	0.00	0.00
BMP Reduction – FY 2013	99.6	96.5
4th & 5th Generation Permit		
BMP Reduction – FY 2014	1.02	0.13
BMP Reduction – FY 2015	29.6	31.6
BMP Reduction – FY 2016	10.7	2.28
BMP Reduction – FY 2017	1,026	262.1
BMP Reduction – FY 2018	3,734	715.0
BMP Reduction – FY 2019	94.9	22.9
BMP Reduction – FY 2020	421.4	102.9
BMP Reduction – FY 2021	2,878	932.9
BMP Reduction – FY 2022	278.4	213.2
BMP Reduction – FY 2023	217.4	52.8
BMP Reduction – FY 2024	18.7	3.18
BMP Reduction – FY 2025	1,013	239.9
Total BMP Reduction	**9,893**	**2,692**
Percent Reduction of Target	**44.7%**	**35.7%**

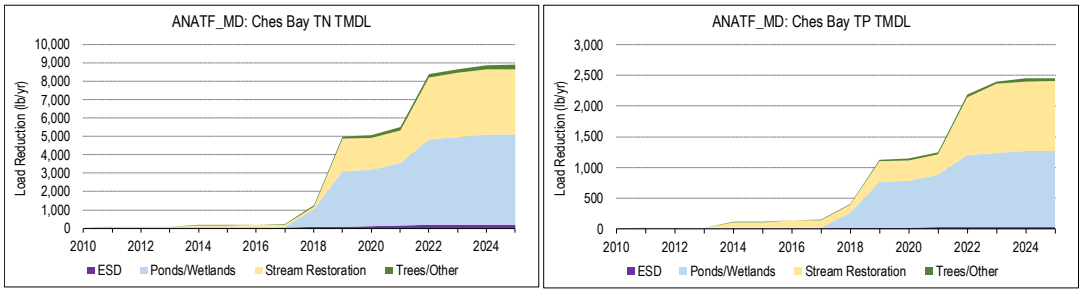


Figure 13. Cumulative Reductions for Chesapeake Bay TMDL – Anacostia Tidal Fresh MD.

Mattawoman Creek

Table 30. Annual Progress for Chesapeake Bay TMDL - Mattawoman Creek Watershed.

Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
TMDL Issuance Date	2010	2010
Target Load Reduction	1,426	771.9
3rd Generation Permit		
BMP Reduction – FY 2010	0.00	0.00
BMP Reduction – FY 2011	0.00	0.00
BMP Reduction – FY 2012	0.00	0.00
BMP Reduction – FY 2013	0.00	0.00
4th & 5th Generation Permit		
BMP Reduction – FY 2014	0.00	0.00
BMP Reduction – FY 2015	0.00	0.00
BMP Reduction – FY 2016	0.00	0.00
BMP Reduction – FY 2017	10.9	2.22
BMP Reduction – FY 2018	396.2	113.8
BMP Reduction – FY 2019	0.00	0.00
BMP Reduction – FY 2020	87.7	25.7
BMP Reduction – FY 2021	295.2	335.0
BMP Reduction – FY 2022	0.00	0.00
BMP Reduction – FY 2023	8.29	1.67
BMP Reduction – FY 2024	0.00	0.00
BMP Reduction – FY 2025	278.5	81.2
Total BMP Reduction	**1,077**	**560.0**
Percent Reduction of Target	**75.5%**	**72.5%**

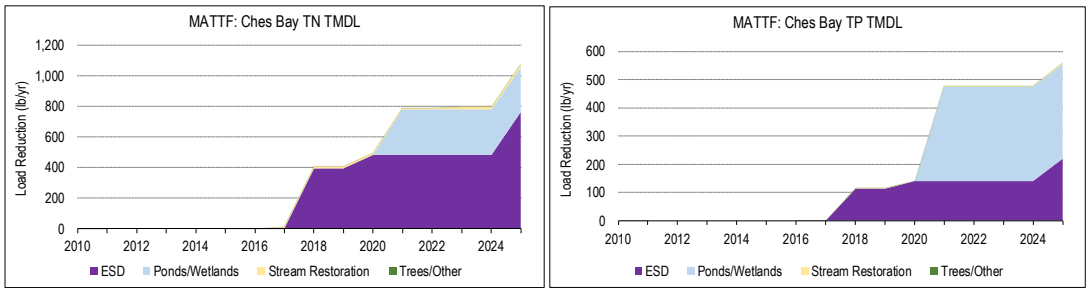


Figure 14. Cumulative Reductions for Chesapeake Bay TMDL - Mattawoman Creek Watershed.

Patuxent River

Table 31. Annual Progress for Chesapeake Bay TMDL - Patuxent River Lower Mesohaline.

Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
TMDL Issuance Date	2010	2010
Target Load Reduction	857.7	261.7
3rd Generation Permit		
BMP Reduction – FY 2010	0.00	0.00
BMP Reduction – FY 2011	0.00	0.00
BMP Reduction – FY 2012	0.00	0.00
BMP Reduction – FY 2013	0.00	0.00
4th & 5th Generation Permit		
BMP Reduction – FY 2014	0.00	0.00
BMP Reduction – FY 2015	0.00	0.00
BMP Reduction – FY 2016	0.00	0.00
BMP Reduction – FY 2017	0.09	0.02
BMP Reduction – FY 2018	3.17	0.66
BMP Reduction – FY 2019	0.00	0.00
BMP Reduction – FY 2020	0.00	0.00
BMP Reduction – FY 2021	0.00	0.00
BMP Reduction – FY 2022	0.00	0.00
BMP Reduction – FY 2023	0.06	0.01
BMP Reduction – FY 2024	0.00	0.00
BMP Reduction – FY 2025	0.00	0.00
Total BMP Reduction	**3.33**	**0.69**
Percent Reduction of Target	**0.4%**	**0.3%**

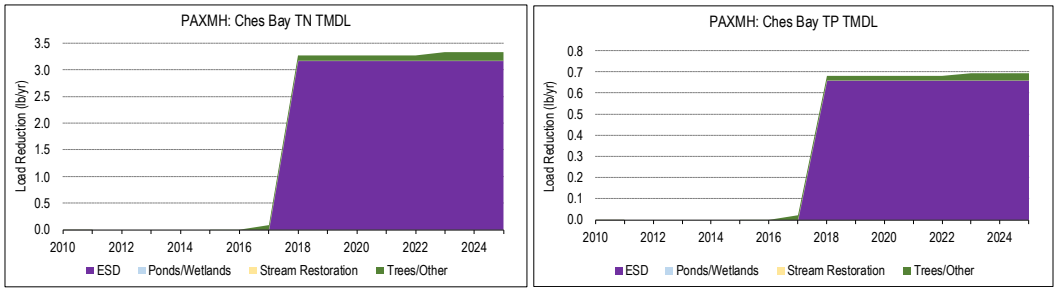


Figure 15. Cumulative Reductions for Chesapeake Bay TMDL - Patuxent River Lower Mesohaline.

Table 32. Annual Progress for Chesapeake Bay TMDL - Patuxent River Middle Oligohaline.

Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
TMDL Issuance Date	2010	2010
Target Load Reduction	3,685	839.4
3rd Generation Permit		
BMP Reduction – FY 2010	0.00	0.00
BMP Reduction – FY 2011	0.00	0.00
BMP Reduction – FY 2012	0.00	0.00
BMP Reduction – FY 2013	0.00	0.00
4th & 5th Generation Permit		
BMP Reduction – FY 2014	0.00	0.00
BMP Reduction – FY 2015	0.07	0.01
BMP Reduction – FY 2016	0.00	0.00
BMP Reduction – FY 2017	143.6	21.1
BMP Reduction – FY 2018	5.79	0.88
BMP Reduction – FY 2019	0.00	0.00
BMP Reduction – FY 2020	0.00	0.00
BMP Reduction – FY 2021	1,006	639.1
BMP Reduction – FY 2022	0.00	0.00
BMP Reduction – FY 2023	0.35	0.06
BMP Reduction – FY 2024	233.5	58.3
BMP Reduction – FY 2025	500.8	469.8
Total BMP Reduction	**1,891**	**1,189**
Percent Reduction of Target	**51.3%**	**141.7%**

Note: The County will discuss TMDLs that appear to be met through BMP reductions with MDE.

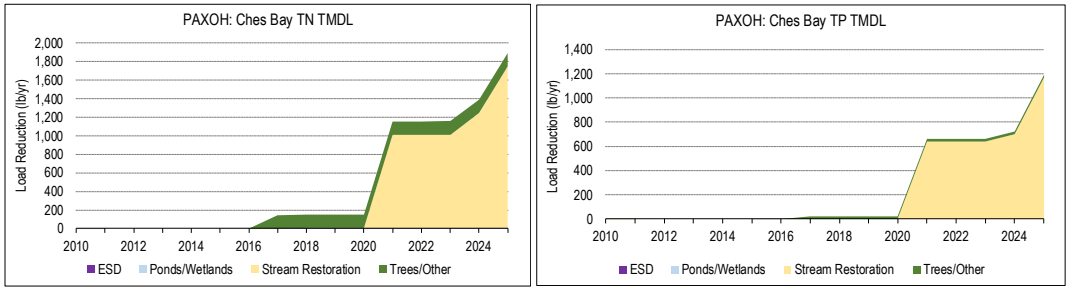


Figure 16. Cumulative Reductions for Chesapeake Bay TMDL - Patuxent River Middle Oligohaline.

Table 33. Annual Progress for Chesapeake Bay TMDL - Patuxent River Upper Tidal Fresh.

Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
TMDL Issuance Date	2010	2010
Target Load Reduction	14,510	4,997
3rd Generation Permit		
BMP Reduction – FY 2010	11.8	2.13
BMP Reduction – FY 2011	0.00	0.00
BMP Reduction – FY 2012	35.5	17.1
BMP Reduction – FY 2013	167.4	171.7
4th & 5th Generation Permit		
BMP Reduction – FY 2014	0.17	0.02
BMP Reduction – FY 2015	6.98	6.55
BMP Reduction – FY 2016	1.32	0.24
BMP Reduction – FY 2017	107.2	21.3
BMP Reduction – FY 2018	1,587	645.6
BMP Reduction – FY 2019	9.03	1.62
BMP Reduction – FY 2020	2,918	770.3
BMP Reduction – FY 2021	802.5	468.4
BMP Reduction – FY 2022	0.00	0.00
BMP Reduction – FY 2023	724.7	244.6
BMP Reduction – FY 2024	205.3	114.4
BMP Reduction – FY 2025	333.9	87.4
Total BMP Reduction	**6,912**	**2,551**
Percent Reduction of Target	**47.6%**	**51.1%**

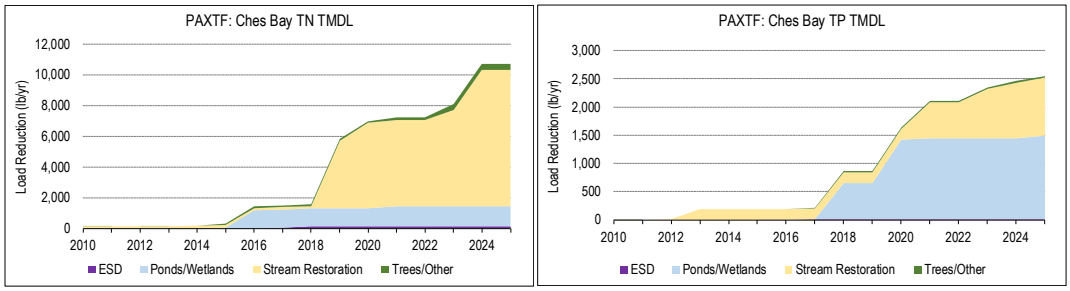


Figure 17. Cumulative Reductions for Chesapeake Bay TMDL - Patuxent River Upper Tidal Fresh.

Piscataway River

Table 34. Annual Progress for Chesapeake Bay TMDL - Piscataway Creek Watershed Tidal.

Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
TMDL Issuance Date	2010	2010
Target Load Reduction	19,013	28,801
3rd Generation Permit		
BMP Reduction – FY 2010	0.00	0.00
BMP Reduction – FY 2011	0.00	0.00
BMP Reduction – FY 2012	140.2	144.2
BMP Reduction – FY 2013	0.00	0.00
4th & 5th Generation Permit		
BMP Reduction – FY 2014	0.05	0.05
BMP Reduction – FY 2015	0.04	0.04
BMP Reduction – FY 2016	22.5	22.4
BMP Reduction – FY 2017	163.7	202.3
BMP Reduction – FY 2018	1,109	1,504
BMP Reduction – FY 2019	59.4	57.9
BMP Reduction – FY 2020	75.9	70.6
BMP Reduction – FY 2021	4,243	826.6
BMP Reduction – FY 2022	1,163	559.9
BMP Reduction – FY 2023	261.2	249.3
BMP Reduction – FY 2024	868.3	455.8
BMP Reduction – FY 2025	2,579	1,252
Total BMP Reduction	**10,686**	**5,346**
Percent Reduction of Target	**56.2%**	**18.6%**

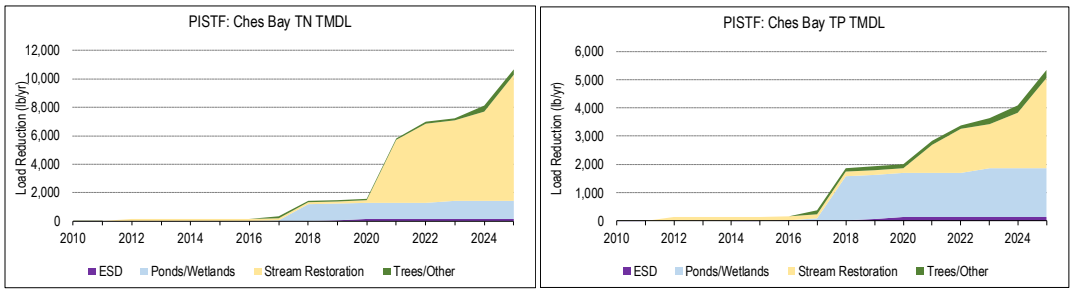


Figure 18. Cumulative Reductions for Chesapeake Bay TMDL - Piscataway Creek Watershed Tidal.

Potomac River

Table 35. Annual Progress for Chesapeake Bay TMDL - Potomac Lower Mesohaline MD.

Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
TMDL Issuance Date	2010	2010
Target Load Reduction	377.9	162.0
3rd Generation Permit		
BMP Reduction – FY 2010	0.00	0.00
BMP Reduction – FY 2011	0.00	0.00
BMP Reduction – FY 2012	0.00	0.00
BMP Reduction – FY 2013	0.00	0.00
4th & 5th Generation Permit		
BMP Reduction – FY 2014	0.00	0.00
BMP Reduction – FY 2015	0.00	0.00
BMP Reduction – FY 2016	0.00	0.00
BMP Reduction – FY 2017	0.00	0.00
BMP Reduction – FY 2018	0.00	0.00
BMP Reduction – FY 2019	0.00	0.00
BMP Reduction – FY 2020	0.00	0.00
BMP Reduction – FY 2021	0.00	0.00
BMP Reduction – FY 2022	0.00	0.00
BMP Reduction – FY 2023	0.00	0.00
BMP Reduction – FY 2024	0.00	0.00
BMP Reduction – FY 2025	0.00	0.00
Total BMP Reduction	**0.00**	**0.00**
Percent Reduction of Target	**0.0%**	**0.0%**

Table 36. Annual Progress for Chesapeake Bay TMDL - Potomac Upper Tidal Fresh DC.

Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
TMDL Issuance Date	2010	2010
Target Load Reduction	7,274	12,623
3rd Generation Permit		
BMP Reduction – FY 2010	0.00	0.00
BMP Reduction – FY 2011	0.00	0.00
BMP Reduction – FY 2012	0.00	0.00
BMP Reduction – FY 2013	0.00	0.00
4th & 5th Generation Permit		
BMP Reduction – FY 2014	0.00	0.00
BMP Reduction – FY 2015	0.12	0.16
BMP Reduction – FY 2016	0.00	0.00
BMP Reduction – FY 2017	26.5	35.5
BMP Reduction – FY 2018	0.00	0.00
BMP Reduction – FY 2019	9.8	11.2
BMP Reduction – FY 2020	48.9	55.1
BMP Reduction – FY 2021	0.00	0.00
BMP Reduction – FY 2022	0.00	0.00
BMP Reduction – FY 2023	6.5	11.2
BMP Reduction – FY 2024	0.00	0.00
BMP Reduction – FY 2025	513.7	765.2
Total BMP Reduction	**605.5**	**878.1**
Percent Reduction of Target	**8.3%**	**7.0%**

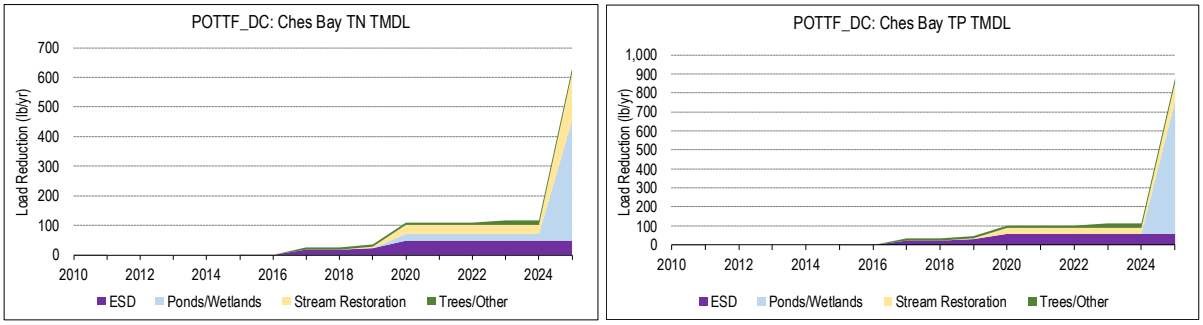


Figure 19. Cumulative Reductions for Chesapeake Bay TMDL - Potomac Upper Tidal Fresh DC.

Table 37. Annual Progress for Chesapeake Bay TMDL - Potomac Upper Tidal Fresh MD.

Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
TMDL Issuance Date	2010	2010
Target Load Reduction	19,740	4,394
3rd Generation Permit		
BMP Reduction – FY 2010	0.00	0.00
BMP Reduction – FY 2011	0.00	0.00
BMP Reduction – FY 2012	0.00	0.00
BMP Reduction – FY 2013	0.00	0.00
4th & 5th Generation Permit		
BMP Reduction – FY 2014	12.3	3.01
BMP Reduction – FY 2015	0.08	0.01
BMP Reduction – FY 2016	43.0	14.1
BMP Reduction – FY 2017	115.2	48.5
BMP Reduction – FY 2018	938.0	186.9
BMP Reduction – FY 2019	79.9	14.9
BMP Reduction – FY 2020	298.3	67.7
BMP Reduction – FY 2021	449.1	119.2
BMP Reduction – FY 2022	231.5	40.5
BMP Reduction – FY 2023	35.3	4.76
BMP Reduction – FY 2024	0.00	0.00
BMP Reduction – FY 2025	0.00	0.00
Total BMP Reduction	**2,203**	**500.0**
Percent Reduction of Target	**11.2%**	**11.4%**

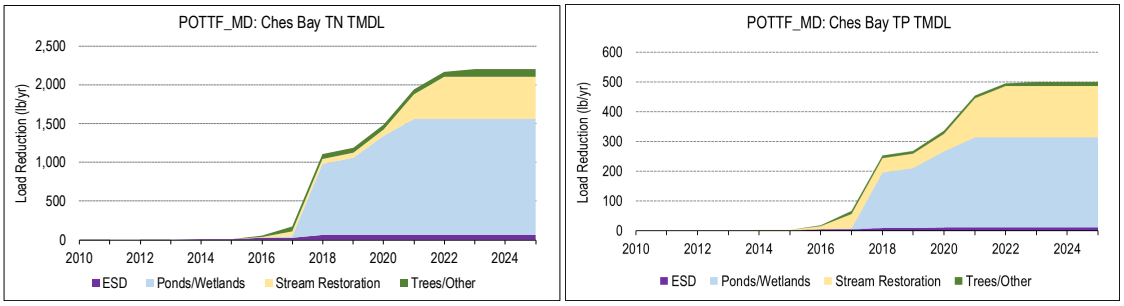


Figure 20. Cumulative Reductions for Chesapeake Bay TMDL - Potomac Upper Tidal Fresh MD.

Western Branch

Table 38. Annual Progress for Chesapeake Bay TMDL - Western Branch Watershed Tidal Fresh.

Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
TMDL Issuance Date	2010	2010
Target Load Reduction	20,865	15,763
3rd Generation Permit		
BMP Reduction – FY 2010	0.00	0.00
BMP Reduction – FY 2011	8.92	14.19
BMP Reduction – FY 2012	0.00	0.00
BMP Reduction – FY 2013	2.70	4.30
4th & 5th Generation Permit		
BMP Reduction – FY 2014	1.89	0.95
BMP Reduction – FY 2015	6.83	10.5
BMP Reduction – FY 2016	42.2	64.2
BMP Reduction – FY 2017	405.4	258.9
BMP Reduction – FY 2018	1,353	966.9
BMP Reduction – FY 2019	96.5	67.76
BMP Reduction – FY 2020	933.3	668.6
BMP Reduction – FY 2021	346.5	245.7
BMP Reduction – FY 2022	565.9	369.2
BMP Reduction – FY 2023	993.3	821.0
BMP Reduction – FY 2024	791.6	563.8
BMP Reduction – FY 2025	2,941	2,896
Total BMP Reduction	**8,490**	**6,952**
Percent Reduction of Target	**40.7%**	**44.1%**

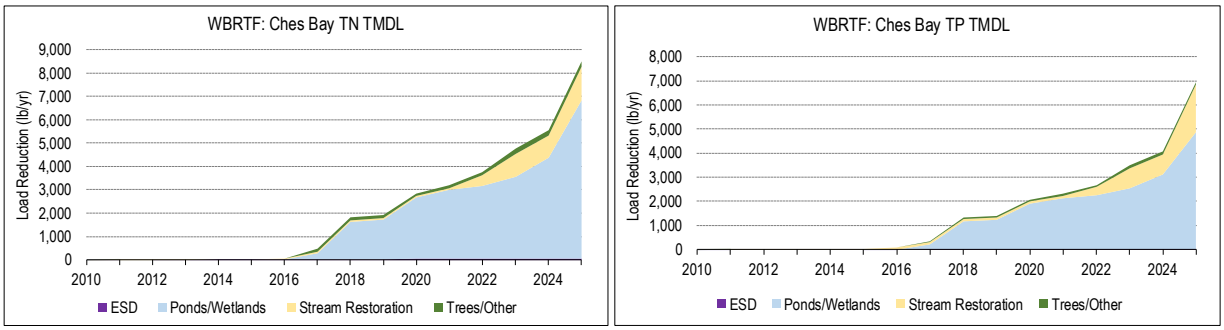


Figure 21. Cumulative Reductions for Chesapeake Bay TMDL - Western Branch Watershed Tidal Fresh.

2.3.2 Local TMDLs – Annual/Cumulative Pollution Reductions

This section contains the annual and cumulative progress towards meeting the local nutrient and sediment TMDLs. Tables are organized by major watershed.

Anacostia River

Table 39. Annual Progress for Anacostia River Local TMDLs – Tidal (Not incl. loads from Watts Br & LBC).

Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
TMDL Issuance Date	2008	2008	2007
Target Load Reduction	16,341	2,006	5,887,253
3rd Generation Permit			
BMP Reduction – FY 2008	0.00	0.00	0
BMP Reduction – FY 2009	0.00	0.00	0
BMP Reduction – FY 2010	0.00	0.00	0
BMP Reduction – FY 2011	4.86	0.59	2,315
BMP Reduction – FY 2012	0.00	0.00	0
BMP Reduction – FY 2013	0.00	0.00	0
4th & 5th Generation Permit			
BMP Reduction – FY 2014	0.70	0.09	328.0
BMP Reduction – FY 2015	0.73	0.08	412.0
BMP Reduction – FY 2016	0.60	0.09	232.0
BMP Reduction – FY 2017	40.5	7.32	23,760
BMP Reduction – FY 2018	0.55	0.08	222.0
BMP Reduction – FY 2019	0.00	0.00	0
BMP Reduction – FY 2020	2.69	0.21	1,479
BMP Reduction – FY 2021	296.3	87.4	169,561
BMP Reduction – FY 2022	141.5	24.1	104,458
BMP Reduction – FY 2023	1.68	0.23	597
BMP Reduction – FY 2014	0.00	0.00	0
BMP Reduction – FY 2025	0.00	0.00	0
Total BMP Reduction	**490.1**	**120.2**	**303,364**
Percent Reduction of Target	**3.0%**	**6.0%**	**5.2%**

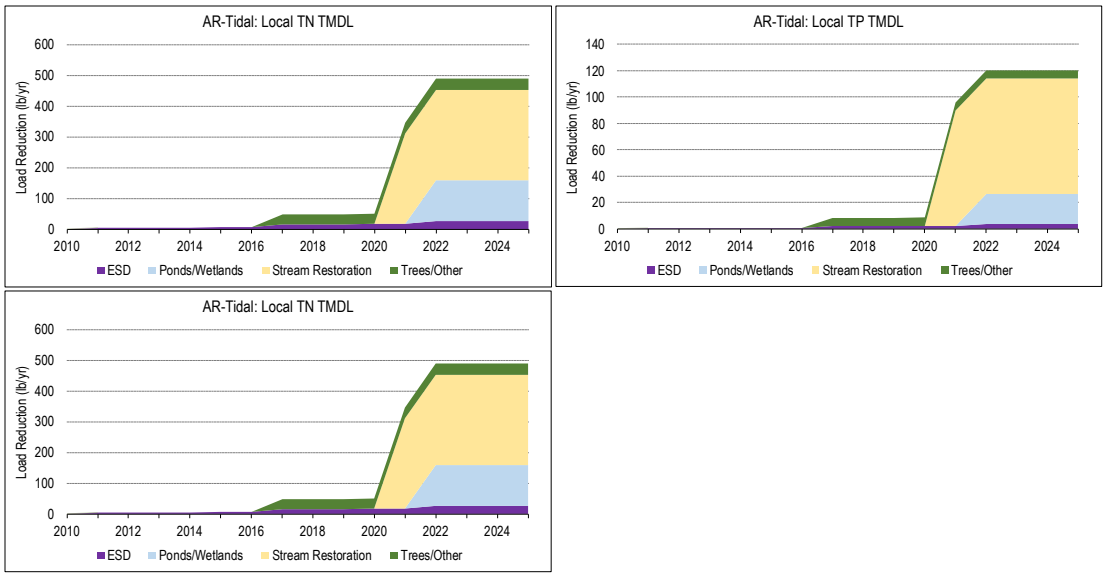
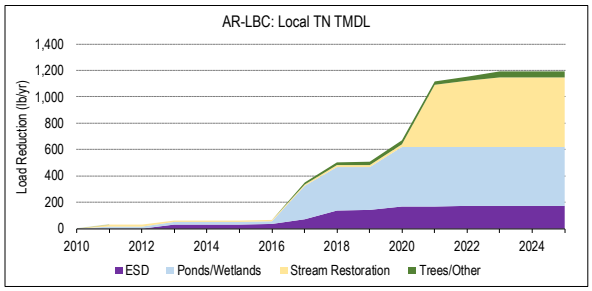


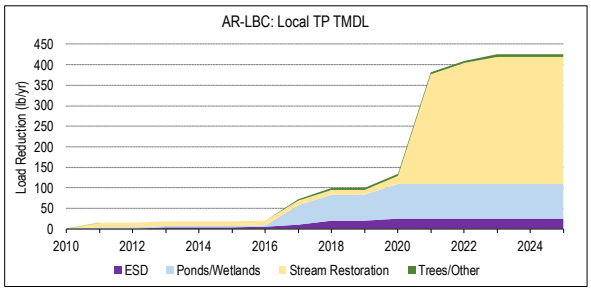
Figure 22. Cumulative Reductions for Anacostia River Local TMDLs – Tidal (not incl. loads from Watts Br & LBC).

Table 40. Annual Progress for Anacostia River Local TMDLs – Non-Tidal: Lower Beaverdam Creek.

Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
TMDL Issuance Date	2008	2008	2007
Target Load Reduction	44,683	5,471	15,647,365
3rd Generation Permit			
BMP Reduction – FY 2008	0.00	0.00	0
BMP Reduction – FY 2009	0.00	0.00	0
BMP Reduction – FY 2010	0.76	0.12	279
BMP Reduction – FY 2011	29.1	14.7	51,810
BMP Reduction – FY 2012	0.00	0.00	0
BMP Reduction – FY 2013	32.4	3.93	15,479
4th & 5th Generation Permit			
BMP Reduction – FY 2014	0.03	0.00	14.0
BMP Reduction – FY 2015	0.22	0.03	103.0
BMP Reduction – FY 2016	4.30	0.58	1,877
BMP Reduction – FY 2017	284.3	52.2	181,363
BMP Reduction – FY 2018	153.8	27.6	82,933
BMP Reduction – FY 2019	2.37	0.19	1,314
BMP Reduction – FY 2020	162.2	34.4	128,828
BMP Reduction – FY 2021	448.6	248.1	116,998
BMP Reduction – FY 2022	31.6	27.6	100,425
BMP Reduction – FY 2023	41.9	16.1	59,843
BMP Reduction – FY 2024	0.00	0.00	0
BMP Reduction – FY 2025	0.87	0.17	230

Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
Total BMP Reduction	**1,192**	**425.6**	**741,495**
Percent Reduction of Target	**2.7%**	**7.8%**	**4.7%**





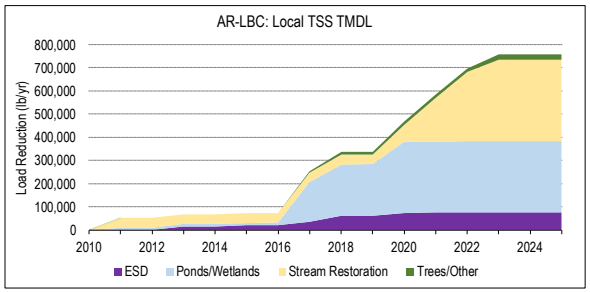


Figure 23. Cumulative Reductions for Anacostia River Local TMDLs – Non-Tidal: Lower Beaverdam Creek.

Table 41. Annual Progress for Anacostia River Local TMDLs – Non-Tidal: Northeast Branch.

Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
TMDL Issuance Date	2008	2008	2007
Target Load Reduction	83,575	10,424	28,918,853
3rd Generation Permit			
BMP Reduction – FY 2008	0.74	0.10	309.0
BMP Reduction – FY 2009	0.00	0.00	0
BMP Reduction – FY 2010	79.7	16.4	52,214
BMP Reduction – FY 2011	0.00	0.00	0
BMP Reduction – FY 2012	0.00	0.00	0
BMP Reduction – FY 2013	105.2	95.4	347,755
4th & 5th Generation Permit			
BMP Reduction – FY 2014	0.36	0.04	174.0
BMP Reduction – FY 2015	37.5	32.6	118,810
BMP Reduction – FY 2016	11.4	1.99	6,670
BMP Reduction – FY 2017	1,265	259.6	820,204
BMP Reduction – FY 2018	2,707	524.7	1,863,890
BMP Reduction – FY 2019	67.8	14.4	39,728
BMP Reduction – FY 2020	536.7	105.2	343,778
BMP Reduction – FY 2021	2,698	648.3	1,613,641

Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
BMP Reduction – FY 2022	221.9	197.1	722,657
BMP Reduction – FY 2023	259.3	51.3	169,757
BMP Reduction – FY 2024	24.4	3.30	14,369
BMP Reduction – FY 2025	1,323	248.9	939,409
Total BMP Reduction	**9,338**	**2,199**	**7,053,362**
Percent Reduction of Target	**11.2%**	**21.1%**	**24.4%**

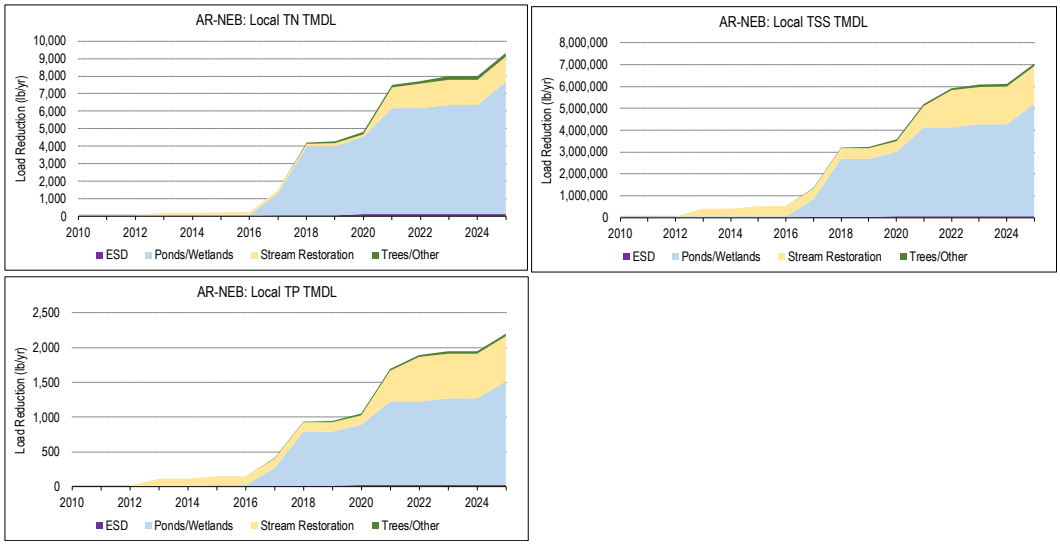


Figure 24. Cumulative Reductions for Anacostia River Local TMDLs – Non-Tidal: Northeast Branch.

Table 42. Annual Progress for Anacostia River Local TMDLs – Non-Tidal: Northwest Branch.

Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
TMDL Issuance Date	2008	2008	2007
Target Load Reduction	29,321	3,749	10,200,025
3rd Generation Permit			
BMP Reduction – FY 2008	6.44	0.96	3,220
BMP Reduction – FY 2009	0.00	0.00	0
BMP Reduction – FY 2010	0.00	0.00	0
BMP Reduction – FY 2011	6.03	0.73	2,907
BMP Reduction – FY 2012	0.00	0.00	0
BMP Reduction – FY 2013	24.9	4.75	14,331
4th & 5th Generation Permit			
BMP Reduction – FY 2014	0.27	0.01	176
BMP Reduction – FY 2015	0.40	0.03	213
BMP Reduction – FY 2016	1.93	0.28	767
BMP Reduction – FY 2017	34.5	5.03	12,721
BMP Reduction – FY 2018	2,166	217.0	88,145

Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
BMP Reduction – FY 2019	56.0	9.39	39,569
BMP Reduction – FY 2020	10.7	1.43	4,698
BMP Reduction – FY 2021	761.7	232.1	180,969
BMP Reduction – FY 2022	0.00	0.00	0
BMP Reduction – FY 2023	22.7	3.18	7,729
BMP Reduction – FY 2024	0.00	0.00	0
BMP Reduction – FY 2025	0.00	0.00	0
Total BMP Reduction	**3,091**	**475.0**	**355,445**
Percent Reduction of Target	**10.5%**	**12.7%**	**3.5%**

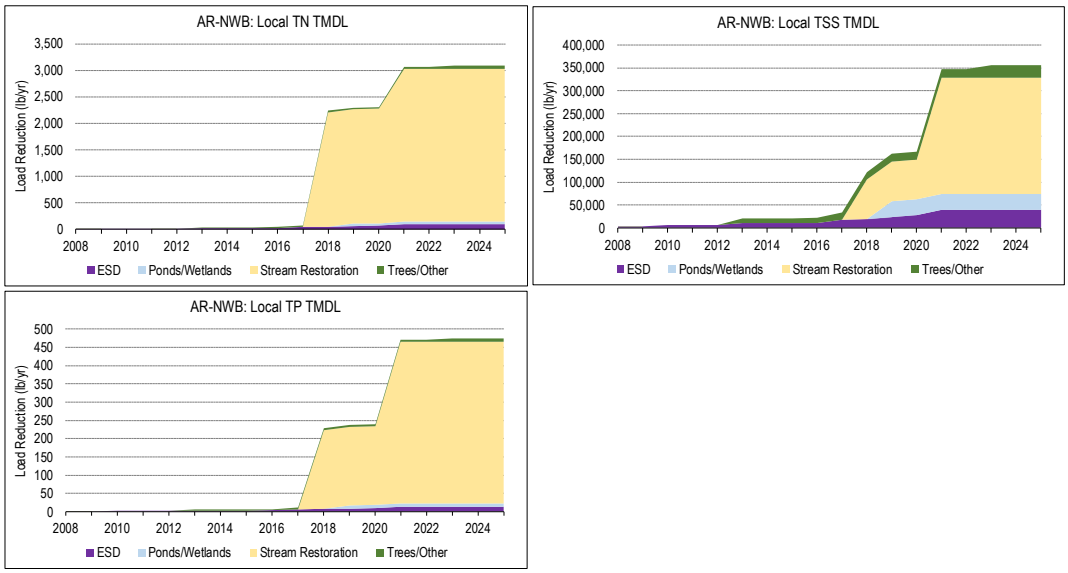


Figure 25. Cumulative Reductions for Anacostia River Local TMDLs – Non-Tidal: Northwest Branch.

Table 43. Annual Progress for Anacostia River Local TMDLs – Non-Tidal: Watts Branch.

Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
TMDL Issuance Date	2008	2008	2007
Target Load Reduction	6,454	835.0	2,243,496
3rd Generation Permit			
BMP Reduction – FY 2008	0.00	0.00	0
BMP Reduction – FY 2009	0.00	0.00	0
BMP Reduction – FY 2010	165.1	149.7	545,855
BMP Reduction – FY 2011	0.00	0.00	0
BMP Reduction – FY 2012	0.00	0.00	0
BMP Reduction – FY 2013	0.00	0.00	0
4th & 5th Generation Permit			

Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
BMP Reduction – FY 2014	0.00	0.00	0
BMP Reduction – FY 2015	0.10	0.01	51
BMP Reduction – FY 2016	0.03	0.00	12
BMP Reduction – FY 2017	3.31	0.41	1,473
BMP Reduction – FY 2018	208.2	51.1	159,515
BMP Reduction – FY 2019	0.00	0.00	0
BMP Reduction – FY 2020	0.00	0.00	0
BMP Reduction – FY 2021	0.00	0.00	0
BMP Reduction – FY 2022	0.00	0.00	0
BMP Reduction – FY 2023	0.58	0.08	208
BMP Reduction – FY 2024	0.00	0.00	0
BMP Reduction – FY 2025	215.1	27.9	558,600
Total BMP Reduction	**592.4**	**229.2**	**1,265,714**
Percent Reduction of Target	**9.2%**	**27.4%**	**56.4%**

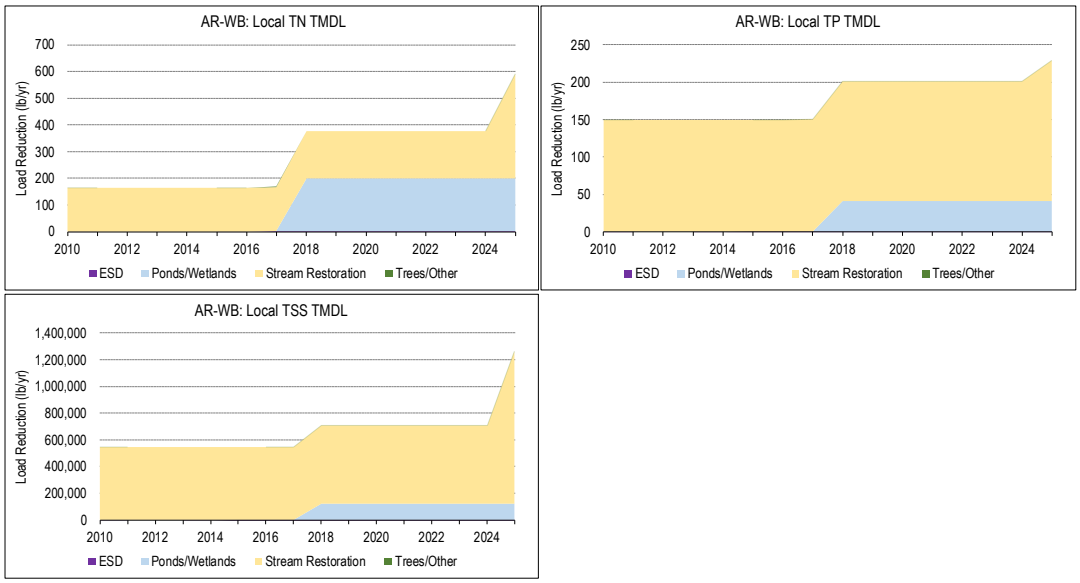


Figure 26. Cumulative Reductions for Anacostia River Local TMDLs – Non-Tidal: Watts Branch.

Mattawoman Creek

Table 44. Annual Progress for Mattawoman Creek Local TMDL.

Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
TMDL Issuance Date	2005	2005
Target Load Reduction	9,358	1,109
3rd Generation Permit		
BMP Reduction – FY 2008	0.00	0.00

Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
BMP Reduction – FY 2009	0.00	0.00
BMP Reduction – FY 2010	0.00	0.00
BMP Reduction – FY 2011	0.00	0.00
BMP Reduction – FY 2012	0.00	0.00
BMP Reduction – FY 2013	0.00	0.00
4th & 5th Generation Permit		
BMP Reduction – FY 2014	0.00	0.00
BMP Reduction – FY 2015	0.00	0.00
BMP Reduction – FY 2016	0.00	0.00
BMP Reduction – FY 2017	13.7	2.22
BMP Reduction – FY 2018	495.8	113.8
BMP Reduction – FY 2019	0.00	0.00
BMP Reduction – FY 2020	109.8	25.7
BMP Reduction – FY 2021	369.5	335.0
BMP Reduction – FY 2022	0.00	0.00
BMP Reduction – FY 2023	10.4	1.67
BMP Reduction – FY 2024	0.00	0.00
BMP Reduction – FY 2025	348.6	81.2
Total BMP Reduction	**1,347**	**559.6**
Percent Reduction of Target	**14.4%**	**50.4%**

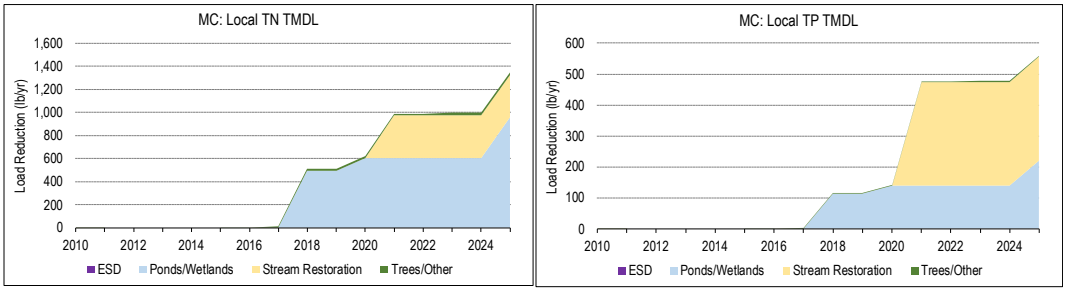


Figure 27. Cumulative Reductions for Mattawoman Creek Local TMDL.

Piscataway Creek

Table 45. Annual Progress for Piscataway Creek Local TMDL.

Year	Total Suspended Solids (lbs./year)
TMDL Issuance Date	2019
Target Load Reduction	17,398,169
4th & 5th Generation Permit	
BMP Reduction – FY 2019	36,696
BMP Reduction – FY 2020	39,605

Year	Total Suspended Solids (lbs./year)
BMP Reduction – FY 2021	2,352,036
BMP Reduction – FY 2022	1,725,731
BMP Reduction – FY 2023	203,972
BMP Reduction – FY 2024	1,100,841
BMP Reduction – FY 2025	4,297,908
Total BMP Reduction	**9,756,790**
Percent Reduction of Target	**56.1%**

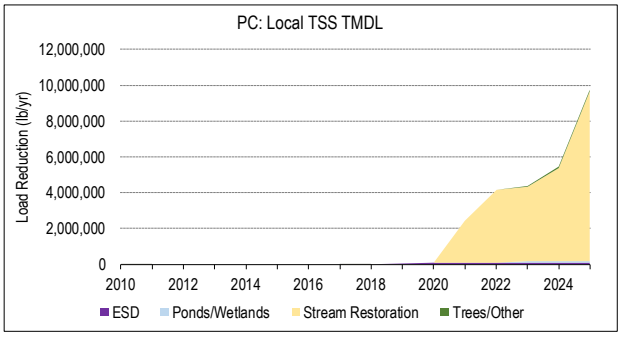


Figure 28. Cumulative Reductions for Piscataway Creek Local TMDL.

Rocky Gorge

Table 46. Annual Progress for Rocky Gorge Local TMDL.

Year	Total Phosphorus (lbs./year)
TMDL Issuance Date	2008
Target Load Reduction	12.5
3rd Generation Permit	
BMP Reduction – FY 2008	0.00
BMP Reduction – FY 2009	0.00
BMP Reduction – FY 2010	0.00
BMP Reduction – FY 2011	0.00
BMP Reduction – FY 2012	0.00
BMP Reduction – FY 2013	0.00
4th & 5th Generation Permit	
BMP Reduction – FY 2014	0.00
BMP Reduction – FY 2015	0.00
BMP Reduction – FY 2016	0.00
BMP Reduction – FY 2017	0.02
BMP Reduction – FY 2018	0.00
BMP Reduction – FY 2019	0.00
BMP Reduction – FY 2020	0.00

Year	Total Phosphorus (lbs./year)
BMP Reduction – FY 2021	0.00
BMP Reduction – FY 2022	0.00
BMP Reduction – FY 2023	0.05
BMP Reduction – FY 2024	155.0
BMP Reduction – FY 2025	0.00
Total BMP Reduction	**155.1**
Percent Reduction of Target	**>100%**

Note: The County will discuss TMDLs that appear to be met through BMP reductions with MDE.

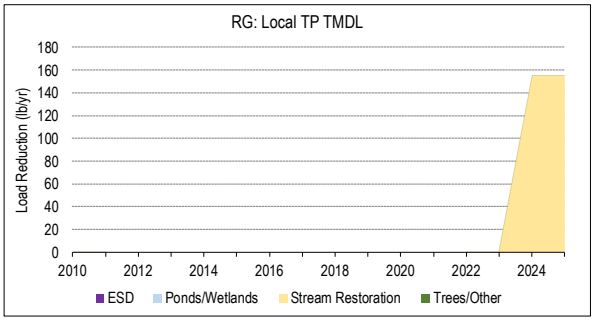


Figure 29. Cumulative Reductions for Rocky Gorge Local TMDL.

Lower Patuxent

Table 47. Annual Progress for Lower Patuxent Local TMDL.

Year	Total Suspended Solids (lbs./year)
TMDL Issuance Date	2018
Target Load Reduction	3,609,050
4th & 5th Generation Permit	
BMP Reduction – FY 2018	4,137
BMP Reduction – FY 2019	0
BMP Reduction – FY 2020	0
BMP Reduction – FY 2021	3,677,419
BMP Reduction – FY 2022	0
BMP Reduction – FY 2023	219.0
BMP Reduction – FY 2024	168,538
BMP Reduction – FY 2025	946,000
Total BMP Reduction	**4,796,313**
Percent Reduction of Target	**>100%**

Note: The County will discuss TMDLs that appear to be met through BMP reductions with MDE.

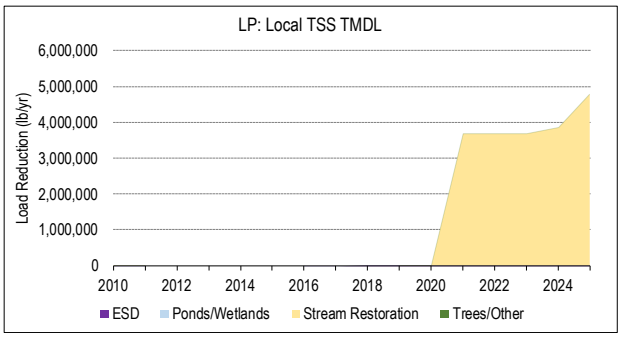


Figure 30. Cumulative Reductions for Lower Patuxent Local TMDL.

Middle Patuxent

Table 48. Annual Progress for Middle Patuxent Local TMDL.

Year	Total Suspended Solids (lbs./year)
TMDL Issuance Date	2018
Target Load Reduction	3,613,455
4th & 5th Generation Permit	
BMP Reduction – FY 2014	0
BMP Reduction – FY 2015	0
BMP Reduction – FY 2016	0
BMP Reduction – FY 2017	0
BMP Reduction – FY 2018	6,752
BMP Reduction – FY 2019	0
BMP Reduction – FY 2020	0
BMP Reduction – FY 2021	0
BMP Reduction – FY 2022	0
BMP Reduction – FY 2023	2,584
BMP Reduction – FY 2024	0
BMP Reduction – FY 2025	0
Total BMP Reduction	**9,336**
Percent Reduction of Target	**0.3%**

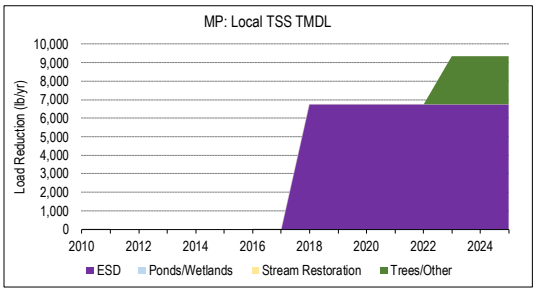


Figure 31. Cumulative Reductions for Middle Patuxent Local TMDL.

Upper Patuxent

Table 49. Annual Progress for Upper Patuxent Local TMDL.

Year	Total Suspended Solids (lbs./year)
TMDL Issuance Date	2011
Target Load Reduction	1,943,158
3rd Generation Permit	
BMP Reduction – FY 2011	0
BMP Reduction – FY 2012	79,142
BMP Reduction – FY 2013	897,802
4th & 5th Generation Permit	
BMP Reduction – FY 2014	0
BMP Reduction – FY 2015	33,930
BMP Reduction – FY 2016	483.0
BMP Reduction – FY 2017	14,561
BMP Reduction – FY 2018	309,751
BMP Reduction – FY 2019	4,312
BMP Reduction – FY 2020	2,116,408
BMP Reduction – FY 2021	660,220
BMP Reduction – FY 2022	0
BMP Reduction – FY 2023	622,209
BMP Reduction – FY 2024	0
BMP Reduction – FY 2025	379,855
Total BMP Reduction	**5,118,673**
Percent Reduction of Target	**>100%**

Note: The County will discuss TMDLs that appear to be met through BMP reductions with MDE.

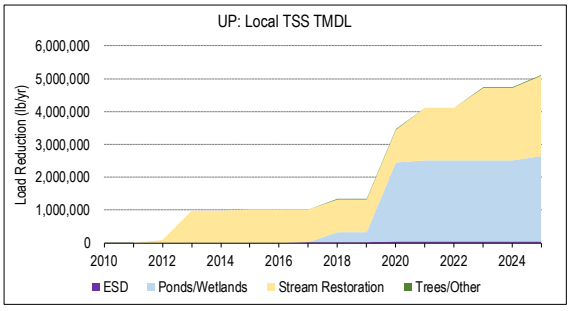


Figure 32. Cumulative Reductions for Upper Patuxent Local TMDL.

2.4 Part IV.F.3.c. List of Proposed BMPs, Programmatic Initiatives, And Alternative Control Practices

Permit Conditions Part IV.F.3;

c. An updated list of proposed BMPs, programmatic initiatives, and alternative control practices, as necessary, to demonstrate adequate progress toward meeting the Department's approved benchmarks and final stormwater WLA implementation dates;

The County will continue to conduct restoration activities throughout the County. **Sections 2.4.1 and 2.4.2** present the proposed restoration progress (Permit condition IV.F.3.c) for the Chesapeake Bay and local nutrient and sediment TMDLs allocation watershed divisions. Annual planning is based on the County's fiscal year (July to June). The County plans to continue its programmatic activities described in **Section 2.5. Attachment C** contains the listing of projects under planning, design, or construction, by watershed. **Attachment D** contains the estimated BMPs required to meet local TMDL load reduction targets.

2.4.1 Chesapeake Bay TMDLs – Proposed Reductions

Anacostia

Table 50. Planned Load Reductions for Chesapeake Bay TMDL – Anacostia Tidal Fresh DC.

Fiscal Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
2026	148.4	25.8
2027	0.00	0.00
2028	0.00	0.00
2029	0.00	0.00
2030	0.00	0.00
Total	148.4	25.8

Table 51. Planned Load Reductions for Chesapeake Bay TMDL – Anacostia Tidal Fresh MD.

Fiscal Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
2026	2.26	0.37
2027	0.00	0.00
2028	2,534	2,194
2029	0.00	0.00
2030	0.00	0.00
Total	2,536.26	2,194.37

Mattawoman Creek

Table 52. Planned Load Reductions for Chesapeake Bay TMDL – Mattawoman Creek Watershed.

Fiscal Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)

2026	0.00	0.00
2027	0.00	0.00
2028	0.00	0.00
2029	0.00	0.00
2030	0.00	0.00
Total	0.00	0.00

Patuxent River

Table 53. Planned Load Reductions for Chesapeake Bay TMDL – Patuxent River Lower Mesohaline.

Fiscal Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
2026	0.00	0.00
2027	0.00	0.00
2028	0.00	0.00
2029	0.00	0.00
2030	0.00	0.00
Total	0.00	0.00

Table 54. Planned Load Reductions for Chesapeake Bay TMDL – Patuxent River Middle Oligohaline.

Fiscal Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
2026	0.00	0.00
2027	0.00	0.00
2028	0.00	0.00
2029	0.00	0.00
2030	0.00	0.00
Total	0.00	0.00

Table 55. Planned Load Reductions for Chesapeake Bay TMDL – Patuxent River Upper Tidal Fresh.

Fiscal Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
2026	0.00	0.00
2027	0.00	0.00
2028	0.00	0.00
2029	336.3	34.1
2030	0.00	0.00
Total	336.3	34.1

Piscataway River

Table 56. Planned Load Reductions for Chesapeake Bay TMDL – Piscataway Creek Watershed Tidal Fresh.

Fiscal Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
2026	4.29	4.28
2027	0.00	0.00
2028	0.00	0.00
2029	0.00	0.00
2030	139.0	142.9
Total	143.293	147.182

Potomac River

Table 57. Planned Load Reductions for Chesapeake Bay TMDL – Potomac Lower Mesohaline.

Fiscal Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
2026	0.00	0.00
2027	0.00	0.00
2028	0.00	0.00
2029	0.00	0.00
2030	0.00	0.00
Total	0.00	0.00

Table 58. Planned Load Reductions for Chesapeake Bay TMDL – Potomac Upper Tidal Fresh DC.

Fiscal Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
2026	86.0	85.3
2027	0.00	0.00
2028	0.00	0.00
2029	0.00	0.00
2030	0.00	0.00
Total	86.0	85.3

Table 59. Planned Load Reductions for Chesapeake Bay TMDL – Potomac Upper Tidal Fresh MD.

Fiscal Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
2026	818.8	286.1
2027	1,370	264.9
2028	0.00	0.00
2029	3,269	1,089

Fiscal Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
2030	0.00	0.00
Total	5,457.8	1,640

Western Branch

Table 60. Planned Load Reductions for Chesapeake Bay TMDL – Western Branch Watershed Tidal Fresh.

Fiscal Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
2026	1,346	1,562
2027	0.00	0.00
2028	402.3	510.9
2029	0.00	0.00
2030	0.00	0.00
Total	1,748.3	2,072.9

2.4.2 Local TMDLs – Proposed Reductions

Anacostia River

Table 61. Planned Load Reductions for Anacostia River Local TMDLs – Tidal (Not incl. loads from Watts Br & LBC).

Fiscal Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
2026	0.00	0.00	0
2027	0.00	0.00	0
2028	0.00	0.00	0
2029	0.00	0.00	0
2030	0.00	0.00	0
Total	0.00	0.00	0

Table 62. Planned Load Reductions for Anacostia River Local TMDLs – Non-Tidal: Lower Beaverdam Creek.

Fiscal Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
2026	184.8	36.8	115,375
2027	0.00	0.00	0
2028	0.00	0.00	0
2029	0.00	0.00	0
2030	0.00	0.00	0
Total	184.8	36.8	115,375

Table 63. Planned Load Reductions for Anacostia River Local TMDLs – Non-Tidal: Northeast Branch.

Fiscal Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
2026	2.95	0.38	1,418
2027	0.00	0.00	0
2028	1,546	1,401	5,110,937
2029	0.00	0.00	0
2030	0.00	0.00	0
Total	1,548.95	1,401.38	5,112,355

Table 64. Planned Load Reductions for Anacostia River Local TMDLs – Non-Tidal: Northwest Branch.

Fiscal Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
2026	0.00	0.00	0
2027	0.00	0.00	0
2028	1,762	874.8	2,921,289
2029	0.00	0.00	0
2030	0.00	0.00	0
Total	1,762	874.8	2,921,289

Table 65. Planned Load Reductions for Anacostia River Local TMDLs – Non-Tidal: Watts Branch.

Fiscal Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
2026	0.00	0.00	0
2027	0.00	0.00	0
2028	0.00	0.00	0
2029	0.00	0.00	0
2030	0.00	0.00	0
Total	0.00	0.00	0

Mattawoman Creek

Table 66. Planned Load Reductions for Mattawoman Creek Local TMDL.

Fiscal Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
2026	0.00	0.00
2027	0.00	0.00
2028	0.00	0.00
2029	0.00	0.00
2030	0.00	0.00
Total	0.00	0.00

Piscataway Creek

Table 67. Planned Load Reductions for Piscataway Creek Local TMDL.

Fiscal Year	Total Suspended Solids (lbs./year)
2026	2,524
2027	0
2028	0
2029	0
2030	607,600
Total	610,124

Rocky Gorge

Table 68. Planned Load Reductions for Rocky Gorge Local TMDL.

Fiscal Year	Total Phosphorus (lbs./year)
2026	0.00
2027	0.00
2028	0.00
2029	0.00
2030	0.00
Total	0.00

Lower Patuxent

Table 69. Planned Load Reductions for Lower Patuxent Local TMDL.

Fiscal Year	Total Suspended Solids (lbs./year)
2026	0
2027	0
2028	0
2029	0
2030	0
Total	0

Middle Patuxent

Table 70. Planned Load Reductions for Middle Patuxent Local TMDL.

Fiscal Year	Total Suspended Solids (lbs./year)
2026	0

Fiscal Year	Total Suspended Solids (lbs./year)
2027	0
2028	0
2029	0
2030	0
Total	0

Upper Patuxent

Table 71. Planned Load Reductions for Upper Patuxent Local TMDL.

Fiscal Year	Total Suspended Solids (lbs./year)
2026	0
2027	0
2028	0
2029	652,415
2030	0
Total	652,415

2.5 County Programs that Contribute to Nutrient and Sediment Reductions

The County has implemented a wide range of programmatic stormwater management initiatives over the years to address existing water quality concerns. This section describes these programs (and their respective individual initiatives), including the contributions the programs make to water quality protection and improvement. Load reductions by watershed from these programs are reflected in **Section 2** of this document.

Stormwater Management (SWM) Program (Capital Improvement Program [CIP] SWM Program).

The SWM Program is responsible for performing detailed assessments of impairments for addressing stormwater management and existing water quality. It is also responsible for preparing design plans for and overseeing the construction of regional stormwater management facilities and water quality control projects. Those activities contribute to annual load reductions through improved planning and assessment and implementation of BMPs that reduce pollutant loading. Since 2012, the SWM Program has installed 453 practices treating almost 3,200 EIA acres, mainly through the planting of street trees (**Table 72**, **Table 73**).

Table 72. Annual Load Reductions Through the CIP SWM Program since 2012.

Fiscal Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)	EIA (acres)	Number of practices
2012	242.9	192.6	692,211	58.9	9
2013	679.8	598.6	2,180,047	68.5	10
2014	16.0	4.80	13,967	1.50	2
2015	73.6	57.9	209,974	16.5	6

Fiscal Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)	EIA (acres)	Number of practices
2016	371.1	255.9	826,718	37.7	34
2017	690.6	180.2	457,663	80.2	23
2018	2,545	311.8	339,389	52.5	26
2019	225.3	94.5	151,520	24.8	3
2020	227.7	128.4	194,851	35.4	10
2021	18,551	3,437	6,250,449	638.9	26
2022	2,172	892.2	2,193,318	630.4	19
2023	3,444	1,361	2,829,313	535.8	271
2024	1,578	694.1	2,121,717	171.6	7
2025	4,437	3,508	5,656,509	844.4	7
Total	35,253	11,716	24,117,647	3,197	453

Table 73. Percent of Total CIP SWM Program Load Reductions by BMP Type since 2012.

BMP Type	Total Nitrogen % of Total	Total Phosphorus % of Total	Total Suspended Solids % of Total	EIA % of Total	Number of practices % of Total
bioretention	0.33%	0.23%	0.19%	0.23%	3.09%
extended detention structure, wet	1.60%	0.93%	1.59%	2.96%	0.66%
forest conservation	0.55%	0.27%	0.18%	0.39%	0.22%
impervious surface elimination (to forest)	0.01%	0.01%	0.01%	0.01%	0.22%
impervious surface elimination (to pervious)	0.00%	0.00%	0.00%	0.00%	0.22%
landscape infiltration	0.00%	0.00%	0.00%	0.00%	0.22%
micro-bioretention	0.27%	0.13%	0.17%	0.29%	5.08%
micropool extended detention pond	0.29%	0.20%	0.34%	0.30%	0.22%
outfall stabilization	0.03%	0.09%	0.15%	0.09%	0.22%
permeable pavements	0.01%	0.01%	0.01%	0.00%	0.66%
planting trees or forestation on previous urban	1.37%	1.06%	0.38%	1.06%	2.21%
rain gardens	0.01%	0.01%	0.01%	0.02%	0.88%
rainwater harvesting	0.00%	0.00%	0.00%	0.00%	3.09%
retention pond (wet pond)	3.81%	4.10%	3.08%	3.88%	1.99%
shoreline stabilization	0.45%	0.04%	0.02%	1.60%	0.22%
step pool storm conveyance	0.00%	0.00%	0.00%	0.00%	0.00%
stream restoration	90.3%	91.4%	93.3%	88.6%	15.7%
street trees	0.01%	0.00%	0.00%	0.03%	44.37%
submerged gravel wetlands	0.58%	1.23%	0.36%	0.50%	1.32%
underground filter	0.32%	0.30%	0.25%	0.06%	5.52%
urban tree canopy	0.00%	0.00%	0.00%	0.01%	13.91%

Clean Water Partnership Program

This program is a community-based public-private partnership, to assist in addressing the restoration requirements of the Chesapeake Bay WIP program. Since 2016, the Clean Water Partnership (CWP) program has been in partnership with the County to deliver a multi-faceted program supporting BMP restoration, community support, and mentoring startup local contractors. The CWP has installed 378 practices treating almost 5,000 EIA acres mainly through micro bioretention and wet ponds (**Table 74**, **Table 75).**

Table 74. Annual Load Reductions Through the Clean Water Partnership.

Fiscal Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)	EIA (acres)	Number of practices
2016	12.9	2.76	5,902	1.37	21
2017	2,265	750.3	1,448,510	271.3	129
2018	11,842	4,980	7,266,484	842.3	78
2019	329.1	131.1	199,625	12.4	19
2020	8,199	2,340	4,222,956	344.9	59
2021	7,096	4,147	13,562,705	1,339	26
2022	1,260	404.0	1,111,840	478.3	4
2023	1,512	678.7	955,541	157.5	11
2024	3,115	1,241	1,987,378	289.3	16
2025	10,315	4,412	7,829,009	1,248	15
Total	45,947	19,088	38,589,949	4,984	378

Table 75. Percent of Total Clean Water Partnership Load Reductions by BMP Type.

BMP Type	Total Nitrogen % of Total	Total Phosphorus % of Total	Total Suspended Solids % of Total	EIA % of Total	Number of practices % of Total
bioretention	0.28%	0.30%	0.14%	0.22%	3.44%
bio-swale	0.06%	0.03%	0.02%	0.02%	1.06%
disconnection of non-rooftop runoff	0.01%	0.02%	0.01%	0.02%	12.70%
disconnection of rooftop runoff	0.01%	0.01%	0.01%	0.01%	10.85%
extended detention structure, wet	5.83%	9.16%	4.35%	3.46%	1.06%
grass swale	0.01%	0.01%	0.00%	0.01%	0.53%
impervious surface elimination (to pervious)	0.02%	0.01%	0.01%	0.03%	5.29%
micro-bioretention	0.60%	0.48%	0.29%	0.50%	23.02%
outfall stabilization	0.32%	0.31%	0.53%	0.26%	2.12%
permeable pavements	0.00%	0.00%	0.00%	0.00%	0.26%
rainwater harvesting	0.00%	0.00%	0.00%	0.00%	0.26%
retention pond (wet pond)	73.04%	62.80%	50.92%	46.37%	19.58%
sand filter	0.51%	0.63%	0.39%	0.63%	6.88%
shoreline stabilization	1.92%	1.45%	1.31%	1.83%	2.38%

BMP Type	Total Nitrogen % of Total	Total Phosphorus % of Total	Total Suspended Solids % of Total	EIA % of Total	Number of practices % of Total
step pool storm conveyance	0.00%	0.00%	0.00%	0.00%	0.00%
stream restoration	17.10%	24.65%	41.86%	46.50%	6.88%
submerged gravel wetlands	0.14%	0.06%	0.05%	0.08%	0.79%
underground filter	0.14%	0.07%	0.10%	0.05%	2.91%

Rain Check Rebate Program

The Rain Check Rebate Program, established in 2013, incentivizes County property owners interested in installing approved stormwater management practices on their properties. The program provides eligible applicants the opportunity to receive rebates for installing approved stormwater BMPs. Property owners that participate in the Rain Check Rebate Program are eligible for a fee reduction credit on the Clean Water Act fee included in their tax bill, for installing stormwater management practices on their property. The Rain Check Rebate Program has provided rebates for more than 3,600 practices treating almost 24 acres **(Table 76)**. Most of the practices are rain barrels and trees on single family homes.

In FY 2025, DoE continued to offer an enhanced rebate to Rain Check Rebate applicants within the Urban Tree Program area. To qualify for an enhanced rebate, applicants must plant larger sized trees (2- to 2.5-inch caliper for shade trees or 1.5-inch caliper for small/understory trees). Twelve enhanced rebates were approved in FY 2025 totaling 65 trees. There was a funding hiatus toward the end of FY 2025, which limited participation, but we expect the program to grow in FY26, as more residents become aware of the opportunity.

Table 76. Rain Check Rebate Program Statistics.

Fiscal Year	Number of Practices	Acres Treated	Final Rebate Amount ($)
2014	64	0.49	$14,549
2015	198	1.28	$53,239
2016	195	2.57	$125,718
2017	282	2.02	$159,246
2018	262	2.27	$90,253
2021	325	1.81	$150,786
2020	416	2.30	$161,477
2019	181	1.37	$79,035
2022	297	1.59	$154,813
2023	571	3.45	$269,155
2024	375	2.04	$217,783
2025	478	2.64	$268,127
Total	3,644	23.8	$1,744,181

Practice Type	Number of Practices	Acres Treated	Final Rebate Amount ($)
cisterns	53	0.77	$46,241

conservation landscaping	11	0.11	$20,748
pavement removal	255	2.64	$402,020
permeable pavement	216	1.98	$622,099
rain barrels	1,295	8.84	$122,955
rain garden	180	3.27	$320,060
single tree	1,634	6.21	$210,059

Property Type	Number of Practices	Acres Treated	Final Rebate Amount ($)
church	62	0.29	$9,700
commercial	40	0.72	$96,940
condo**minium**	4	0.02	$6,000
co-op	5	0.03	$5,991
institutional	21	1.14	$23,741
multi-family	6	0.02	$3,250
single family	3,506	21.6	$1,598,559

Applicant Type	Number of Practices	Acres Treated	Final Rebate Amount ($)
civic association	30	0.27	$3,000
condo association	1	0.29	$20,000
non-profit	122	1.63	$81,904
property owner	3,491	21.6	$1,639,278

Table 77. Annual Load Reductions Through the Rain Check Rebate Program.

Fiscal Year	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)	EIA (acres)
2014	3.04	0.57	1,344	0.35
2015	5.67	1.11	2,417	1.22
2016	17.3	4.64	6,431	2.46
2017	12.6	2.22	5,420	2.99
2018	5.43	1.48	2,020	0.57
2021	0.57	0.07	253.2	0.10
2020	--[a]	--	--	--
2019	--	--	--	--
2022	--	--	--	--
2023	--	--	--	--
2024	--	--	--	--
2025	--	--	--	--
Total	44.60	10.10	17,885	7.70

Note:
[a] Data not available.

Countywide Green/Complete Streets Program

The Department of Public Works and Transportation (DPW&T) initiated a countywide Green/Complete Streets Program during the 2011 reporting year as a strategy for addressing mounting MS4 and TMDL treatment requirements. The program seeks out opportunities to incorporate stormwater control measures, environmental enhancements, and community amenities.

To date the County has undertaken six Green/Complete Streets projects, including:

- Ager Road – 1.63 miles of Ager Road, Hamilton Street and Jamestown Road in Hyattsville was reconstructed to improve safety, remove impervious area and install environmental site design (ESD) facilities. The combination of pavement removal, a bioswale, a micro- bioretention, and three submerged gravel wetland facilities provided an excess ESD volume treatment of 21,660 cubic feet.
- Swann Road – 1.6 miles of Swann Road in Suitland was improved to address appearance, safety, and functionality. These improvements included a tree planting, a micro-bioretention facility, and seven bioswales.
- Edmonston Road – 1.6 miles of roadway in Hyattsville was improved to address safety, functionality, and aesthetics. The project installed micro-bioretention facilities between the curb and sidewalk.
- Montpelier Drive – 0.6 miles of roadway in South Laurel is being improved to address safety and accommodate all principal modes of transportation. The project results in the removal of 0.304 acres of impervious surface area.
- Harry S. Truman Drive – A proposed 2.4-mile project in Largo to improve safety, functionality, and aesthetics. Project elements include ESD facilities and impervious reduction. The use of permeable surfaces is being evaluated to reduce the impervious area impacts from the shared use path.
- Campus Drive – A proposed 1.0-mile project in College Park/Riverdale. The scope also includes tree planting and stormwater management.

Street Sweeping and Storm Drain Maintenance

The County conducts street sweeping operations on select arterial, collector, and industrial roadways. Residential subdivisions are swept on a request-only basis. Street sweeping captures debris, including sediment and associated bacteria that reaches waterways. Street sweeping falls under MDE's identified programmatic practices for pollution reduction that can provide water quality benefits.

In 2024, Prince George's County purchased a Regenerative Air Street Sweeper to provide additional service capacity to our street sweeping program. Prior to 2023, all street sweeping services were provided through a vendor. Table 78 summarizes the County's street sweeping activities.

Table 78. Summary of Street Sweeping Services by DPW&T.

Date	Tonnage	Miles Swept	No. of Streets Swept
July 2024	163.2	991	1,044
Aug 2024	123	697	859
Sept 2024	109.8	500.9	1,623
Oct 2024	121	366.8	1,456

Date	Tonnage	Miles Swept	No. of Streets Swept
Nov 2024	25	50.8	270
Dec 2024	0	0	0
Jan 2025	0	0	0
Feb 2025	0	0	0
Mar 2025	0	0	0
Apr 2025	171.5	604.2	1,232
May 2025	119.8	448.2	882
June 2025	168	556.8	1,104
Total	1,001	4,216	8,470

Storm drain maintenance is typically targeted in two focus areas: the 21 communities annually served by the Comprehensive Community Cleanup Program and in response to citizen complaints for clogged and malfunctioning systems. DPW&T's Storm Drain Maintenance Division is also responsible for major channel maintenance. The County performs street sweeping and storm drain maintenance annually. However, it is not being reported for nutrient or sediment credits because MDE guidance requires sorting (separate leaves and trash from sediments), for which the County does not have the resources.

Countywide Channel Programs

DPW&T has completed a countywide channel assessment program to identify and prioritize channels for replacement using ecosystem restoration solutions when viable. The assessment identified the current conditions of the channels and ranked them accordingly, while seeking green infrastructure solutions, such as stream restoration and floodplain reconnections, rather than in-kind replacements for legacy stormwater conveyances, whenever possible.

Outfall Reconstruction Program

DPW&T's Outfall Reconstruction program continues to address outfall repairs as they are identified. The goal is to ensure the outfalls are stable, and to use green practices such as step pools, regenerative stream conveyances, and natural vegetated banks, when possible. Projects completed include:

- Suitland and Regency was completed in June 2019.
- Trafalgar Court was completed in November 2019.
- 6911 Groveton was started in October 2019 and completed in January 2020.
- West Indian Head Highway was completed in April 2021.
- Clear Creek was completed in March 2021.
- East Indian Head Highway (in progress).

Alternative Compliance Program

Alternative Compliance is a partnership between Prince George's County and qualified tax-exempt religious organizations or other 501(c) nonprofit organizations to improve water quality in the County's waterways by reducing and treating stormwater runoff. Nonprofits who participate in Alternative Compliance are eligible to receive a reduction in their Clean Water Act Fee by providing an easement to their property for County employees to install BMPs. As of June 30, 2023, the Department of the

Environment (DoE) has received and processed 189 applications from qualified faith-based organizations.

Stormwater Stewardship Grant Program

The Prince George's County Stormwater Stewardship Grant Program funds on-the-ground restoration activities that improve neighborhoods, improve water quality, and engage County residents.

Applicants included non-profit organizations, municipalities, watershed organizations, educational institutions, community associations, faith-based organizations, civic groups, and more. **Table 79** lists the projects since inception.

Table 79. Stormwater Stewardship Grant Program Projects Awarded through FY 2025.

Organization	Project Title	Award Amount	Fiscal Year
Alice Ferguson Foundation	Prince George's Green Clean Water Education and Outreach	$23,836	2015
City of District Heights	District Heights Rain Garden	$34,862	2015
Town of Landover Hills	Landover Hills Community Rain Gardens	$126,578	2015
The Low Impact Development Center, Inc.	Behnke Nurseries Rain Check Rebate Demo	$55,895	2015
Town of Forest Heights	Track 2 Citizen Engagement-Treekeepers of Forest Heights	$49,794	2015
Anacostia Watershed Society	National Capital Region - Watershed Stewards Academy	$48,000	2015
City of College Park	Track 1 Water Quality - Narragansett Pkwy & Muskogee St Stormwater Treatment and Outreach Project	$66,180	2015
City of Greenbelt	Track 1 Water Quality Buddy Attick Park Parking Lot Stormwater Management Demonstration and Water Quality Treatment Project.	$187,700	2015
Pheasant Run Homeowner's Association, Inc.	Track 2 Pheasant Run HOA Stormwater Awareness Projects	$11,730	2015
Alliance for the Chesapeake Bay	Faithful Stewards Restoring Watersheds - Track 2 Citizen Engagement	$25,000	2015
The Empowerment Institute	Track 1 Water Quality - SOMA and The Empowerment Institute	$152,145	2015
Neighborhood Design Center	Track 2: Stormwater Savvy: Transforming Community Vision into Implementable Design	$79,308	2015
Alice Ferguson Foundation	Tracks 1 & 2: Improving Water Quality with Stormwater BMPs and Education at Alice Ferguson Foundation's new Potomac Watershed Study Center	$188,972	2015
Global Health and Education Projects, Inc.	Track 1 & Track 2: Community Partnerships for Environmental Action and Sustainability (COPEAS)	$15,000	2016
Alliance for the Chesapeake Bay	Track 1 Water Quality: Trees for Sacred Places	$131,926	2016
Neighborhood Design Center	Track 2 Citizen Engagement: Community Design and Engagement through Continuation of NDC's Stormwater Savvy Program	$50,000	2016
Neighborhood Design Center	Track 2 Citizen Engagement: Providing Technical Assistance to Prince George's County Stormwater Stewardship Grant Applicants	$24,432	2016
The Low Impact Development Center, Inc.	Track 2 Citizen Engagement Rain Check Rebate Resource Center at Behnke Nurseries	$8,423	2016
Interstate Commission on the Potomac River Basin (The)	Track 2 Citizen Engagement	$61,938	2016

Organization	Project Title	Award Amount	Fiscal Year
New Hope Educational Institute	Water Quality NHA Parking Lot 1	$125,000	2016
Parkdale High School	Track 1 Water Quality: Creating Green Infrastructure for the Parkdale Community	$200,000	2016
University of Maryland College Park Foundation	University of Maryland Golf Course Stormwater Stewardship Demonstration Project	$124,770	2016
Union Bethel AME Church	Track I Water Quality Clean Water for Union Bethel AME Church	$128,381	2016
Accokeek First Church of God	Track I Water Quality Clean Water for Accokeek First Church of God	$75,000	2016
Anacostia Riverkeeper	Water Quality: Community-Based Restoration Implementation at Faith based locations In Prince George's County	$27,715	2016
People for Change Coalition	Faith-Based Technical Assistance	$35,000	2016
City of Hyattsville	Water Quality - Melrose Trail Rain Gardens	$20,431	2016
Friends of Lower Beaverdam Creek	RainWorks - Quincy and Moss Run Watersheds	$114,227	2016
Maryland League of Conservation Voters Education Fund	Citizen Engagement- Latino Outreach in the Prince Georges County Watershed	$22,500	2016
Suitland Civic Association	Suitland Rain Barrel Project	$35,000	2016
Clean Water Fund	Track 2 Citizen Engagement: Residential Outreach and Behavior Change Campaign for Central Prince George's County	$25,257	2016
University of Maryland College Park	Track 1 Water Quality Stormwater Stewardship Education at the BAIB Urban Farm	$80,000	2016
ECO City Farms	Tracks 1 Water Quality & Track 2 Citizen Engagement: Uncaptured Stormwater is a Missed Opportunity: Water Stewardship for Urban Farming	$45,000	2016
Interfaith Partners for the Chesapeake (IPC)	Tracks 2 and 3 - Faith Community Training and Technical Support	$51,010	2017
Neighborhood Design Center	Track 2 Citizen Awareness and Engagement: Providing Technical Assistance to Prince George's County Stormwater Stewardship Grant Applicants	$27,363	2017
Interstate Commission on the Potomac River Basin (The)	Track 2. Score Four: Students, Schools, Streams, and the Bay	$60,189	2017
Greenbelt Homes, Inc.	Greenbelt Homes Incorporated Clean Water Initiative	$101,935	2017
Anacostia Riverkeeper	Track 6: Trash Reduction in the Anacostia: Trapping Trash	$200,000	2017
Alliance for the Chesapeake Bay	Track 1 - RiverWise Homeowners Associations	$33,322	2017
REAL School Gardens (dba Out Teach)	REAL School Gardens Two-Year Train and Support Program	$100,000	2017
Town of Cheverly	Town of Cheverly -- Boyd Park / 64th Avenue Retrofit Project	$121,833	2017
End Time Harvest Ministries	Track 2: Wellness Ambassadors Rain garden project	$16,415	2017
Maryland League of Conservation Voters Education Fund	Track 2 - Festival del Rio Anacostia - Anacostia River Festival	$11,791	2017
Maryland National Capital Park	Tracks 1&2 - M-NCPPC Stormwater Stewardship Program	$250,000	2017

Organization	Project Title	Award Amount	Fiscal Year
and Planning Commission			
Clean Water Fund	Track 2 Citizen Engagement: Residential Outreach and Behavior Change Campaign for Central Prince George's County	$42,402	2017
The Low Impact Development Center, Inc.	Port Towns Eco District Stormwater Masterplan	$60,000	2017
DuVal High School	Track 1: DuVal High School Courtyard Rain Garden	$26,207	2017
University of Maryland - Environmental Finance Center	Sustainable Maryland -- Prince George's County Pet Waste Education Campaign	$135,000	2017
Anacostia Watershed Society	Track 5: Conservation Green Earth	$500,000	2017
Maryland League of Conservation Voters Education Fund	Conectando con la Naturaleza (Connecting with Nature)	$29,497	2017
Centro de Apoyo Familiar	(2-3) Agua Sanas-Familia Sanas/Healthy Waters-Healthy Families	$30,333	2017
People for Change Coalition	Stormwater for Residential Communities (SFRC)	$44,151	2017
People for Change Coalition	Faith-Based Technical Assistance Program	$41,130	2017
People for Change Coalition	ScoopDaPoop	$68,432	2017
Central Kenilworth Avenue Revitalization Community Development Corporation, Inc.	Technical Assistance in Engaging the Community to Plant and Care for 850 Trees in Prince George's County	$50,000	2017
Prince George's Green	The Giving Trees	$50,000	2017
National Wildlife Federation	Track 2: Sacred Grounds in Prince George's County	$41,465	2018
Town of Edmonston	Water Quality Retrofits for the 46th Avenue Green Street Project	$148,000	2018
Anacostia Riverkeeper	Trash Reduction in the Anacostia: Trapping Trash Guilford Run	$214,985	2018
Interfaith Partners for the Chesapeake (IPC)	Faith Community Teacher Training	$19,214	2018
University of Maryland - Environmental Finance Center	Sustainable Maryland -- Prince George's County Pet Waste Education Campaign II	$100,000	2018
Global Health and Education Projects, Inc.	Family Tree Adoption Program, Community Partnerships for Environmental Action and Sustainability (COPEAS)	$50,000	2018
Interfaith Partners for the Chesapeake (IPC)	Faith Community ACP Technical Assistance	$32,378	2018
Anacostia Riverkeeper	Litter Trap Trash maintenance Arundel Canal	$19,750	2018
Centro de Apoyo Familiar	Agua Sanas-Familia Sanas/Healthy Waters-Healthy Families	$30,000	2018
Neighborhood Design Center	Stormwater Savvy: Community-engaged Design with a Stormwater Focus	$27,689	2018
Alliance for the Chesapeake Bay	Trees for Sacred Places Prince George's County	$30,000	2018
Anacostia Watershed Society	Treating and Teaching	$384,057	2018
Maryland National Capital Park and Planning Commission	Tracks 1&2 M-NCPPC Stormwater Stewardship	$150,000	2018
Anacostia Watershed Society	National Capital Region Watershed Stewards Academy	$15,000	2018
Central Kenilworth Avenue Revitalization Community	Tree Planting Projects on Private Individual Residential Property and Support for Existing County Tree Canopy Programs	$125,542	2018

Organization	Project Title	Award Amount	Fiscal Year
Development Corporation, Inc.			
City of Mount Rainier	Mount Rainier Stormwater Retrofit Project	$166,707	2019
City of District Heights	Track 1. Water Quality Projects	$108,579	2019
Town of Capitol Heights	Chamber Avenue Green Street Project	$200,000	2019
Town of Edmonston	Water Quality Retrofits for Ingraham Green Street Project	$169,530	2019
Center for Watershed Protection, Inc.	Abandonment of Accokeek BMP	$12,700	2019
Alice Ferguson Foundation	Hard Bargain Farmyard Watershed Stewardship	$140,000	2020
Anacostia Watershed Society	Harnessing the Power of Natural Filters	$23,453	2020
EcoLatinos, Inc.	Festival del Rio Anacostia 2020	$23,694	2020
Anacostia Watershed Society	Prince George's County Environmental Stewardship Training Courses	$11,510	2020
EcoLatinos, Inc.	Agua es Vida, Reduce la Escorrentia - Water is Life, Reduce Stormwater Runoff	$18,993	2020
City of Hyattsville	Hyattsville Tree Canopy Program	$60,762	2020
Central Kenilworth Avenue Revitalization Community Development Corporation, Inc.	Grow Green With Trees - A Local Collaborative's Residential Greening Project	$134,031	2020
University of Maryland - Environmental Finance Center	Residential Action Framework and Stormwater Outreach Campaign	$50,000	2020
End Time Harvest Ministries	Youth-led Storm Water Awareness and Rain Check Rebate Education Project	$31,163	2020
City of Mount Rainier	Water Quality Projects – MOUNT RAINIER - GI projects for Commercial land uses	$196,000	2020
Town of Edmonston	Water Quality Retrofits for Lafayette Place Industrial Green Street Project	$68,527	2020
GreenTrust Alliance Inc.	Little Paint Branch Wetland and Stream Buffer Enhancement Project	$50,000	2020
Global Health and Education Projects, Inc.	Family Tree Adoption Program (FTAP) of Prince George's County	$115,969	2020
Town of Cheverly	Cheverly Town Park Rain Garden Demo	$54,954	2020
Washington Area Bicyclist Association	Watershed Wiggles/Meneando por la Cuenca	$5,000	2021
National Wildlife Federation	Public Outreach and Stewardship to Care for Creation along the Upper Patuxent River: A Multifaith Sacred Grounds Partnership	$29,999	2021
Mount Rainier Elementary School PTO	Mount Rainier Elementary School PTO Storm Water Management program	$5,000	2021
EcoLatinos, Inc.	Agua es Vida, Reduce la Escorrentia Phase II	$29,748	2021
Centro de Apoyo Familiar	CAF Family and Youth Environmental Stewardship Community Program	$15,000	2021
Neighborhood Design Center	Creative Inspections: Building a Green Inspector Corps with Game Play	$30,000	2021
Defensores de la Cuenca	Academia de Defensores de Cuencas	$15,000	2021
Central Kenilworth Avenue Revitalization Community Development Corporation, Inc.	Branching Out - Enhancing our Successful Collaborative Greening Project	$133,736	2021

Organization	Project Title	Award Amount	Fiscal Year
City of Hyattsville	Greening Oliver Alleyway	$36,702	2021
City of Mount Rainier	Water Quality Retrofits for 30th Avenue and 33rd Avenue in Mount Rainier	$142,441	2021
Town of Edmonston	Water Quality Retrofits for Gallatin Green Street project, Edmonston, MD	$142,803	2021
National Wildlife Federation	Public Outreach and Stewardship to Care for Creation along the Upper Patuxent River: A Multifaith Sacred Grounds Partnership Phase II	$30,000	2022
Anacostia Watershed Society	Mussel Power: Empowering High School Students as Environmental Stewards	$22,653	2022
Defensores de la Cuenca	Pescando Conocimiento - Fishing for Knowledge	$29,964	2022
Defensores de la Cuenca	7th Annual Festival del Río	$25,575	2022
Town of Edmonston	Water Quality Retrofits for Hamilton Street, Edmonston, MD	$131,785	2022
Town of Colmar Manor	Newark Road Green Street Project	$36,318	2022
Washington Area Bicyclist Association	Watershed Wiggles/Meneando por la Cuenca	$9,420	2022
University Christian Church	Stormwater Management for Community Use of 5-Acre Church Property	$50,800	2022
University of Maryland College Park	SM Residential Framework in Prince George's County 2.0	$29,975	2022
City of Mount Rainier	Water Quality Retrofits for Arundel Rd between 25 and 30th Streets in Mount Rainier	$150,520	2022
Central Kenilworth Avenue Revitalization Community Development Corporation, Inc.	Filling in the Gaps-Replenishing our Precious Canopy	$99,990	2022
Global Health and Education Projects, Inc.	Increasing Environmental Stewardship in Minority and Underserved Communities Through Family Tree Adoption Program (FTAP)	$58,000	2022
Greenbelt Homes, Inc.	Greenbelt Community Conservation Landscape and Demonstration Project	$4,041	2023
EcoLatinos, Inc.	Expanding Latino Outreach and Engagement in the Prince George's Rain Check Rebate Program	$41,817	2023
ECO City Farms	Stormwater Management for the Urban Farm Incubator	$134,888	2023
University of Maryland College Park	Developing a Pilot Climate Wise Academy	$110,000	2023
Global Health and Education Projects, Inc.	Increasing Environmental Stewardship in Minority and Underserved Communities in Prince George's County Through Family Tree Adoption Program (FTAP)	$50,000	2023
Alice Ferguson Foundation	Cultivating Sustainable Actions Through Watershed Stewardship	$45,000	2023
The Low Impact Development Center, Inc.	Building Community Resilience in Northwest Branch and Broad Creek/Swann Creek Watersheds	$490,464	2023
Alliance for the Chesapeake Bay	Prince George's Community Stormwater Program Pilot	$490,464	2023
Town of Edmonston	Town of Edmonston Buchanan Industrial Green Street	$179,360	2023
Town of Eagle Harbor Inc.	Eagle Harbor Sustainability Outreach and Education	$10,018	2023

Organization	Project Title	Award Amount	Fiscal Year
University Christian Church	Permeable Walkways	$50,000	2023
City of Hyattsville	Hyattsville Canopy Conservation 2023	$32,172	2023
Alliance for the Chesapeake Bay	Peace Park Restoration at Bowie State University	$25,000	2023
Town of Colmar Manor	Newark Road Green Street- 43rd and Newark Construction	$80,450	2023
Town of Berwyn Heights	Berwyn Heights Tree Canopy	$69,943	2024
Town of Riverdale Park	Riverdale Park Curb Rain Garden Pilot Program & Rainwater Harvesting	$139,540	2024
University Christian Church	University Christian Church Permeable Walkway and Conservation Landscaping	$113,000	2024
City of Greenbelt Department of Public Works	City of Greenbelt Red Oak Mitigation Plan	$297,600	2024
EcoLatinos, Inc.	Agua es Vida 2024	$59,413	2024
Alice Ferguson Foundation	Continuing Litter Reduction Efforts in Prince George's County	$45,000	2024
National Wildlife Federation	Sacred Grounds: Creating Climate Resilient Communities for people and wildlife through the power of congregations	$60,000	2024
Neighborhood Design Center	Frenchman's Creek Depavement & Bioretention Engineering & Implementation	$143,579	2024
Capitol Technology University	Capitol's Storm Water Project	$115,800	2024
Global Health and Education Projects, Inc.	Increasing Environmental Stewardship in Minority and Underserved Communities Through Family Tree Adoption Program Extension's (FTAP-E) Tree Canopy Outreach, Education, and Maintenance in Prince George's County, Maryland	$35,900	2024
The Low Impact Development Center, Inc.	Piloting a Rain Check Homes Co-Payment Program in Henson Creek Watersheds	$997,399	2024
Town of Brentwood	Windom Road Historic Barrier Park	$62,560	2024
St. Ann's Center for Children, Youth and Families	Porous Play Area Renovation Project (PPARP)	$65,687	2024
Town of Edmonston	Town of Edmonston – 47th Avenue & 49th Avenue Green Streets	$146,580	2024
Anacostia Riverkeeper	Anacostia Watchdogs: Pattern Analysis of Illegal Dumping in Prince George's Anacostia Watershed	$49,717	2024
Carole Highland Neighborhood Association	Community Awareness and Engagement	$28,200	2024
Vista Estates West Homeowners Association (VEWHOA)	Tree Preservation	$81,287	2024
Nature Forward	Activating Communities and Youth for Climate Resilience and Stormwater Stewardship	$59,161	2024
City of Mount Rainier	Clean Walks, Clean Waters	$10,000	2024
Project Bright Future	Spring into Gardening	$9,500	2024
Prince George's Community College Foundation	Prince George's Community College Community Garden	$9,500	2024
EcoLatinos, Inc.	St. Mary's Catholic Church	$100,616	2024

Organization	Project Title	Award Amount	Fiscal Year
Anacostia Watershed Society	5701 Clean-up to Green-up	$49,767	2024
Alliance for the Chesapeake Bay	Capitol Technology University Bioretention Phase II - Construction	$127,316	2025
City of Mount Rainier	Permeable Pavement for Mount Rainier	$150,000	2025
Preserve At Rock Creek Homeowner Association	Water Quality Retrofits Design for Rock Creek Road	$26,000	2025
Hyattsville Mennonite Church	HMC Stormwater Management & Pocket Forest Restoration Plan	$149,963	2025
Town of Bladensburg	Town of Bladensburg Water Quality Improvements Projects	$30,000	2025
Town of North Brentwood	4525-4531 Rhode Island Ave Stormwater Mitigation	$64,000	2025
Town of Riverdale Park	Phase I: Beale Circle Improvement Project (Retention Facility & Rain Garden)	$89,000	2025
Neighborhood Design Center	Eastpines Community Forest Restoration, Master Planning, and Implementation	$75,000	2025
Cottage City	Track 2- Tree Canopy Outreach, Education, Maintenance, and Preservation.	$70,000	2025
Casey Trees	Casey Trees Invasive Removal & Outreach at Riverdale Site	$61,683	2025
Town of Berwyn Heights	Berwyn Heights Tree Canopy Continuation	$50,000	2025
Season's Home Owners Association, Inc.	Seasons HOA Stormwater and Landscape Improvement	$73,838	2025
City of New Carrollton	Invasive Management and Tree Health Enhancement (Tracks 2 & 3)	$250,000	2025
Town of Fairmount Heights	Preserve, Maintain, Outreach and Educate the Tree Canopy of Fairmount Heights, MD	$30,000	2025
Town of Riverdale Park	Branching Forward: Tree Canopy Preservation and Invasive Species Management	$120,000	2025
Alice Ferguson Foundation	Continuation of Litter Reduction Efforts in Prince George's County	$45,000	2025
Potomac Riverkeeper Network	Oxon Hill Community Engagement for 2025 Earth Day Cleanup	$10,000	2025
Interfaith Partners for the Chesapeake (IPC)	Growing Faith-Based Community Watershed Stewardship in Prince George's County	$28,386	2025
Town of Forest Heights	Forest Heights Community Awareness and Engagement	$20,000	2025
National Wildlife Federation	Sacred Grounds: Scaling up the power of congregations to work together for a climate resilient watershed	$60,000	2025
Chesapeake Education Arts Research Society (CHEARS)	A Globally Informed Systems Thinking Approach to Supporting Prince George's County's Climate Action Plan: Learning to Grow, Prepare, Eat, and Model the Carbon Reduction Outcomes of High Health Heritage & Low-Environmental Impact Foods	$14,700	2025
City of Laurel	Community Engagement through City of Laurel Farmer's Market: Promoting County Programs in Laurel	$18,000	2025
Live Peace Tech Corporation	The South Asian American Community Engagement in Environmental Stewardship: A Community Climate Education Initiative	$27,500	2025
Project Bright Future	Faith in Action: Cultivating Clean Water & Healthy Communities	$40,000	2025
University of Maryland	Prince Georges County Climate Stewards Academy – Phase 2	$92,960	2025

Tree Planting and Landscape Revitalization Programs

The County has several programs with the goal of planting trees.

- **Right Tree, Right Place Program.** The Right Tree, Right Place program, seeks to increase the urban tree canopy along County roads. The program planted 5,498 native trees in FY 2025. In addition, the Right Tree, Right Place Program is an urban risk management tree program developed by DPW&T to systematically remove and replace dead, dying, and high-risk street trees. During FY 2025, tree work continued to concentrate on the removal and replacement dead, dying, and high-risk street trees (many of which are Ash and large Bradford pear trees killed by the Emerald Ash Borer). The program completed 545 tree removals in FY 2025.
- **Growing Green with Pride Day.** The Growing Green with Pride Cleanups program is sponsored by DPW&T's Office of Highway Maintenance. Groups across the County are urged to participate and recruit volunteers to plant, beautify, and clean up the County on selected dates in the spring and fall of each year. Growing Green with Pride events were held in October 2024, and April 2025. During FY 2025, 240 trees were planted and 25.49 tons of litter and debris were collected.
- **Arbor Day & Tree City.** Members of the Prince George's County Beautification Committee (PGCBC), volunteers, and the staff and students at Oxon Hill Elementary School planted 14 trees in honor of Arbor Day. In FY 2024, 7,323 trees were planted in Prince George's County, earning a Tree City USA award, which the County has received every year since 1983.
- **Urban Tree Grant.** DoE was awarded an Urban Tree Grant to plant 2,000 trees in equity areas beginning in FY 2023. DoE will be leveraging these funds to plant large trees in residential properties as well as municipal public lands to maximize stormwater, carbon storage, and cooling co-benefits. Part of this project also seeks to determine if higher rebate amounts will boost participation in the Rain Check Rebate program and thus generate more stormwater management credits. In FY 2023 DoE participated in the development of a regional Tree Equity Score Analyzer tool to help guide tree planting in equity areas. Also, in FY 2023, Natural Resource & Climate Resilience Programs (NRCR) began working with the Metropolitan Washington Council of Governments on a Prince George's County Tree Equity Tool. This tool, which combines census socioeconomic data, tree canopy data, and ownership data to help the NRCR better target and prioritize planting opportunities, was completed in FY 2025 along with an update to the tree canopy data within the tool. It covers the entire County and enables analysis by subwatershed as well as other local parameters. In FY 2025, DoE and its grantees planted 1,830 trees benefiting approximately 10,000 residents in equity areas while maximizing stormwater reduction, carbon storage, and cooling co-benefits.
- **Tree ReLEAF Grant Program.** DoE's Tree ReLEAF Grant Program funds neighborhood, civic, and community/homeowner organizations; schools; libraries; and municipalities for tree and shrub planting projects in public spaces or common areas. During this reporting period, potential Tree ReLEAF applicants from areas eligible for the Urban Tree Grant Program were advised to shift to the Urban Tree Grant Program since that program requires no match, does not categorically limit the per project funding, and can provide larger trees (thus providing greater stormwater benefits).
- **Median Beautification.** The median beautification initiative has installed more than 10,000 native plants across all nine Councilmanic districts in the County. These medians serve as a template and inspiration for installing native species throughout the County on residential, commercial and government properties, that will all work together to support a beautiful, healthy,

and sustainable Prince George's County. Due to funding issues in FY 2025, the program was paused but will resume in FY 2026.

- **Arbor Day Every Day.** Arbor Day Every Day provides free trees to schools to plant and maintain on school grounds. In FY 2025, potential Arbor Day Every Day applicants from areas eligible for the Urban Tree Grant Program were advised to shift to the Urban Tree Grant Program. In FY 2026, through its Urban Tree Program, NRCR will be focusing on opportunities to plant school cooling groves to lessen heat island impacts and benefit the communities in which the schools are located. In municipalities, NRCR will also be targeting rights of way plantings along routes children walk to school

3 Bacteria Local TMDLs

Permit Conditions Part IV.F.3

For all TMDLs and WLAs listed in Appendix A, the County shall annually document, in one Countywide Stormwater TMDL Implementation Plan, updated progress toward meeting these TMDL WLAs. This Countywide Stormwater TMDL Implementation Plan shall include:

a. A summary of all completed BMPs, programmatic initiatives, alternative control practices, or other actions implemented for each TMDL stormwater WLA;
b. An analysis and table summary of the net pollutant reductions achieved annually and cumulatively for each TMDL stormwater WLA;
c. An updated list of proposed BMPs, programmatic initiatives, and alternative control practices, as necessary, to demonstrate adequate progress toward meeting the Department's approved benchmarks and final stormwater WLA implementation dates.

The County must meet various bacteria TMDLs (**Table 2**, **Figure 3**). MDE's 2022 *Guidance for Developing Bacteria Total Maximum Daily Load Stormwater Wasteload Allocation Watershed Implementation Plans* focuses on the spatial identification of potential sources on the landscape, water quality monitoring to identify sources, elimination of bacteria sources, and estimating trends; the focus of the MDE 2022 guidance is less on meeting SW-WLAs and more on tracking and eliminating bacteria sources because of the inaccuracies associated with quantifying land-use loading rates and traditional BMP performance. Therefore, this section does not discuss load reductions or traditional BMPs, such as bioretention systems.

The County finalized its draft *Bacteria Stormwater Wasteload Allocation (SW-WLA) Watershed Implementation Plan (WIP) for Prince George's County* document and submitted it for MDE review on September 25, 2024. MDE provided comments on January 2, 2025. The County submitted a revised plan on February 25, 2025, which was approved by MDE on March 31, 2025. The bacteria source tracking geodatabase was sent to MDE on May 20, 2025. The document followed the 2022 MDE guidance on developing bacteria WIPs. The plan included existing water quality data along with descriptions of geospatial data used in subwatershed prioritization. The document was accompanied by factsheets for each TMDL listing and mapping potential bacteria sources based on MDE guidance. The factsheets also contain maps showing priority watershed for monitoring based on the number and severity of potential bacteria sources identified through a geospatial analysis. The County also identified monitoring locations and began collecting water quality data for priority subwatersheds.

3.1 Permit Conditions Part IV.F.3a. Completed BMPs for Bacteria TMDL WLAs

MDE guidelines for bacteria focus on source track down and elimination. Because of this, BMP and alternative control practices are not described in this section. The County programs in **Section 2.5** of this document mainly involved nutrient and sediment reductions. The County and other agencies have initiated a wide range of programmatic stormwater management initiatives over the years to address bacteria concerns. These initiatives are briefly described in this subsection.

3.1.1 Pet Waste Management

The pet waste management initiative aims to educate residents about the issue, change personal behaviors, and implement best practices at the individual, community, and municipal level. The program started in 2017 and has worked with over 35 municipalities and HOAs. More than 200 pet waste stations have been installed in communities across the County. During FY 2025, DoE continued distributing the pet waste video, brochures, posters, and game to communities seeking to educate residents about the problems caused by pet waste and to encourage them to pick up after their pets.

3.1.2 Animal Services Division Programs

DoE's Animal Services Division administers programs for animal control, animal licensing, vaccination, spaying and neutering, public education, cruelty prevention, euthanasia, and other programs. The division will continue with its current programs, including adoption events, spay and neuter clinics, and public education events. Spaying and neutering as well as pet adoptions can keep animals from becoming strays, thus reducing the amount of animal waste that is not properly disposed of. The division keeps detailed records on the number and types of licensed animals in the County, as well as statistics related to the stray animal population. This information can help determine if the overall stray population is decreasing.

3.1.3 Sanitary Wastewater Related Activities

Illicit Connection

DoE's Stormwater Management Division's Inspection and Compliance Section receives illicit discharge/water quality complaint referrals. To expedite a County response to those complaints, DoE staff immediately refers the investigation and corrective action to the Washington Suburban Sanitary Commission (WSSC) if sanitary wastewater is suspected of being the source of the illicit discharge.

Sewer Repair and Rehabilitation

One source of the nutrients and bacteria found in stormwater is aging sewer systems. Many sewer pipes in the region were constructed in the 1940s and 1950s. The County is also experiencing sanitary sewer overflows (SSOs). WSSC is under a 2005 consent decree with the EPA to overhaul its sewer lines to reduce SSOs under their SR3 (Sewer Repair, Replacement and Rehabilitation) Program to upgrade the sewer systems. The largest factor in SSOs is sewer pipe blockages (e.g., debris, grease, roots). The single most effective measure to reduce SSOs is to repair and rehabilitate existing sewer lines. The SR3 Program includes sewer pipelining or replacement, manhole replacement, and protecting exposed pipes and manholes. Additional methods to reduce potential sewage from entering County waterways include eliminating cross-connections and pump station repairs and upgrades.

WSSC coordinates with the County on all sewer repairs and rehabilitation. WSSC:

- Provides the County daily sewer and water line breaks and estimates of the discharge flows from broken systems.
- Coordinates with the County major sewer line repairs or replacements.
- Coordinates with the County on wastewater plant upgrades.

WSSC is working with the Restaurant Association of Maryland and other agencies to educate food service establishments on the best ways to dispose of fats, oils, and grease to help reduce SSOs due to

blockages. As part of this disposal guidance, WSSC conducts inspections for food service establishments (e.g., restaurants/kitchens serving the public, cafeterias, hotel, and grocery stores).

Onsite Sewage Disposal System Repair and Replacement

The Prince George's County Health Department responds to complaints about sanitary sewer overflows, failing and malfunctioning Onsite Sewage Disposal Systems (OSDSs) that may impact the waters of the State. Typical solutions are connecting to sanitary sewers, maintaining septic systems to ensure proper operation, or replacing failing septic systems with Best Available Technology (BAT) system.

The County's stormwater BMP database contains more than 800 records of septic connections and 75 advanced denitrification systems as of June 30, 2025. Using Chesapeake Bay Restoration Fund grants, the Health Department plans to continue replacing failing septic systems in critical areas (within 1,000 feet of tidal waters) based on available funding and eligibility. Failing systems inside critical areas are prioritized.

The Health Department provides the following septic system activities for County residents:

- Percolation tests to determine soil suitability for individual sewage disposal systems.
- Review of septic system plans, issue septic system permits for
  - replacement of failing septic systems, and
  - conventional septic systems in new construction.
- Inspection of well and septic system construction in existing homes.
- Disbursement of funds from the State's Chesapeake Bay Restoration Fund for the installation of BAT nitrogen-reducing septic tanks or connection to the public sewer.
- Site evaluations for the potential installation of innovative and alternative septic systems where conventional septic systems will not work.
- Inspection and licensing of septage haulers to operate in the County.
- Evaluation of septic systems and wells for the operation of new foster care homes, adult and childcare facilities, camps, schools, and other institutional facilities.
- Sanitary water and sewer surveys in problem areas in conjunction with WSSC.

3.1.4 MS4 Program Activities

Illicit Discharge Detection and Elimination

The County uses the full enforcement authority authorized by the County Code to investigate and eliminate illicit discharges. The County Code assigns the authority and responsibility for responding to and eliminating illicit discharges by type, activity, or location. For instance, enforcement actions associated with violations involving the improper storage of materials and/or dumping on private property are governed under the zoning ordinance, and both housing and property codes.

DoE's Stormwater Management Division's Inspection and Compliance Section receives illicit discharge/water quality complaint referrals through the County's Customer Call Center 311 system, through e-mails from State and local government agencies, through correspondences from the director's office, and through direct phone calls or e-mails from County residents. DoE also maintains close communications with environmental organizations throughout the County. Site investigations are

performed on all incoming complaints except for those that clearly fall within the purview of another agency. To expedite a County response to those complaints, DoE staff immediately refers the investigation and corrective action, if warranted, to the responsible agency. Additional information on this program is available in the County's annual NPDES MS4 report and geodatabase.

Litter Control and Illegal Dumping

Urban litter is noted as a source of pathogens. The County conducted several countywide trash reductions, litter reduction, and recycling programs. Additional information on these programs is discussed in **Section 5** (Trash TMDL) of this document.

3.2 Permit Conditions Part IV.F.3.b Net Pollution Reductions Achieved Annually and Cumulatively for Bacteria

Progress towards bacteria TMDLs is not tracked by load reductions, but rather by source track down and elimination. The County finalized its source trackdown plan and began collecting bacteria samples, which include the locations for the Watershed Assessment monitoring (Figure 33). Table 80 presents the results of FY 2024 and FY 2025 monitoring. A full description of the results is presented in separate monitoring report.

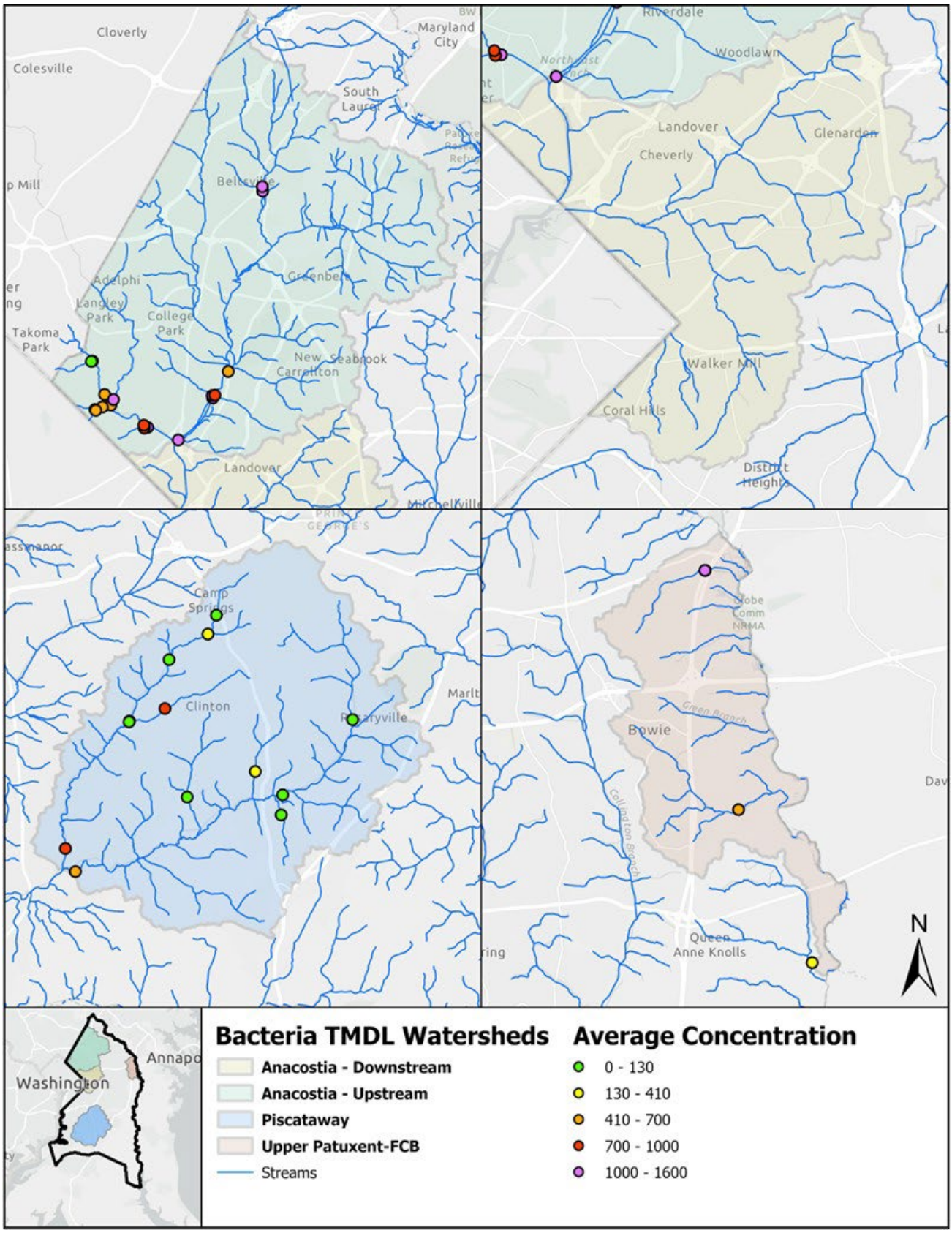


Figure 33. Phase I Bacteria Trackdown Monitoring Locations and Results.

Table 80. Phase I Bacteria Trackdown Monitoring Results.

Subwatershed ID[a]	Number of stations	Number of samples	Median concentration (MPN/100 mL)	Percent of samples > 126 MPN/100 mL	Percent of samples > 410 MPN/100 mL
Anacostia River Watershed					
AR-12	1	3	540	100%	100%
AR-14	4	9	1414	78%	67%
AR-28	2	8	246	50%	38%
AR-38	3	12	581	83%	50%
AR-39	4	14	629	86%	57%
AR-40	1	5	1600	100%	60%
AR-42	1	4	88	25%	25%
AR-43	2	4	252	50%	50%
Piscataway Creek Watershed					
PC-10	2	4	104	50%	0%
PC-11	1	1	49	0%	0%
PC-13	2	9	34	22%	11%
PC-15	1	5	74	40%	40%
PC-21	1	3	21	0%	0%
PC-23	1	4	45	25%	25%
PC-25	2	4	37	25%	0%
PC-31	1	1	25	0%	0%
PC-7	1	4	464	100%	50%
PC-9	1	3	29	0%	0%
Patuxent River Watershed					
PX-12	2	7	28	43%	14%
PX-2	1	1	365	100%	0%
PX-7	1	1	435	100%	100%

3.3 Permit Conditions Part IV.F.3.c Proposed BMPs to Demonstrate Adequate Progress for Bacteria TMDLs

MDE guidelines for bacteria focus on source track down and elimination. Because of this, BMP and alternative control practices are not described in this section. In addition to continued monitoring, the County will continue the programmatic initiatives described in **Section 3.1** of this document. The County plans to collect additional trackdown samples in FY 2026. As elevated levels of bacteria are found, the County will proceed upstream and identify new monitoring locations based on the data collected for the development of the watershed trackdown factsheets.

4 PCB Local TMDLs

Permit Conditions Part IV.F.3

For all TMDLs and WLAs listed in Appendix A, the County shall annually document, in one Countywide Stormwater TMDL Implementation Plan, updated progress toward meeting these TMDL WLAs. This Countywide Stormwater TMDL Implementation Plan shall include:

a. A summary of all completed BMPs, programmatic initiatives, alternative control practices, or other actions implemented for each TMDL stormwater WLA;
b. An analysis and table summary of the net pollutant reductions achieved annually and cumulatively for each TMDL stormwater WLA;
c. An updated list of proposed BMPs, programmatic initiatives, and alternative control practices, as necessary, to demonstrate adequate progress toward meeting the Department's approved benchmarks and final stormwater WLA implementation dates.

The County must meet various PCB TMDLs (**Table 2**, **Figure 4**). MDE's 2022 *Guidance for Developing Local PCB TMDL (Total Maximum Daily Load) Stormwater Wasteload Allocation (SW-WLA) Watershed Implementation Plans (WIPs)* focuses on the spatial identification of potential sources, source track down, and elimination of PCB sources and less on meeting WLAs. Therefore, this section does not discuss load reductions or traditional BMPs, such as bioretention systems.

The County finalized its draft *Prince George's County, MD Polychlorinated Biphenyls (PCBs) Total Maximum Daily Load (TMDL) Stormwater Wasteload Allocation (SW-WLA) Watershed Implementation Plan* document and submitted it for MDE review on March 3, 2024, along with the draft Sampling and Analysis Plan (SAP) and monitoring Quality Assurance Project Plan (QAPP). The plan included existing water quality data along with descriptions of geospatial data used in subwatershed prioritization. The document was accompanied by factsheets for each TMDL listing and mapping potential PCB sources based on MDE guidance. The factsheets also contain maps showing priority watershed for monitoring based on the number and severity of potential PCB sources identified through a geospatial analysis. The County also identified monitoring locations and began collecting water quality data for priority subwatersheds. These documents followed the 2022 MDE guidance and associated material on developing PCB WIPs. MDE approval with final recommendations was received on September 24, 2025. The plan was finalized and submitted with the FY 2024 annual report, along with the PCB source trackdown geodatabase.

4.1 Permit Conditions Part IV.F.3.a Completed BMPs for PCB TMDL WLAs

MDE guidelines for PCBs focus on source track down and elimination. Because of this, BMP and alternative control practices are not described in this section. The County programs in **Section 2.5** of this document mainly involved nutrient and sediment reductions.

The 2007 inter-jurisdictional TMDL for PCBs for the tidal portions of the Potomac and Anacostia Rivers established a significant reduction target of over 98 percent for the Maryland segment of the Anacostia watershed, which includes Lower Beaverdam Creek (LBC). Over the past two decades, LBC has been the subject of numerous investigations. Many of these investigations indicate that LBC is an ongoing source of PCB contamination to the tidal Anacostia River.

Since 2019, the MDE and the County have investigated potential sources of PCBs in LBC and its tributaries (**Figure 34**). The investigations have encompassed the collection and analysis of samples from both surface water and sediment. The purpose of each sampling event was to gain insights into the presence and distribution of PCBs in the environmental components in the creek. The main objective was to pinpoint areas with higher concentrations of PCBs in either sediment or surface water. This effort aids in the identification of potential sources of PCB contamination, which could be impacting the quality of sediment and surface water in LBC. While two primary areas of concern have been identified, work continues to isolate the source of PCBs. The County is working with MDE and EPA to better characterize those areas and that effort will continue through FY 2026.

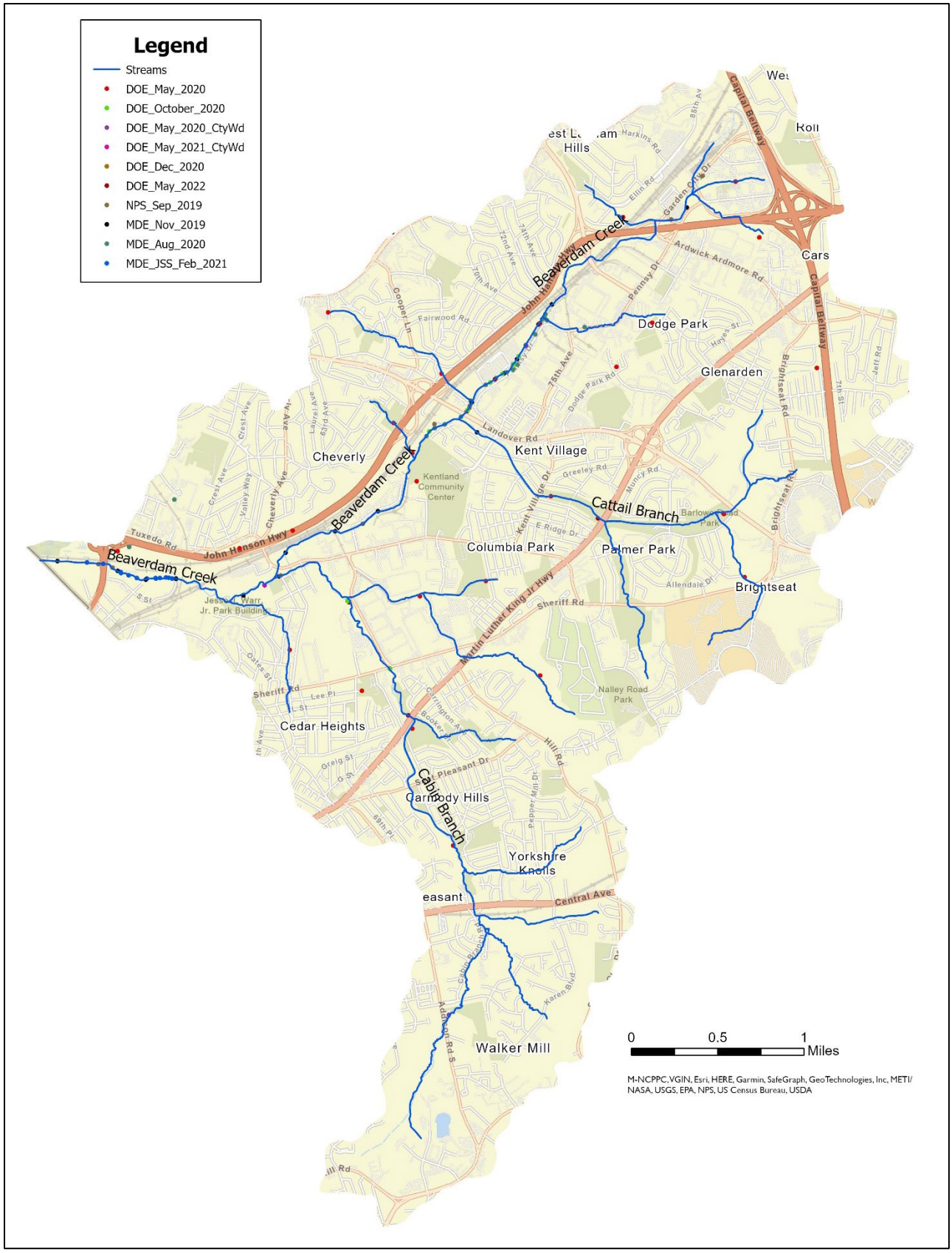


Figure 34. Map of PCB Monitoring Locations in the Lower Beaverdam Creek Watershed.

The County's actions towards implementation to date are as follows:

- **2015** – Prince George's County submitted its restoration plan for PCB-impacted water bodies, including the Anacostia and Potomac River watersheds.
- **Spring 2020** – Following previous studies through the Anacostia Watershed indicating the presence of PCBs, the County began collecting stream sediment and aqueous samples. Sampling was focused on the area of LBC and its tributaries where 24 samples were collected. Limited aqueous screening was also performed countywide.
- **Fall 2020** – Areas identified in the previous assessments were targeted with sediment and aqueous sampling for refinement. Mapping of the MS4 and individual outfall screenings were performed at eight locations where elevated levels of PCBs were previously detected.
- **Winter 2020** – Further sampling refinement and identification of areas of concern within LBC. Federal and State enforcement action is underway on one potentially responsible party. The County continued to be engaged with MDE on the trackdown of PCBs near the Landover Metro station.
- **Spring 2022** – Follow up sampling was performed in the LBC, Cabin Branch, and Cattail Branch watersheds. Outfalls to the creek were further characterized.
- **Summer 2023** – The County completed a sediment and PCB reduction plan around the Landover Metro at or near outfalls where elevated PCB concentrations have been identified. The project involved the analysis of the hydrology of the selected areas and the development of a model to select locations for BMPs and their placement to intercept sediment transport, the recommendation of BMP types that are suitable for collecting sediments and filtering PCBs, and the preparation of BMP conceptual designs for four selected sites. This work was partially funded through a grant from the Chesapeake Bay Trust.
- **Spring 2024 –** The County submitted to PCB WIP and trackdown results, SAP, and monitoring QAPP to MDE on March 3.
- **Spring 2024 –** The County began Phase I of its trackdown program and has completed the desktop analysis and phased priority PCB sampling locations.
- **Summer 2024 –** The County worked with EPA, MDE and their subcontractor to conduct a dye trace analysis and video survey of the conveyance system located in the vicinity of the 3100 Block of Pennsy Drive in Landover, MD. This is in preparation for further work in FY 2025 to include passive sediment samplers in the manhole vaults leading to LBC.
- **Summer 2025 –** The County continued coordination with the EPA and MDE to advance the PCB trackdown investigation in LBC near the 3100 Block of Pennsy Drive in Landover, MD. Work included outfall and creek focused sampling, consisting of surface water grab samples, 24-hour composite samples, passive pore water polyethylene samplers and sediment profiles from LBC. Soil grab samples were also collected at co-located and background locations. Work also included the deployment and retrieval of passive sediment samplers from the conveyance system. The County continued collaboration with EPA and MDE throughout the summer to evaluate sediment and water quality data, deploy additional passive samplers, and assess PCB concentrations to support ongoing source identification and remediation planning efforts. Figure 35 depicts the project area and sample locations.

Figure 35. Map of PCB Project Area in the Lower Beaverdam Creek Watershed.

4.2 Permit Conditions Part IV.F.3.b Net PCB reductions achieved annually and cumulatively for PCBs

Progress towards PCB TMDLs is not tracked by load reductions, but by source track down and elimination. The County has finalized its source track down plan and received MDE approval in FY 2025. The County began collecting PCB trackdown samples (Figure 36) in FY 2024 and continued in FY 2025. The results of the monitoring are presented in Table 81. A full description of the results is presented in separate monitoring report.

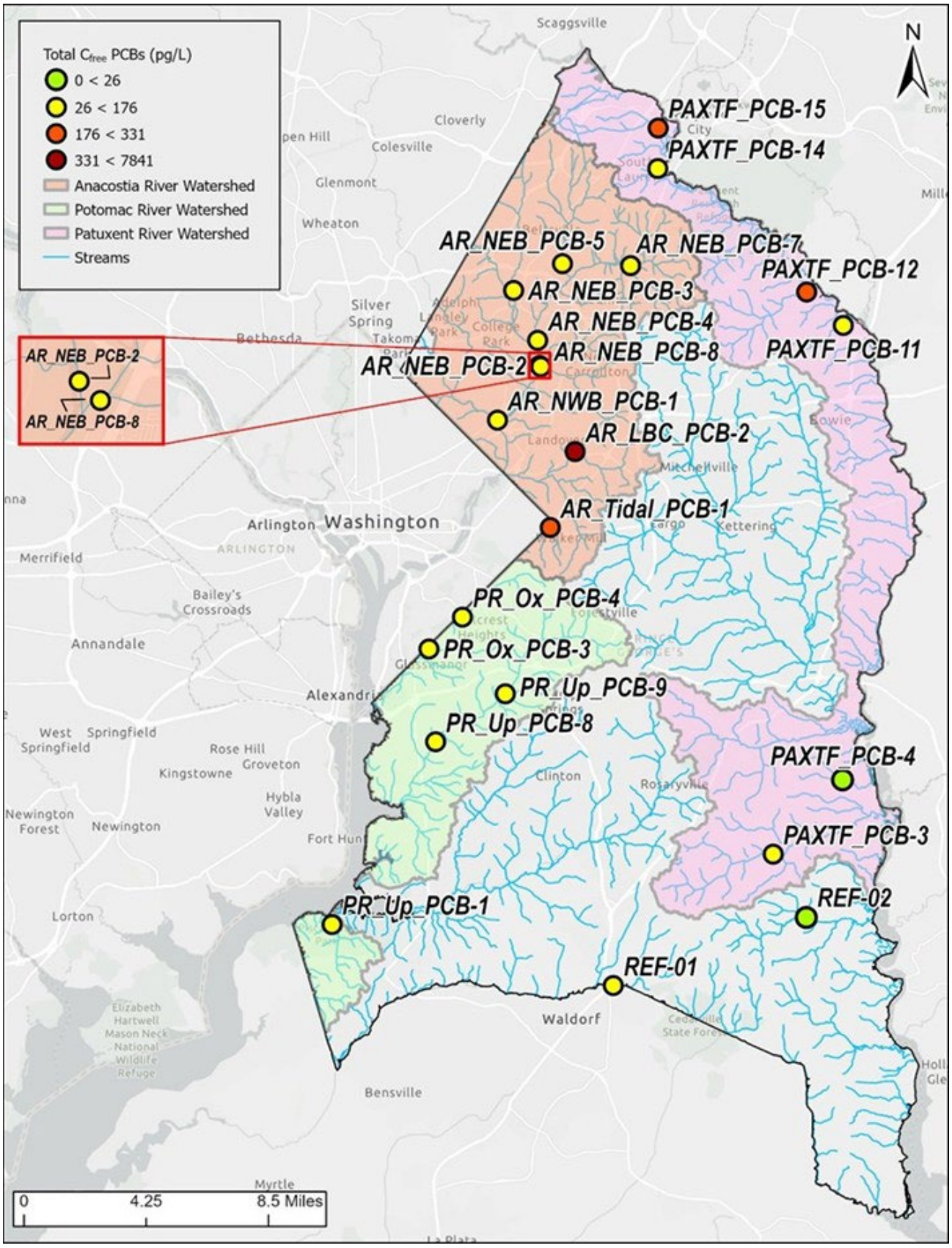


Figure 36. Phase I PCB Trackdown Monitoring Locations and Results.

Table 81. Phase I Total PCB Trackdown Monitoring Results.

Watershed	Site ID	Total PCBs (pg/L)	Exceeds or is Equal to Reference Threshold (26 pg/L)	Exceeds TMDL Water Column Endpoint	PCB Source Decision	Resulting Decision
Anacostia River Watershed (TMDL Water Column Endpoint = 640 pg/L)	**Northeast Branch**					
	AR_NEB_PCB-2	107.6	X		Unable to determine whether significant source	Discussion with MDE
	AR_NEB_PCB-3	129.3	X		Unable to determine whether significant source	Discussion with MDE
	AR_NEB_PCB-4	144.4	X		Unable to determine whether significant source	Discussion with MDE
	AR_NEB_PCB-5	68.6	X		Unable to determine whether significant source	Discussion with MDE
	AR_NEB_PCB-7	39.1	X		Unable to determine whether significant source	Discussion with MDE
	AR_NEB_PCB-8	166	X		Unable to determine whether significant source	Discussion with MDE
	Northwest Branch					
	AR_NWB_PCB-1	103.6	X		Unable to determine whether significant source	Discussion with MDE
	Tidal (including LBC)					
	AR_LBC_PCB-2	299.9	X		Unable to determine whether significant source	Discussion with MDE
	AR_Tidal_PCB-1	7,840.9	X	X	Significant source	Further source trackdown investigation needed
Patuxent River Watershed (TMDL Water Column Endpoint = 600 pg/L)	**Patuxent River Tidal Fresh (PAXTF)**					
	PAXTF_PCB-3	37	X		Unable to determine whether significant source	Discussion with MDE
	PAXTF_PCB-4	25.4			Not significant source	No source trackdown investigation needed
	PAXTF_PCB-11	71.3	X		Unable to determine whether significant source	Discussion with MDE
	PAXTF_PCB-12	292.5	X		Unable to determine whether significant source	Discussion with MDE
	PAXTF_PCB-14	140.3	X		Unable to determine whether significant source	Discussion with MDE
	PAXTF_PCB-15	330.9	X		Unable to determine whether significant source	Discussion with MDE
Potomac River Watershed (TMDL Water Column Endpoint = 260 pg/L)	**Oxon Run**					
	PR_Ox_PCB-3	175	X		Unable to determine whether significant source	Discussion with MDE
	PR_Ox_PCB-4	126.2	X		Unable to determine whether significant source	Discussion with MDE
	Upper Potomac					
	PR_Up_PCB-1	34.2	X		Unable to determine whether significant source	Discussion with MDE

Watershed	Site ID	Total PCBs (pg/L)	Exceeds or is Equal to Reference Threshold (26 pg/L)	Exceeds TMDL Water Column Endpoint	PCB Source Decision	Resulting Decision
	PR_Up_PCB-8	93.2	X		Unable to determine whether significant source	Discussion with MDE
	PR_Up_PCB-9	67.2	X		Unable to determine whether significant source	Discussion with MDE
Reference Sites	**Reference Sites**					
	REF-01	37.8	--	--	--	--
	REF-02	15.1	--	--	--	--

4.3 Permit Conditions Part IV.F.3.c Proposed BMPs to Demonstrate Adequate Progress for the PCB TMDL

MDE guidelines for PCBs focus on source track down and elimination. Because of this, BMP and alternative control practices are not described in this section. The County will continue the source track down document and analyses.

5 Local Trash TMDL

Permit Conditions Part IV.F.3.d

Updates on the County's efforts to reduce trash, floatables, and debris and show progress toward achieving the annual trash reduction allocation required by the Anacostia trash TMDL.

i. Quantifying annual trash reductions using the Department's TMDL analysis or an equivalent and comparable County trash reduction model
ii. The public education and outreach strategy to initiate or increase residential and commercial recycling rates, improve trash management, and reduce littering
iii. An annual evaluation of the local trash reduction strategy including any modifications necessary to improve source reduction and proper disposal.

This section provides an update on the County's efforts to reduce trash, floatables, and debris and show progress toward achieving the annual trash reduction allocation required by the Anacostia trash TMDL (**Table 2**, **Figure 5**).

5.1 Quantified Annual Trash Reductions

The County continued practices for litter removal in FY 2025 with expanded prevention efforts through messaging. We recognize that source reduction and the capture of disposable items, before such items become litter, are ultimately the most effective approach to reducing the litter load on the Anacostia River and its communities. The Litter Reduction Program devoted much of its effort to building capacity for litter prevention, messaging, and capture over this fiscal year.

Litter reduction efforts resulted in the removal of 439,609 pounds of litter in the Anacostia River Watershed in FY 2025, which exceeds the target annual load reduction of 170,628 pounds per year. By continuing to implement a countywide anti-litter marketing campaign, using trash traps along three Anacostia tributaries, producing grade-specific activity books that focus on litter reduction and marine debris, and partnering with Prince George's County Public Schools (PGCPS) to host virtual environmental classes for students, and an expanded roadside litter removal program.

The County continued to conduct countywide trash reduction efforts through contracted services for in-stream cleanups that extend into overbank areas. County staff is conducting virtual educational programs promoting litter reduction strategies and recycling in-lieu of in- person clean-up events. The virtual educational programs will continue to raise awareness for the adverse impact of litter on the environment and encourage environmental stewardship. Summaries of several programs and respective accomplishments are included in this reporting.

5.1.1 Cleanup Activities

Table 82 outlines the enacted FY 2025 measures and shows the respective accounting for load reductions for the Anacostia River. The County will continue to update and include this table in future MS4 annual reports to MDE. There were 439,609 pounds removed from locations in the watershed. In the County jurisdictional boundaries, 681,375 pounds of litter was collected. Factoring in reductions, the County claims a load reduction of 439,609 pounds for efforts in FY 2025 in the Anacostia River Watershed. While the activities outlined in Table 82 are specific to the Anacostia River Watershed, the

County and volunteers performed litter removal and prevention activities in other areas of the County. These activities cannot be counted towards reducing the annual MS4 trash loads because the associated trash was either larger than point source items or the activities occurred outside of the Anacostia River Watershed.

Table 82. Pounds of Trash Removed in the Anacostia River Watershed in FY 2025.

Activity Category	Activity/Location	# trash bags collected	Actual amount (lbs)	Annual Load Reductions Counted (lbs)	Calculation methodology
Community Cleanups	Various Individual clean ups in the Anacostia River Watershed	156	3,900	2,503.41	Total number of bags × 0.7 × 25 lbs. × 0.917 (accounts for liquid in bottles [glass and plastic] and cans)
Additional Roadside Litter Removal-Contracted	Anacostia River Watershed	26,065	651,625	418,278	
Corvias BMP Clean Ups	Various locations in Anacostia River Watershed (specific locations recorded in PGCLitterTRAK)	207	5,175	3,321.83	Total number of bags × 0.7 × 25 lbs. × 0.917 (accounts for liquid in bottles [glass and plastic] and cans)
Contractor Services - Stream Area Cleanups	Lower Beaver Dam	360	9,000	6750	Total load × 0.75 to account for non-MS4 items (exclusive of tires) which were disposed with bags at landfill
	Northwest Branch	218	5,450	4,087.5	
	Sligo Creek	177	4,425	3,318.75	
	Northeast Branch	72	1,800	1,350	
Bandalong Devices	Arundel Canal Bandalong	0	0	0	Total number of bags × 0.7 × 25 lbs. × 0.917 (accounts for liquid in bottles [glass and plastic] and cans)
	Cabin Branch Bandalong	0	0	0	
	Guilford Run Bandalong	0	0	0	
Total		27,255	681,375	439,609	

For selected cleanup events within the Anacostia River Watershed, volunteers collected trash conveyed through the MS4. A discount factor of 0.43 was applied to the total amount of trash collected for volunteer cleanup events to estimate the amount of trash conveyed through the MS4. After the 0.43 factor was applied, trash collected during these events was applied towards the 2023 MS4 Permit reduction goal. This factor is reflective of the ratio of the TMDL MS4 WLA to total trash as follows: (MS4 WLA)/ (WLA + LA) = 0.43 (43 percent).

For other cleanup events, bags of litter were collected in 33-gallon bags that equate to 25 pounds of litter per bag. Bagged items typically include bottles, cans, cups, bags, and other small items that could flow into a storm drain inlet and ultimately discharge to a local waterway. However, there is the potential for volunteers to put other items like sports balls or small oil containers in the bags. The trash workgroup—managed by the Metropolitan Washington Council of Governments (MWCOG)—has determined a discount factor of 0.7 to account for the possible inclusion of these items in the volunteers' bags. Also, the trash workgroup determined a value of 0.917 to account for the weight of liquid in partially full containers. Plastic bottles are one of the most frequently collected items, in- stream, and community

cleanups. Persons picking up the bottles during cleanup activities do not consistently empty the collected bottles before placing such bottles in recycling bags. Because collected trash might include the weight of water in partially full bottles, only a portion of the total trash weight is counted towards the annual MS4 waste load reduction.

The County continued the services of contractors to assist with roadside litter removal and in-stream cleanups. Roadside Litter Removal contractors removed 418,278 pounds of trash (actual pounds without deductions). These contractors performed cleanups in adjacent riparian buffers in road rights-of-way and along roadways at various locations within the Anacostia River Watershed.

As part of County's quality control for litter reduction activities by contractors, County staff conducted pre-inspections of contractor's work sites to assess type and composition of litter found on-site. Post-inspections of the sites were also performed to ensure the removal of litter especially for in-stream litter removal. For tires and loose items (e.g., buckets, cans, pieces of wood), contractors segregated these items from bagged litter. Loads of bagged litter and all loose items were weighed and disposed at the County landfill. Due to inconsistent contractor reporting of the number of bags of litter collected, only weight tickets for loads consisting of bags of litter and loose items disposed at the County's landfill were used to calculate trash reduction achieved. A factor of 0.75 was applied to the weight of litter collection to account for loose items. The weight of tires has not been included in the load reduction computation.

The 2015 Anacostia River Watershed Trash TMDL implementation plan set a trash reduction benchmark of 170,628 pounds per year. The County will continue to conduct community and stream cleanups, promote adoption of additional stream segments under the Adopt-a-Stream Program, install "No Dumping" Signage, and add Big Belly trash and recycling stations at bus stops. The County ramped up anti-litter outreach and education efforts in FY 2020 with the kickoff of the County's anti-litter marketing campaign. This campaign was built in partnership with the PGCPS green schools' program to complement the environmental education curriculum with anti-litter activity books.

The results of instream monitoring performed by the Metropolitan Washington Council of Governments (MWCOG) are shown in Table 83. MWCOG monitors twice a year and conducts a bottle count at fifteen in-stream stations within the County; however, in FY 2025, the county did not take place due to lack of contract. The table below illustrates the number of bottles surveyed at fifteen locations within the Anacostia watershed.

Table 83. Stream Monitoring Data – Plastic Bottle Makeup, by Volume, of Trash Mix

Fiscal Year	Number of Surveys	Total Number of Items	Number of Plastic Bottles	Percent Plastic Bottles (%)	Total Weight (grams)	Plastic Bottle Weight (grams)	Percent Weight (%)
2011	2	1,569	263	16.8	292,713	15,731	5.4
2012	1	288	62	21.5	19,037	4,320	22.7
2013	2	725	136	18.8	93,158	8,300	8.9
2014	2	817	93	11.4	73,758	7,410	10
2015	2	882	95	10.7	73,448	8,480	11.5
2016	2	1,755	185	10.5	158,153	15,065	9.5
2017	2	2,020	286	14.1	182,950	20,550	11.2

Fiscal Year	Number of Surveys	Total Number of Items	Number of Plastic Bottles	Percent Plastic Bottles (%)	Total Weight (grams)	Plastic Bottle Weight (grams)	Percent Weight (%)
2018	2	2,436	705	28.9	209,318	38,645	18
2019	2	4,007	1,014	25.3	405,261	62,070	15.3
2020	2	2,935	637	21.7	215,729	33,747	15.7
2021	2	3,547	520	14.7	274,531	26,820	9.8
2022	2	3,147	628	20	226,061	25,330	11.2
2023	2	3,405	849	24.9	207,640	52,150	25.1
2024	2	3,191	878	27.5	249,223	43,110	17.3
2025	--	--	--	--	--	--	--

Note: Monitoring data was provided by MWCOG

5.1.2 Comprehensive Community Cleanup Program

DoE administers the Comprehensive Community Cleanup Program. This program is designed to revitalize, enhance, and help maintain unincorporated areas of the County. It also involves conducting multiple concentrated cleanups each year (Table 84). Through this program, DoE, the Department of Permitting, Inspections and Enforcement (DPIE), and DPW&T work with local civic and homeowner associations to provide a wide range of cleanup and maintenance services over a two-week period. Services provided by this program include bulky trash collection, storm drain outfall screening and sampling, roadside litter pickup, tree trimming, and storm drain maintenance.

Table 84. Comprehensive Community Cleanup Program performance.

Community	Tires Collected	Trash Collected (Tons)
Columbia Park	1	3.59
Glassmanor	3	2.19
Apple Grove – Squires Woods	0	1.49
Kingswood/ Dresden Green	3	2.48
Woodlawn Community	0	2.10
West Lanham Hills/ Hanson Oaks	0	2.24
Wilburn Ests	2	1.20
Little Washington/Westphalia Ests.	1	2.32
Maplewood	0	3.29
Windbrook	4	3.00
Presley Manor	0	2.49
Lynnalan	1	2.06
Riverdale Hgts/Crestwood/ Riverdale Hills	5	1.39
Boulevard Hgts./ Bradbury Hgts. (Phase 1)	0	2.06
Boulevard Hgts./ Bradbury Hgts. (Phase 2)	0	2.89
Palmer Park (Phase 1) / Kenmoor	0	1.71
Palmer Park (Phase 2)	1	2.52

Community	Tires Collected	Trash Collected (Tons)
Hillandale/Knollwood	0	2.37
West Laurel (Phase 1)	0	0.83
West Laurel (Phase 2)	0	1.75
Radiant Valley	0	2.01
Total	21	45.98

5.1.3 Clean Up, Green Up Program (Going Green with Pride)

The Clean Up, Green Up (Going Green with Pride) program is sponsored by DPW&T's Office of Highway Maintenance. Groups across the County are encouraged to sign up and recruit volunteers to plant, beautify, and clean up the County on chosen dates in the spring and fall of each year. In the spring, the major focus of the program is to maintain plant beds and clean up trash in the communities. The volunteers are provided with supplies of bags and gloves and sent to locations to pick up trash. The event has been successful in cleaning several areas in a relatively short amount of time. The estimated trash capture for the Clean Up, Green Up (Going Green with Pride) activities in FY 2025 was 81,740 pounds of litter removed from communities across the County.

5.1.4 Roadside Cleanups

The County maintains multiple programs and partnerships to address trash along roadways. The litter pick up is performed by DPW&T and Department of Corrections crews, volunteers, and the State Highway Administration (SHA). Roadway collection programs include roadside cleanup on landfill approach roads, removal of litter from the County roadsides, Adopt-a-Road and Adopt-a-Median programs, removal of litter from non-roadside County property by DPW&T and a community service program by Department of Corrections. In addition, the County is responsible for some non-roadside cleanups of trash, debris (including debris resulting from evictions) and abandoned items from properties and right-of-way's other than roadsides. During this reporting period, DPW&T serviced 9,000 miles of roadway and collected and disposed of 1,866,975 pounds of trash and debris at the landfill.

5.1.5 Trash Monitoring Program

Per the approved September 2010 Anacostia watershed trash TMDL, Prince George's County is required by MDE and EPA to annually remove or prevent hundreds of tons of trash from potentially entering the Anacostia River. To accomplish this challenging task, the County must implement cost-effective trash reduction measures and annually monitor both stream and land-based trash levels to estimate load quantities better. MWCOG assists the County in determining stream and land-based trash levels and identifying existing major trash hot spots. This monitoring data helps the County to identify areas for litter removal, capture, and prevention activities. Also, the identification of trash sources further enables the County to specifically tailor trash education and outreach programs and better direct limited trash reduction resources to where there is the most need. Long-term monitoring is critical for assessing the effectiveness of both trash reduction and pollution prevention measures and initiatives and positions the County to meet its trash TMDL goals.

MWCOG employs the MDE-approved Anacostia tributary trash surveying field checklist for annually surveying 16 stream sites. These monitoring sites are depicted in Figure 37. In-stream baseline trash surveys are performed two times per year (late spring/summer and early fall). Upstream and downstream coordinates are provided for each site. As part of the survey, the total number of trash items is recorded and cataloged according to 20 general types. Also, at five of the sites, MWCOG removes and weighs trash items from the first 250 feet of the survey reach. This task enables MWCOG to develop a reasonable estimate of general instream trash accumulation/loading rates. Stream by stream top trash item comparisons are graphically depicted. Photographic documentation of representative trash level conditions is also provided, and existing trash can be mapped using GIS software.

Figure 37. Anacostia TMDL-Related Trash Monitoring Locations.

5.2 Public Education and Outreach Strategy for Litter

The County engages in many education and outreach events focused on schools and the public. These events include activities attempting to prevent litter through behavioral change. Such activities seek to generally inspire environmental stewardship while other activities explain the negative consequences of litter to foster the need for community litter control. Informational topics include some of the following issues: how to manage litter, how long trash remains in streams or land, and information about upcoming recycling and cleanup events. Other communication methods include printed flyers, brochures, promotions, and newsletters. All in-person outreach events were limited to two presentations.

5.2.1 Storm Drain Stenciling

The Storm Drain Stenciling Program raises community awareness and alerts community members of the connection between local storm drains and the Chesapeake Bay. While the County's SWM program requires stenciling on all storm drain inlets for new developments, this program focuses on stencils to educate residents of older communities. The County purchases the paint, tools, and stencils used by volunteers to stencil the "Don't Dump – Chesapeake Bay Drainage" message. In some communities, environment-centric murals are painted on storm drain inlets. In FY 2025, no stenciling activities took place due to staffing changes.

5.2.2 Tours of Facilities

Public education opportunities also include tours of County facilities, including the Brown Station Road Landfill and MRF. The intent of the tours is to provide information about proper solid waste disposal, how and where the County's municipal solid waste is disposed, and the availability of services and convenience centers for disposal of items that might otherwise be illegally dumped. Publicly available publications associated with these facilities also provide additional public outreach. There were 50 tours organized in FY 2025 (Table 85).

Table 85. List of Public Outreach Facility Tours in FY 2025.

Name of Event (Participant)	Date of Event	No. of Participants
Sagarika Srivastava	7/9/2024	1
Swana	7/12/2024	24
MD Sea Grant	7/24/2024	6
Berwyn Heights	7/31/2024	13
Md Sea Grant	8/8/2024	9
Family	8/9/2024	5
Shaconna Gorham	8/14/2024	4
Laura Vendetta	8/15/2024	4
Riverdale Green Team	8/16/2024	9
Greenbelt Recreation	9/5/2024	14
Adelle Berlinger	9/12/2024	8
Takoma Park	9/17/2024	16
City of New Carrollton	9/18/2024	28
City of New Carrollton	9/18/2024	32

Name of Event (Participant)	Date of Event	No. of Participants
Sierra Club	9/27/2024	20
Laurie Pickard	10/3/2024	3
High Point High School	10/11/2024	34
Northern VA Conservation Advocate for Nature Forward	11/7/2024	23
EPA	Not available	9
DDOT (District Dept Of Transportation	11/14/2024	13
CMIT North	11/19/2024	50
Sol Learning Center	11/20/2024	
Washington New Church School	11/26/2024	22
Washington New Church School	11/26/2024	15
High Point Hs	12/11/2024	24
Bob McCarty	12/12/2024	4
Pax Academy	1/14/2025	30
Robert Brice	1/23/2025	1
DoE	1/28/2025	3
Mundo Verde Charter School	1/29/2025	27
Mundo Verde Charter School	1/30/2025	26
Mundo Verde Charter School	1/30/2025	23
Opportunities Inc	2/13/2025	9
DC Synagogue	2/17/2025	4
William Wirt Ms	2/19/2025	24
Andrew Mullin and Arthur Kustuch	3/5/2025	2
High Point High School	3/12/2025	19
Thomas Ainsley	3/20/2025	2
Opportunities Inc.	3/25/2025	5
Senior Group-City of Greenbelt	4/8/2025	8
Riderwood Village	4/15/2025	12
Collington Senior Community	4/22/2025	10
Doe Inspectors	4/24/2025	2
Greenbelt Middle School	4/24/2025	43
Recycling Partnership	5/15/2025	16
College Park Committee	5/20/2025	6
Lynne Larkin	5/22/2025	3
Washington Latin PCS	5/28/2025	25
Tour/PGCPS (Sara Gillespie)	6/25/2025	25
Tour w/Alice Ferguson Foundation	6/26/2025	21
Total		**736**

5.3 Evaluation of the local trash reduction strategy including any modifications necessary to improve source reduction and proper disposal.

For FY 2026, the County will continue to perform stream cleanups, community cleanups, and outreach and education, when possible. Initiatives such as Adopt-A- Stream, Environmental Crimes Team, and ongoing installation of Big Belly Trash receptacles were expanded. The County will continue working with regional partners to standardize metrics that will be used to quantify load reduction. The County continues to install "No Dumping" at litter hot spots as identified in the 2010 Anacostia River Watershed Restoration Plan and Report, determined by staff, or reported by residents. Warnings are provided in both English and Spanish. The roll-out of the marine debris student activity books and interactive website will take place and aid in reaching students despite the restrictions on in-person outreach.

During FY 2026, the County's litter reduction programs will continue to evolve and adapt to the current fiscal environment. BigBelly trash receptacles will be further installed across the County to aid in reducing roadside litter and overflowing trash cans at bus stops. Even with the ongoing restrictions to community engagement and outreach, the County will continue to strive to fulfill the current MS4 Permit target rate of 170,628 pounds per year for litter load reduction.

6 Restoration Planning, Tracking, and Adaptive Management

6.1 Restoration Planning

The Stormwater Management Division develops and manages capital improvement projects to enable the project to be constructed in a timely manner in accordance with budget expectations. The Capital Projects Design Section of the Stormwater Management Division creates construction documents, and potentially uses interagency collaboration in the design and construction of a project to minimize the cost to the constituents.

The County identifies specific BMP opportunities over a 6-year planning horizon, which becomes part of the approved annual county budget. These opportunities are included in the County's biannual FAP and summarized in the County's annual MS4 progress report.

The County's restoration plans were developed to follow the 2014 NPDES permit requirement that required the County to provide restoration of built-up land use areas that currently do not have SWM controls. These implementation strategies are presented for entire watersheds, as individual project opportunities are unknown at the time of plan development. The County is updating these plans to follow 2022 MDE guidance for meeting nutrient and sediment TMDLs, bacteria TMDLs, and PCB TMDLs. The updated WIPs will be included as attachments to this document (**Attachment A**).

6.2 Restoration Obstacles

Restoration planning and implementation is not without obstacles. Below is a brief discussion of the main obstacles that the County faces as it performs watershed restoration activities to meet its permit requirements.

- Permit Requirements
  - The County permit requires that the County meet a specific impervious acres restoration requirement (Part IV.E of permit). The BMP types best suited to meet this requirement are not necessarily the best suited for providing substantial load reductions. For example, wet ponds can treat a large impervious area, but only provide 39.6 percent total nitrogen removal, only if the BMP treats 3 inches of rainfall. The County's local TMDLs for nitrogen require an 81 percent reduction for the Anacostia River watershed and 54 percent for the Mattawoman Creek watershed. Smaller practices, such as bioretention facilities can reach 68.6 percent for treating 3 inches but are not as cost effective and treat less than an acre, resulting in significantly higher costs for restoration.
- Land Ownership and Access
  - Most of the County is owned by private residents or businesses (see **Figure 38**). The County does not own many sites that are suitable for BMP implementation. The County has implemented projects on County-owned properties (e.g., school, libraries) and will continue to do so. The County Alternative Compliance Program **(page 76)** opens land owned by nonprofits for BMP retrofits and other projects. The Rain Check Rebate Grant Program (**page 72**) funds small-scale residential practices. It is politically challenging for the County to construct projects on private land, as it can be perceived as favoritism and providing benefits (e.g., aesthetics, flood control) to some, but not others.

  - Much of the urban land in Prince George's County was developed before stormwater control requirements. This increases the obstacles in finding open land to implement BMPs. County planners and designers also need to consider aging infrastructure and utilities in the area.
- Community Support
  - Community support can make or break a project. Easements for BMP locations and continued access for operation and maintenance (O&M) are needed from residents and businesses. Nearby residents and businesses might object to the need for construction equipment crossing or stored on their property. There are also sometimes misconceptions regarding BMPs and their aesthetics or role in the presence of mosquito and undesired wildlife.
- Project Funding and DoE Budget
  - DoE completes a semi-annual FAP as part of permit conditions. The County expects current funding sources and levels to remain consistent with the County's biannual FAP, which is expected to reoccur over the life of the WIPs. The countywide dollars for restoration average no more than $70 million per year for all stormwater restoration. The County has been focusing on cost-efficient BMPs; however, opportunities for these types of projects are diminishing. So, while funding will remain the same, the amount of load reduction progress per dollar spent will decrease.
  - With each new BMP, comes the need for regular O&M and inspections. BMP O&M will take increasing levels of DoE's budget and will likely impact the annual progress of new BMPs implementation. Currently, the County BMP database contains more than 600 restoration BMPs that the County is responsible for O&M. This number is expected to grow significantly over the current permit term.

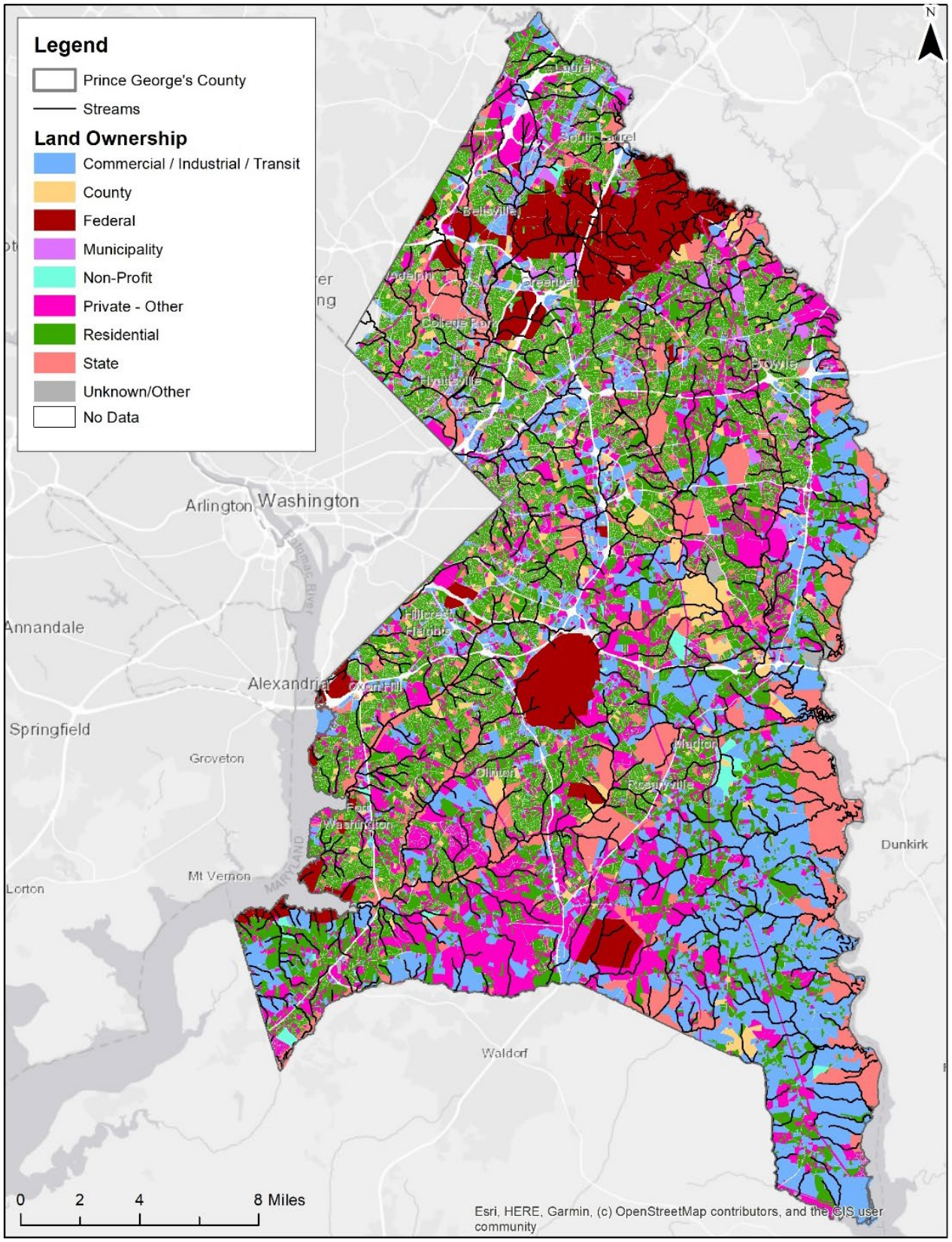


Figure 38. Land Ownership in Prince George's County.

6.3 Tracking Progress

The County maintains a robust program to track stormwater implementation policy decisions, maintenance responsibility, watershed location, and types of BMPs. The County' geodatabase has the capacity to track new and redevelopment activities to ensure that all projects include an evaluation of ESD practices as a first option in controlling stormwater. The geodatabase provides the County with a tool to identify development trends and to track progress in implementing ESD to the maximum extent possible.

Overall, the County's restoration process is tracked and reported to MDE via annual NPDES reports, the geodatabase, and FAPs.

The NPDES MS4 annual report is accompanied by supplemental data about BMPs (including alternative practices such as stream restoration, septic system upgrades, and tree planting), funding, and water quality. Stormwater BMP data are provided in a georeferenced database. The database provides descriptive details for each BMP, including BMP type, project location, drainage area delineation, equivalent acres of impervious surface treated, maintenance records, year installed, and estimated load reductions. County staff update the database annually with new and planned projects, which provides an annual indication that restoration is progressing as planned and allows for adjustments in future BMP implementation.

The County NPDES permit requires restoration to be reported as EIAs. This is how the County must measure restoration progress based on our MS4 permit. The County reports calculated load reductions using MDE's TIPP tool methodology, as per MDE's *Guidance for Developing Local Nutrient and Sediment TMDL (Total Maximum Daily Load) Stormwater Wasteload Allocation (SW-WLA) Watershed Implementation Plans (WIPs)* in this document and our annual NPDES MS4 report and geodatabase.

The measurement of progress for meeting approved TMDLs vary based on the type of TMDL, as listed below. The remainder of this subsection briefly discusses these methods. Detailed information is in the respective WIPs.

- Nutrients and sediment: TIPP Tool calculations
- Bacteria: source tracking & water quality monitoring
- PCBs: source tracking & water quality monitoring

6.3.1 Modeling

As mentioned in **Section 2.1** of this document, the County uses an Access load calculation tool that mimics the MDE TIPP Tool methodology for calculating load reductions for nutrient and sediment TMDLs. **Attachment B** provides additional details of the County Access database.

6.3.2 Source Tracking and Water Quality Monitoring

The County has multiple monitoring programs. Some programs are requirements of the NPDES permit, while others are for pollutant source trackdown. Three types are described below.

- MS4 Permit Monitoring for Assessments of Controls
- Bacteria
- PCBs

- Illicit discharge detection and elimination (IDDE)

MS4 Permit Monitoring for Assessments of Controls

Under the terms of the new MS4 permit the County is required to have two types of water quality programs: BMP effectiveness monitoring and watershed assessment monitoring. Each monitoring program type is briefly described below.

BMP Effectiveness

The MS4 permit BMP effectiveness monitoring component requires evaluating the cumulative effects of urban stormwater retrofits and alternative urban BMPs through water quality monitoring for storm and baseflow at a subwatershed scale. This monitoring includes nutrients, sediment, and bacteria, which have TMDLs. The County selected the pooled monitoring approach as part of its permit requirements.

Watershed Assessment

The MS4 permit requires that the County conduct watershed assessment and trend monitoring, including stream biology, habitat, bacteria (*E. coli*, Enterococcus), and chlorides, based on MDE's *2021 MS4 Monitoring Guidelines: BMP Effectiveness and Watershed Assessment*.

The monitoring guidelines for bacteria require that the County establish a monitoring station in each watershed impaired for bacteria and monitor monthly. The County has selected at least one potential monitoring station in each of the three watersheds that have bacteria TMDLs. The County will collect a monthly bacteria grab sample per monitoring station on the same day and time (e.g., last Friday of every month), regardless of weather conditions, except for hazardous conditions (e.g., thunderstorms, winter weather events) where sampling will be delayed until the hazardous conditions abate. Additional information is included in the County's draft watershed assessment sampling plan.

Bacteria

Source Track Down

The County has a bacteria trackdown strategy, which has been approved by MDE. The initial stage was a geospatial analysis to determine potential hot spot subwatersheds in the County. Water quality samples are being collected for subwatersheds identified as potential hot spots. This monitoring will be an ongoing process.

The County started to collect bacteria screening samples during its countywide biological monitoring. This sampling will occur in watersheds with bacteria TMDLs and will follow stratified random locations for monitoring.

Microbial Source Tracking (MST)

MDE encourages areas to conduct MST analysis for locations with high bacteria concentrations and no known or identified sources upstream. MDE also encourages jurisdictions to collect new BST data at TMDL assessment points to assess changes in microbial community sources, especially if there has been significant land-use change in an area since the BST data was last gathered for TMDL development. The County will explore MST on a case-by-case basis and conduct MST analysis, as necessary.

PCBs

The County is developing a draft PCB track down strategy, which MDE reviewed. The initial stage was a geospatial analysis to determine potential subwatersheds of concern in the County. Initial water quality

samples were collected for high priority subwatersheds identified during this process. This monitoring will be an ongoing process.

IDDE

For the FY 2025 inspections, DoE performed field screening of 151 major storm drain outfalls throughout the County. The outfall screening was conducted from June 2025, with 153 inspections being conducted at 151 outfalls. If a dry-weather flow was present, a sample was taken and tested with a Hach chemical test kit. Tests were conducted for temperature, pH, ammonia, dissolved oxygen, turbidity, detergents, chlorine, copper, phenols, and fluoride. When a chemical test was conducted, and the results showed a high concentration for any contaminant, the site was retested after four hours but within 24 hours to verify the results.

Of the 153 inspections, 35 inspections observed dry-weather flow. A chemical test was performed for all 35 inspections observing dry-weather flow. Two sites were found to be generating pollutants higher than the threshold limits on at least one of the two inspection chemical tests. The outfall reports for these sites were forwarded to DoE's Code Enforcement Officer to investigate further and determine the source of the possible illicit discharge.

6.4 Adaptive Management

It will be important for the County, MDE, and watershed partners to work together to ensure successful ongoing implementation.

County WIPs are developed using the best information available at the time. As implementation progresses, adaptive management allows for adjustments to restoration activities as new information becomes available from the state or different stakeholders, and opportunities to increase effectiveness and reduce costs emerge. The County will use new information as it becomes available to assess the effectiveness of its restoration program and adjust as needed.

Close coordination is especially valuable for adaptive management because of the possibility of unanticipated circumstances arising during WIP implementation. For example, the installed BMPs might remove significantly more or less than the amount of pollution expected. A natural disaster could affect the plan's implementation. If BMPs are being implemented at a slower rate than is called for in the WIP, the adaptive management process will need to include an evaluation of the causes of the lag in implementation and either address those causes or otherwise propose additional activities to compensate for the lag.

Implementation lags can be caused by a lack of available land, delays in obtaining the necessary permits for constructing BMPs, being denied permission to build a BMP on private land, and lapses in funding. The County has a process to prevent many issues through initial project discussions and planning. Some implementation issues are not preventable (e.g., weather). In these cases, the County will work to develop contingency plans to keep watershed restoration on or ahead of schedule through adaptive management. The County performs tri-annual inspections on privately owned BMPs and similarly performs inspections for publicly owned BMPs. BMPs that fail inspection are then repaired and restored to full working order.

The County will evaluate the progress of WIP implementation during each permit cycle following this adaptive management approach. The evaluation will take advantage of an updated BMP inventory, new BMP technologies, experience with the new programmatic initiatives, and more recent water quality data. The evaluation could provide the County with the opportunity to remove practices from consideration that are expensive and show no water quality improvement. Adaptive management will involve ongoing biological monitoring, evaluating applied strategies, assessing progress, and incorporating any useful new knowledge into further restoration activities.

Several aspects of this document support the use of adaptive management:

- Large portions of the County's inner beltway development predate stormwater management regulation first established in the regulations in 1985 where greater than 85 percent development already occurred. This makes watershed restoration challenging and costly, where the watershed needs require addressing upland BMPs to be installed, while also addressing stream erosion through armoring banks, which protects impacted properties from further erosion. Adaptive management will be important to help these challenges so that this plan can undergo adjustments in the future.
- The County has a stormwater management ordinance that requires developers to install BMPs to offset the increased impervious area due to new construction.
- The County will use adaptive management to determine the most appropriate restoration practices at the best locations. This means that the County will look across land uses to determine where restoration projects will be most cost-effective in achieving pollutant load reductions. The County reserves the right to use alternative restoration activities if the opportunity arises and the alternative practices will produce greater load reductions or a similar load reduction at a lower cost.
- Part of the adaptive management strategy is to help reduce long-term costs while increasing load reduction. The County recognizes that future BMP-related research could result in new, more efficient pollution reduction technologies becoming available. These advances could decrease cost, decrease the footprints of the BMPs, or increase load reduction efficiencies. Some of the advances could come from proprietary technologies, which the County will evaluate based on their cost and performance.
- Using biological monitoring results, DoE can adjust implementation priorities and target areas of poor stream health. The biological assessment results will be interpreted at multiple spatial scales as Degraded/Not Degraded (for specific stream sites) and percent degradation (for sets of sites within subwatersheds and the watershed as a whole). The County will use these results as the principal indicator of stressor-reduction effectiveness. A lack of positive response will be taken as evidence that additional or more intensive stormwater management is necessary to achieve ecologically meaningful pollutant reductions.

Attachment A. Approved TMDL Restoration Plans Developed by Prince George's County

The following documents are provided in an attached zip file.

- 2012 Chesapeake Bay Phase II Watershed Implementation Plan
- 2015 Countywide Trash TMDL Restoration Plan
- 2024 Local TMDL Watershed Implementation Plans
  - Anacostia River (nutrients, sediment)
  - Mattawoman Creek (nutrients)
  - Patuxent River (phosphorus, sediment)
  - Piscataway Creek (sediment)
  - Countywide bacteria strategy
  - Countywide PCB strategy

Attachment B. County Access Database Documentation

The document is provided in an attached zip file.

Attachment C. List of Planned Structural and Alternative BMPs

Attachment C lists the projects currently in planning, design, or under construction and are reported in the County's annual MS4 geodatabase submission. Implementation of these BMPs is not expected to meet nutrient and sediment TMDL target load reductions.

The projects in this attachment assume that future funding is available. Several of these projects could be removed in the future because of the limitations related to permitting, right of way, or utility conflicts. In addition, load reductions, costs, and EIA credits of these projects could change as the projects move towards completion. All loads in this attachment are presented as edge-of-stream.

Table 86. Projects Under Planning, Design, or Construction.

Chesapeake Bay Segmentshed	Local TMDL Allocation Watershed	MDE Geodatabase ID	BMP Type	Reporting Year	Total Nitrogen (lbs/year)	Total Phosphorus (lbs/year)	Total Suspended Solids (lbs/year)	Cost	EIA Credit (acre)
Anacostia Tidal Fresh DC	Anacostia River - Non-Tidal - Lower Beaverdam Creek	PG21BMP023266	Retention Pond (Wet Pond)	2026	110.7	22.41	70,300	$440,860	8.07
		PG22BMP023265	Retention Pond (Wet Pond)	2026	59.5	12.25	38,471	$2,278,000	5.97
		PG25ALN002227	Stream Restoration	2026	TBD	TBD	TBD	$0	104.4
		PG25BMP025849	Bioretention	2026	4.8	0.75	2,102	$0	0.67
		PG25BMP025850	Micro-Bioretention	2026	9.8	1.44	4,502	$0	0.80
Anacostia Tidal Fresh MD	Anacostia River - Non-Tidal - Northeast Branch	PG20ALN002479	Stream Restoration	2028	470.6	426.72	1,556,276	$1,965,233	125.51
		PG20ALN002480	Stream Restoration	2028	369.3	334.84	1,221,188	$1,577,033	42.60
		PG20ALN002484	Stream Restoration	2028	705.7	639.82	2,333,473	$2,947,850	188.18
		PG23BMP017812	Micro-Bioretention	2026	2.9	0.38	1,418	$810,700	0.41
	Anacostia River - Non-Tidal - Northwest Branch	TBD	Planting Trees or Forestation on Previous Urban	2028	3.2	0.59	622	$725,000	0.19
		PG20ALN002477	Stream Restoration	2028	860.0	234.00	610,200	$2,224,033	135.84
		PG20ALN002478	Stream Restoration	2028	283.0	83.00	279,000	$1,035,200	63.42
		PG20ALN002483	Stream Restoration	2028	614.2	556.88	2,030,976	$2,559,650	163.79
		PG22BMP011380	Submerged Gravel Wetlands	2028	1.7	0.33	490	$1,964,559	0.38
Patuxent Upper Tidal Fresh	Upper Patuxent	PG24ALN001399	Stream Restoration	2029	545.5	48.93	652,415	$0	47.60

Chesapeake Bay Segmentshed	Local TMDL Allocation Watershed	MDE Geodatabase ID	BMP Type	Reporting Year	Total Nitrogen (lbs/year)	Total Phosphorus (lbs/year)	Total Suspended Solids (lbs/year)	Cost	EIA Credit (acre)
Piscataway	Piscataway	PG20ALN004174	Stream Restoration	2030	183.8	166.60	607,600	$0	48.46
		PG23BMP019451	Micro-Bioretention	2026	3.7	3.41	1,736	$810,700	0.54
		PG23BMP021148	Micro-Bioretention	2026	2.0	1.59	788	$810,700	0.36
Potomac Upper Tidal Fresh DC	N/A	PG19ALN000140	Stream Restoration	2026	120.1	108.92	397,245	$5,894,499	88.59
		PG23BMP017811	Micro-Bioretention	2026	3.1	3.28	1,332	$810,700	0.34
Potomac Upper Tidal Fresh MD	N/A	PG17RST000128	Retention Pond (Wet Pond)	2026	676.1	173.25	463,450	$4,489,000	39.94
		PG20ALN003768	Stream Restoration	2026	7.1	1.24	2,037	$1,538,123	0.74
		PG23ALN000948	Stream Restoration	2029	1,151.8	450.48	1,657,511	3,467,425.1	157.24
		PG23ALN000956	Stream Restoration	2027	729.2	125.81	997,455	$3,333,821	73.57
		PG23ALN000961	Stream Restoration	2029	814.4	203.34	823,694	$3,188,000	79.53
		PG23ALN000968	Stream Restoration	2026	397.0	285.29	485,275	$1,739,935	70.07
		PG24ALN001375	Stream Restoration	2027	101.3	45.07	120,069	$9,770,049	109.00
		PG24ALN001376	Stream Restoration	2029	35.0	18.94	67,750	$290,600	2.79
		PG24ALN001377	Stream Restoration	2029	30.6	20.70	98,225	$245,812	2.36
		PG24ALN001378	Stream Restoration	2029	121.5	68.08	301,960	$896,797	8.61
		PG24ALN001380	Stream Restoration	2029	159.2	116.23	836,835	$2,518,300	44.95
		PG24ALN001381	Stream Restoration	2029	562.3	347.44	1,056,613	$4,543,025	81.09
		PG24ALN001382	Stream Restoration	2029	115.8	38.45	131,768	$258,833	4.62
		PG24ALN001383	Stream Restoration	2029	149.2	28.44	86,615	$416,822	7.44
		PG24ALN001384	Stream Restoration	2029	77.6	66.15	230,016	$325,502	5.81
		PG24ALN001385	Stream Restoration	2029	17.6	9.2	45,084.0	$107,567	1.92
		PG24BMP023245	Retention Pond (Wet Pond)	2027	174.6	45.56	119,424	$4,485,725	62.65
		PG24BMP023246	Retention Pond (Wet Pond)	2027	392.7	102.62	269,430	$1,547,271	21.61
		PG24BMP023247	Retention Pond (Wet Pond)	2027	211.4	55.16	146,681	$173,271	2.42
		PG24BMP023248	Retention Pond (Wet Pond)	2027	192.5	50.06	135,021	$1,063,256	14.85

Chesapeake Bay Segmentshed	Local TMDL Allocation Watershed	MDE Geodatabase ID	BMP Type	Reporting Year	Total Nitrogen (lbs/year)	Total Phosphorus (lbs/year)	Total Suspended Solids (lbs/year)	Cost	EIA Credit (acre)
		PG24BMP023706	Extended Detention Structure, Wet	2029	66.4	17.40	43,971	$1,164,482	11.18
		PG24BMP023707	Extended Detention Structure, Wet	2029	615.4	160.98	423,392	$5,137,052	49.32
		PG24BMP023708	Extended Detention Structure, Wet	2029	49.8	13.05	34,221	$195,525	3.49
		PG24BMP023709	Extended Detention Structure, Wet	2029	69.0	18.14	46,802	$259,954	4.64
		PG24BMP024520	Bio-Swale	2027	6.4	1.33	2,148	$26,492	0.37
		PG25ALN001824	Stream Restoration	2029	277.4	173.81	411,937	$1,191,427	48.16
Western Branch	N/A	PG17ALN000127	Stream Restoration	2028	723.0	656.00	2,391,734	$8,275,657	267.40
		PG19BMP024564	Retention Pond (Wet Pond)	2026	1,640.9	673.02	896,491	$6,304,554	82.47
		PG19RST000015	Retention Pond (Wet Pond)	2026	97.8	40.34	51,653	$2,628,967	12.84
		PG21ALN000317	Stream Restoration	2026	1,631.0	1,516.00	2,411,513	$9,951,332	356.00
		PG23ALN000965	Stream Restoration	2028	284.0	73.00	414,367	$0	33.41

TBD = to be determined

Attachment D. Estimated BMPs Required to Meet Local TMDL Load Reduction Targets

Attachment D presents the estimated restoration activities and cost needed to meet local TMDLs based on the 2024 nutrient and sediment WIP updates. These do not include BMPs currently in planning, design, or under construction as reported in the County's annual MS4 geodatabase submission.

The County could use many different combinations of BMPs to meet the load reductions for these TMDLs. However, the cost and lack of available space for implementation would make many of them infeasible. The results of a cost-effectiveness analysis of various scenarios with different combinations of BMPs could assist the County in selecting a strategy that could work together most effectively to meet the load reduction targets at the lowest cost.

The Microsoft Excel Solver Add-in was used to determine the most cost-effective scenarios to meet the load reductions for this WIP. Solver processes a set of conditions to meet the County's objective: *the lowest cost*. The main condition was meeting the load reduction target in every scenario. The analysis considered runoff reduction practices, outfall stabilization, stream restoration, tree planting, and new wet ponds. Ten scenarios were run for each TMDL. The tables in this attachment represent the median scenario to meet TMDL load reductions. The median scenario that has been selected for presentation serves as a starting point for the County to make future decisions. The actual combination of BMPs implemented to meet the TMDL can change over time as adaptive management principles are applied.

Table 87 presents the approximate year of TMDL compliance based on treating 2 percent of the untreated impervious area in the allocation watershed per year. The remainder of this appendix contains the estimated BMP types and amounts needed to meet the load reduction requirements. The costs in the tables are not adjusted to consider future inflation. The year needed to meet compliance can be modified through more effective BMPs or restoration practices. All tables in this attachment are as reported in the 2024 WIP updates.

Table 87. Estimated Timeline to Meet Local TMDLs.

Allocation Watershed	TN	TP	TSS
Anacostia River - Non-Tidal - Lower Beaverdam Creek	2120	2065	2053
Anacostia River - Non-Tidal - Northeast Branch	2120	2065	2053
Anacostia River - Non-Tidal - Northwest Branch	2120	2065	2053
Anacostia River - Non-Tidal - Watts Branch	2120	2065	2053
Anacostia River - Tidal	2120	2065	2053
Lower Patuxent	--	--	Met
Mattawoman	2104	2047	--
Middle Patuxent	--	--	2060
Piscataway	--	--	2044
Rocky Gorge	--	Met	--
Upper Patuxent	--	--	Met

Note: The County will discuss TMDLs that appear to be met through BMP reductions with MDE.

Anacostia River

Table 88. Estimated BMPs Required to Meet Anacostia River Local TMDLs – Tidal (Not incl. loads from Watts Br & LBC).

Practice	TN (lbs/yr)	TP (lbs/yr)	TSS (lbs/yr)	Budget	Impervious Credit (imp acre)
Stream restoration / outfall stabilization	235	223	856,720	$10,594,124	65.73
Tree planting	17	14	22335	$267,725	3.56
Impervious to turf	2	0	1421	$458,955	0.36
New wet ponds	14,306	3,274	9735731	$512,559,448	1,432.74
RR practices	1,255	208	544236	$53,847,420	76.28
Total WIP	15,815	3,719	11,160,443	$577,727,672	1,578.67
Load reduction to meet	**15,814**	**1,879**	**5,557,043**	**--**	**--**

Notes:
lbs/yr = pounds per year; $/lb = dollars per pound; $/imp acre = dollars per impervious acre.
Costs are January 2020 dollars.

Table 89. Estimated BMPs Required to Meet Anacostia River Local TMDLs – Non-Tidal: Lower Beaverdam Creek.

Practice	TN (lbs/yr)	TP (lbs/yr)	TSS (lbs/yr)	Budget	Impervious Credit (imp acre)
Stream restoration / outfall stabilization	637	574	2,186,546	$27,680,136	171.74
Tree planting	45	35	57,005	$699,506	9.31
Impervious to turf	5	0	3,628	$1,199,148	0.93
New wet ponds	38,836	8,443	24,847,812	$1,339,206,103	3,743.44
RR practices	3,406	536	1,389,016	$140,691,569	199.30
Total WIP	42,929	9,588	28,484,007	$1,509,476,462	4,124.72
Load reduction to meet	**42,930**	**4,847**	**14,182,844**	**--**	**--**

Notes:
lbs/yr = pounds per year; $/lb = dollars per pound; $/imp acre = dollars per impervious acre.
Costs are January 2020 dollars.

Table 90. Estimated BMPs Required to Meet Anacostia River Local TMDLs – Non-Tidal: Northeast Branch.

Practice	TN (lbs/yr)	TP (lbs/yr)	TSS (lbs/yr)	Budget	Impervious Credit (imp acre)
Stream restoration / outfall stabilization	1,092	960	3,304,590	$45,139,707	280.07
Tree planting	78	58	86,153	$1,140,728	15.19
Impervious to turf	9	0	5,482	$1,955,525	1.52
New wet ponds	66,555	14,116	37,553,220	$2,183,926,079	6,104.66
RR practices	5,838	896	2,099,260	$229,434,428	325.01

Practice	TN (lbs/yr)	TP (lbs/yr)	TSS (lbs/yr)	Budget	Impervious Credit (imp acre)
Total WIP	73,572	16,030	43,048,705	$2,461,596,467	6,726.45
Load reduction to meet	**73,571**	**8,104**	**21,434,944**	**--**	**--**

Notes:
lbs/yr = pounds per year; $/lb = dollars per pound; $/imp acre = dollars per impervious acre.
Costs are January 2020 dollars.

Table 91. Estimated BMPs Required to Meet Anacostia River Local TMDLs – Non-Tidal: Northwest Branch.

Practice	TN (lbs/yr)	TP (lbs/yr)	TSS (lbs/yr)	Budget	Impervious Credit (imp acre)
Stream restoration / outfall stabilization	390	388	1,519,511	$18,297,206	113.52
Tree planting	28	24	39,615	$462,390	6.16
Impervious to turf	3	0	2,521	$792,664	0.62
New wet ponds	23,738	5,705	17,267,660	$885,245,988	2,474.50
RR practices	2,082	362	965,278	$93,000,358	131.74
Total WIP	26,241	6,479	19,794,585	$997,798,606	2,726.54
Load reduction to meet	**26,240**	**3,275**	**9,856,181**	**--**	**--**

Notes:
lbs/yr = pounds per year; $/lb = dollars per pound; $/imp acre = dollars per impervious acre.
Costs are January 2020 dollars.

Table 92. Estimated BMPs Required to Meet Anacostia River Local TMDLs – Non-Tidal: Watts Branch.

Practice	TN (lbs/yr)	TP (lbs/yr)	TSS (lbs/yr)	Budget	Impervious Credit (imp acre)
Stream restoration / outfall stabilization	89	69	209,601	$3,273,360	20.31
Tree planting	6	4	5,464	$82,721	1.10
Impervious to turf	1	0	348	$141,807	0.11
New wet ponds	5,407	1,018	2,381,892	$158,370,008	442.69
RR practices	474	65	133,150	$16,637,712	23.57
Total WIP	5,977	1,156	2,730,455	$178,505,608	487.78
Load reduction to meet	**5,977**	**584**	**1,359,557**	**--**	**--**

Notes:
lbs/yr = pounds per year; $/lb = dollars per pound; $/imp acre = dollars per impervious acre.
Costs are January 2020 dollars.

Mattawoman Creek

Table 93. Estimated BMPs Required to Meet Mattawoman Creek Local TMDL.

Practice	TN (lbs/yr)	TP (lbs/yr)	Budget	Impervious Credit (imp acre)
Stream restoration / outfall stabilization	196	177	$8,410,189	52.18
Tree planting	25	19	$353,745	4.71
Impervious to Turf	22.23	1.04	$4,337,293	3.38
Wet pond	6,928	1,563	$203,168,023	567.91
ESD practices	762	125	$26,661,579	37.77
Total Restoration Plan	**7,933**	**1,886**	**$242,930,829**	**665.94**
Load reduction to meet	**7,933**	**534**	**--**	**--**

Notes:
lbs/yr = pounds per year; $/lb = dollars per pound; $/imp acre = dollars per impervious acre.
Costs are January 2020 dollars.

Piscataway Creek

Table 94. Estimated BMPs Required to Meet Piscataway Creek Local TMDL.

Practice	TSS (lbs/yr)	Budget	Impervious Credit (imp acre)
Stream restoration / outfall stabilization	7,660,624	$102,675,297	617.79
Tree planting	124,161	$452,892	6.03
Impervious to Turf	0	$0	0.00
Wet pond	0	$0	0.00
ESD practices	84,387	$6,670,156	9.45
Total Restoration Plan	**7,869,172**	**$109,798,345**	**633.27**
Load reduction to meet	**7,869,171**	**--**	**--**

Notes:
lbs/yr = pounds per year; $/lb = dollars per pound; $/imp acre = dollars per impervious acre.
Costs are January 2020 dollars.

Rocky Gorge

The TP load reduction target will be met through the combination of existing and planned BMPs. Therefore, additional BMPs are not required.

Lower Patuxent

The TSS load reduction target will be met through the combination of existing and planned BMPs. Therefore, additional BMPs are not required.

Middle Patuxent

Table 95. Estimated BMPs Required to Meet Middle Patuxent Local TMDL.

Practice	TSS (lbs/yr)	Budget	Impervious Credit (imp acre)
Stream restoration / outfall stabilization	599,311	$7,789,854	48.33
Tree planting	80,595	$884,363	11.78
Impervious to Turf	0	$0	0.00
Wet pond	2,502,491	$83,525,948	233.48
ESD practices	424,942	$26,444,536	37.46
Total Restoration Plan	**3,607,339**	**$118,644,700**	**331.04**
Load reduction to meet	**3,607,320**	**--**	**--**

Notes:
lbs/yr = pounds per year; $/lb = dollars per pound; $/imp acre = dollars per impervious acre.
Costs are January 2020 dollars.

Upper Patuxent

The TSS load reduction target will be met through the combination of existing and planned BMPs. Therefore, additional BMPs are not required.