2023

Annual NPDES MS4 Report

Prepared for:

Maryland Department of the Environment

Water Management Administration

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Baltimore, Maryland 21230

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12/31/2023

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National Pollutant Discharge Elimination System
Municipal Separate Storm Sewer Systems

2023 Annual Report

Prepared for

Maryland Department of the Environment
Water Management Administration
1800 Washington Boulevard
Baltimore, Maryland 21230

Prepared by

Prince George's County Government
Department of the Environment
Stormwater Management Division
1801 McCormick Drive, Suite 500
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EXECUTIVE SUMMARY

Effective December 2, 2022, Maryland Department of the Environment (MDE) renewed County's National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit with the increased responsibilities. In the permit history this was the fifth (5th) permit issued to the County (also referred as fifth generation permit). This report summarizes the activities carried out by various departments and agencies within Prince George's County in accordance with fourth (4th) and (5th) generation permit during fiscal year (FY) 2023, the period of July 2022 through June 2023. This year's report is revised to include updates per the 5th generation permit requirements.

In FY 2023, the County vigorously continued its efforts to reduce pollutants entering its waterways in accordance with the objectives of the MS4 permit. These efforts cut across a wide swath of agencies and programs. In FY 2023, the County's notable accomplishments toward meeting the MS4 goals included:

Restoration Accomplishments

- To date, a total of 5,695 acres of impervious area, of which 95 acres towards 5th generation permit, have been treated and about 3,225 acres were in active planning, design, or construction in FY 2023 to meet the 4th and 5th generation permit requirements.

Illicit Discharge Detection and Elimination Inspections (MS4 Regulated Land)

- County inspectors evaluated 151 outfalls in spring/summer 2023 to ascertain the presence of illicit discharges. Of these outfalls, 32 received chemical testing with five (5) sites recording parameters above pollutant thresholds. Property owners acted to resolve these discharge problems such that all issues were resolved satisfactorily by the end of the reporting period.

- Regular inspection of 92 commercial and industrial sources identified 54 water quality concerns which the County staff then investigated and worked with property owners to satisfactorily resolve.

Litter Control

- Trash reduction in the Anacostia watershed included approximately 363,004 pounds of litter.

- The County conducted several countywide trash reductions, litter reduction, and recycling programs.

Outreach and Education

- The County hosted over 306 environmental education and outreach events that promoted environmental awareness, green initiatives, and community involvement in reducing pollutants to its waterways. With printed materials such as brochures or newsletters;

electronic materials such as website pages; mass media such as newspaper articles or public service announcements (radio or television); and conducting targeted workshops on stormwater management for the public, the total outreach efforts by the County were over 500.

- In 2023, a total of 10,741 trees were planted in Prince George's County, earning a Tree City USA award for the 40th consecutive year along with the People Loving and Nurturing Tree (P.L.A.N.T.) Award and the Growth Green Award for the County.

Monitoring and Assessment

- The County continued its chemical, physical, and biological monitoring and assessment of the Bear Branch watershed. Slight improvements in water quality were noted, this information can be found in Prince George's County, Maryland—Long-Term Stormwater Monitoring Program —Bear Branch Annual Report 2023, included on the DVD. Going forward, the County intends to participate in MDE's pooled monitoring program.

- The County developed a draft plan for watershed assessment and trend monitoring related to stream biology and habitat, bacteria, and chloride. The County performed an internal review of the plan to finalize the plan for submission to MDE by April 2, 2024.

Land Development and SWM Controls

- In FY2023, 140 concept plans for stormwater control were approved.

Land Development Inspection Enforcement

- The County staff performed 8,101 stormwater construction inspections and 9,626 sediment control inspections.

These achievements are further described in this report, with supporting details provided in the MS4 geodatabase and the additional documents on the accompanying DVD to this report.

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ABBREVIATIONS

ACP	Alternative Compliance Program
ADA	American with Disabilities Act
ARP	Anacostia Restoration Plan
ASD	Animal Services Division, DoE
AWCAC	Anacostia Watershed Citizens Advisory Committee
AWS	Anacostia Watershed Society
B-IBI	Benthic-index of biotic integrity
BMP	Best management practices
BOD_5	5-day biochemical oxygen demand
C	Celsius
CA	Community association/civic association/condominium association
CBLP	Chesapeake Bay Landscape Professional
CBT	Chesapeake Bay Trust
CAB	County Administrative Building
CFR	Code of Federal Regulations
CIP	Capital Improvements Program
CKAR	Central Kenilworth Avenue Revitalization Community Development Corporation
CO	Carbon monoxide
COMAR	Code of Maryland Regulations
COPE	Community Outreach Promoting Empowerment, DoE
CPCS	Capital Projects Construction Section, DoE
CPDS	Capital Projects Design Section, DoE
CRI	Community Referenced Instructional Program
Cu	Total copper
CWA	Clean Water Act
CWP	Clean Water Partnership
DC	District of Columbia
DIR	Director's Office, Department of the Environment
DoE	Prince George's County Department of the Environment
DO	Director's Office
DPIE	Department of Permitting, Inspections and Enforcement
DPW	Department of Public Works
DPW&T	Prince George's County Department of Public Works and Transportation
DVD	Digital versatile disc
E. coli	*Escherichia coli*
ECO	ECO City Farm
EED	Environmental Engineering Division, Health Department
EFC	Environmental Finance Center
EHDC	Environmental Health/Disease Control Division
EMC	Event mean concentration
EMS	Emergency Medical Services

EPA	U.S. Environmental Protection Agency
EPS	Environmental Programs Section
EPIC	Empowering People with Intellectual Challenges
ESD	Environmental site design
ESS	Engineering Services Section, DoE
ETHM	End Time Harvest Ministries
FD	Fire Department
FDA	U.S. Food and Drug Administration
Ft	Feet
FY	Fiscal year (the period from July 1 to June 30)
GIS	Geographic information system
HAZMAT	Prince George's County Hazardous Materials Team
HD	Prince George's County Health Department
HMD	Prince George's County Fire/Emergency Medical Services Department, Hazardous Materials Division
HOA	Homeowner association
I	Interstate
ICS	Inspection and Compliance Section
ID	Inspections Division, DPIE; also identification number
IDDE	Illicit discharge detection and elimination
IPM	Integrated pest management
KPGCB	Keep Prince George's County Beautiful
LED	Light-emitting diode
LID	Low impact development
LLC	Limited Liability Corporation
MAEOE	Maryland Association for Environmental and Outdoor Education
MBSS	Maryland Biological Stream Survey
MD	Maryland
MDE	Maryland Department of the Environment
MEP	Maximum extent practicable
MES	Maryland Environmental Service
µg/L	Micrograms per liter
MDNR	Maryland Department of Natural Resources
mg/L	Milligrams per liter
M-NCPPC	Maryland-National Capital Park and Planning Commission
MPN B/100 mL	Most probable number of Bacteria per 100 milliliters
MRF	Materials Recycling Facility
MSDS	Material Safety Data Sheet
MS4	Municipal Separate Storm Sewer System
MWCOG	Metropolitan Washington Council of Governments
NACA	Neighborhood Assistance Corporation of America
NDC	Neighborhood Design Center
NOI	Notice of intent
NO3+NO2	Total nitrate + nitrite

NPDES	National Pollutant Discharge Elimination System
OCS	Prince George's County Office of Central Services
OEPM	Office of Engineering and Project Management, DPW&T
OHM	Office of Highway Maintenance, DPW&T
OSDM	Office of Storm Drain Maintenance, DPW&T
Pb	Total lead
P_E	Precipitation estimated for target rainfall
PE	Professional Engineer
PFCC	People for Change Coalition
PGCLitterTRAK	Prince George's County litter reporting smartphone application
PG	Prince George's
PGCPS	Prince George's County Public Schools
pH	A measure of acidity or alkalinity of a solution (comes from potential of hydrogen)
POI	Point of investigation
ppm	Parts per million
PSS	Program Support Section, DoE
R&DS	Research and Development Section, DoE
RBP	Rapid bioassessment protocols
RRD	Resource Recovery Division, DoE (formerly known as Waste Management Division)
SIC	Standard industrial classification
SD	Sustainability Division, DoE (formerly known as Sustainable Initiatives Division)
SMD	Stormwater Management Division, DoE
SSD	Strategic Services Division
SPCC	Spill Prevention Control and Countermeasure
SRRD	Site/Road Plan Review Division, DPIE
SSG	Stormwater Stewardship Grant
STEM	Science, technology, engineering, and mathematics
SWANA	Solid Waste Association of North America
SWM	Stormwater management
SWMF	Stormwater management facility
SWMP	Stormwater management program
SWPPP	Stormwater pollution prevention plan
TBD	To be determined
TKN	Total Kjeldahl nitrogen
TMDL	Total maximum daily load
TNI	Transforming Neighborhoods Initiative
TP	Total phosphorus
TPH	Total petroleum hydrocarbons
TSS	Total suspended solids
UM	University of Maryland
UMES	University of Maryland Extension Service
USC	United States Code
WIP	Watershed implementation plan
WLA	Waste load allocation

WMATA	Washington Metropolitan Area Transit Authority
WSSC	Washington Suburban Sanitary Commission
YMCA	Young Men's Christian Association
Zn	Total zinc

ACKNOWLEDGEMENTS

The Prince George's County Department of the Environment, Stormwater Management Division, has prepared this 2021 NPDES MS4 Annual Report on behalf of Prince George's County. The status of the County's NPDES programs is based upon information solicited from County agencies that administer jurisdiction-wide stormwater programs and accomplishments achieved in partnership with State and Federal agencies and non-profit organizations providing grant and SRF funding and general support. Primary administrative and technical personnel responsible for compliance with the NPDES MS4 Permit are referenced in the "Permit Administration" section, beginning on page 23 of this report. The following groups also provide the County with programmatic assistance, information and/or ancillary funding to assist the County's efforts in protecting and improving water resources:

Maryland-National Capital Park and Planning Commission
- Department of Parks and Recreation, Department of Planning

Maryland Department of Natural Resources
Maryland Department of the Environment
Neighborhood Design Center
Prince George's County Agencies
- Environment:
  - Director's Office: Communications and Community Engagement Section
  - Strategic Services Division: Budget and Procurement Section
  - Stormwater Management Division: Capital Projects Construction Section, Capital Projects Design Section, Environmental Programs Section, Inspection and Compliance Section
  - Resource Recovery Division: Disposal Section, Recycling Section, Project Management Section, Collections Section
  - Sustainability Division: Community Outreach Promoting Empowerment Section
- Public Safety: Fire/Emergency Medical Services Department's Hazardous Materials Division
- Health and Human Services Department: Health Department's Environmental Engineering Program
- Office of Information Technology
- Public Works and Transportation:
  - Office of Engineering and Project Management: Engineering Services Division
  - Office of Engineering and Project Management: Highway and Bridge Design Division
  - Office of Highway Maintenance: Special Services Division
  - Office of Storm Drain Maintenance: Storm Drainage Maintenance Division
  - Office of Transportation: Transit Planning Section
- Permitting, Inspections and Enforcement: Site/Road Plan Review Division, Inspections Division, Enforcement Division, Building Plan Review Division

Prince George's County Beautification Committee
Prince George's County Public Schools
United States Environmental Protection Agency, Region III
United States Army Corps of Engineers
Washington Metropolitan Council of Governments
Washington Suburban Sanitary Commission

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INTRODUCTION

This report summarizes the activities carried out by various departments and agencies within Prince George's County in accordance with the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit during fiscal year (FY) 2023, the period of July 2022 through June 2023.

Following this chapter, each section of the permit is spelled out and the County's compliance activities related to that permit condition are described, with an emphasis on those actions taken in FY 2023. These chapters are organized by the four parts of the permit: (1) identification, (2) definitions, (3) water quality, and (4) standard permit conditions. However, the substance of the report is in the fourth part where the County's compliance activities related to numerous permit conditions are described extensively. Where important, the reader is directed to follow-up information in this report or on the accompanying DVD of the MS4 geodatabase.

Dated June 30, 2023, Maryland Department of the Environment (MDE) provided its comments on the FY 2022 NPDES MS4 annual report and other associate reports including consent decree. County's response to MDE's comments is included in Appendixes A and B of the report. Where important, the reader is directed to follow-up information in this report or on the accompanying DVD of the MS4 geodatabase.

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PART I: IDENTIFICATION

Permit Condition Part I: Prince George's County's NPDES MS4 Discharge Permit 20-DP-3314 MD0068284 covers stormwater discharges from the municipal separate storm sewer system in Prince George's County, Maryland, except for the City of Bowie. This permit was issued on December 2, 2022 and will remain in effect through December 1, 2027.

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PART II: DEFINITIONS

Permit Condition Part II: As required by MDE, terms used in this permit are defined in relevant chapters of Title 40 of the Code of Federal Regulations (CFR) Parts 122-124 or the Code of Maryland Regulations (COMAR) 26.08.01, 26.17.01, and 26.17.02. Terms not defined in CFR or COMAR shall have the meanings attributed by common use.

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PART III: WATER QUALITY

Permit Condition Part III: As required by MDE, the Prince George's County must manage, implement, and enforce a stormwater management program (SWMP) in accordance with the Clean Water Act (CWA) and corresponding stormwater National Pollutant Discharge Elimination System (NPDES) regulations, 40 CFR Part 122-124, to meet the following requirements:

1. *Effectively prohibit pollutants in stormwater discharges or other unauthorized discharges into the MS4 as necessary to comply with Maryland's receiving water quality standards;*
2. *Attain applicable wasteload allocations (WLAs) for each established or approved Total Maximum Daily Load (TMDL) for each receiving water body, consistent with Title 33 of the U.S. Code (USC) §1342(p)(3)(B)(iii); 40 CFR §122.44(k)(2) and (3); and*
3. *Comply with all other provisions and requirements contained in this permit, and in plans and schedules developed in fulfillment of this permit.*

Compliance with all the conditions contained in PARTs IV through VII of this permit shall constitute compliance with §402(p)(3)(B)(iii) of the CWA and adequate progress toward compliance with Maryland's receiving water quality standards and any EPA approved stormwater WLAs for this permit term.

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PART IV: STANDARD PERMIT CONDITIONS

A. PERMIT ADMINISTRATION

Permit Condition Part IV. A: Prince George's County shall designate an individual to act as a liaison with the Maryland Department of the Environment (Department) for the implementation of this permit. The County shall provide the coordinator's name, title, address, phone number, and email address. Additionally, the County shall submit in its annual reports to the Department an organizational chart detailing personnel and groups responsible for major NPDES program tasks in this permit. The Department shall be notified in annual reports of any changes in personnel or organization relative to NPDES program tasks.

Jeff DeHan, Associate Director, Stormwater Management Division, Department of the Environment, Prince George's County, is the current liaison for the implementation of this permit. Table A-1 below identifies the lead program management and current technical personnel. Table A-2 provides addresses of the coordinating agencies and Figure A-1 through Figure A-13 provides organization charts detailing personnel and groups responsible for major NPDES program tasks.

Table A-1. Key Prince George's County Staff

Permit Condition	Department/ Division	Manager (s), Title/ E-mail Address, Telephone	Technical Personnel, Title/ E-mail Address, Telephone
Permit Administration	DoE/SMD	Jeff DeHan, Associate Director Stormwater Management Division jmdehan@co.pg.md.us 301-883-5838	Sudhanshu Mishra, Assistant Associate Director Stormwater Management Division SPMishra@co.pg.md.us 301-883-5906
Legal Authority	Office of Law	County Attorney 301-952-5225	N/A
Source Identification	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	Chambal Pandey, Engineer IV Environmental Programs Section cpandey@co.pg.md.us 301-883-5175
Storm Drain System	DoE/DPIE	Yonas Tesfai, Engineer IV Site/Road Plan Review Division YSTesfai@co.pg.md.us 301-883-5725	Tony Newsome, Engineer II Site/Road Plan Review Division, DPIE acnewsome@co.pg.md.us 301-883-7647
Industrial Commercial Sources	DoE/SMD	George Nicol, Section Head Inspection Programs Section gsnicol@co.pg.md.us 301-883-5976	Paul DeSousa, Code Enforcement Officer, Inspection and Compliance Section pddesousa@co.pg.md.us (301) 883-5871
Urban Best Management Practices (BMP)	DoE/SMD	Frank Galosi, Section Head Capital Projects Design Section flgalosi@co.pg.md.us 301-883-5876	See program managers.

Permit Condition	Department/ Division	Manager (s), Title/ E-mail Address, Telephone	Technical Personnel, Title/ E-mail Address, Telephone
		James M. Lyons, Administrator Clean Water Partnership jmlyons@co.pg.md.us 301-883-3634	
Impervious Surfaces	DoE/SMD	Sudhanshu Mishra, Assistant Associate Director Stormwater Management Division SPMishra@co.pg.md.us 301-883-5906	Charles Walsh, IT Project Coordinator IV Environmental Programs Section cwalsh@co.pg.md.us
Monitoring Locations	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	Chambal Pandey, Engineer IV Environmental Programs Section cpandey@co.pg.md.us 301-883-5175
Water Quality Improvement Projects	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	Chambal Pandey, Engineer IV Environmental Programs Section cpandey@co.pg.md.us 301-883-5175
Management Programs			
Stormwater Management			
Implementing SWM Design Policies and Principles	DPIE/SRRD	Mary Giles, PE, Associate Director Site/Road Plan Review Division mcgiles@co.pg.md.us 301-636-2060	Rey de Guzman, Chief Site/Road Plan Review Division redeguzman@co.pg.md.us 301-636-2060
SWM Programmatic Information	DPIE/SRRD	Rey de Guzman, Chief Site/Road Plan Review Division redeguzman@co.pg.md.us 301-636-2060	Yonas Tesfai, Engineer IV Site/Road Plan Review Division YSTesfai@co.pg.md.us 301-636-2060
SWM Design Manual	DPIE/SRRD	Mary Giles, PE, Associate Director Site/Road Plan Review Division mcgiles@co.pg.md.us 301-636-2060	Rey de Guzman, Chief Site/Road Plan Review Division redeguzman@co.pg.md.us 301-636-2060
Erosion and Sediment Control and SWM Construction Inspections	DPIE/ID	Mauney Scottie, Code Enforcement Officer, Inspections Division RSPatel@co.pg.md.us 301-883-3820	See program manager
Private BMP Inspection and Enforcement	DoE/SMD	George Nicol, Section Head Inspection and Compliance Section gsnicol@co.pg.md.us 301-883-5976	Satinder Sachdeva, Engineer III Inspection and Compliance Section sssachdeva@co.pg.md.us 301-883-5830
Public BMP Inspection and Maintenance	DPW&T/OSDM	Joanna Smith, Associate Director Office of Storm Drain Maintenance jmsmith@co.pg.md.us 301-499-8533	Scott McPhall, Program Manager Office of Storm Drain Maintenance smcphall@co.pg.md.us 301-883-5710

Permit Condition	Department/ Division	Manager (s), Title/ E-mail Address, Telephone	Technical Personnel, Title/ E-mail Address, Telephone
Erosion and Sediment Control			
Erosion and Sediment Control	DPIE/ID	Ramesh Patel, Code Enforcement Officer, Inspections Division RSPatel@co.pg.md.us 301-883-3820	See program manager
Quarterly Grading	DPIE/SRDD	Rey de Guzman, Chief Site/Road Plan Review Division redeguzman@co.pg.md.us 301-636-2060	Yonas Tesfai, Engineer IV Site/Road Plan Review Division YSTesfai@co.pg.md.us 301-636-2060
Illicit Connection and Enforcement Program			
Field Screening and Outfall Sampling	DoE/SMD	George Nicol, Section Head Inspection and Compliance Section gsnicol@co.pg.md.us 301-883-5976	Paul DeSousa, Code Enforcement Officer Inspection and Compliance Section pddesousa@co.pg.md.us (301) 883-5871
Commercial Industrial Area Surveys	DoE/SMD	George Nicol, Section Head Inspection and Compliance Section gsnicol@co.pg.md.us 301-883-5976	Paul DeSousa, Code Enforcement Officer Inspection and Compliance Section pddesousa@co.pg.md.us (301) 883-5871
Investigation and Enforcement	DoE/SMD	George Nicol, Section Head Inspection and Compliance Section gsnicol@co.pg.md.us 301-883-5976	Paul DeSousa, Code Enforcement Officer, Inspection and Compliance Section pddesousa@co.pg.md.us (301) 883-5871
	HD/EED	Susan W. Thweatt, Program Chief Environmental Engineering/Policy Program swthweatt@co.pg.md.us 301-883-7682	See program manager
	FD/EMS	Christian Wargo, Chief Fire/EMS Department CBWargo@co.pg.md.us 301-262-6325	Jesse Constantino, Captain Fire/EMS Department JRConstantino@co.pg.md.us 301-262-6325
Trash and Litter			
Program Assessment and Public Education and Outreach	DoE/SD	Dawn Hawkins-Nixon, Associate Director Sustainability Division dhnixon@co.pg.md.us 301-883-5839	See program manager
Trash and Litter Control – Private Property	DPIE	Ruby Sherrod, Associate Director Enforcement Division RJSherrod@co.pg.md.us	See program manager

Permit Condition	Department/ Division	Manager (s), Title/ E-mail Address, Telephone	Technical Personnel, Title/ E-mail Address, Telephone
		301-883-6067	
Street Sweeping	DPW&T/OHMD	William Boyd, Associate Director Office of Highway Maintenance WBBoyd@co.pg.md.us 301-499-8522	Michael Brown, Chief Special Services Division mobrown@co.pg.md.us 301-499-8520
Recycling, Trash and Garbage Collection, Public Education	DoE/RRD	Marilyn Naumann, Associate Director Resource Recovery Division merybak@co.pg.md.us 301-780-6315	See program manager
Property Management and Maintenance			
SWPPP	DoE/SMD	George Nicol, Section Head Inspection and Compliance Section gsnicol@co.pg.md.us 301-883-5976	Ken Krantz Inspection and Compliance Section kekrantz@co.pg.md.us 301-883-5958
Street Sweeping	DPW&T/OHMD	William Boyd, Associate Director Office of Highway Maintenance WBBoyd@co.pg.md.us 301-499-8522	Michael Brown, Chief Special Services Division mobrown@co.pg.md.us 301-499-8520
Storm Drain Maintenance	DPW&T/OSDM	Joanna Smith, Associate Director Office of Storm Drain Maintenance jmsmith@co.pg.md.us 301-499-8533	See program manager
Vegetation Management	DPW&T/OHMD	Michael Brown, Acting Director Office of Highway Maintenance mobrown@co.pg.md.us 301-499-8520	See program manager
Roadside Litter Control	DPW&T/OHMD	William Boyd, Associate Director Office of Highway Maintenance WBBoyd@co.pg.md.us 301-499-8522	Michael Brown, Chief Special Services Division mobrown@co.pg.md.us 301-499-8520
Snow and Ice Control	DPW&T/OHMD	William Boyd, Associate Director Office of Highway Maintenance WBBoyd@co.pg.md.us 301-499-8522	Mary L. Holden, Planning Chief Office of Highway Maintenance mlholden@co.pg.md.us 301-324-2705
Public Education			
Community Outreach and Education	DoE/SD	Mary Abe, Section Head Natural Resource Protection and Stewardship mabe@co.pg.md.us 240-539-0511	Carole Barth, Planner IV Manager, Tree Conservation and Conservation Landscaping Programs cabarth@co.pg.md.us 240-532-1299
	DoE/Director Office	Linda Lowe, Public Information Specialist	See program manager

Permit Condition	Department/ Division	Manager (s), Title/ E-mail Address, Telephone	Technical Personnel, Title/ E-mail Address, Telephone
		Communications and Community Engagement Section lmlowe@co.pg.md.us 301-883-5952	
Restoration Plans and TMDL			
Watershed Assessments	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	See program manager
Restoration Plans	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	Consultant Services
Public Participation	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	See program manager
TMDL Compliance			
Water Quality Retrofits	DoE/SMD	Frank Galosi, Section Head Capital Projects Design Section flgalosi@co.pg.md.us 301-883-5876	See program manager
Construction of SWM Retrofits	DoE/SMD	Joanna Smith, Section Head Capital Projects Construction Section jmsmith@co.pg.md.us 301-883-5991	See program manager
Local and Bay TMDL Load Reduction and Tracking Program	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	Chambal Pandey, Engineer IV Environmental Programs Section cpandey@co.pg.md.us 301-883-5175
Program Evaluation	DoE/SMD	Jeff DeHan, Associate Director Stormwater Management Division jmdehan@co.pg.md.us 301-883-5838	Sudhanshu Mishra, Assistant Associate Director Stormwater Management Division SPMishra@co.pg.md.us 301-883-5906
Assessment of Controls			
Watershed Restoration Assessment	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	Consultant Services
Stormwater Management Assessment	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	Consultant Services

Permit Condition	Department/ Division	Manager (s), Title/ E-mail Address, Telephone	Technical Personnel, Title/ E-mail Address, Telephone
Program Funding			
	DoE/SSD	Michelle Russell, Deputy Director Department of the Environment mwrussell@co.pg.md.us 301-952-3954	Latasha Coates, Budget Analyst Budget and Procurement Section LCoates@co.pg.md.us 301-952-3300

Table A-2. Department Addresses

Department/ Division/Section	Address
DoE/DO:	Department of the Environment, Director's Office 1801 McCormick Drive, Suite 500, Largo, MD 20774
DoE/SMD:	Department of the Environment, Stormwater Management Division (SMD) 1801 McCormick Drive, Suite 500, Largo, MD 20774
DoE/SMD/CPDS:	Department of the Environment, SMD, Capital Projects Design Section (CPDS) 1801 McCormick Drive, Suite 500, Largo, MD 20774
DoE/SMD/CPCS:	Department of the Environment, SMD, Capital Projects Construction Section (CPCS) 1801 McCormick Drive, Suite 500, Largo, MD 20774
DoE/SMD/ICS:	Department of the Environment, SMD, Inspection & Compliance Section (ICS) 1801 McCormick Drive, Suite 500, Largo, MD 20774
DoE/SMD/EPS:	Department of the Environment, SMD, Environmental Programs Section (EPS) 1801 McCormick Drive, Suite 500, Largo, MD 20774
DoE/SD:	Department of the Environment, Sustainability Division (SD) 1801 McCormick Drive, Suite 500, Largo, MD 20774
DoE/SD/ESS:	Department of the Environment, SD, Engineering Services Section (ESS) 1801 McCormick Drive, Suite 500, Largo, MD 20774
DoE/SD/ NRCRP:	Department of the Environment, SD, Natural Resources & Climate Resilience Programs (NRCRP) 1801 McCormick Drive, Suite 500, Largo, MD 20774
DoE/RRD:	Department of the Environment, Resource Recovery Division (RRD) 3500 Brown Station Road, Upper Marlboro, MD 20774
DPW&T:	Department of Public Works and Transportation (DPW&T) 9400 Peppercorn Place, Suite 300, Largo, MD 20774
DPW&T/OEPM:	Department of Public Works and Transportation, Office of Engineering & Project Management (OEPM) 9400 Peppercorn Place, Suite 400, Largo, MD 20774
DPW&T/OHMD:	Department of Public Works and Transportation, Office of Highway Maintenance (OHM) 8400 D'Arcy Road, Forestville, MD 20747
DPW&T/OSDM	Department of Public Works and Transportation, Office of Storm Drain Maintenance (OSDM) 8400 D'Arcy Road, Forestville, MD 20747
DPIE:	Department of Permitting, Inspections and Enforcement (DPIE) 9400 Peppercorn Place, Suite 230, Largo, MD 20774
HD/EHDC:	Health Department, Environmental Health/Disease Control Division 9201 Basil Court, Suite 318, Largo, MD 20774

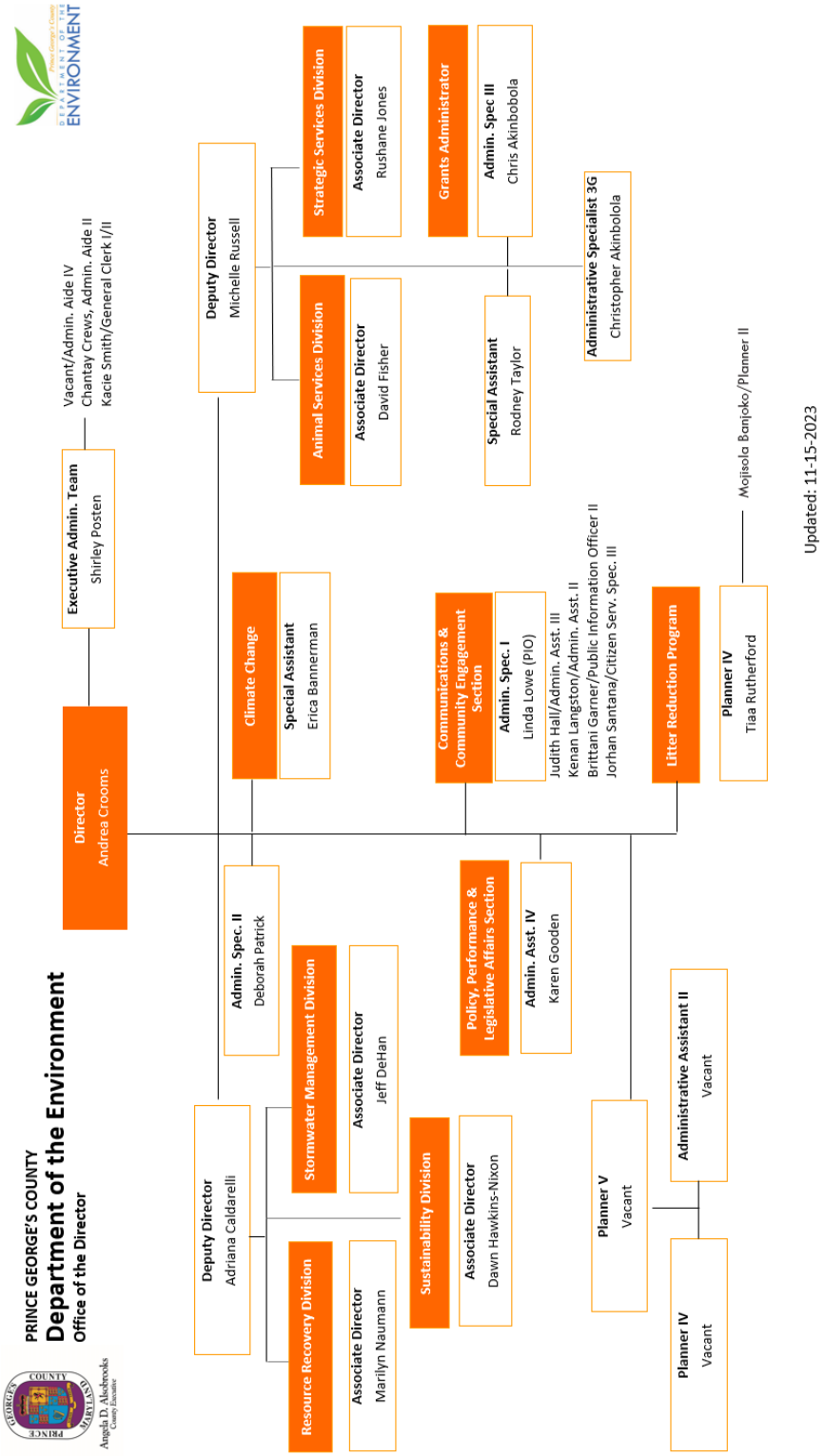

Figure A-1. Department of the Environment - Office of the Director Organizational Chart

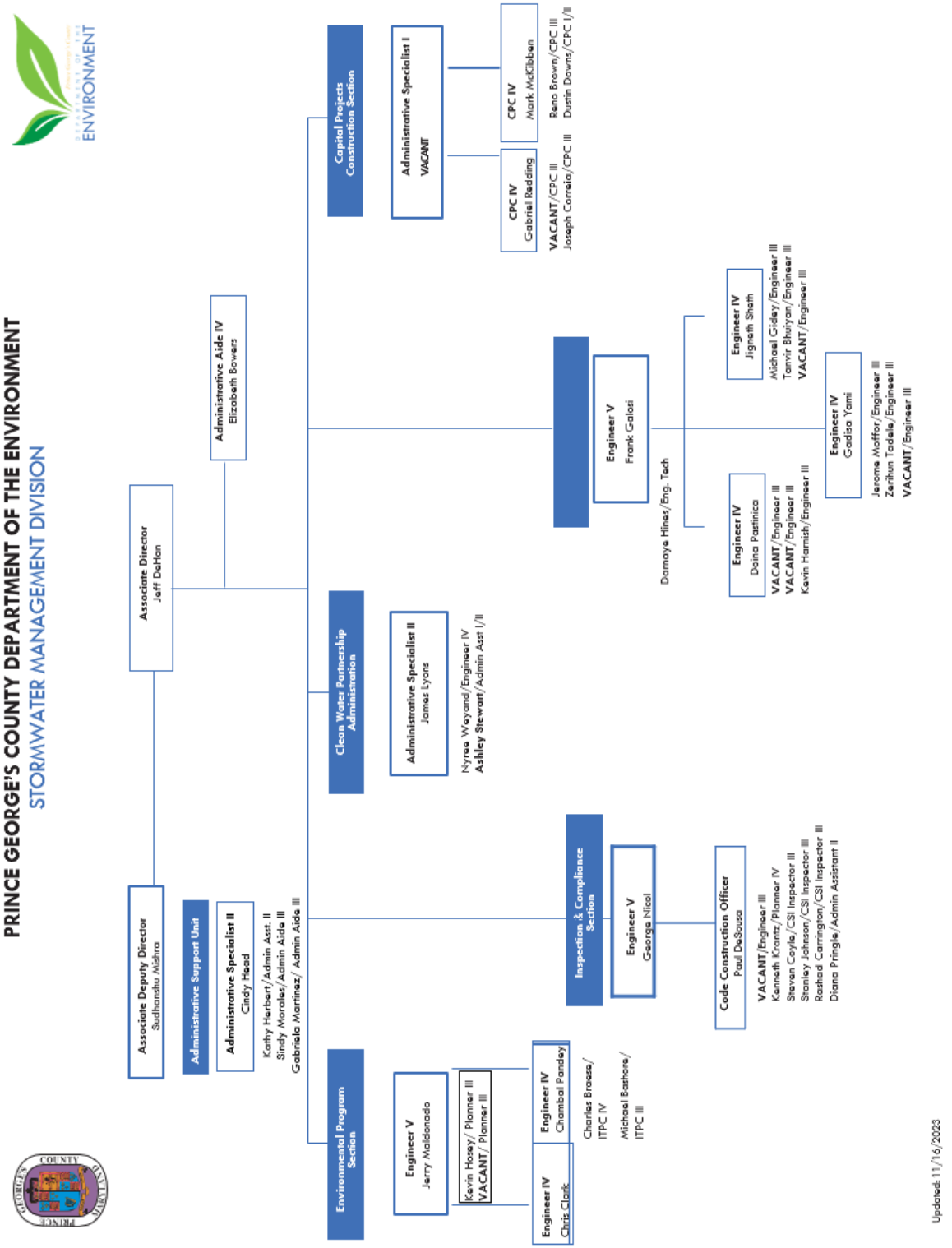

Figure A-2. Department of the Environment - Stormwater Management Division Organizational Chart

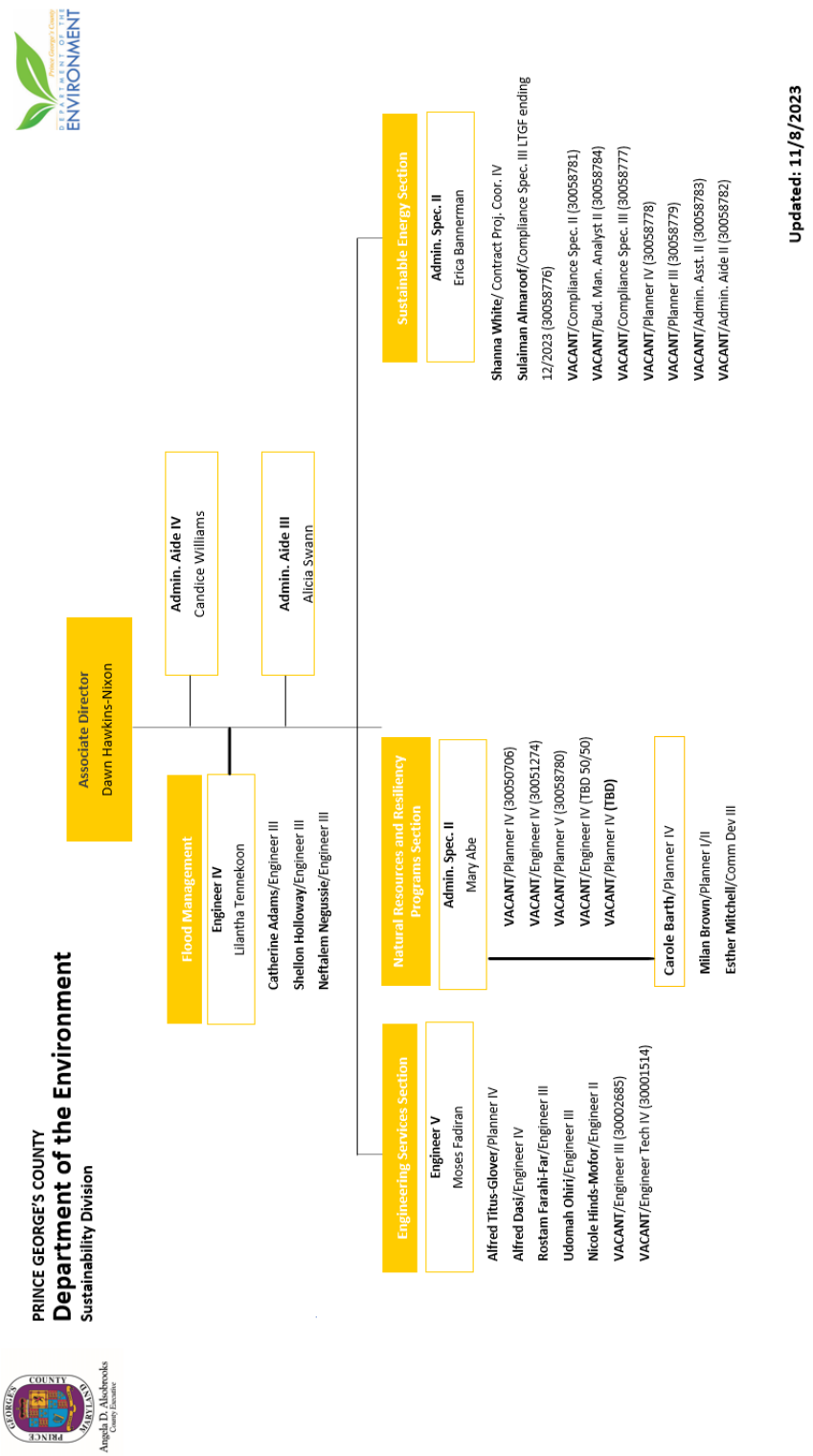

Figure A-3. Department of the Environment - Sustainability Division Organizational Chart

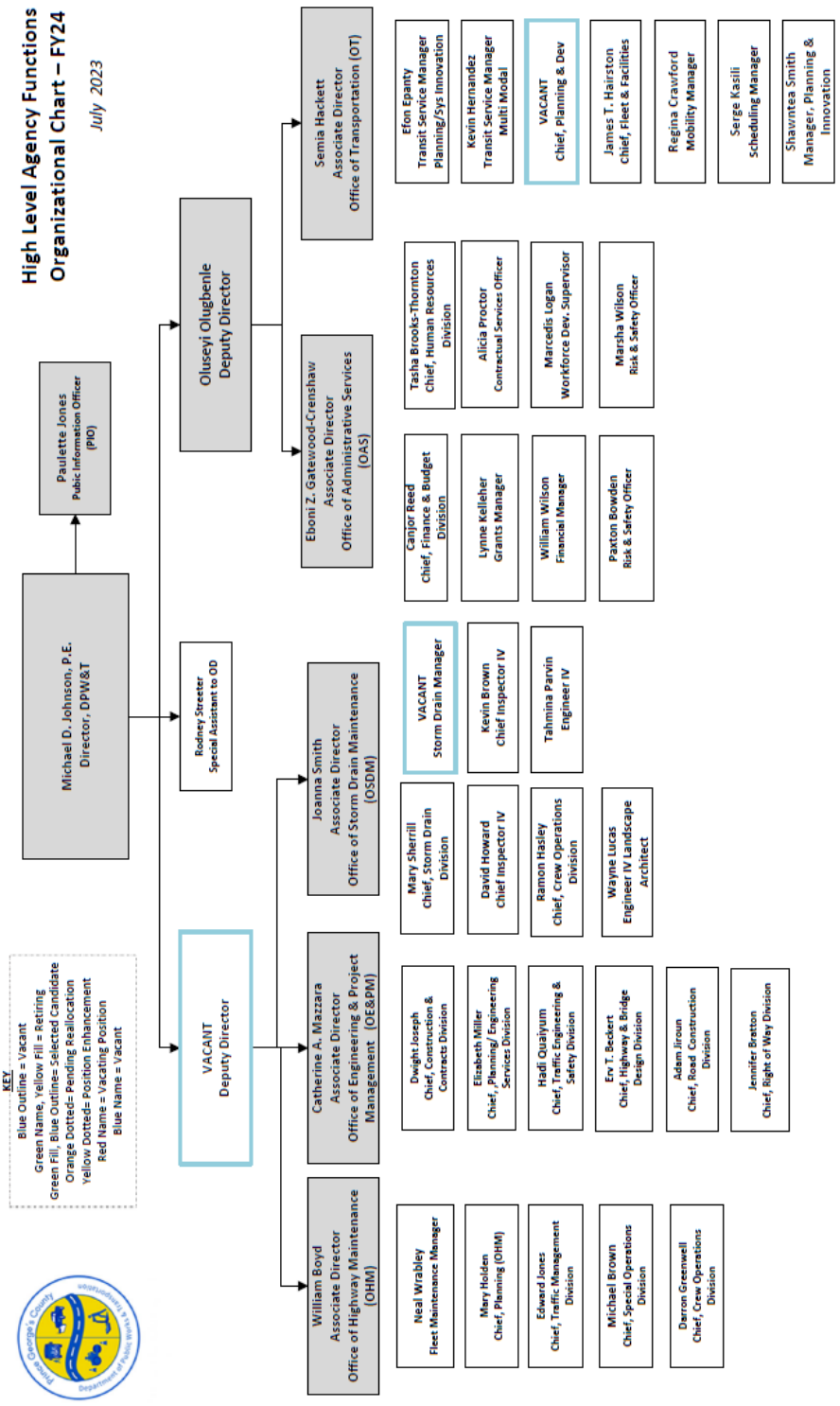

Figure A-4. Department of Public Works and Transportation - Office of the Director Organizational Chart

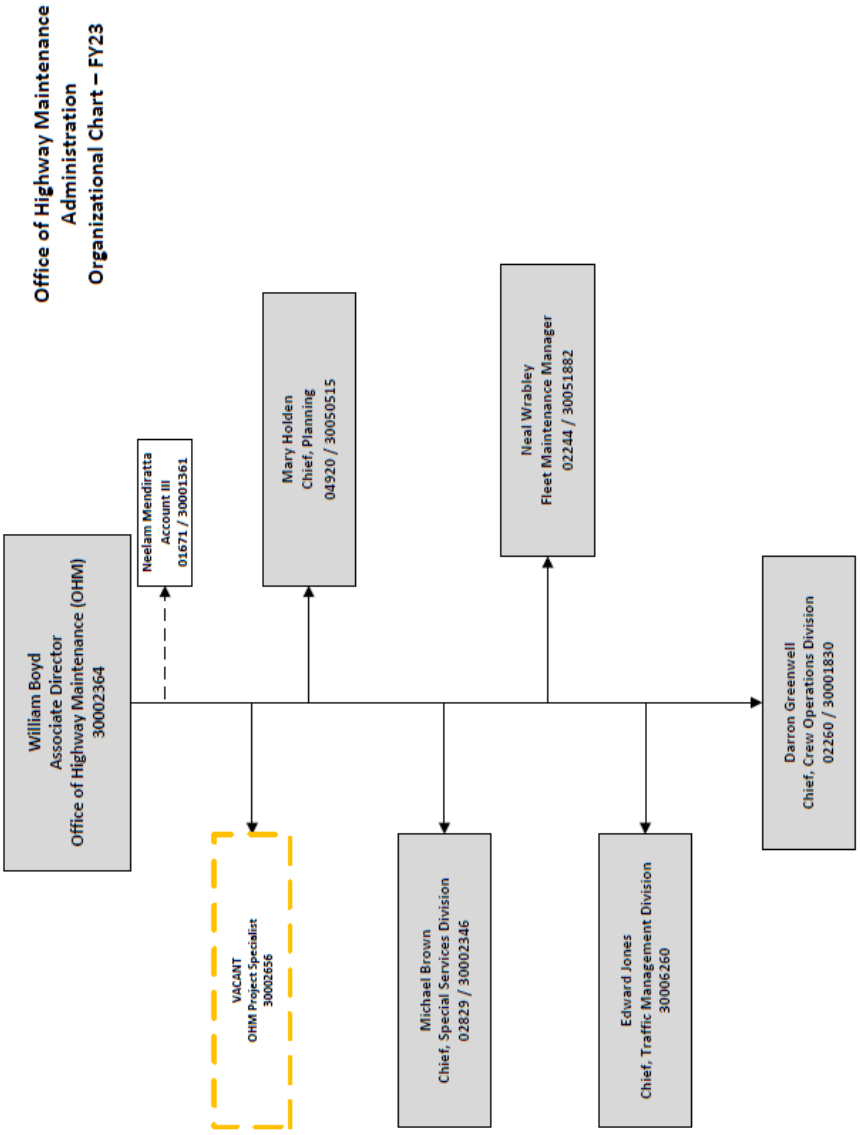

Figure A-5. Department of Public Works and Transportation - Office of Highway Maintenance (OHM) Organizational Chart

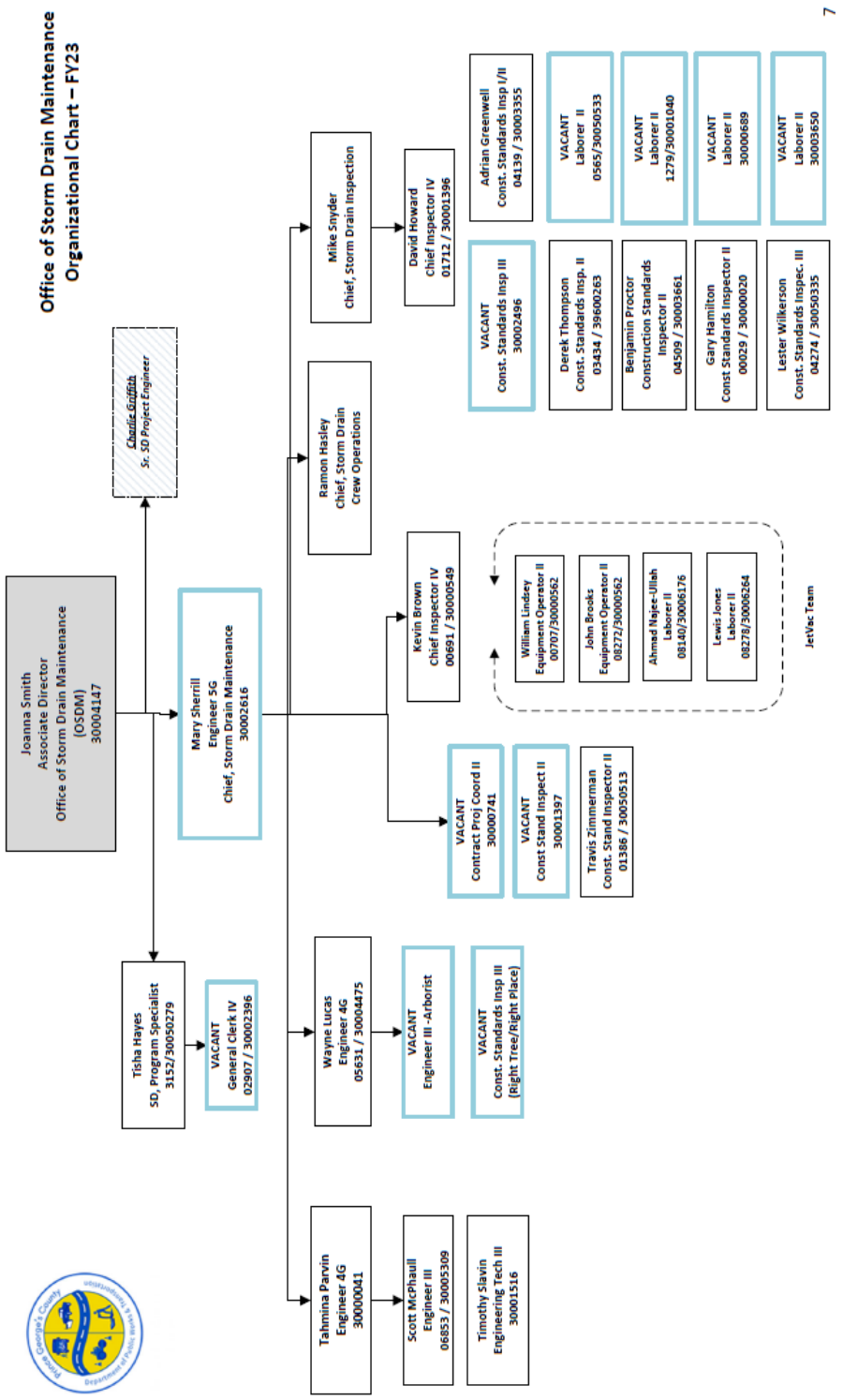

Figure A-6. Department of Public Works and Transportation, OHM - Storm Drain Maintenance Division Organizational Chart

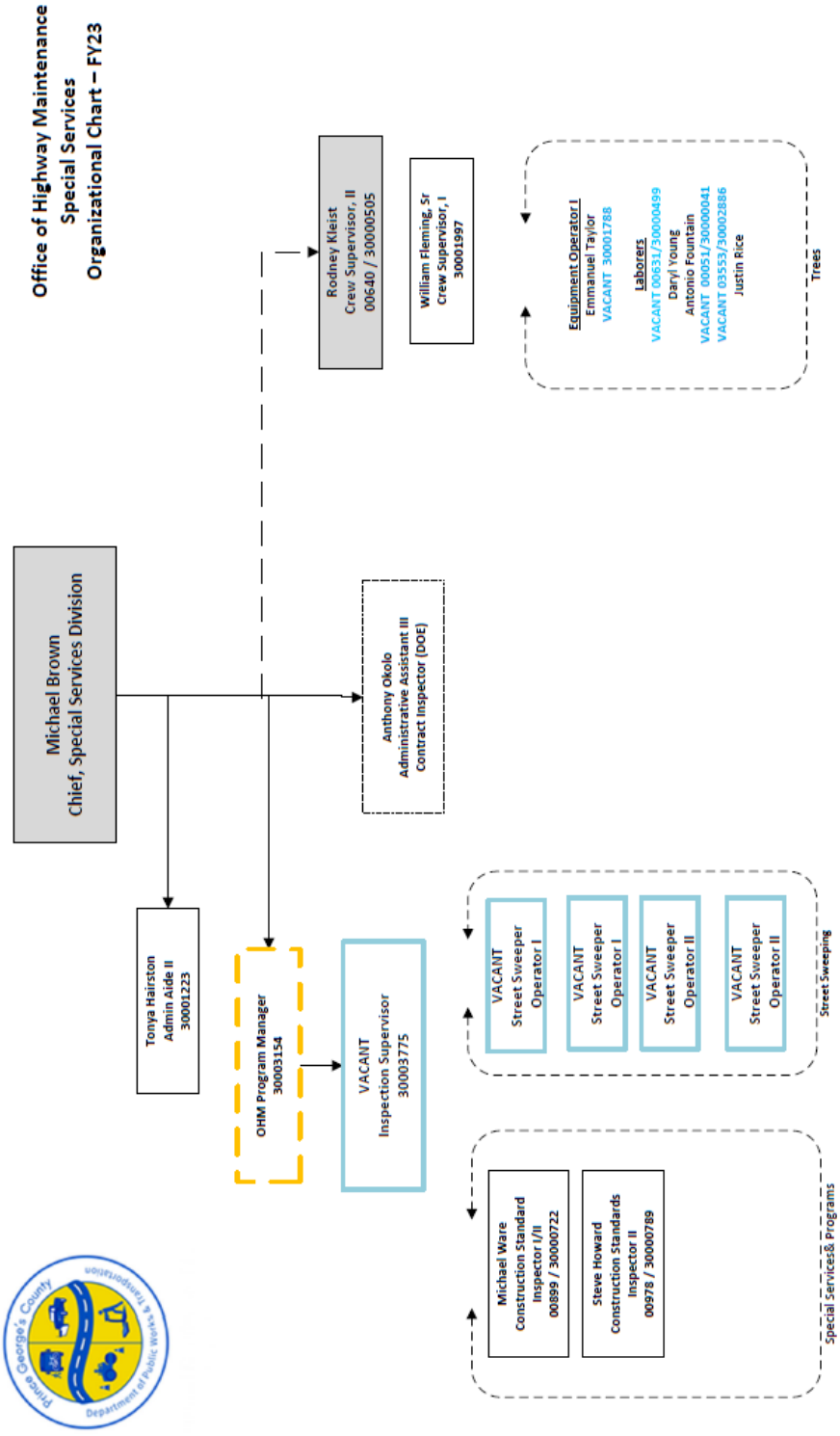

Figure A-7. Department of Public Works and Transportation (OHM) -Special Services Division

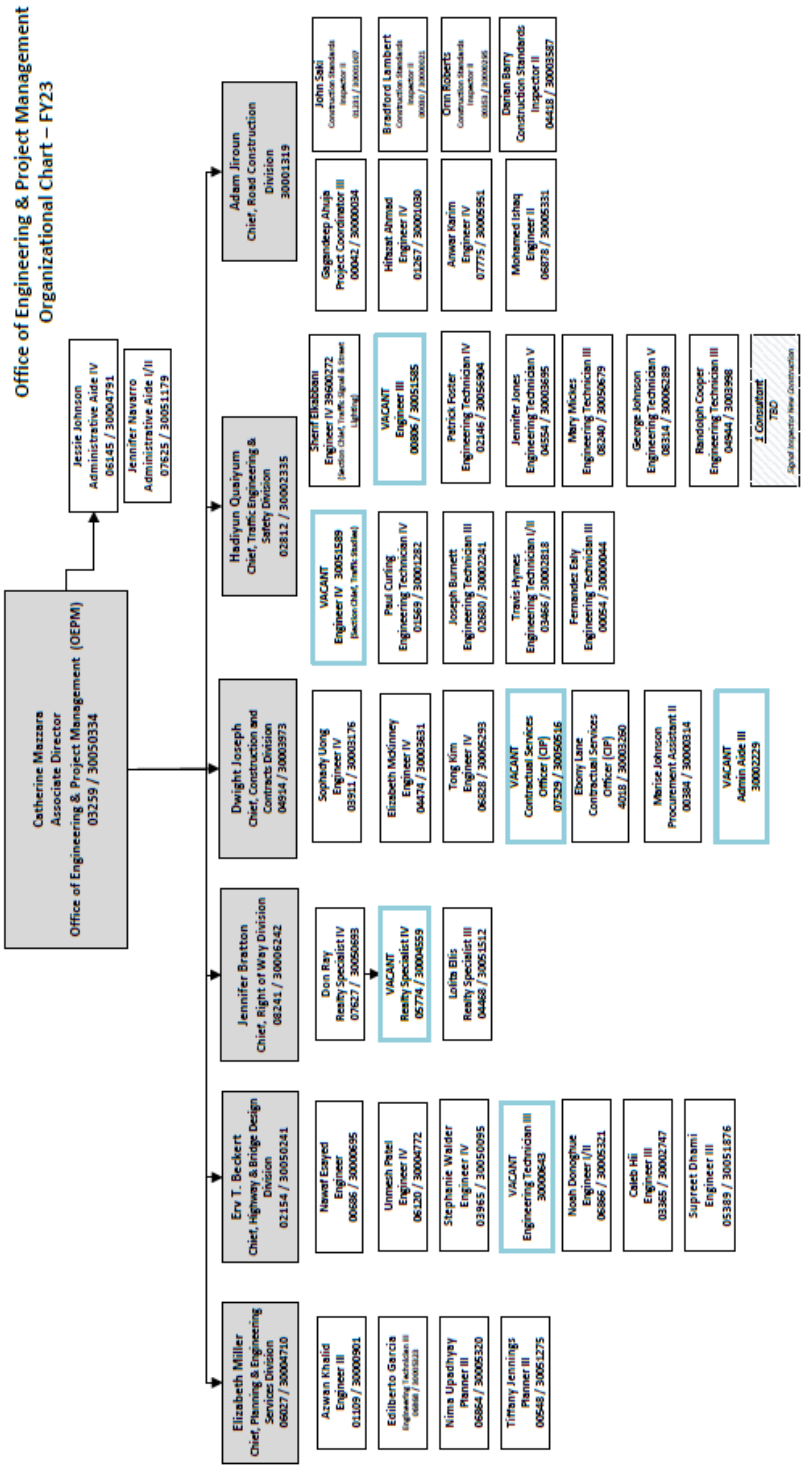

Figure A-8. Department of Public Works and Transportation - Office of Engineering and Project Management Organizational Chart

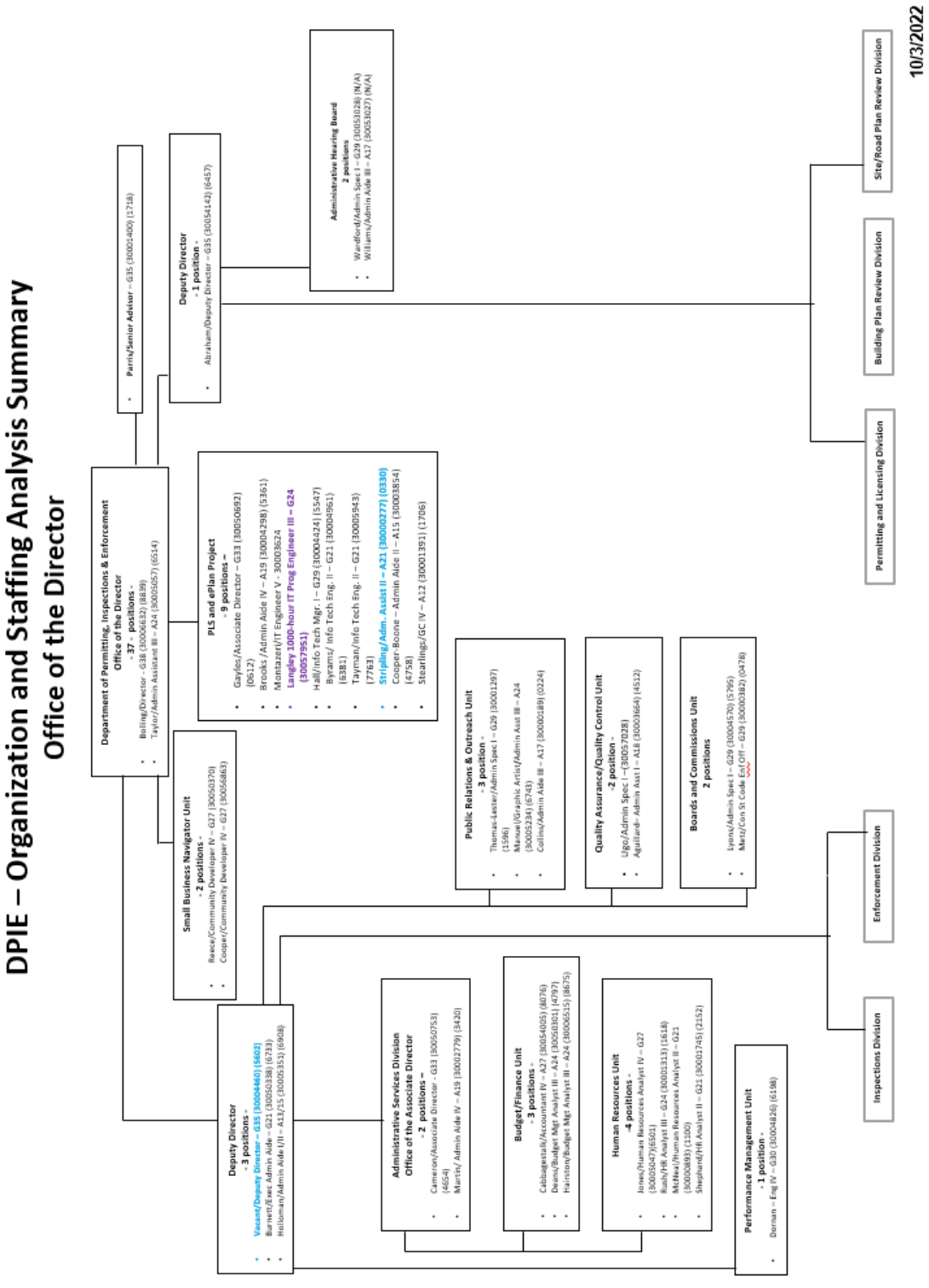

Figure A-9. Department of Permitting, Inspections and Enforcement - Organization and Staffing Analysis Summary, Office of the Director

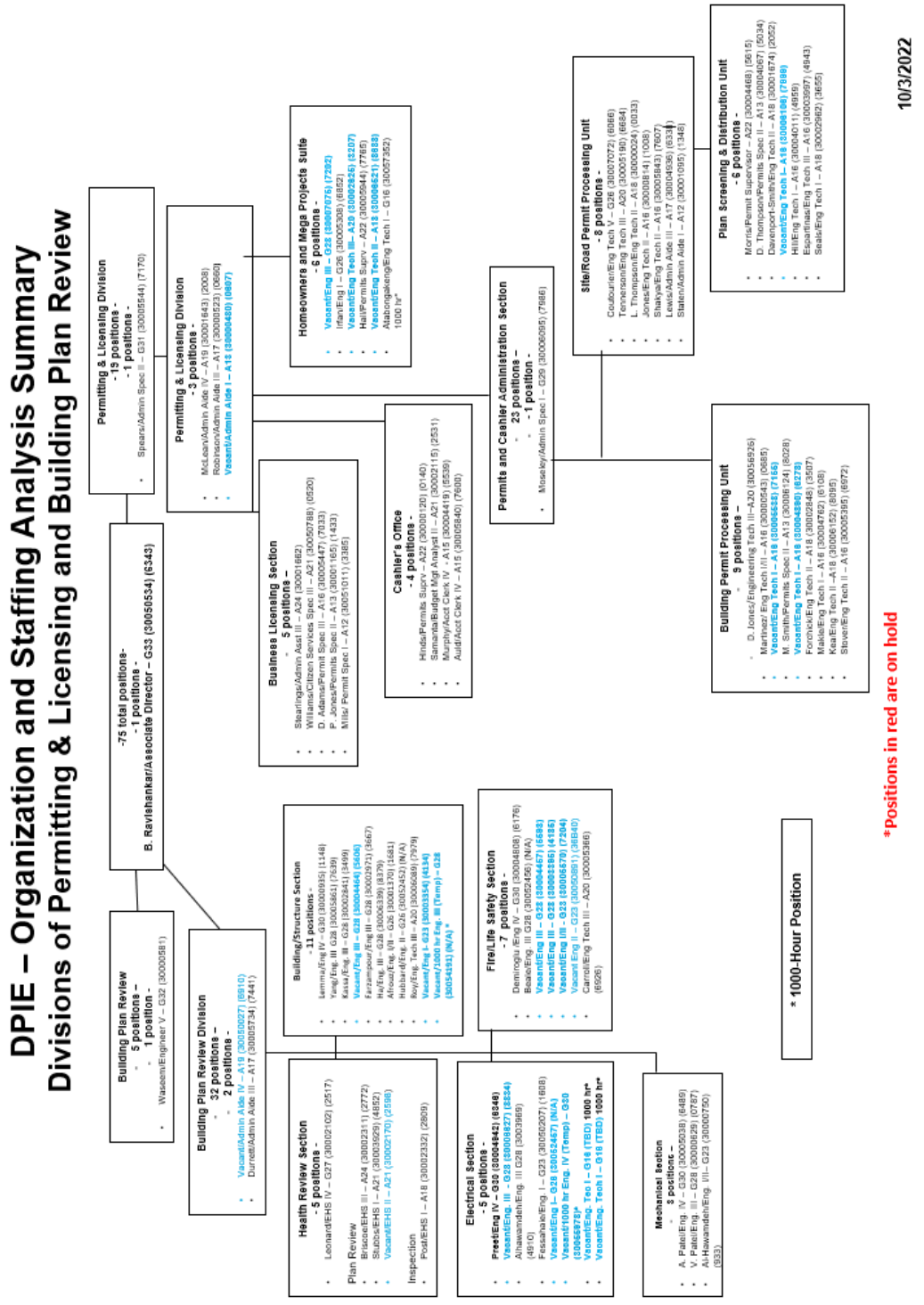

Figure A-10. Department of Permitting, Inspections and Enforcement - Organization and Staffing Analysis Summary, Permitting and Licensing Division and Building Plan Review

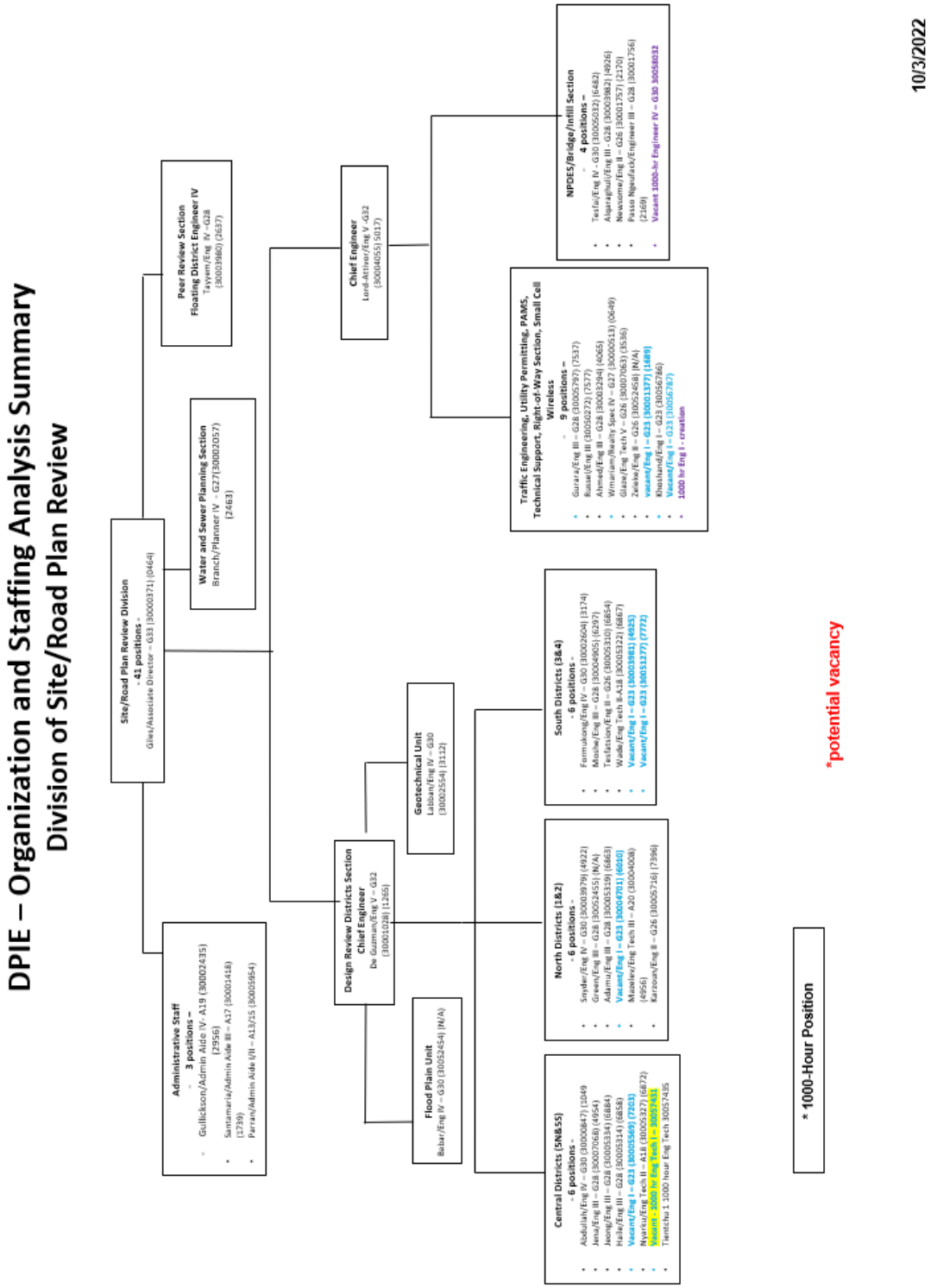

Figure A-11. Department of Permitting, Inspections and Enforcement - Organization and Staffing Analysis Summary, Site/ Road Plan Review Division

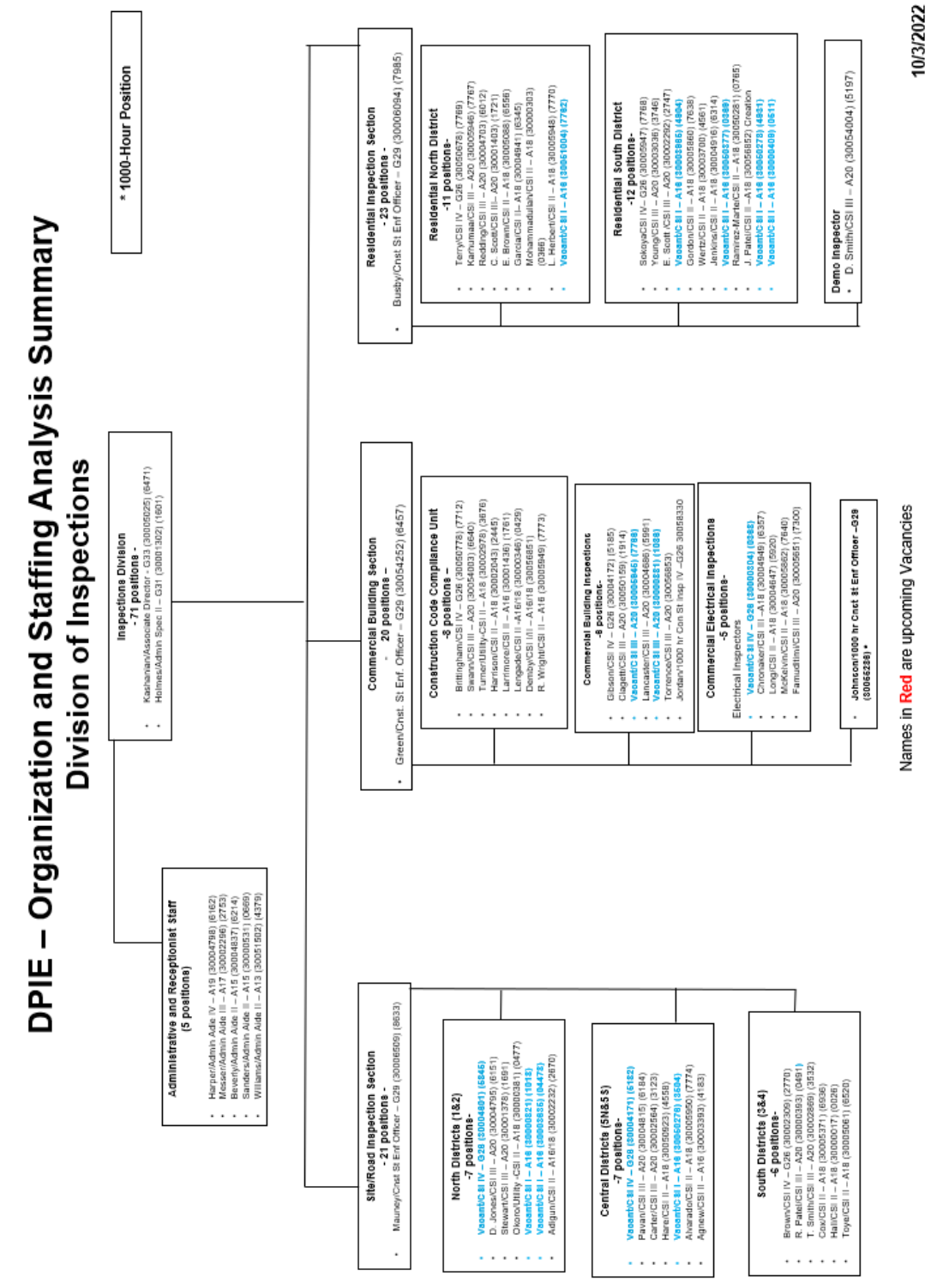

Figure A-12. Department of Permitting, Inspections and Enforcement - Organization and Staffing Analysis Summary, Inspections Division

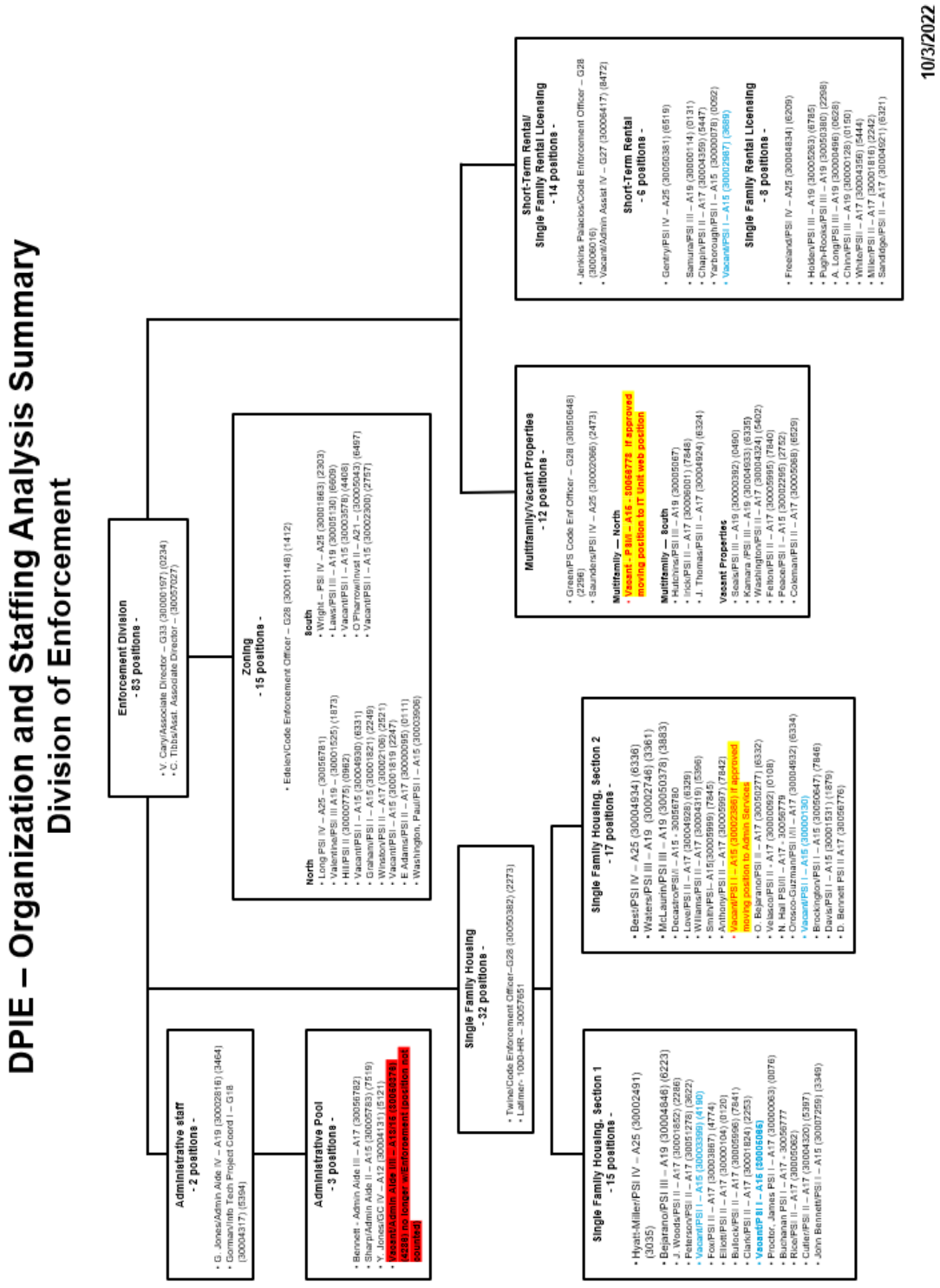

Figure A-13. Department of Permitting, Inspections and enforcement - Organization and Staffing Analysis Summary, Enforcement Division

B. LEGAL AUTHORITY

Permit Condition Part IV. B: Prince George's County shall maintain adequate legal authority to meet this permit's requirements in accordance with NPDES regulations at 40 CFR §122.26 throughout the term of this permit. In the event that any provision of its legal authority is found to be invalid, the County shall notify the Department in writing within 30 days and make the necessary changes to maintain adequate legal authority within one year of notification. All changes shall be included in the County's annual report.

In 1993, Prince George's County revised its "Grading, Drainage and Erosion Control" ordinance to provide the County with adequate legal authority to directly perform the activities described in 40 CFR 122.26(d) (2) (i). Legal authority was recertified by the County attorney in 1999 and was accepted by MDE.

Prince George's County continues to maintain adequate legal authority throughout the term of its NPDES MS4 permit. There were no changes made during this reporting period to invalidate this legal authority.

C. SOURCE IDENTIFICATION

Sources of pollutants in stormwater runoff jurisdiction-wide shall be identified by Prince George's County and linked to specific water quality impacts on a watershed basis. A georeferenced database shall be submitted annually in accordance with Maryland Department of the Environment, National Pollutant Discharge Elimination System, Municipal Separate Storm Sewer System, Geodatabase Design and User's Guide (Version 1.2, May 2017), (hereafter MS4 Geodatabase) or as noted below in each bulleted items that includes information on the storm drain system, industrial and commercial sources, urban BMPs, impervious surfaces, monitoring locations and water quality improvement projects.

Annual progress is discussed under each bulleted Items below.

1. STORM DRAIN SYSTEM

Permit Condition Part IV. C. 1: All infrastructure, major outfalls, inlets, and associated drainage areas delineated (to be submitted as a supplemental geodatabase)

In FY 2023, the County's drainage infrastructure is currently at 55,702/54,600 Inlets records and 2,012/1,981 Major Outfall Drainage Areas. The County's DPW&T received field verified data from a consultant in June and is still analyzing and integrating it into MDE Geodatabase. As of this fiscal year, the County is reporting the following number of major outfalls by type:

- 10,749 Total Outfalls
- 2,052 /2,498 Major Outfalls
  - 990/879 are Industrial Outfall 12" or greater,
  - 1,049/1,587 are Outfall 36" or greater,
  - 1/3 are 36" or Greater-Multiple Pipes, and
  - 12 /29 are Outfall with Drainage Area Greater than 50 acres.
- 8,697 Minor Outfalls

The County will continue to review and integrate field verified data and identify additional Major Outfalls in subsequent annual reports. The outfalls along with their outfall locations and associated drainage areas have been provided on DVD in the MDE's MS4 geodatabase.

2. INDUSTRIAL AND COMMERCIAL SOURCES

Permit Condition Part IV. C. 2: Industrial and commercial land uses and sites that the County has determined have the potential to contribute significant pollutants (to be submitted as a supplemental geodatabase).

The County completed an analysis for industrial and commercial sources and a geodatabase containing this information was submitted to MDE on June 10, 2016. For this reporting period, the inventory of the industrial and commercial sources remains unchanged from that submittal.

3. URBAN BEST MANAGEMENT PRACTICES (BMPS)

Permit Condition Part IV. C. 3: Stormwater management facility data for new and redevelopment, including outfall locations and delineated drainage areas.

The urban BMPs along with their outfall locations and associated drainage areas have been provided on DVD in the MDE's MS4 geodatabase. For FY 2022, the inventory includes a total of 92,425 urban BMPs. A summary of the records of each BMP types is provided in the Table C-1.

Table C-1. Summary of the BMP inventory provided in the Geodatabase for BMPs

BMP Inventory	Geodatabase Table	Number of Records*	Records with Project Completed in Permit Term (2014-2022)
BMPs	BMP	5,834	3,066
Stream Restoration and Outfall Stabilization	AltBMPLine	106	60
Storm Drain Vacuuming, Street Sweeping, Tree Planting, and Impervious Area Elimination	AltBMPPoly	85,590	85,582
Septic Denitrification or Connection to WWTP	AltBMPPoint	895	192
Total		**92,425**	**88,900**

**The number of records also include individual tree planting.*

4. IMPERVIOUS SURFACES

Permit Condition Part IV. C. 4: Public and private land cover delineated, controlled and uncontrolled impervious areas based on, at a minimum, Maryland's hierarchical eight-digit sub-basins.

An analysis of the MS4 regulated permit area and associated impervious area has been completed and a description of the methodology with GIS data was provided to MDE in the previous reporting. In FY2023, an update of the MS4 regulated permit area and associated impervious areas was provided on DVD in the MDE's MS4 geodatabase.

5. MONITORING LOCATIONS

Permit Condition Part IV. C. 5. Locations established by Prince George's County for chemical, biological, and physical monitoring of watershed restoration efforts and the 2000 Maryland Stormwater Design Manual, unless participating in the pooled monitoring program, as described in PART IV.G; and;

The established chemical and biological, and physical monitoring locations for stormwater monitoring in the Black Branch watershed and watershed restoration monitoring in the Bear Branch watershed are provided on DVD in the MDE's MS4 geodatabase.

Permit Condition Part IV. C. 6: Restoration projects implemented in accordance with PART IV.E.3 including stormwater BMPs, programmatic initiatives, and alternative control practices in accordance with the Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated Guidance for National Pollutant Discharge Elimination System Stormwater Permits (2021), (hereafter 2021 Accounting Guidance), including projects proposed, under construction, and completed with associated drainage areas delineated.

6. WATER QUALITY IMPROVEMENT PROJECTS

The information regarding Water Quality Improvement Projects at their various stages (proposed, design, under construction, and completed), with associated tables including their drainage areas delineated, is provided in the MDE's MS4 geodatabase format under the feature classes RestBMP, AltBMP Line, AltBMP Point, AltBMP Polygon, and Impervious Surface Associated Tables on the DVD.

For FY2023, the BMP inventory includes 776 projects that were either in planning, in design, under construction, or completed phases since fourth generation permit inception. Of this inventory, 729 projects have been completed, while 47 projects were either in planning, in design or under construction. These projects are being implemented through various programs including the Capital Improvements Program (CIP), the Clean Water Partnership (CWP), the countywide Green/Complete Streets Program, redevelopment projects by developers, septic system upgrades and septic system removal and DoE's Comprehensive Community Cleanup Program.

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D. MANAGEMENT PROGRAMS

1. STORMWATER MANAGEMENT PROGRAM

Permit Condition Part IV. D. 1. a. (i): The County shall implement the stormwater management design policies, principles, methods, and practices found in the latest version of the 2000 Maryland Stormwater Design Manual. This includes complying with the Stormwater Management Act of 2007 (Act) by implementing Environmental Site Design (ESD) to the Maximum Extent Possible (MEP) for new and redevelopment projects.

The County's Department of Permits Inspections and Enforcement (DPIE) incorporated MDE's three phase comprehensive review for all new and redevelopment projects, in accordance with the processes established in the *Prince George's County Stormwater Management Design Manual* and the Prince George's Soil Conservation District's *Soil Erosion and Sediment Control-Pond Safety Reference Manual*.

Permit Condition Part IV. D. 1. a. (ii): The County shall implement the stormwater management design policies, principles, methods, and practices found in the latest version of the 2000 Maryland Stormwater Design Manual. This includes tracking the progress toward satisfying the requirements of the Act and identifying and reporting annually the problems and modifications necessary to implement ESD to the MEP.

As critical decisions on stormwater controls are made during the concept plan phase, the County's DPIE uses a geodatabase to track stormwater implementation policy decisions, maintenance responsibility, watershed location, and types of BMPs. The geodatabase has the capacity of tracking 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. The County conducted an extensive analysis of stormwater controls approved at the concept plan stage of the process. A representative example of this type of data analysis is provided in Table D-1.

Table D-1. Stormwater Management Concept Plan Approvals by Watershed in FY 2023

MDE 8-digit code	Watershed Name	Number of Plans	Proposed Impervious Area (Acres)	Disturbed Area (Acres)
2131101	Patuxent River lower	2	0.49	0.95
2131103	Western Branch	33	113.18	192.89
2140201	Patuxent River upper	6	3.75	13.55
2140111	Mattawoman Creek	3	10.49	29.63
2140201	Potomac River U tidal	12	6.39	13.24
2140203	Piscataway Creek	6	4.44	20.46
2140204	Oxon Creek	8	32.71	60.08
2140205	Anacostia River	70	144.73	711.27
TOTAL		140	316.18	1,042.07

Permit Condition Part IV. D. 1. a. (iii): The County shall implement the stormwater management design policies, principles, methods, and practices found in the latest version of the 2000 Maryland Stormwater Design Manual. This includes reporting annually the modifications that have been made or need to be made to all ordinances, regulations, and new development plan review and approval processes to comply with the requirements of the Act.

There have been no updates to the County's Stormwater Management Design Manual, however DPIE over the past year has produced three Techno-grams related to stormwater management procedures/policies. These Techno-grams cover the following topics:

1. Technogram 001-2021 Topsoil Certification: DPIE issued this technogram on 3/9/2021, which now requires the permittee to issue a certification that topsoil was installed in accordance with the erosion and sediment control standards. The agency was observing lack of compliance for the installation of topsoil, and therefore issued this technogram to enhance compliance.
2. Technogram 001-2022 Rational Method Runoff Coefficient C Factors for New Zoning: DPIE issued this technogram on 3/22/2022. This technogram increased C factors used in calculating 10-year storm flows to proposed storm drain systems. The technogram also provided a chart to relate C factors to the new zoning categories that were implemented in early 2022. The technogram also requires the permittee to size storm drain systems that intercept more than 10 acres for the 100-year storm event – OR – alternatively calculate the depth and width of 100-year overland flow to ensure that structures are elevated above the 100-year overland flow path.
3. Technogram 003-2022 Underdrains: DPIE issued this technogram on 5/3/2022. This technogram serves as a reminder to the permittee that underdrains are required to be installed under the curb line of public roadways. This was issued to improve compliance with this requirement.

Over the past year DPIE has been working on ensuring that the Maintenance Agreements for private stormwater devices are obtained prior to permit closure. Maintenance Agreements are checked at the time of Building Permit review and at the time of as-built review.

Permit Condition Part IV. D. 1. b: Maintaining programmatic and implementation information related to the stormwater management program including, but not limited to:

i. Number of Concept, Site Development, and Final plans received and number of those approved. Plans that are re-submitted as a result of a revision or in response to comments should not be considered as a separate project;
ii. Number of redevelopment projects received and number of those approved;
iii. Number of stormwater exemptions issued; and
iv. Number and type of waivers received and issued, including those for quantity control, quality control, or both. Multiple requests for waivers may be received for a single project and each should be counted separately, whether part of the same project or plan.

A summary of the stormwater controls during the concept plan approval phase in FY 2023 is provided below:

1. 140 Concept Plans approved.

2. 100 Site Development Plans reviewed.
3. 177 Final Plans reviewed.
4. 25 Redevelopment Projects received and approved.
5. 63 Stormwater Exemptions granted, a list is included on the DVD under Management Programs\Concept Exemption
6. No waivers were granted.

Permit Condition Part IV. D. 1. c: The County shall maintain construction inspection information according to COMAR 26.17.02 for all ESD treatment practices, structural stormwater management facilities, and stable storm water conveyance and capacity to receiving waters, including the number of inspections conducted and violation notices issued by the County.

Construction inspections are performed by DPIE within three districts. The total number of site/road inspectors for FY 2023 was 17. During this reporting period, these inspectors performed a total of 8,101 stormwater inspections and issued 15 violations (Table D-2). The DPIE staff in the Site/Road Inspections Section continues to perform routine and demand inspections, in an effort to gain full compliance with the approved plans and permits.

Table D-2. History of Notice of Violation issued since Calendar Year 2014

Calendar year	Inspection	Notice of Violation (NOV)	Stop Work Orders (SWO)	Citations
2023	8,101	15	33	15
2022	10,016	17	22	15
2021	11,417	10	25	10
2020	9,701	12	14	76
2019	9,527	19	25	145
2018	10,590	21	23	132
2017	8,980	8	04	065
2016	7,111	13	02	102
2015	7,350	42	03	37
2014	7,957	30	20	55

Permit Condition Part IV. D. 1. d: The County shall conduct preventative maintenance inspections, according to COMAR 26.17.02, of all ESD treatment systems, structural stormwater management facilities, and stable stormwater conveyance and capacity to receiving waters, at least on a triennial basis. Documentation identifying the ESD systems and structural stormwater management facilities inspected, the number of maintenance inspections, follow-up inspections, the enforcement actions used to ensure compliance, the maintenance inspection schedules, and any other relevant information shall be submitted in the County's annual reports.

The County's Department of the Environment (DOE) and the Department of Public Works (DPW&T), during this reporting period conducted preventive maintenance inspections on to ensure functional operation of installed BMPs. The inspection records of the completed BMPs for triennial inspections are provided in the MDE's MS4 geodatabase on DVD. A summary of the inspection records is provided in Table D-3.

Table D-3. Summary of Total Inspection Records in the Inventory

Inspection Inventory	Geodatabase Table	Number of Records
New Development, redevelopment, conversion, or restoration BMPs captured in the BMP feature class.	BMPInspections	5,816
Alternative BMP-Stream Restoration, Shoreline Stabilization, Outfall Stabilization, and Land Cover Conversion	AltBMPLineInspections	62,005
TOTAL		67,821

These BMPs are inspected and maintained by three different programs: 1) preventive maintenance inspection of private owned storm water management facilities by the Department of Environment (DoE); 2) preventive maintenance inspection of public owned storm water management facilities by the Department of Public Works and Transportation (DPW&T); and 3) initial inspection, retrofits, and on-site BMP functionality verification provided by Clean Water Partnership (CWP).

2. EROSION AND SEDIMENT CONTROL

Permit Condition Part IV. D. 2. a: The County shall implement program improvements identified in any MDE evaluation of the County's erosion and sediment control enforcement authority;

In a letter dated May 14, 2021, MDE delegated erosion and sediment control enforcement authority to the County through June 30, 2023.

Under this authority, inspections are performed within three districts. The total number of site/road inspectors for FY 2023 was 17. During this reporting period, these inspectors performed a total of 9,626 sediment control inspections and issued 172 violations. DPIE staff in the Site/Road Inspections Section continues to perform routine and demand inspections, in an effort to gain full compliance with the approved plans and permits.

Permit Condition Part IV. D. 2. b: The County shall ensure that construction site operators have received training regarding erosion and sediment control compliance and hold a valid responsible Personnel Certification as required by the Department.

The construction site operators received training on a regular basis. A training log is maintained and provided on the DVD under "management folder".

Permit Conditions Part IV. D. 2. c: Reporting quarterly, information regarding earth disturbances exceeding one acre or more. Quarters shall be based on calendar year and submittals shall be made within 30 days following each quarter. The information submitted shall cover permitting activity for the preceding three months.

During the 2023 reporting period, Prince George's County reported a total of 100 projects with earth disturbances of an acre or more. The total earth disturbance for these 100 projects was 1,497.32 acres. Copies of the disturbed area databases were forwarded to MDE throughout the year on a quarterly basis. Overall grading permit information for FY2023 is provided on the DVD in the MS4 geodatabase.

Permit Condition Part IV. D. 3 The County shall implement an inspection and enforcement program to ensure that all discharges into, through, or from the MS4 that are not composed entirely of stormwater are either issued a permit by the Department or eliminated. Activities shall include, but not be limited to:

a. Reviewing all County outfalls to prioritize field screening efforts in areas with the greatest potential for polluted discharges. The County must submit the process developed to prioritize outfall screenings to the Department for approval with the first year annual report;

b. Submitting a plan and schedule for field screening the prioritized outfalls for the Department's approval with the first year annual report. The plan and schedule shall include the annual screening of at least 150 outfalls. Each outfall having a dry weather discharge shall be sampled at the time of screening using a chemical test kit. An alternative program may be submitted by the County for the Department's approval that methodically identifies, investigates, and eliminates illegal discharges into, through, or from the County's MS4;

c. Conducting annual visual surveys of commercial and industrial areas as identified in PART IV.C.2 above for discovering, documenting, and eliminating pollutant sources. Areas surveyed and the results of the surveys shall be reported annually;

d. Maintaining written standard operating procedures for outfall screenings, illicit discharge investigations, annual visual surveys of commercial and industrial areas, responding to illicit discharge complaints, and enforcement implementation; From 2015 to 2020, the consultant used an automated field inspection tool developed in 2015 to perform the inspections. The field application allows field inspectors to access County geographic information system (GIS) inventory of storm drains, best management practices, streets, property ownership, etc., facilitate recording of field data, and to automatically generate inspection reports. Beginning in 2021, a new web-based inspection tools developed by ESRI in 2021 was used to perform the inspections. The new web-based tools allow for real time data syncing and live updates.

e. Maintaining an ordinance, or other regulatory means, that prohibits illicit discharges into the storm sewer system;

f. Maintaining a program to address and respond to illegal discharges, dumping, and spills; and

g. Using appropriate enforcement procedures for investigating and eliminating illicit discharges, illegal dumping, and spills. When a suspected illicit discharge discovered within the County's jurisdiction is either originating from or discharging to an adjacent MS4, the County must coordinate with that MS4 to resolve the investigation. Significant discharges shall be reported to the Department for enforcement and/or permitting

3. ILLICIT DISCHARGE DETECTION AND ELIMINATION

For the FY 2023 inspections, DoE contracted Consultant services to perform field screening of 151 major storm drain outfalls throughout the County. Initially, this effort started in 2015, and focused primarily on the Anacostia watershed; however, in 2016, the target area was expanded to include the entire County.

A web-based field inspection tool developed by Esri in 2021 for the County was used by consultants to perform the inspections. The web-based tool allows for real time data syncing and live updates. The field application allows field inspectors to access County geographic information system (GIS) inventory

of storm drains, best management practices, streets, property ownership, etc., facilitate recording of field data, and to automatically generate inspection reports.

The outfall screening was conducted from May 2023 through June 2023, with 156 inspections being conducted at 151 outfalls. A two-person field crew visited each site following 72 hours of dry weather. The physical condition of each site was recorded on the web-based field inspection tool. 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.

It is important to note that a dry-weather flow does not indicate an illicit discharge. Groundwater intrusion into storm drains is common; additionally, permitted discharges may be occurring. To determine if an illicit discharge was present, the results of the chemical tests performed were compared with the accepted statewide averages described in Dry Weather Flow and Illicit Discharges in Maryland Storm Drain Systems (MDE, 1997). Using the statewide averages, the 1997 study provides a threshold for each constituent, based on watershed land use. The results from the chemical tests performed during the 2023-reporting year were compared with this threshold to determine which results are considered abnormal for each constituent, and to make recommendations as to which storm drain systems should be investigated further as having possible illicit connections. Numerical thresholds for dissolved oxygen, turbidity, and fluoride are not published. The need for follow-up investigations based on these parameters was determined on a case-by-case basis. The thresholds used for the investigations are as follows:

- pH outside the range of 5.5 to 8.5
- 0.5 ppm detergents
- 0.4 ppm chlorine
- 0.17 ppm phenols
- 0.21 ppm copper
- 1.0 ppm ammonia

When a confirmed high concentration of a contaminant was found, field crews followed the stormdrain system upstream attempting to locate the source of the contamination. Additional tests at upstream structures were conducted as needed in an effort to track the contamination upstream to the source, especially where two systems converged.

All data collected during the illicit discharge screening were recorded in a database conforming to the MDE formatting requirements. This database is provided on DVD in the MDE's MS4 geodatabase.

The results show that, of the 156 inspections, 32 observed dry-weather flow. A chemical test was performed for all 32 inspections observing dry-weather flow. Five (5) 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. Table D-4 below shows the details of the investigation and corrective actions taken to eliminate the illicit discharge observed at the five (5) outfalls.

Table D-4. Details of the Corrective Action Taken for the Illicit Discharges

Outfall ID	Corrective Actions
PG17OUT058396	At the time of the consultant's inspection, this outfall was found to have a discharge that exceeded the detergent threshold. During the follow-up inspection, the detergent level had dropped below the threshold, but ammonia exceeded threshold levels with detergent smell present and visible suds. The Code Enforcement Officer conducted an inspection of the outfall and traced the discharge back to an apartment complex. During the inspection, a resident was observed washing their vehicle in the parking lot of the apartment complex. The Code Enforcement Officer met with the manager of the apartment complex and informed the manager that all vehicle washing is not to be done in the apartment complex's parking lot. The County will continue to monitor the outfall at the next scheduled inspection. The issues have been resolved.
PG20OUT720096	At the time of the consultant's inspection, this outfall had a discharge that failed detergent during the first inspection. During the second test, the detergent level had dropped below the threshold. The Code Enforcement Officer conducted an inspection of the outfall. From the inspection, it appears the water flow in the storm drain system is possibly due to groundwater intrusion through the pipe joints. The Code Enforcement Officer inspected the storm drain system but was unable to locate the possible source of the detergent from the first inspection. No illicit discharge was found. The County will continue to monitor the outfall at the next scheduled inspection. The issue has been resolved.
PG22OUT106683	At the time of the consultant's inspection, this outfall was found to have a discharge that exceeded the chlorine threshold. Upon revisiting the structure, the chlorine level was still above the threshold. The Code Enforcement Officer conducted an inspection of the outfall and contacted Washington Suburban Sanitary Commission (WSSC) to investigate for any possible water leaks in the surround area. From WSSC investigation, they found a small valve leak in the roadway causing the water to enter the storm drain system. The water leak was repaired by WSSC. The issue has been resolved.
PG64OUT027309	At the time of the consultant's inspection, this outfall was found to have a discharge that exceeded the detergent threshold with a sewage odor. During the follow-up inspection, the detergent level was below the threshold and the sewage odor was no longer present. The Code Enforcement Officer conducted an inspection of the outfall. From the inspection, it appears the storm drainage system drains conveys runoff from an apartment complex. Residents were observed washing their vehicles in the parking lot of the apartment complex. The Code Enforcement Officer met with the manager of the apartment complex and informed the manager that all vehicle washing is not to be done in the apartment complex's parking lot. The County will continue to monitor the outfall at the next scheduled inspection. The issues have been resolved.
PG97OUT027684	At the time of the consultant's inspection, this outfall had a discharge that failed detergent during the first inspection. During the second test, the detergent level was under the threshold value. Iron flocculent was also observed at the outfall. The Code Enforcement Officer conducted an inspection of the outfall and followed the stormdrain system upstream but was unable to locate the possible source of the detergent from the first inspection. No visible source of a possible illicit discharge was located. The iron flocculent is due to ground water seepage into the storm drain

Outfall ID	Corrective Actions
	system. The County will continue to monitor the outfall at the next scheduled inspection. The issue has been resolved.

The County also investigated the problems observed during the FY 2023 illicit discharge screening concerning structural problems, sediment deposits, erosion, floatables, and odors. Below are the details of our investigation and the actions taken to address these problems.

- Structural problems: The cases were referred to the County's DPW&T to investigate the outfall for structural problems. DPW&T investigated the outfalls and addressed the structural problems. The issue has been resolved.
- Sediment Deposits: The cases were referred to the County's DPW&T to investigate the sediment deposition at the outfall and in the storm drain systems. DPW&T investigated these outfalls and removed the sedimentation. They also investigated the storm drain systems to determine if sedimentation infiltrated the system through cracks in the storm drainpipes or through pipe separation of the joints. No cracks or pipe separation were found during their investigation. The issue has been resolved.
- Erosion: The cases were referred to the County's DPW&T to investigate the outfall with erosion issues. DPW&T repaired the erosion and placed additional riprap at the end of the outfalls to eliminate the erosion problems. The issue has been resolved.
- Floatables: The County's Volunteer Cleanup Program coordinated with community organizations to perform litter pickup at these outfalls. The community organizations have removed the trash and debris from these outfalls, and the surround areas. The issue has been resolved.
- Odors: The outfalls with the odor issues were investigated by DoE's Code Enforcement Officer. During the inspection, it was observed the cause odor was due to stagnant water and/or decaying leaf material within the pipes or storm drain inlet structures. The County's DPW&T also investigated the odor and found no illicit discharge that could be causing the odors. The issue has been resolved.

Commercial and Industrial Visual Surveys

DoE also contracted consultants to perform the Commercial and Industrial Visual Surveys. Concurrent with the development of the field tool used in outfall field screening, the County's consultant developed a polygon layer for the County that identified commercial and industrial areas. Field crews from AB Consultants visited these polygons within the target area identified for the IDDE field screening and performed inspections.

Within the commercial and industrial areas, field teams reviewed the drainage conditions, business practices, and overall site condition to determine if visual evidence of pollution was present that would not be detectable through the chemical tests. Field crews recorded suspicious practices found on commercial and industrial areas surrounding the 151 selected outfalls for IDDE inspections. Using the field inspection tool, commercial and industrial points were generated to indicate the location of the specific violations and polygons were created, verified, and attributed to track the areas that were visually inspected.

A total of 92 commercial and industrial complexes were inspected over the course of the inspections. A total of 54 potential water quality concerns was identified and reported to the County for follow-up investigation and/or enforcement. Of these potential water quality concerns, three (3) were improper storage of materials and containers; forty (40) were trash & debris around the property; two (2) were pavement staining from a restaurant grease waste container; six (6) were oil staining of the pavement; one (1) was staining of the pavement; one (1) was a water leak; and one (1) was a sudsy discharge. The County investigated each site and contacted each property owner to address these potential water quality concerns. The results of these investigations are noted below:

- Improper storage of materials and containers: The property owners were informed of containers not being properly stored. The property owners were required to either remove the containers from the property, place the containers under an outdoor covered area or store them within their facility. When the properties were re-inspected, it was observed that the property owners complied with the request. The issues have been resolved.
- Trash & Debris: The property owners were informed of the trash and debris around their property. The property owners were required to clean up their property. When the properties were re-inspected, it was observed that the property owners complied with the request. The County also worked with the property owners to educate them on good housekeeping practices and to develop a routine maintenance schedule to eliminate trash & debris on their property. The issues have been resolved.
- Grease waste containers: The property owners were informed of the grease spills from the waste containers and the potential water quality concerns it poses. The County worked with the property owners to educate them on good housekeeping practices and to eliminate any grease spills when disposing the grease waste. The issues have been resolved.
- Oil stains: The property owners were informed of the oil stains on the pavement within their property and around the used oil disposal containers, and the potential water quality concerns it poses. The County worked with the property owners to educate them on good housekeeping practices and to eliminate any oil spills when disposing the used oil. Also, required the property owners to repair any vehicle leaking automotive fluids and place containers under the vehicles to capture the fluids until the vehicles can be repaired. The issues have been resolved.
- Pavement stains: The property owner was informed of the staining of the pavement from their concrete equipment. The property owner was required to cover the equipment. When the property was re-inspected, it was observed that the property owner complied with the request. The issue has been resolved.
- Water leak: Washington Suburban Sanitary Commission (WSSS) was contacted about water coming up though the water valve cap in the parking lot. WSSC investigated and determined there was a water leak. The water leak was repaired by WSSC. The issue has been resolved.
- Sudsy discharge: The manager of the property was informed of the sudsy discharge which was due to the cleaning crew dumping their wastewater into the parking lot. The manager was informed that wastewater cannot be dumped into the parking lot by their cleaning crew. The issue has been resolved.

Investigation and Enforcement Program

The County utilizes 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 housing and property codes. Environmental enforcement, including disturbed area, grading, sediment and erosion control, is authorized under the County Code, "Subtitle 32. Water Resources Protection and Grading Code." All of these enforcement responsibilities fall within the authority of the Inspection and Enforcement Divisions of DPIE. The prevention of human exposure to sewage is administered by the Health Department in accordance with the on-site sewage disposal systems regulations. The initial response to all hazardous material spills is handled by the County's Fire/Emergency Medical Services Department, Hazardous Materials Division (HMD).

Illicit Discharges

DoE's Stormwater Management Division's Inspection and Compliance Section (ICS) 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. In this capacity, ICS staff received six (6) complaint during this reporting period. Site investigations are performed on all incoming complaints with the exception of complaints that clearly fall within the purview of another agency, such as sediment and erosion control. To expedite a county response to those complaints, DoE staff immediately refers the investigation and corrective action, if warranted, to the responsible agency.

- DoE received an e-mail from The Meadows at Capitol Heights apartment complex concerning sewage flowing into the storm drain inlet structure located on the property. During the investigation, the inspector observed sewage overflowing from a sewer manhole located on the adjacent property, Fox Club apartment complex and flowing into The Meadows at Capitol Heights apartment complex. The inspector informed the manager for Fox Club apartment complex of the of the sewer overflow. Because the sewer line was private and maintained by Fox Club apartment complex, it was their responsibility to unclog the sewer line. Fox Club apartment complex contacted a plumbing contractor and had the blockage removed. The complaint was resolved.
- DoE received an e-mail from MDE's Brad Metzger concerning a complaint he received from a concerned resident in Hyattsville, MD about an unusual green tint and very milky water in the Paint Branch stream channel. During the investigation, the inspector did not observe any discoloration in the stream channel. From the photos the resident sent, it appears the discoloration may be due to suspended sedimentation in the stream channel. The inspector followed the stream channel upstream and observed an active construction site at the U.S. Army Research Laboratory in Adelphi, MD. The construction supervisor informed the inspector that sediment laden water from the site had entered the stream channel after a rain event because some of the sediment controls damaged from the heavy machinery. The inspector requested the construction supervisor repair the sediment controls on the site to eliminate any

sedimentation from leaving the site. The construction supervisor complied and made the necessary repairs to the sediment controls. The complaint was resolved.

- DoE received an e-mail from MDE's Oladapo John concerning a complaint he received from Washington Suburban Sanitary Commission (WSSC) about a plumbing contractor discharging sewage from a IHOP restaurant in College Park, MD into the nearby storm drain inlet structure. During the investigation, the plumbing contractor informed the inspector they were repairing a broken sewer pipe from the grease interceptor and was pumping the grease interceptor into the nearest sewer manhole. At the time of WSSC's inspection, the WSSC inspector observed the pump and hose on the ground, near the inlet structure which led the WSSC inspector to think the plumbing contractor was pumping fluids from the grease interceptor into the nearby inlet structure. The plumbing contractor explained that someone over the weekend ran over the hose, dragging the hose out of the sewer manhole and pulling the pump out of the grease interceptor. Because of this the pump was unplugged and was not pumping fluids from the grease interceptor into the inlet structure. The inspector inspected the inlet structure and found no evidence of sewage or grease in the inlet. The complaint was resolved.
- DoE received an e-mail from the Town of University Park, MD concerning sedimentation in Wells Run stream channel. During the investigation, the inspector observed an active SWM pond retrofit project at Belcrest Road in Hyattsville. The site supervisor informed the inspector that the active sediment basin was overwhelmed by a heavy rain event, causing sediment laden water to enter Wells Run. The site supervisor worked with the site engineer to find possible solutions so that the sediment basin is not overwhelmed again. The solution was to enlarge the sediment basin for additional capacity. The complaint was resolved.
- DoE received an e-mail from the Anacostia Riverkeepers which they received from a concerned resident in Brentwood, MD concerning sedimentation laden water being discharged from a storm drain outfall, into the Northwest Branch stream channel. During the investigation, the inspector did not observe any sediment discharge from the outfall. The inspector investigated the storm drain system upstream from the outfall to determine the source of the sedimentation and found a recently repaired water line on 34th Street in Brentwood, done by WSSC. It appears the broken water line was the cause of the sedimentation laden water being discharged from the outfall and into Northwest Branch stream channel. The complaint was resolved.
- DoE received an e-mail from MDE's Kate Ansalvish concerning a complaint she received from a concerned property owner in Capitol Heights, MD about the water in Beaver Dam Creek stream channel running orange/brown. During the investigation, the inspector observed that the discoloration in the water was sedimentation. The inspector traced the sedimentation runoff through the storm drain system to a water line break in Cheverly, MD. The inspector notified WSSC of the water line break and the water line was repaired by WSSC. The complaint was resolved.

Environmental Engineering Program

The Prince George's County Health Department responds to sanitary sewer overflows, failing and malfunctioning sewage disposal systems, solid waste and hazardous materials spills and dumping complaints that may impact the waters of the State. During this reporting period the Health Department responded to 40 complaints/notifications to assess potential threats to local streams and waters of the state. This is a significant decrease (approximately 60%) from last year. One of the reasons

for this low notification was a system glitch by WSSC, that caused the County to be off of the alert system since February 2023.

Illegal Dumping and Spills

DPW&T responds to illegal dumping occurring along the public road right-of-way. Additional information on the County's Road maintenance litter control is found under "Litter Control" on page 64.

Hazardous Material Division (HMD) of the Fire/Emergency Medical Services Department is responsible for handling the initial response to all hazardous material spills within the County. In FY2023, the Hazardous Materials (HAZMAT) team responded to 140 calls for assistance. The number of responses per month is provided in Table D-5. Within each month, the HAZMAT responses have been subdivided into four categories: fuel, carbon monoxide (CO), chemical, and other. The details of these records can be obtained by contacting the Fire and EMS Department.

The fuel category indicates that the incident involved a response for a potential release of petroleum material. On calls involving the release of petroleum materials the responsible party is put on notice that the release must be reported in accordance with Maryland law (COMAR 26.10) by contacting MDE within two (2) hours of the release. This is done by issuance of a correction order to the responsible party. Additionally, a spill report is completed and forwarded to MDE's Emergency Response Division. This action begins the regulatory process to ensure that spills are handled in accordance with Maryland law. The HAZMAT team does not leave the scene until the hazard has been controlled, removed, or a third party has been contracted with to handle the release.

The carbon monoxide (CO) category indicates that the incident involves the potential presence of carbon monoxide and the possibility of sick persons due to their exposure. Carbon monoxide incidents typically require the use of atmospheric monitoring equipment to detect, locate, and quantify the presence of hazardous gases. Should these be detected the source of the release is typically secured to prevent the release of additional hazardous gas into the structure. Any hazardous gas detected is typically removed by natural or forced ventilation and the structure is not returned to the occupants until the atmosphere is rechecked. Should the source of the release be determined to be an appliance, the occupants may be issued a correction order to have the appliance serviced prior to use.

The chemical category indicates that the incident involves a response to a potential hazardous material other than petroleum. This could include materials from any of the nine Department of Transportation hazard classes. There are four levels of response, with resources dispatched in accordance with the potential hazard or quantity of material involved. In all cases, the HAZMAT team does not leave the scene until the hazard has been abated, controlled, removed, or a third party has been contracted with to handle the release.

The other indicates that hazardous materials units and personnel were utilized at emergency incidents or events to support operations and ensure the safety of personnel and the public. Typically, these incidents require the use of atmospheric monitoring equipment or equipment to detect, identify and quantify unknown materials. Additionally, units and personnel are strategically placed at locations to decrease response times at high profile events such as County sporting or political events.

Table D-5. Hazmat Calls in FY 2023.

Month	Number of Hazmat Responses	Number of Actions Taken	Response Types				Resolved	Number of Cases Referred to MDE*
			Fuel	CO	Chemical	Other		
Jul-21	22	14	6	2	0	6	14	1
Aug-21	13	9	5	0	0	4	9	4
Sep-21	8	5	4	1	0	0	5	0
Oct-21	17	3	1	1	1	0	3	0
Nov-21	5	1	1	0	0	0	1	0
Dec-21	7	3	3	0	0	0	3	1
Jan-22	9	5	3	0	0	0	3	1
Feb-22	8	6	5	0	1	0	5	3
Mar-22	9	5	4	0	1	0	5	0
Apr-22	15	10	7	1	2	0	9	4
May-22	16	10	8	0	1	1	9	6
Jun-22	11	6	4	0	2	0	5	1
Total	140	77	51	5	8	11	71	21

**Fuel responses are reported to MDE per Maryland law (COMAR 26.10)*

4. PROPERTY MANAGEMENT AND MAINTENANCE

Permit Conditions Part IV. D. 4. a: Coverage under Maryland's NPDES General Permit for Discharges of Stormwater Associated with Industrial Activity (SW Industrial GP) is typically required at facilities where the following activities are performed: maintenance or storage of vehicles or equipment; storage of fertilizers, pesticides, landscaping materials, hazardous materials, or other materials that could pollute stormwater runoff. The County shall:

I. Ensure that a Notice of Intent (NOI) has been submitted to the Department for each County-owned industrial facility requiring coverage under the SW Industrial GP; and

II. Submit with the annual report a list of County properties requiring industrial stormwater permit.

In FY 2023, the County continued to provide compliance assistance for the County-owned and municipal-owned industrial properties listed in Table D-6. This reporting year, the County's consultant, KCI Technologies assisted the County in meeting MDE's requirements of renewing the General Permit for Discharges from Stormwater Associated with Industrial Activities (Permit 20-SW) for the nine (9) County facilities and nine (9) Municipal facilities, a total of eighteen (18) facilities. On July 31, 2023, KCI delivered all 20-SW NOI and updated Stormwater Pollution Prevention Plan (SWPPP).

Table D-6. County-Owned and Municipal-Owned Industrial Properties

Number	Name of Facility
DoE	
1	Brown Station Road Sanitary Landfill
2	Missouri Avenue Convenience Center

Number	Name of Facility
3	Materials Recycling Facility
4	Prince George's County's Yard Waste Composting Facility
5	Sandy Hill Creative Disposal Project
OCS	
1	Central Vehicle Maintenance Facility
DPW&T	
1	Brandywine Facility
2	Ritchie Service Complex
3	Glenn Dale Facility
Municipal	
1	Town of Cheverly
2	City of College Park
3	City of Greenbelt
4	City of Hyattsville
5	City of Laurel
6	City of New Carrollton
7	Town of Riverdale Park
8	City of Seat Pleasant
9	Town of Bladensburg

Permit Conditions Part IV. D. 4. b: The County shall develop, implement, and maintain a good housekeeping plan (GHP) for County-owned properties not required to be covered under Maryland's SW Industrial GP where the activities listed in PART IV.D.4.a are performed. The GHP shall be submitted to the Department by the County in its third year annual report and implemented thereafter. A standard GHP may be developed for all County-owned property or separate GHPs may be developed for properties with similar use (e.g., recreation and parks properties, school properties). The GHP shall include, but not be limited to:

- *i. A description of property management activities;*
- *ii. A map of the locations of properties covered by the GHP;*
- *iii. A list of potential pollutants and their sources that result from facility activities;*
- *iv. Written procedures designed to reduce the potential for stormwater pollution from property activities, including illicit discharges, dumping, and spills;*
- *v. Written procedures for annually assessing County properties in order to prevent the discharge of pollutants, spills, and leaks into its municipal separate storm sewer system;*
- *vi. Written procedures for performing storm water conveyance system inspections for removing debris that may cause clogging, backups, and flooding; and*
- *vii. Annual training for all appropriate County staff and contractors regarding best practices for preventing, reducing, and eliminating the discharge of pollutants during property activities.*

In FY 2023, the County contracted consultant services from KCI Technologies to identify county-owned properties that may need a Good Housekeeping Plan (GHP). These properties do not meet the criteria for coverage under Maryland's General Permit for Discharges from Stormwater Associated with Industrial Activities (Permit 20-SW). With assistance from the consultant, the County is developing a geospatial database with all county-owned facilities and their relevant activities. Each facility will be evaluated and added to the GHP database if warranted. Future reports will reflect the progress of the GHP implementation program for County-owned properties.

Permit Conditions Part IV. D. 4. c: The County shall continue to implement a program to reduce pollutants associated with the maintenance of County-owned properties including, but not limited to, local roads and parks. The maintenance program shall include the following activities where applicable:

i. Street sweeping in the amount identified in Appendix B and annually updated thereafter in accordance with PART IV.E.8;

ii. Inlet and conveyance inspection and cleaning in the amount identified in Appendix B and annually updated thereafter in accordance with PART IV.E.8; and

iii. Reducing the use of pesticides, herbicides, fertilizers, and other pollutants associated with vegetation management. This can include, but is not limited to:

- *Developing and implementing an Integrated Pest Management Plan according to EPA guidelines;*
- *Custom fertilizer property management plans based on soil testing;*
- *Targeted application or "spot application" of pesticides;*
- *Alternative and organic fertilizers;*
- *Manual weed removal, mowing, and trimming;*
- *Annual training and applicator certification and licensing as required by Maryland Department of Agriculture to ensure accurate application of chemicals according to manufacturer's recommendations;*
- *Subcontracting to a certified pest control applicator licensed business for some or all of properties;*
- *Piloting biological pest control programs; and*
- *Establishing "no mow" areas.*

Street Sweeping

In 2023, 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. Regenerative air street sweepers are the most environmentally friendly street sweepers. Since these machines air-blast the pavement across the entire width of the sweeping head, regenerative air sweepers tend to do a better job of cleaning over the entire covered surface and the amount of exhausted pollutants in the air is typically much less than that from a vacuum sweeper. Since regenerative-based sweepers also tend to pick up the small-micron particles across the entire sweeping head, they are generally considered a better choice for those programs designed to improve both water and air quality. See Table D-7 for accomplishments realized through the County.

Table D-7. Street Sweeping Services by DPW&T.

Date	Tonnage	Miles Swept	No. of Streets Swept
March 2023	14.64	56.9	48
April 2023	55.95	375	613
May 2023	78.15	317.9	31
June 2023	57.1	252.6	412
Total	205.84	1,002.4	1,104

The County's Street sweeping operations, utilizing vendors, is limited to selected arterial, collector, and industrial streets, with service to residential subdivision streets provided on a request only basis.

Between August 2022 and May 2023, the vendor performed three 2 spring cycles and 3 fall cycles in each of our service areas, with a summary provided in Table D-8 below.

Table D-8. Street Sweeping by the Vender Summary.

Route No.	Start date	End date	Miles Swept	Tons for disposal
Spring Arterial Roadways	6/19/2023	6/23/2023	310.6	61.37
Spring Arterial Roadways	6/13/2023	6/17/2023	290.7	50.79
Fall Arterial Roadways	11/2/2022	11/9/2022	290.7	50.79
Fall Arterial Roadways	9/19/2022	10/5/2022	205.6	39.04
Fall Arterial Roadways	7/27/2022	8/19/2022	454	95.19
TOTAL			1,551.60	297.18

**Tonnage not provided by the vendor*

Storm Drain Maintenance – Inlet, Storm Drain, and Channel Cleaning

Storm drains 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. During this reporting year, the County received 2,655 service requests from constituents, inspected 1,429 inlets, and cleaned 74,065 linear feet of storm drainpipe.

DPW&T's Storm Drain Maintenance Division is also responsible for major channel maintenance. There are 69 major channels which were inspected and cleaned/cleared on a 3-year cycle. During this reporting period, maintenance was performed on an estimated 32,554 linear feet of channel.

Unpaved Shoulder Maintenance

DPW&T's Office of Highway Maintenance (OHM) Division administers road maintenance programs to eliminate standing water, enhance green space, and reduce herbicide usage. Litter crews utilize small equipment to cut the tight areas and roadside shoulders are mowed in a 6-week cycle during the growing season (March 15 through October 15). Roadside vegetation is maintained mechanically. Herbicide use is restricted to the spraying of sidewalk joint, monolithic concrete median areas, fence lines, guard rail areas and riprap areas that cannot be mowed. Herbicide is applied by licensed contractors in accordance with contractual application rates. DPW&T does not utilize pesticides or fertilizers on any lands under their maintenance purview. In FY 2023, the County followed these protocols.

Permit Conditions Part IV. D. 4. d: The County shall reduce the use of winter weather deicing and anti-icing materials, without compromising public safety, by developing a County Salt Management Plan (SMP) to be submitted to the Department in its third year annual report and implemented thereafter. The SMP shall be based on the guidance provided on best road salt management practices described in the Maryland Department of Transportation, State Highway Administration's Maryland Statewide Salt Management Plan, developed and updated annually as required by the Maryland Code, Transportation §8-602.1. The County's SMP shall include, but not be limited to:

i. A plan for evaluation of new equipment and methods, and other strategies for continual program improvement.

ii. Training and outreach:

- *Creating a local "Salt Academy" that annually provides County winter weather operator personnel and contractors with the latest training in deicer and anti-icer management, or the participation of County personnel and contractors in a "Salt Academy" administered by another MS4 permittee or State agency; and*
- *Developing and distributing best salt management practices outreach for educating residents within the County.*

iii. Tracking and reporting:

- *Starting with the fourth year annual report, during storm events where deicing or anti-icing materials are applied to County roads, track and record the amount of materials used, and snowfall in inches per event, if applicable; and*
- *Report the deicing or anti-icing application by event or date, and the monthly and annual pounds used per lane mile per inch of snow.*

Snow and Ice Control Program

Per the permit condition, a progress on County's Salt Management Plan (SMP) will be reported in third year annual report. County's Snow and Ice Removal Program relies on a wide source of information to determine when the application of anti-icing and/or de-icing materials is warranted, including, temperature probes, weather forecasts via an Accuweather subscription service, and individuals monitoring the road conditions. Locations of the De-icing routes are shown in Figure D-1. DPW&T command staff prepare operational goals at the onset of every 12-hour operational shift. Operational goals are developed in accordance with the storm forecast, actual air and roadway temperature measurements and projected conditions during the shift.

Temperature probes embedded in the roadways are continually monitored as they provide key information used to determine an appropriate treatment for snow and ice control. Roadway temperature is a more reliable indicator of icy roadways conditions then air temperature. Conference calls with all snow districts are conducted at a minimum of three times per shift. During this time, real time road conditions, roadway temperatures and the latest Accuweather forecast is discussed. Modifications to operational goals are continually adjusted in response to current and project conditions.

Every year, prior to the dry run exercise, DPW&T and OHM conducts mandatory snow and ice control training for all staff and contractors. Each job classification is provided with specific training for their job duties assigned in the snow operations. Plow operators are provided with equipment training; district foremen and managers are provided with operations training, including how to implement operational goals and procedures. All operators are trained is sensible salting practices.

As the County upgrades their fleet of trucks, the trucks are being equipped with newer technology that will better gauge and track the application of salt. DPW&T continues to implement operational activities to help manage and reduce salt application including replacing older equipment with newer, better functioning spreaders and hoppers and continued training of equipment operators in the proper application and loading of salt.

During this reporting year the County had a very mild winter. The County mobilized for 5 snow and ice control events and used a total of 629 tons of salt, a 95% reduction over the salt usage from the 2021-22 snow season. Of the 5 storms, the County only treated hills, cold spots and bridges during 3 events. The tonnage of salt used in these storms was 322 tons, 192 tons, and 114 tons respectively. The County mobilized for 2 additional storms, but icy road conditions did not materialize, and no salt was applied.

When an accumulating ice or snowstorm is predicted in advance, Prince George's County conducts pre-treating of roadways with brine as a snow fighting strategy. Salt brine is applied before a winter storm to help delay the accumulation of snow and ice on the roadway and increase efficiency to reduce the tonnage of salt used on the roadway for de-icing. Pre-treatment was only utilized in the December 15, 2022, storm when the forecast predicted freezing road conditions in the pre-dawn commute hours. Six-hundred and ten miles of primary and collector roadways were pretreated to protect the traveling public. The County used 28,500 gallons of salt brine during the 22-23 snow season, a 62 percent decrease over the 21-22 snow season.

Permit Conditions Part IV. D. 4. e: The County shall evaluate current litter control problems associated with discharges into, through, or from portions of its MS4 that are not already addressed under the TMDL implementation plan for trash (litter and floatables) (see Appendix A). Additionally, the County shall continue to remove from or prevent from entering its storm drain system 500 tons of litter and debris in the first year of permit issuance or as updated annually thereafter in accordance with PART IV.E.8.
Permit Conditions Part IV. D. 4. f: The County shall report annually on the changes in its Property Management and Maintenance programs and the overall pollutant reductions resulting from implementation of the components of the programs listed in this section.

Litter Control

The County maintains an aggressive litter control and collection program along County-maintained roadways. The litter service schedule is based on historical collection data, where the most highly littered roadways are serviced including our major arterial, and primary roadways on a bi-weekly basis. Locations of the litter pickup routes are shown in Figure D-2.

In September 2022, the County implemented a countywide Beautification Initiative Blitz for (120) days to abate existing litter, illegal dumping, and high grass complaints in the public right-of-way. Contract resources were increased as well as the frequency of litter collection from once every two weeks to twice a week for roadways identified as heavily littered and hot spot roadway locations. All other roadways in the litter schedule were serviced for litter collection once a week. A total of 619 tons of litter and illegal dumping was collected and disposed of, and more than 6,888 roadways were cleaned during this 4-month period of the countywide Beautification Blitz.

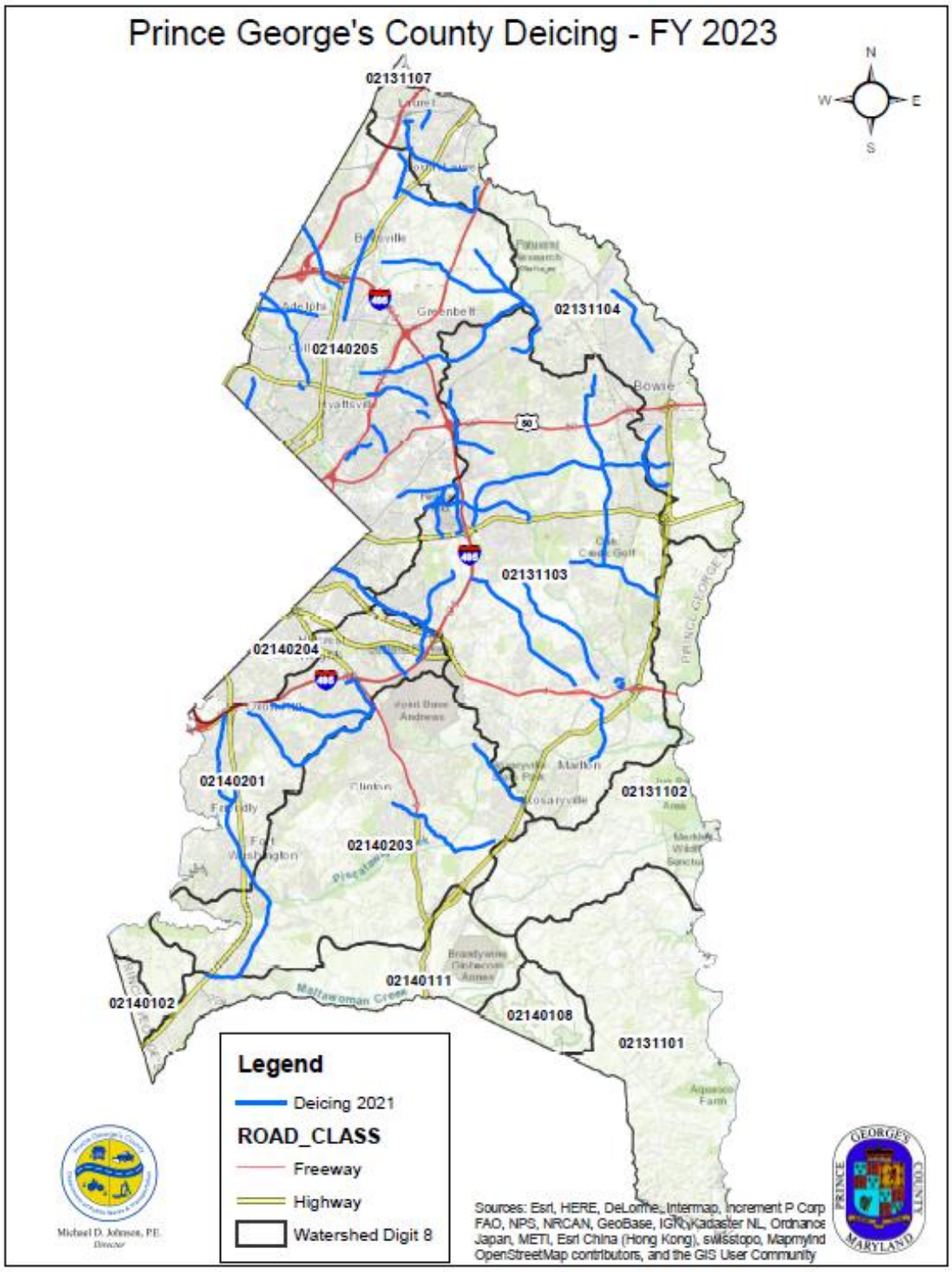


Figure D-1. De-Icing Map

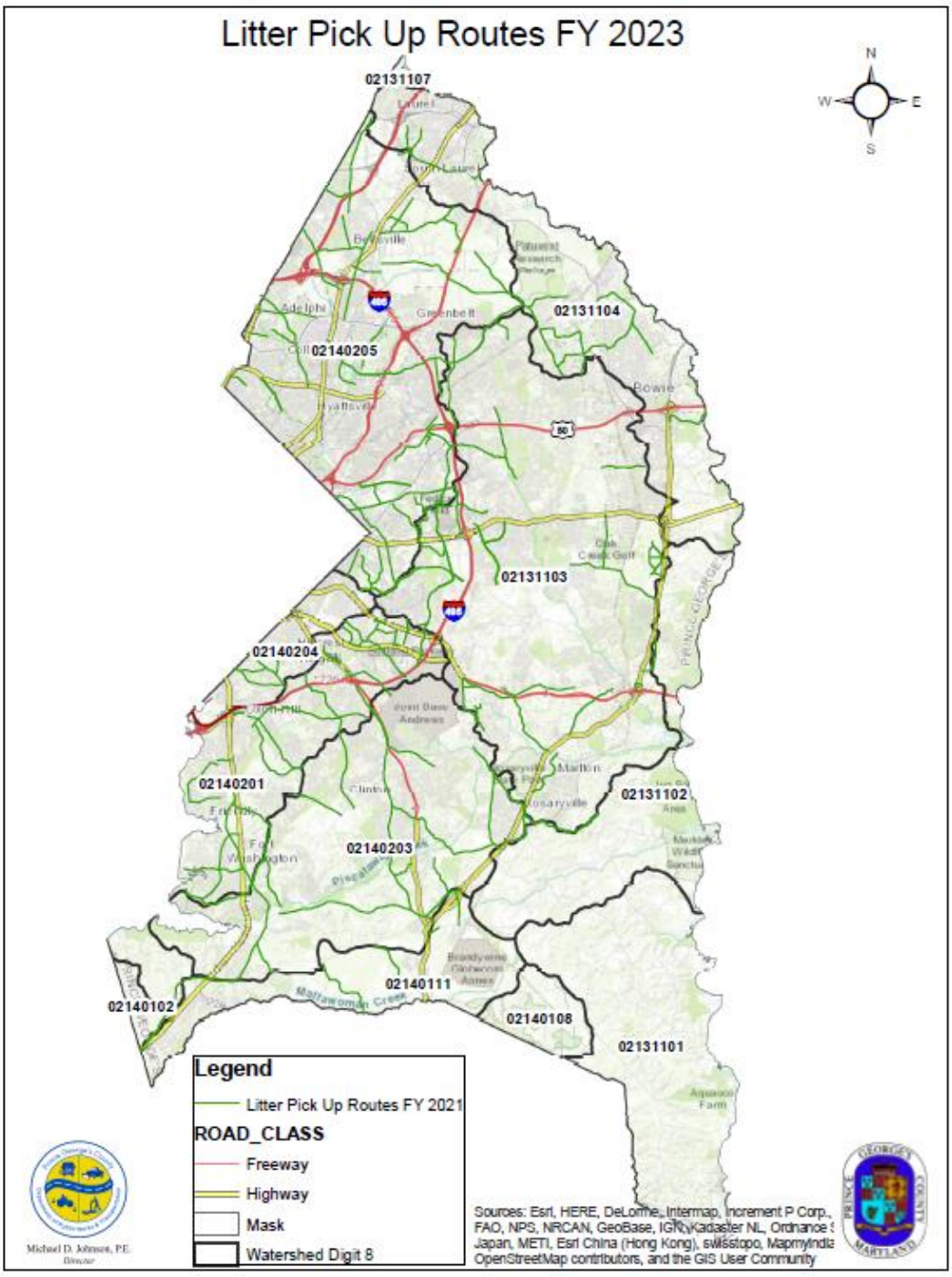


Figure D-2. Litter Pick Up Routes

5. PUBLIC EDUCATION

Permit Condition Part IV. D. 5. a: Prince George's County shall maintain a website with locally relevant stormwater management information and promoting its existence and use.

The County maintains its stormwater management information in its website under Department of the Environment. All locally relevant stormwater management information can be accessed at: https://www.princegeorgescountymd.gov/departments-offices/environment/stormwater-management

Permit Condition Part IV. D. 5. b: Prince George's County shall maintain a compliance hotline or similar mechanism for public reporting of water quality complaints, including suspected illicit discharges, illegal dumping, and spills and flooding problems.

CountyClick 311 is Prince George's County's main source of government information and access to non-emergency services through its call center. Citizens may also utilize alternative forms of communication for lodging water quality complaints, such as through email or by direct calling. More information regarding the investigation and enforcement actions taken to resolve water quality complaints is provided under "Environmental Engineering program" on page 57.

Permit Conditions Part IV. D. 5. c: The County shall continue to implement a public outreach and education campaign which provide information to inform the general public about the benefits of:

- *i. Increasing water conservation;*
- *ii. Residential and community stormwater management implementation and facility maintenance;*
- *iii. Proper erosion and sediment control practices;*
- *iv. Removing debris from storm drain inlets to prevent flooding;*
- *v. Increasing proper disposal of household hazardous waste;*
- *vi. Improving lawn care and landscape management (e.g., the proper use of herbicides, pesticides, and fertilizers, ice control and snow removal);*
- *vii. Proper residential car care and washing;*
- *viii. Litter reduction;*
- *ix. Reducing, reusing, and recycling solid waste; and*
- *x. Proper pet waste management.*

The County shall conduct a minimum of 500 outreach efforts per year. These efforts may include distributing printed materials such as brochures or newsletters; electronic materials such as website pages; mass media such as newspaper articles or public service announcements (radio or television); and conducting targeted workshops on stormwater management for the public.

The County seeks every opportunity to promote environmental awareness, green initiatives, and community involvement to protect the County's natural resources and promote clean and healthy communities. As human behavior is a significant source of stormwater pollution, the County provides a vast array of volunteer opportunities and services to control pollutants at the source, to prevent

stormwater pollution, and to restore watersheds. The County also integrates water quality outreach as a vital component of watershed restoration projects. With printed materials such as brochures or newsletters; electronic materials such as website pages; mass media such as newspaper articles or public service announcements (radio or television); and conducting targeted workshops on stormwater management for the public, the total outreach efforts by the County were over 500, including over 300 outreach events that covered one or more topics from the list below:

i. Increasing water conservation;
ii. Residential and community stormwater management implementation and facility maintenance;
iii. Proper erosion and sediment control practices;
iv. Removing debris from storm drain inlets to prevent flooding;
v. Increasing proper disposal of household hazardous waste;
vi. Improving lawn care and landscape management (e.g., the proper use of herbicides, pesticides, and fertilizers, ice control and snow removal);
vii. Proper residential car care and washing;
viii. Litter reduction;
ix. Reducing, reusing, and recycling solid waste; and
x. Proper pet waste management."

A list of the FY 2023 DoE outreach events, a brief description, and participants count are provided in the DVD under Management Programs/Public Outreach and Education folder.

During these events, information was provided to the general public and interested parties about various incentive-based programs that are designed to reduce stormwater pollution through direct or indirect means. These programs are discussed below in detail.

Natural Resource and Climate Resilience Programs (formerly Community Outreach Promoting Empowerment)

Last fiscal year, the Natural Resource & Climate Resilience Programs (NRCR) Section continued to partner with local communities, schools, homeowner associations, watershed groups, civic groups, and municipalities to find ways to inform and engage residents. These partnerships promote environmental stewardship and long-term behavior change as well as driving participation in DoE programs. Over time, such partnerships become "force multipliers" extending DoE's impact. As part of the DoE's outreach and education effort various games, workshops and activities were used to promote anti-litter, native shrub/tree planting and stormwater stewardship.

In this reporting period, DoE, through its Sustainability Division, participated in or held 24 events reaching almost 900 people to engage communities and individuals in restoration, promoting sustainable solutions and leveraging community action. These were a mix of both virtual and in person events. Of note, NRCR is moving towards more direct implementation related activities versus outreach and education which still involve outreach and education but with a more focused approach to support implementation of residential climate resilience projects.

Climate Resilience Programs

In FY23, the County's Climate Action Plan (CAP) moved toward the implementation phase as mandated by Executive Order NO. 5 – 2022, Implementing Climate Action: Urgent Action Directive for All County Agencies and County Funded Operations to Initiate and Support Immediate Action to Implement Climate Solutions for Prince George's County. The Resident Advisory Group for Climate Action and Environmental Justice, comprised of a cross-section of Prince George's County community members, was convened. Resident Advisers began serving on the Climate Implementation Task Force along with the leadership from various County departments. In FY24, work groups will begin developing implementation strategies for the County CAP's 26 Priority Recommendations.

NRCR continued to re-align its existing programs to garner resilience co-benefits while still achieving water quality improvements. This entails shifting the focus to land cover changes (large-scale tree plantings, conservation landscaping) and practices that provide ecosystem services while promoting infiltration for volume reduction to help reduce local nuisance flooding.

Urban Tree Grant

DoE was awarded an Urban Tree Grant to plant 2,000 trees in equity areas beginning in FY23. 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 FY23 NRCR began working with eligible municipalities to locate potential plantings in municipal rights of way and other municipal properties. DoE conducted meetings / walkthroughs in the following communities:

- Forest Heights
- District Heights
- Fairmount Heights
- Brentwood
- North Brentwood
- Mount Rainier

As part of this effort, NRCR began developing a point capture design app that would feed into its previously developed tree management app which now includes resilience practices (rain gardens, cisterns, impervious removals, etc.). The App has been renamed the Climate Resilience App. The Climate Resilience App will allow DoE and its contractors to geolocate and track individual trees for better documentation as well as giving the municipalities a crucial maintenance tool. We also anticipate engaging municipal Green Teams to use the App to identify possible small scale residential resilience projects.

In FY23 NRCR also began building a pipeline for HOA, school, and residential Urban Tree Grant plantings. NRCR conducted meetings/walkthroughs in Barnaby Valley Park and Wingate HOAs as well as the Dora Kennedy French Immersion School and Judith P. Hoyer Montessori School. NRCR also began mobilizing Prince George's County Master Gardeners to assist in building the residential pipeline of

projects. The first cohort of Master Gardeners completed training in conducting homeowner property audits and began visiting interested homeowners. Master Gardeners also tabled at events in eligible communities thus generating Urban Tree Grant leads. Lastly, DoE began working with the Chesapeake Bay Trust to implement an enhanced Rain Check Rebate for individuals planting trees in eligible communities.

In FY23 DoE participated in the development of a regional Tree Equity Score Analyzer tool to help guide tree planting in equity areas. Also, in FY23, NRCR began working with the MWCOG on a Prince George's County Tree Equity Tool. This tool will cover the entire County and will enable analysis by subwatershed as well other local parameters.

Pet Waste Campaign

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 2017and has worked with over 35 municipalities and HOAs. More than 200 pet waste stations have been installed in communities across the County. In FY 23, 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. The pet waste game was also featured at the Trolley Trail Day which extended along the Trolley Trail from College Park, thru Riverdale to Hyattsville.

Rain Check Rebate Program

Prince George's County is committed to improving the quality of life for its communities by promoting green solutions to stormwater runoff. The Rain Check Rebate Program allows property owners to receive rebates for installing program-approved stormwater management practices. Homeowners, businesses, and nonprofit entities (including housing cooperatives and churches) can recoup some of the costs of installing the practices covered by the program.

Per County Bill CB-86-2014, changes were made to the Rain Check Rebate Program to entice property owners to participate in the program. First, the maximum lifetime rebate allowable to County property owners (residential projects) was increased from $2,000 to $4,000. Second, nonprofit organizations are now eligible to receive a rebate prior to construction with an approved application and an authorized property owner agreement. Third, the amount of the rebates was modified. Fourth, homeowner associations, condominium associations, and civic associations are now eligible for up to a maximum lifetime rebate of $20,000 per property.

The County has continued to use the brochures to promote the Rain Check Rebate Program, to raise stormwater pollution awareness, and to educate the residential, business, and industrial sectors on rebates available to them for installing approved stormwater BMPs. These brochures provide a brief and informative overview of a specific practice and provide helpful, non-technical information on BMPs, including how they improve the County's water resources. The County may use one or more of these materials, depending on the event audience, to promote stormwater awareness and environmental stewardship. Materials provided to the communities also included links to resources for audiences seeking additional information or more detailed advice. The following brochures were used in the past year.

- "Green Roofs: Benefit You and Your Community"
- "Cisterns: Benefit You and Your Community"
- "Pavement Removal: Benefit You and Your Community"
- "Rain Barrels: Benefit You and Your Community"
- "Permeable Pavement: Benefit You and Your Community"
- "Rain Gardens: Benefit You and Your Community"
- "Urban Tree Canopy: Benefit You and Your Community"

Adopt-A-Road

DPW&T partners with community groups to clean up County roadways. DPW&T provides each group with grabbers, safety vests, gloves, and trash bags. The goal is for each group to clean up a roadway approximately four times per year, but the frequency and dedication to quarterly cleanups varies. Trash collected during the cleanup is left along the roadway, usually in the vicinity of the Adopt-a-Road sign. DPW&T crews then pick up the trash collected by the communities as part of routine road maintenance. The tonnage collected is captured under the achievements of the Litter Control Program.

BMP Inspection Program for Private Stormwater Management Facilities

The County is cognizant that the successful implementation of its preventive maintenance inspection program requires extensive outreach to the regulated community, as property owners may be unaware of the legal responsibility for BMP inspection and maintenance. One-to-one outreach is also conducted with property owners of private stormwater facilities or their representative during the inspection process. To further emphasize the need for compliance, the County provides property owners and on-site managers with a written assessment of the inspection results and a compliance schedule.

Household Hazardous Waste

The "Household Hazardous Waste and Electronics Recycling" brochure promotes the proper disposal of chemicals and hazardous waste and recycling opportunities available to County residents. The brochure, both in English and Spanish, stresses the importance of the safe disposal of hazardous waste and opportunities for recycling unwanted electronic devices. The County maintains a permanent household hazardous waste acceptance site, open and free-of-charge to County residents, at the Brown Station Road Sanitary Landfill in Upper Marlboro. The County contracts with Care Environmental Corporation, a licensed hazardous waste disposal company, to ensure the proper handling and disposal of all hazardous materials collected at the site. Additionally, the County continues to provide a "front door" waste pickup service option for elderly or disabled residents who qualify for this free service. A summary of the materials collected are listed below:

- Hazardous Waste Solids (FY2023, July 1, 2022 – June 30, 2023):
  - 43,221 lbs.
- Solids (FY2023, July 1, 2022 – June 30, 2023):
  - 7,899 lbs.
- Hazardous Waste Bulk Liquids (FY2023, July 1, 2022 – June 30, 2023):
  - 111,600 lbs.
- Electronics (FY2023, July 1, 2022 – June 30, 2023):

- 255.44 tons

○ Residents served:

- 8,937 residents served.

Conservation Landscaping

New Rain Check Rebate for Conservation Landscaping

In FY23, NRCR built on the successful Baywise program by training the first cohort of Master Gardeners to do "Climate Wise" assessments and certifications for resilient landscapes. These "boots on the ground" coupled with the new resilience rebates will be a powerful way to educate County residents on the critical importance of stormwater management in a changing climate. This is also expected to increase participation by homeowners and businesses in small-scale stormwater retrofit projects.

UMD Extension (UME) Master Gardeners Bay-Wise Landscape Management Program

University of Maryland (UMD) Extension Bay-Wise Landscape Management Program is a statewide program operated by UMD Extension Master Gardeners in (24) counties. Bay-Wise Master Gardeners go through two (2) days of training and a 1-day practicum before judging residential and commercial properties. The Bay-Wise Landscape Program supports a holistic approach to cleaning the Bay by promoting the following best management practices: Sustainable gardening, small scale stormwater best management practices (rain barrels, rain gardens, etc.), composting, xeriscape, fertilizing wisely, recycling yard waste, native plantings, and Integrated Pest Management (IPM).

The UMD Master Gardeners also teach County residents techniques to decrease toxins, nutrients, and sediments flowing into our streams and the Chesapeake Bay. Master Gardeners also provide homeowners solutions on how to help reduce stormwater runoff by directing downspouts to garden or lawn areas and installing rain barrels and rain gardens. Prince George's County recognizes and demonstrates the importance of this program by funding the County Master Gardener Coordinator's position at UMD Extension. The talents and skills of the Master Gardener Coordinator instruct recruits, leads plant clinic workshops, and UMD Extension sustainable landscaping education and outreach programs.

Yard Certifications in Stormwater Management for FY 2023

- During this time period, University of Maryland Extension Master Gardener Volunteers in Prince George's County certified eleven (11) residents' yards as BayWise. Residents whose yard is certified as BayWise receive a certificate and yard sign.
- Gardeners that are certified contribute to a cleaner local waterway by adhering to the following best management practices:
    - Feed the soil and fertilize wisely
    - Water efficiently
    - Plant wisely
    - Recycle yard waste
    - Manage garden pests with integrated pest management
    - Protect the soil with mulch or cover crops
    - Control stormwater runoff

- The towns of Cheverly and Cottage City continue to actively disseminate information to residents encouraging Bay-Wise certification of their home's landscapes.

Community Events

- Provided Accokeek food pantries with 400 lbs of produce from the Clinton Demonstration Vegetable Garden.
- Baywise MGs did 164 hours of resident education for BayWise yard certifications and 133 hours of resident yard judging for sustainable practices for the Beautification Committee.
- Advised 2 churches (Bethel UME and Grace UME) on establishing a community garden using sustainable gardening and water practices.
- Advised Andrew Jackson Academy in District Heights on site location for garden and discussed with teacher BMPs for protecting soil, controlling stormwater runoff and water conservation.
- Montpelier Herb and Tea Festival provided information and discussed Baywise principals with residents
- Provided information and discussed Baywise landscaping and yard certification at Chesapeake Natives Native Plant festival.
- Provided 20 residents with sustainable solutions for weed and pest control in their yards.
- Discussed climate change and the effects water will have on the local environment to 20 students for Envirothon.

Summer Youth Enrichment Program (SYEP)

The County organized SYEP in the month of July/August where students learned about stormwater management, NPDES program, and water quality concerns. Other topics included sustainable gardening using native plantings to ward off the extreme weather conditions for this area, and to provide habitat for native insects. They also learned about native trees and the role they play in stormwater management, carbon sequestration, and culture.

Right Tree, Right Place Program

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. Many of these trees were Bradford Pears and Ash trees killed by the Emerald Ash Borer. During FY23, tree work continued to concentrate on the removal of ash trees and large Bradford pear trees. By the end of the fiscal year, almost all Ash street trees in the County, and almost all Bradford Pears of greater than 23" trunk diameter in the PGC inventory have been removed.

In addition, the program seeks to increase the urban tree canopy along County roads. The Neighborhood Design Center (NDC) serves as a design and outreach consultant to DPW&T, working directly with community members and organizations to provide designs and recommendations that are relevant to each unique neighborhood. Choosing the right tree for the right place safely and sustainably improves the tree canopy and transforms communities. Healthy street trees beautify neighborhoods, support human health, increase property values, and benefit our environment.

Planting appropriate street trees in urban and suburban landscapes transforms neighborhoods. The program continues to be well received by those who enjoy the aesthetic and environmental benefits of street trees, and NDC fields dozens of calls each week with requests for trees, tree removal, and clarification of the work being performed in communities. Figure D-3 illustrates the communities where projects were conducted in FY 2023.

Growing Green with Pride Day (previously known as Clean Up Green Up)

The Growing Green with Pride Cleanups 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 remove roadside litter and illegal dumping in the communities. The volunteers are provided with supplies of litter grabbers, trash bags, safety vests, and gloves and assigned locations throughout the County to pick up trash. These cleanup events have been successful in cleaning several areas in a relatively short amount of time. The estimated trash capture for the Growing Green with Pride activities in FY 2023 was 30 tons of litter and illegal dumping removed from communities across Prince George's County.

This one-day, countywide landscape beautification effort has been bringing communities together for over 10 years. DPW&T provides free plant material with the promise that community groups will plant in public spaces, including schools, streetscapes, neighborhood entrances, and municipal centers. Homeowner associations, schools, civic associations, municipalities, and other neighborhood groups can register via an application on DPW&T's or the general Prince George's County website. These groups recruit their own volunteers and garden tools to plant trees, shrubs, perennials, and/or bulbs on Growing Green with Pride Day which is usually held in October. In addition, the volunteers complete weeding, mulching, and general cleaning projects in County maintained public spaces.

NDC partners with DPW&T, and other agencies, by providing design and technical assistance to any interested groups. FY 2023 Growing Green with Pride events were held on October 15, 2022, and April 22, 2023. The achievement realized through this partnership is detailed in Table D-9, table includes both Spring and Fall Events.

Table D-9. Growing Green with Pride Program Achievements in FY 2023

Achievement	Amount
Sites	124
Volunteers	4,966
Trees Installed	492
Shrubs Installed	430
Perennials and Ornamental Grasses Planted	1,774
Spring Flowering Bulbs Planted	10,000
Landscape Designs by NDC	26
Litter and Debris Collected	30 tons

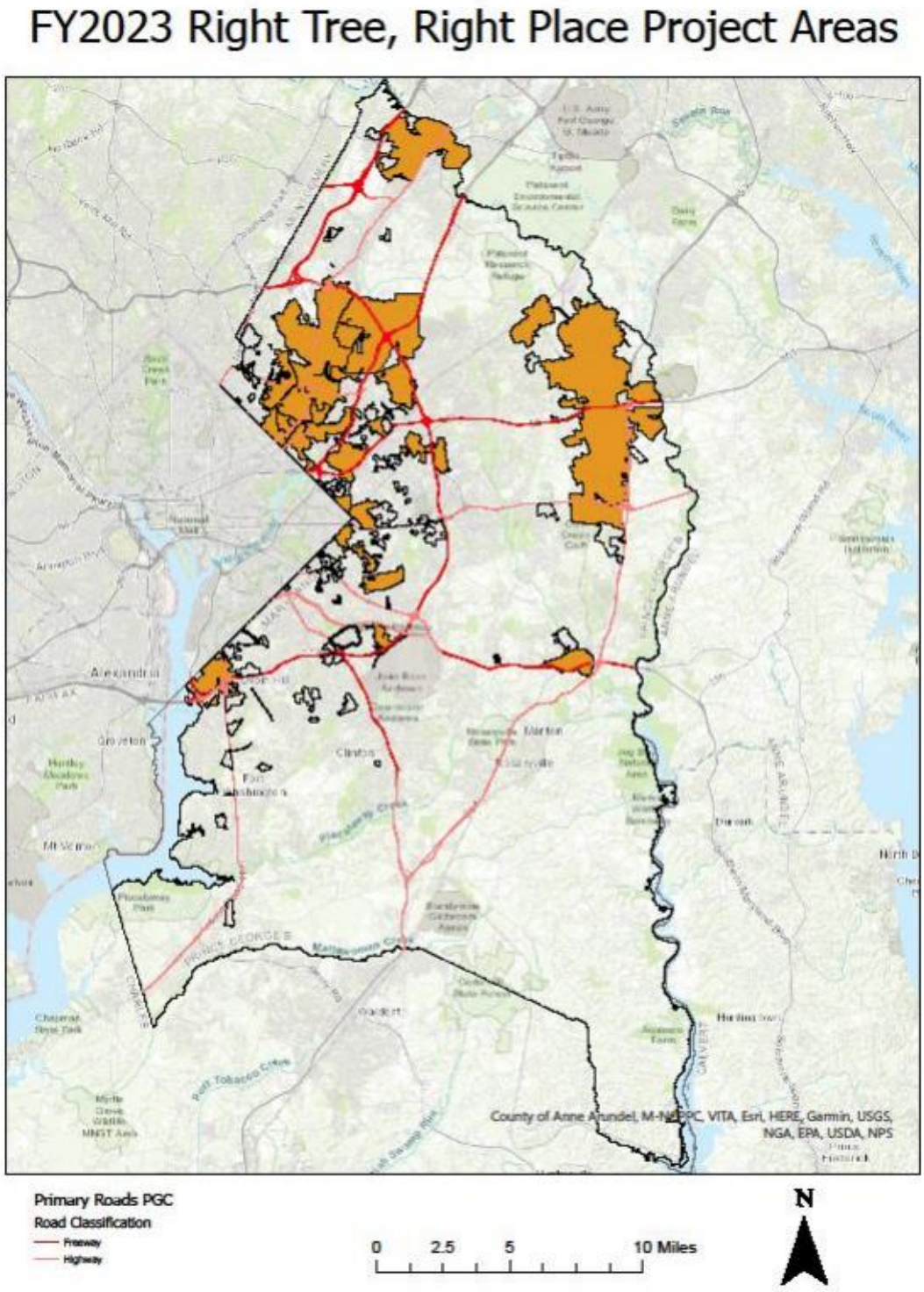


Figure D-3. Right Tree, Right Place Program Project Areas

Arbor Day & Tree City

Members of the Prince George's County Beautification Committee (PGCBC), volunteers, and the staff and students at Francis Scott Key Elementary School planted 23 native trees in honor of Arbor Day. In 2023, a total of 10,741 trees were planted in Prince George's County, earning a Tree City USA award for the 40th consecutive year along with the People Loving and Nurturing Tree (P.L.A.N.T.) Award and the Growth Green Award for the County.

Prince George's Beautification/Tree Planting Committee

Prince George's County Beautification Committee 52nd anniversary in Prince George's County was in 2022. The Prince George's County Committee is an all-volunteer organization dedicated to honoring the landscaping efforts of those in the community who make a difference through landscape beautification. The annual Beautification Awards Ceremony recognizes excellence in gardening and landscape sustainability. Entries are judged on landscape sustainability by Prince George's Master Gardeners Volunteer Judges, who have previously undergone an eight (8) hour training with a one-day practicum. During first half of FY 2023, the Beautification Committee recognized seventy (70) landscapes for their beautification efforts.

Tree ReLeaf Grant Program

Trees are known to provide numerous public health and social benefits. Trees clean the air, beautify neighborhoods and landscapes, conserve energy, reduce water pollution and soil erosion, cool city streets, increase property values, and provide food and habitat for wildlife, among other benefits. They also provide a focal point to bring communities together. Although 51% of the County has tree cover, many urban communities have only 8%.

Tree ReLEAF is a countywide program that provides up to $5,000 to civic, neighborhood, community, homeowner organizations, schools and libraries to plant native trees and shrubs in public or common areas. A municipality can receive up to $10,000 for plantings. The program requires a 50-percent match, which in turn provides a hands-on opportunity for applicants to learn how to properly plant and care for trees and shrubs.

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). One FY2023 Tree ReLEAF project was completed in Laurel which planted 12 trees in the Montpelier neighborhood.

Arbor Day Every Day Program

Prince George's County's DoE works to increase urban tree canopy for all and engage students and residents in tree planting and care. Planting projects support the County's Green School initiatives and complements social study, math, science, and art curriculums.

Arbor Day Every Day plantings, however, are limited by the size and number of trees volunteers can feasibly plant. Thus, in FY23, 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. With professional

installation, more trees and larger trees can be installed (thus providing greater stormwater benefits). See the Urban Tree Grant Program section for the schools we worked with in FY23.

DoE also continued supporting the County's Green School program by providing Professional Development for Green School Teachers on the role trees play in managing stormwater and sequestering carbon. During the last fiscal year, DoE also continued working with the Treating and Teaching Program. Treating and Teaching is a collaborative effort between the Anacostia Watershed Society, Prince George's County, the Chesapeake Bay Trust, and several nonprofit partners. This program trains teachers from Prince George's County Public Schools on how to utilize their school grounds, including stormwater management projects installed, as educational tools to support their curriculum. During the last fiscal year, DoE provided professional development for teachers in the Teach and Treat program.

Stormwater Stewardship Grants for Trees

Neighborhoods abundant with trees are healthier places to live and suffer less crime. We all deserve to live in such neighborhoods, but some Prince George's County residents do not. DoE targets these under-served communities through its Stormwater Stewardship grants. Local nonprofits and municipalities work with community residents to select appropriate trees for residents' yards. See figure 3 for a map of the areas where 524 trees were planted in FY23.

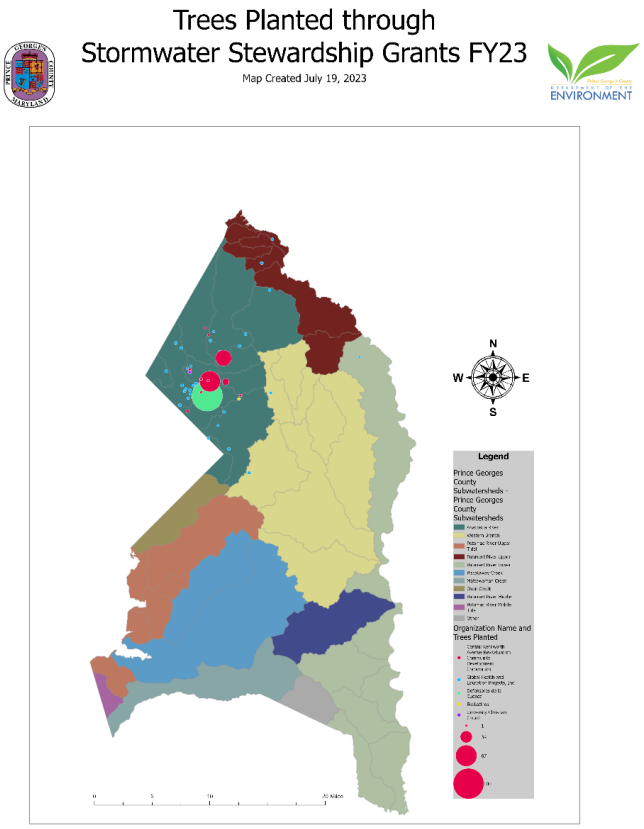


Figure D-4. Map of areas where trees were planted.

In early spring 2015, DoE initiated the publication of the Clean Water Program guidebook series for the regulated community in general and in particular for municipalities to: (1) understand the role and responsibilities for implementing strong, effective local stormwater programs, and (2) build effective, local public education and community engagement programs. Sample cover pages from the guidebook series are shown in Figure D-5. The guidebook provides information on the following:

- County and State NPDES permit requirements
- Associated roles and responsibilities of the County and municipalities along with pertinent examples
- Resources for incorporating various required elements into a local stormwater management program
- Public education and community engagement
- Trash and litter control

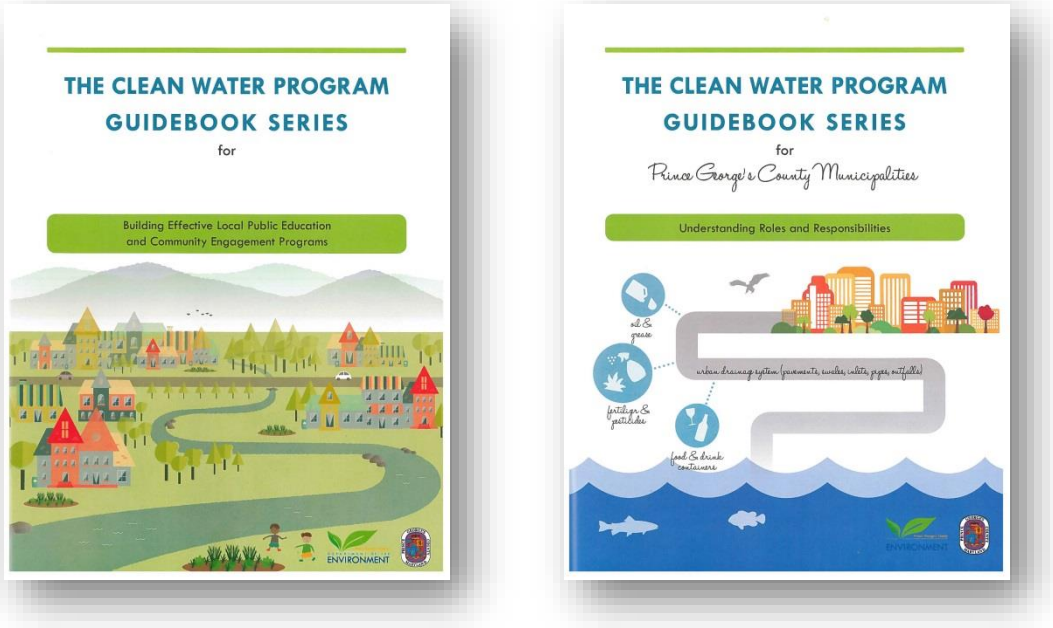


Figure D-5. The Clean Water Program Guidebook Series

Litter Control, Recycling, and Composting

Litter Control

Storm Drain Stenciling

Information on the County's storm drain stenciling efforts was provided earlier in the "Education and Outreach on Litter/Storm Drain stenciling" section on page 146.

Comprehensive Community Cleanup Program (CCCP)

Information on this program was provided earlier in the "Cleanup Activities/Comprehensive Community Cleanup Program" section in chapter IV.D.4 on page 142.

Recycling

The RRD of DoE administers County services and programs to reduce solid waste, including recycling, composting, and hazardous materials recovery and disposal. The County continues to host countywide recycling events, as listed in Table D-10 , to shred documents and dispense free mulch recycled from Christmas trees. These events offer residents of the County an opportunity to conserve natural resources, save energy, and reduce the amount of waste going to the landfill, all positive actions that help to protect the environment. In FY23, approximately 428 individuals toured Western Branch.

Table D-10. FY 2022 Countywide Waste Reduction Participation Events

Name of Event (Participant)	Date of Event	No. of Participants
Tour of Western Branch – DoE-Summer Enrichment Program (SYEP)	July 13, 2022	12
Tour of Western Branch – SAWNA	July 14, 2022	15
Tour of Western Branch – Sustainable Generation SG/Gore	July 20, 2022	2
Tour of Western Branch – Maryland National Capital Park & Planning Commission – Park & Recreation Summer Youth Program	August 3, 2022	15
Tour of Western Branch – United States Agency for International Development (USAID)	August 11, 2022	4
Tour of Western Branch	August 17, 2022	6
Tour of Western Branch	September 7, 2022	2
Tour of Western Branch – City of Laurel	September 9, 2022	7
Tour of Western Branch	September 16, 2022	6
Tour of Western Branch	September 30, 2022	22
Tour of Western Branch	October 12, 2022	18
Tour of Western Branch – Bowie City Council	October 20, 2022	6
Tour of Western Branch	October 28, 2022	60
Display of America Recycles Day poster at HHW/Electronics Event	October 29, 2022	105

Name of Event (Participant)	Date of Event	No. of Participants
Tour of Western Branch	November 4, 2022	30
Tour of Western Branch	November 16, 2022	3
Tour of Western Branch	December 12, 2022	30
Tour of Western Branch	December 29, 2022	30
Tour of Western Branch	January 5, 2023	2
Smithsonian School Tour	January 10, 2023	25
Tour of Western Branch	January 11, 2023	3
MD DOE/ Energy System Engineers	January 12, 2023	12
Tour of Western Branch – Baltimore City Department of Public Works	January 13, 2023	12
Tour of Western Branch	January 18, 2023	5
US Aid	January 20, 2023	14
Howard Eco Works	January 23, 2023	17
Tour of Western Branch	January 26, 2023	2
Largo High School	January 31, 2023	21
Central High School	February 3, 2023	26
Surratsville High School	February 10, 2023	21
Compostable Liner Promotional Event – Mom's Organics Market in collaboration with MES	February 11, 2023	10
BEZU Inc.	February 14, 2023	2
Tour of Western Branch	February 16, 2023	20
Tour of Western Branch Promotional Event – Safeway – in collaboration with MES	February 18, 2023	15
Keep America Beautiful Conference	February 20, 2023	80
Keep America Beautiful (KAB) – PGC Composts/PGCOCF Presentation	February 21, 2023	30
PGC Composts Program Open Forum Discussion – Whitfield Gardens Civic Association – Virtual Meeting	February 21, 2023	20
Masters Student Program	February 21, 2023	2
Curbside Composting Seminar "How do I start with my green cart"	February 23, 2023	232

Name of Event (Participant)	Date of Event	No. of Participants
Tour of Western Branch	February 24, 2023	20
Central High School	February 24, 2023	26
Huntingtown High School	March 2, 2023	21
Mini Outreach Events at Service Area #590 – Grocery Stores	March 14, 2023	155
Mini Outreach Events at Service Area #590 – Grocery Stores	March 16, 2023	155
Tour of Western Branch – Collington Senior Center	March 16, 2023	12
Collington Recycling Committee	March 16, 2023	5
Homeschool Tour	March 17, 2023	16
Tour of Western Branch	March 31, 2023	1
Tour of Western Branch	April 3, 2023	1
Tour of Western Branch	April 13, 2023	1
Riderwood Retirement Home	April 18, 2023	20
Tour of Western Branch	April 21, 2023	3
Resident Tour	April 21, 2023	3
2023 Mulch Madness Giveaway	April 22, 2023	350
Envirothon Training/Competition	April 26, 2023	100
Arbor Day Event	April 28, 2023	225
Resident Tour	May 3, 2023	1
Resident Tour	May 8, 2023	5
MES Management Tour	May 16, 2023	50
Resident Tour	May 17, 2023	1
Sierra Club Tour	May 19, 2023	20
Career Day at Fort Washington Forest Elementary School	May 25, 2023	160
PG Parks Tour	May 31, 2023	10
Oysters Adams Tour	May 31, 2023	15
Tour of Western Branch	June 1, 2023	13
Sylvania Woods Elementary	June 6, 2023	16
Tour of Western Branch	June 16, 2023	25
Mini Outreach Events at Service Area #590 – Grocery Stores	June 21, 2023	163
Mini Outreach Events at Service Area #590 – Grocery Stores	June 22, 2023	163

Name of Event (Participant)	Date of Event	No. of Participants
Tour of Western Branch	June 23, 2023	15
Tour of Western Branch	June 28, 2023	20
Merit Badge Tour	June 28, 2023	4
Tour of Western Branch	June 29, 2023	4

Single-Stream Recycling

The County's single stream recycling program is promoted through direct mail, press releases, newspaper advertisements, displays, and speaking engagements. The County's MRF processes glass bottles and jars, plastic containers, aluminum, steel and bi-metal cans, paper, aseptic containers, and newspaper from 176,218 residences served by the residential curbside single-stream recycling program and merchants (commercial sector). Today, the County's MRF is operating with the latest state-of-the-art equipment to accommodate single-stream recycling, processing over 70,000 tons annually.

An educational single-stream recycling display is housed at the MRF and can travel to community events, public libraries and office buildings throughout the County. In addition, an online video of the MRF operations is available. Tours of the MRF are open to the public, schools, and recycling coordinators by appointment.

County Office Recycling Program

On October 1, 2011, the County Office Recycling Program (CORP) began single-stream recycling in County offices. An outreach campaign was developed to educate employees on the transition from dual-stream to single-stream collection and increase the amount of recycling collected from County offices. The CORP, which has been in existence since 1990, now serves 89 local County offices; all locations are serviced on a regular pickup schedule. All forms of paper and commingled materials are collected from these facilities by a county contractor. A recent expansion to the CORP includes the addition of exterior side by side recycling and trash collection containers being placed at the entrances of eleven County office buildings. Nearly 1 ton of toner cartridges are recycled annually through a agreement with PMK Toner.

Source Reduction & Recycling

The Source Reduction – Stop Waste Before it Starts brochure, available in English and Spanish, provides tips for reducing waste at home, in the yard, and in the office. The brochure also promotes the use of reusable bags rather than non-biodegradable plastic shopping bags. In order to reinforce their recycling and source reduction message, Recycling Section (RS) staff regularly distributes outreach materials, gives presentations, and offers giveaways at community and other special events. Additionally, plastic bags are now banned from yard waste collection. Instead, the public will utilize paper yard waste bags, which can be composted or re-used. Furthermore, plastic bags are banned from the recycling program as this material is detrimental to processing equipment at the Materials Recycling Facility. There is an ongoing public outreach campaign to inform the public to return plastic bags to

participating stores for recycling and to utilize reusable bags to avoid plastic disposal bags altogether. To further encourage re-use, DOE distributes reusable bags at special events and speaking engagements.

Business Recycling and Source Reduction

Businesses play an important role in the County recycling programs with approximately one-half of the solid waste stream coming from the business sector. Businesses also account for two-thirds of the County's current recycling rate. The Recycling Section is enforcing mandatory recycling laws that went into effect in 2014 for the commercial sector and multi-family properties.

Recycling staff assists in developing and implementing successful source reduction plans and recycling programs. The types of assistance may include site visits for identifying waste that can be recycled, matching interested businesses with local mentors who have successful recycling programs, or providing technical assistance needed to start up a recycling program. Prince George's County has also implemented a Polystyrene Ban. DoE has hired Recycling inspectors to enforce recycling mandates in the multi-family, commercial and industrial sectors.

Composting

Food Scraps

During this reporting period, the County entered the third phase of its PGC Composts Program to service approximately 53,000 additional households. It is favorable that the program will continue to grow as a result of the positive feedback and participation generated during the current phase of expansion. In FY23, the Prince George's County Organics Compost Facility (PGCOCF) diverted 16,298.90 tons of food scraps from the landfill into 100% organic compost.

Yard Waste

The Prince George's County Organics Compost Facility (aka Western Branch), operated by the Maryland Environmental Service (MES), accepts yard waste from more than 178,000 households in the County. As shown in Figure D-6, the OCF received over 49,000 tons of yard waste in FY23.

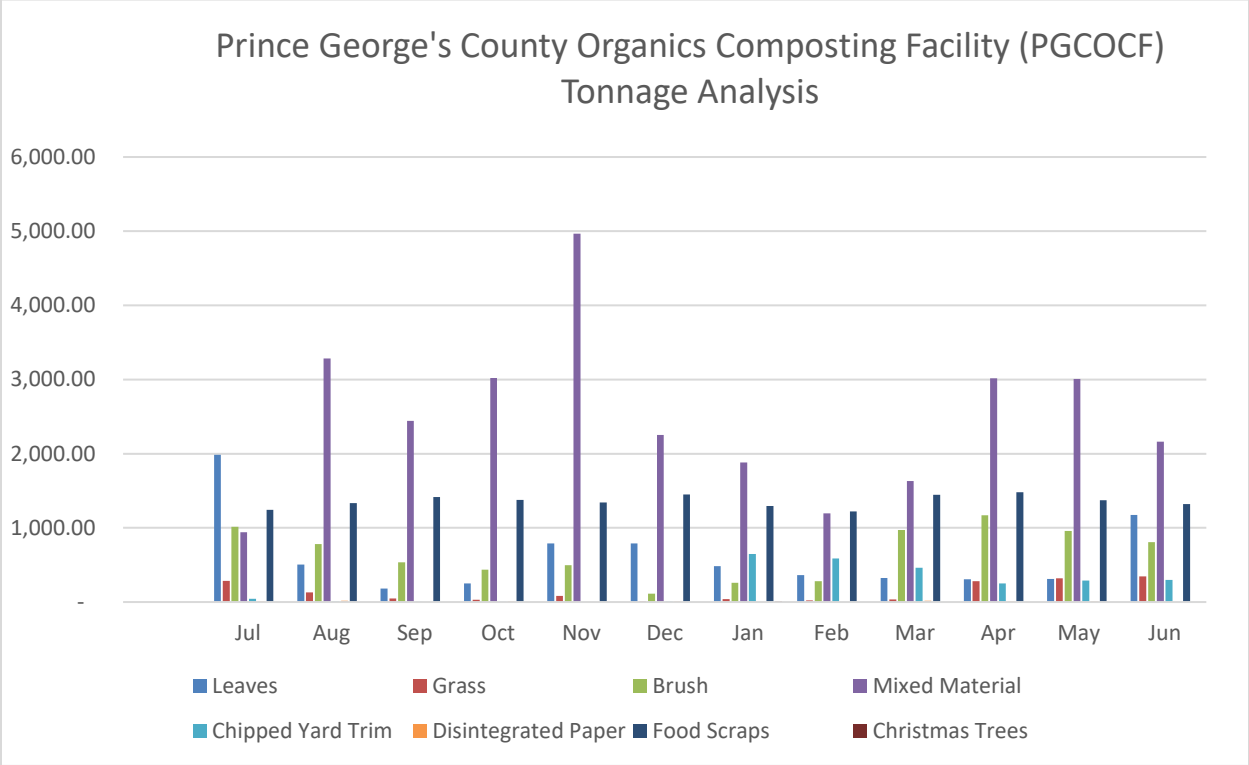


Figure D-6. Yard Waste Composting – FY 2022

Car Care, Mass Transit, and Alternative Transportation

Each year, vehicles release hundreds of tons of harmful emissions into the air we breathe. As atmospheric deposition of nitrogen in the region is a significant source of pollutants, carpooling, vanpooling, bicycling, and using mass transit helps to reduce emissions and protect both air and water quality. Sharing a ride, taking public transportation, and bicycling means fewer vehicles on the road, making the commute to work smoother, quicker, less expensive, easier, and cleaner for everyone. DPW&T provides many services to the residents of Prince George's County, as described below.

Electric Busses

Over the past few years, Prince George's County has secured 12 electric buses that have been operating in revenue service since October 2022. The new zero emissions battery electric vehicles will help reduce DPW&T's carbon footprint, while furthering the Prince George's County goal of being zero emission fleet by 2035. In addition to reducing DPW&T's carbon footprint, these buses provide a cost-effective alternative to diesel vehicles and have a 120-to-180-mile range between charge sessions. The County has ordered an additional six battery electric buses through a FY21 Low or No Emissions award. These buses are scheduled for delivery in January 2024.

Most recently, the county was awarded a $31,000,000 federal Bus and Bus Facilities award. Funding under this award will be used to build a Microgrid, procure an additional 20 battery electric buses, install 5 on route chargers, and upgrade the electrical systems at its current transit facility. Investing in

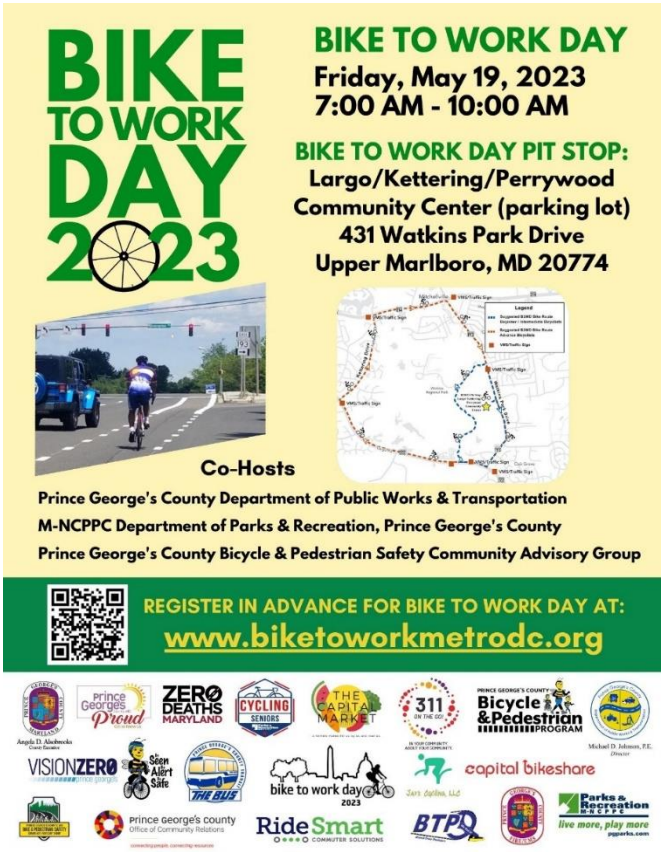
alternative fuel solutions, by replacing conventional fuel buses with clean energy vehicles, is part of the Department's commitment to deliver efficient and safe transportation service and contributing to a cleaner environment.

Commuter Connections

The RideSmart commuter website, a service of DPW&T, is designed to provide commuters and employers in the County with a comprehensive list of transportation solutions available throughout the Washington metropolitan area.

Ride Matching Network

The County continues to participate in the Commuter Connections ride-matching network, a free carpool and vanpool match service available to persons living and/or working in the County. This service is part of a network of Washington metropolitan commuter transportation organizations and is coordinated by the Metropolitan Washington Council of Governments (MWCOG).



Biking to Work

Prince George's County Department of Public Works and Transportation in partnership with Maryland National Capital Park and Planning Commission and Prince George's Countywide Bicycle and Pedestrian community advisory Group co-hosted a Pit Stop for 2022 Bike to Workday on Friday, May 19, 2023. The event was held at Largo/Kettering/Perrywood Community Center.

Bike Share

Guided by a bike share feasibility study completed in 2016, Prince George's County launched Capital Bikeshare on June 1, 2018, with stations along the Route 1/Baltimore Avenue corridor and stations in Largo. Today, the County is Prince George's Proud to offer bikeshare as an alternative transportation option at 27 bikeshare stations within Prince George's County and over 600 bikeshare stations throughout the Capital Bikeshare System in Maryland, Washington DC and Virginia. In February of 2020, Prince George's County launched a Capital Bikeshare for All equity program, providing qualifying individuals a $5 annual membership for Capital Bikeshare. This latest program makes Capital Bikeshare even more accessible for persons of all incomes.

Bicycle and Pedestrian Program

Prince George's County's Bicycle and Pedestrian Program utilizes the 6 E's of safety to improve and increase walking and biking in Prince George's County. The 6'E's are: Engineering, Education, Enforcement, Equity, Emergency Response and Evaluation. These 6 E's are the keys to success in achieving Vision Zero. The County constructs sidewalks, crosswalks, and bicycle lanes to provide safe areas for pedestrians and bicyclists. It also conducts traffic safety education to the general public and targets education efforts at high crash areas of the County as well as targeting special populations such as students through school safety assemblies. Police departments promote traffic safety through enforcement efforts such as radar for speeding, sobriety checkpoints, and seatbelt enforcement. Fire/EMS not only respond to vehicle crashes, but they also promote traffic safety through car seat/booster checks and walk to school safety events. Information for commuters on biking to work is available through Commuter Connections and Ride Smart programs.

Vanpool Subsidy Program

Since the startup period for a new vanpool is the most difficult time, any qualifying individual who starts a new vanpool is eligible to receive a generous startup subsidy from the County. This program assists residents seeking to start a new vanpool with startup costs and assistance with finding passengers. This three-month subsidy program covers 100 percent of the first month's vehicle rental fee (not to exceed $700), 50 percent of the second month's vehicle rental fee (not to exceed $350), and 25 percent of the third month's vehicle rental fee (not to exceed $175). A County Rideshare coordinator is also available to assist groups in forming a vanpool and maintaining ridership.

Park and Ride

The County, in partnership with the State of Maryland and private parking lot owners, maintains 12 free park and ride fringe parking lots, conveniently located throughout the County. These lots provide ideal locations for meeting a carpool, vanpool, or for connecting with TheBus, Metrobus, or other local transit systems. The 12 lots are:

1. Bowie Fringe Parking: MD Route 197 and Northview Drive
2. South Laurel: MD Route 197 and Briarcroft Lane
3. Montpelier: MD Route 197 and Brock Bridge Road
4. Clinton Fringe Parking: MD Route 5 and Woodyard Road
5. Equestrian Center: MD Route 4 in Upper Marlboro
6. Fort Washington: MD Route 210 and East Swann Creek Road
7. Oxon Hill Fringe Parking: MD Route 210 and Oxon Hill Road

8. Beltway (I-494/I-95): I-95 and the Capital Beltway
9. Laurel Fringe Parking: Sandy Spring Road and Van Dusen Road
10. Accokeek Fringe Parking: MD Route 373 and MD Route 210
11. Bowie Market Place: MD Route 450 and Stoneybrook Drive
12. Penn Mar Shopping Center: Donnell Drive and Marlboro Pike

Metrorail

Operated by the Washington Metropolitan Area Transit Authority (WMATA), Metrorail currently serves 91 stations throughout the Washington metropolitan area, much of it underground. The system intersects at various points, along 117 miles of track, making it possible for passengers to travel anywhere on the system. Currently, 15 Metrorail stations are located in the County providing access and convenience to most County residents. The County is one of WMATA's compact jurisdictions and subsidizes the cost of all WMATA bus and rail service provided in the County. DPW&RT staff work cooperatively with WMATA to plan and enhance existing and future public transit services to complement the County Executive's and Council members' goals to meet the transportation needs of County residents, visitors, and employees.

TheBus, CALL-A-BUS, and CALL-A-CAB

TheBus is Prince George's County's public transit system. Schedule information and bus vehicle real time arrivals are available at http://www.princegeorgescountymd.gov/1120/TheBus or through www.NextBus.com. Area specific transit guides offer comprehensive information on public transportation, including transit options.

The County also provides a demand response, curb-to-curb service Call-A-Bus, a complementary ADA/Paratransit, curb-to-curb service. Service is available to all residents of Prince George's County who are not served by or cannot use existing bus or rail services. However, priority is given to senior and persons with disabilities. Persons with disabilities must provide their own escort, if needed. Service animals are allowed for the visually impaired.

The Taxicab Licensing Section of the Office of Transportation (formerly in the Department of Environmental Resources) licenses 1,062 taxicab operators to provide fee-based services to residents and visitors in the County. A subsidy service provided by the County via Maryland state grants is the Call-A-Cab coupon service for seniors and disabled patrons. This program enables seniors and disabled patrons to purchase reduced-price taxicab coupons.

Clean Water Partnership Outreach Activities

The Clean Water Partnership regularly conducts outreach events and activities to educate community members about proposed stormwater management and involve stakeholders in the process. During FY 2023, outreach staff along with the CWP designers, contractors, and CWP leadership participated in 139 outreach events involving approximately 3,370 participants and distributed 3,014 outreach materials such as flyers, brochures, and doorknockers. These events included project-related meetings for approximately 24 projects – which are typically held at the 30, 60, and 90 percent design levels. Flyers were distributed for 17 projects prior to construction start. Additional Clean Water

Partnership social-economic development programs inclusive of public outreach and community involvement are described below.

The CWP held additional outreach events including Greenbelt ES planting event, ribbon cutting at Briers Mill Run Stream Restoration and pedestrian Bridge Reopening, Surrattsville HS Earth Day Celebration, the Riverside Pond community planting event, the City of Laurel Sustainable Saturday, Glen Dale Back to School Event, and Greenbelt ES Back to School Event.

Mentor-Protégé Program

The 6th cohort of the Clean Water Partnership's Mentor Protégé Program (MPP) began in July 2022 and continued through FY23. This cohort included seven companies: Macia Construction (CBSB, MBE), Thomas Construction Group (CBSB, MBE), Casey & Company (MBE), TCG Property Care (MBE), CAS Construction (CBSB, MBE), Celsue Construction (CBSB, MBE), and DC Healthy Grow (Minority Woman Owned – not certified). Two companies in this cohort, Celsue Construction, and TCG Property Care participated in prior cohorts and requested to participate a second time. Celsue hired a new employee to assist with business development and to back up the owner, Ruth Davila. Patricia Guisandes was new to green stormwater infrastructure construction and was a participant in all meetings and workshops. Celsue Construction continues to bid work on CWP projects and has received contract awards of $3,048,928 to date.

TCG Property Care was a participant in Cohort 3, and the owners wanted to continue their development as leaders by participating in a second cohort. Since participating in the two cohorts, TCG was awarded $112,461 in landscaping contracts. Macia Construction joined the cohort but only participated in the program's first few months. The firm is an 8a graduate and decided to stick to pursuing work with the federal government. CAS Construction, a Latin-owned solopreneur, participated fully in the MPP and was awarded several small concrete placement contracts as a subcontractor to larger MPP firms. The company needs to add back-office staff to scale and pursue more CWP projects. Thomas Construction Group continues to bid on CWP work, looking for its first contract award.

Casey & Company is based in the District of Columbia and has installed over one hundred rain gardens in the metro area. They joined cohort 6 to enhance their skill set in green stormwater infrastructure. Since joining, the owner, Casey Forbes, has earned her WBE certification from the Women's Business Enterprise Council (WBENC) and, subsequently, her Prince George's County MBE certification. The firm has begun bidding on CWP work and will soon be awarded its first planting contract on a CWP project. The firm has teamed with another MPP firm and won a contract award on a D.C. project. Casey & Company is looking for space in Prince George's County to move its corporate headquarters and equipment yard.

Cohort 6 graduation took place on August 8th as the program was extended to ensure full participation in the contracting opportunities as the CWP enters the final year of Phase 3. With fifty firm participants in the CWP MPP since its inception, the last few cohorts were small we anticipate this trend continuing. This is a result of the success of the program and the short supply of capable firms specializing in green stormwater infrastructure. The MPP will continue recruiting for the next cohort, which will begin in October 2023. The CWP has also extended an invitation to Jonathan Butler, the Director of Central Services for County firms in construction and facilities management, to participate in

a hybrid MPP with the CWP. If accepted, CWP will begin outreach to those firms in September 2023, and the program will run parallel to the CWP MPP.

Clean Water Partnership Schools Program – Treating & Teaching

The Treating & Teaching Program began in FY 2016 and is designed to assist Prince George's County Public Schools (PGCPS) treat stormwater runoff by constructing BMPs on school property. Treating & Teaching incorporates a community-based approach to engage school facilities staff, educators, students, and community members in every element of the BMP process. Educators and students gain experience and confidence while using the BMP projects to inform classroom learning. Students and volunteers participate in mulching and planting native plants to complete a BMP installation. Interpretive signage provides BMP information, BMP benefits, visuals and illustrations which describe the most common pollutants affecting stormwater runoff in the area. The primary activities in FY23 consisted of implementing BMP design projects and constructing outdoor classrooms.

In FY 2023, the CWP completed one project (Skyline Elementary School) at a Prince George's County school, increasing the total number of CWP PGCPS projects to 56. At the end of FY23, six additional schools are at final design stages: Beltsville Academy, Fort Washington ES, Clinton Grove ES, Kenilworth ES, Benjamin Stoddert Middle School, and Ardmore ES.

Also in FY 2023, outdoor classrooms were installed at the seven schools: Crossland HS, Tall Oaks ES, Eisenhower MS, Friendly ES, Robert Goddard Montessori School, Dora Kennedy ES, and John Bayne ES. Classroom design is well under way for four additional schools: Ardmore ES, Kenilworth ES, Benjamin Stoddert MS, and Surrattsville HS. Program activities include student-volunteer tree planting sessions, educational signage, development of a hands-on learning component to the program that can support existing Science, Technology, Engineering and Mathematics (STEM) activities at the schools.

Student Enrichment

The Clean Water Partnership continued its support of End Time Harvest Ministries (ETHM) in FY 2023. ETHM is a Prince George's County-based non-profit that was established to empower youth through providing opportunities to build educational, social, and economic life skills. ETHM programs include a six-week Jobs For Youth (JFY) Summer Employment Program where students learn about the importance of workforce development, a cornerstone of the CWP program.

In addition, the CWP supported the Student Environmental Alliance Youth Summit. Over 160 students participated in the 2-day event at Bowie State University and the Bladensburg Waterfront Park.

Municipal Engagement

Numerous Clean Water Partnership restoration activities were conducted within municipal boundaries during FY 2023. Several restoration projects in the design or construction phase in FY 2023 were located within the county's 26 municipalities that are covered by this permit. Specifically, the Program is at 90 percent design for projects in the Town of Cheverly (Cheverly stream restoration) and the City of Laurel (Walker Branch - SR77 stream restoration) and has active construction Projects in the City of Hyattsville (9 Pond) and the City of Greenbelt (Hanover Parkway).

E. STORMWATER RESTORATION

Permit Conditions Part IV. E. 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.

Prince George's County intend to replace the annual alternative BMPs with stormwater management BMPs, programmatic initiatives, or alternative control practices in accordance with the 2021 Accounting Guidance. However, this will be achieved by the end of FY 2024 or beyond as new BMPs are implemented per the consent decree. In FY2023, the County is still maintaining on average 217.35 equivalent impervious acres through operational programs (street sweeping and inlet cleaning).

Permit Conditions Part IV. E. 2: The impervious acre restoration requirements described below are in addition to the requirements listed in PART IV.E.1 of this permit.
Permit Conditions Part IV. E. 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.

The County is on the track to restore 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. As of this reporting, the county has already completed 95 acres of restoration.

Permit Conditions Part IV. E. 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.

The County is on the track to meet the Benchmark set in Table 1 of the permit. It should be noted that Table 1 benchmarked meeting 5% or 106.85 acres of 2,137 impervious acres by December 1, 2023 (Year 1). As the reporting period of this report ends on June 30, 2023, the progress reported below only reflects seven (7) months since the permit issuance. Prorating for seven (7) months, the County should have 62 acres by the end of FY2023. The County has exceeded this benchmark for FY2023 and completed 95 acres of restoration. Please see table below for the progress update.

Table E-1. BMP Portfolio (5th Generation Permit)

BMP NAME	BMP TYPE	NUMBER OF BMPS	IMPERVIOUS ACRES TREATED	LENGTH RESTORED (FT)/ LANE MILES (MI)/ MASS LOADING (LBS.)
Capital Projects - New Restoration completed in FY2023 (toward 5th gen. Permit)				
PG20ALN002454	Outfall Stabilization	1	48.59	780
PG21ALN000312	Stream Restoration	1	22.4	1,200
PG21ALN000313	Stream Restoration	1	23.4	575
PG22APY062162	Street Trees	1	0.004	
PG22APY062163	Street Trees	1	0.004	
PG22APY062164	Street Trees	1	0.004	
PG22APY062165	Street Trees	1	0.004	
PG22APY062166	Street Trees	1	0.004	
PG22APY062167	Street Trees	1	0.004	
PG22APY062168	Street Trees	1	0.004	
PG22APY062169	Street Trees	1	0.004	
PG22APY062170	Street Trees	1	0.004	
PG22APY062171	Street Trees	1	0.004	
PG22APY062172	Street Trees	1	0.004	
PG22APY062173	Street Trees	1	0.004	
PG22APY062174	Street Trees	1	0.004	
PG22APY062175	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062176	Street Trees	1	0.004	
PG22APY062177	Street Trees	1	0.004	
PG22APY062178	Street Trees	1	0.004	
PG22APY062179	Street Trees	1	0.004	
PG22APY062180	Street Trees	1	0.004	
PG22APY062181	Street Trees	1	0.004	
PG22APY062182	Street Trees	1	0.004	
PG22APY062183	Street Trees	1	0.004	
PG22APY062184	Street Trees	1	0.004	
PG22APY062185	Street Trees	1	0.004	
PG22APY062186	Street Trees	1	0.004	
PG22APY062187	Street Trees	1	0.004	
PG22APY062188	Street Trees	1	0.004	
PG22APY062189	Street Trees	1	0.004	

BMP NAME	BMP TYPE	NUMBER OF BMPS	IMPERVIOUS ACRES TREATED	LENGTH RESTORED (FT)/ LANE MILES (MI)/ MASS LOADING (LBS.)
PG22APY062190	Street Trees	1	0.004	
PG22APY062191	Street Trees	1	0.004	
PG22APY062192	Street Trees	1	0.004	
PG22APY062193	Street Trees	1	0.004	
PG22APY062194	Street Trees	1	0.004	
PG22APY062195	Street Trees	1	0.004	
PG22APY062196	Street Trees	1	0.004	
PG22APY062197	Street Trees	1	0.004	
PG22APY062198	Street Trees	1	0.004	
PG22APY062199	Street Trees	1	0.004	
PG22APY062200	Street Trees	1	0.004	
PG22APY062201	Street Trees	1	0.004	
PG22APY062202	Street Trees	1	0.004	
PG22APY062203	Street Trees	1	0.004	
PG22APY062204	Street Trees	1	0.004	
PG22APY062205	Street Trees	1	0.004	
PG22APY062206	Street Trees	1	0.004	
PG22APY062207	Street Trees	1	0.004	
PG22APY062208	Street Trees	1	0.004	
PG22APY062209	Street Trees	1	0.004	
PG22APY062210	Street Trees	1	0.004	
PG22APY062211	Street Trees	1	0.004	
PG22APY062212	Street Trees	1	0.004	
PG22APY062213	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062214	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062215	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062216	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	

BMP NAME	BMP TYPE	NUMBER OF BMPS	IMPERVIOUS ACRES TREATED	LENGTH RESTORED (FT)/ LANE MILES (MI)/ MASS LOADING (LBS.)
PG22APY062217	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062218	Street Trees	1	0.004	
PG22APY062219	Street Trees	1	0.004	
PG22APY062220	Street Trees	1	0.004	
PG22APY062221	Street Trees	1	0.004	
PG22APY062222	Street Trees	1	0.004	
PG22APY062223	Street Trees	1	0.004	
PG22APY062224	Street Trees	1	0.004	
PG22APY062225	Street Trees	1	0.004	
PG22APY062226	Street Trees	1	0.004	
PG22APY062227	Street Trees	1	0.004	
PG22APY062228	Street Trees	1	0.004	
PG22APY062229	Street Trees	1	0.004	
PG22APY062230	Street Trees	1	0.004	
PG22APY062231	Street Trees	1	0.004	
PG22APY062232	Street Trees	1	0.004	
PG22APY062233	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062234	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062235	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062236	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062237	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062238	Urban Tree Canopy (i.e., Pervious Turf to	1	0.0028	

BMP NAME	BMP TYPE	NUMBER OF BMPS	IMPERVIOUS ACRES TREATED	LENGTH RESTORED (FT)/ LANE MILES (MI)/ MASS LOADING (LBS.)
	Tree Canopy over Turf)			
PG22APY062239	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062240	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062241	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062242	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062243	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062244	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062245	Street Trees	1	0.004	
PG22APY062246	Street Trees	1	0.004	
PG22APY062247	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062248	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062249	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062250	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	

BMP NAME	BMP TYPE	NUMBER OF BMPS	IMPERVIOUS ACRES TREATED	LENGTH RESTORED (FT)/ LANE MILES (MI)/ MASS LOADING (LBS.)
PG22APY062251	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062252	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062253	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062254	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062255	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062256	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062257	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062258	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062259	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062260	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062261	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	

BMP NAME	BMP TYPE	NUMBER OF BMPS	IMPERVIOUS ACRES TREATED	LENGTH RESTORED (FT)/ LANE MILES (MI)/ MASS LOADING (LBS.)
PG22APY062262	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062263	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062264	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062265	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062266	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062267	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062268	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062269	Street Trees	1	0.004	
PG22APY062270	Street Trees	1	0.004	
PG22APY062271	Street Trees	1	0.004	
PG22APY062272	Street Trees	1	0.004	
PG22APY062273	Street Trees	1	0.004	
PG22APY062274	Street Trees	1	0.004	
PG22APY062275	Street Trees	1	0.004	
PG22APY062276	Street Trees	1	0.004	
PG22APY062277	Street Trees	1	0.004	
PG22APY062278	Street Trees	1	0.004	
PG22APY062279	Street Trees	1	0.004	
PG22APY062280	Street Trees	1	0.004	
PG22APY062281	Street Trees	1	0.004	

BMP NAME	BMP TYPE	NUMBER OF BMPS	IMPERVIOUS ACRES TREATED	LENGTH RESTORED (FT)/ LANE MILES (MI)/ MASS LOADING (LBS.)
PG22APY062282	Street Trees	1	0.004	
PG22APY062283	Street Trees	1	0.004	
PG22APY062284	Street Trees	1	0.004	
PG22APY062285	Street Trees	1	0.004	
PG22APY062286	Street Trees	1	0.004	
PG22APY062287	Street Trees	1	0.004	
PG22APY062288	Street Trees	1	0.004	
PG22APY062289	Street Trees	1	0.004	
PG22APY062290	Street Trees	1	0.004	
PG22APY062291	Street Trees	1	0.004	
PG22APY062292	Street Trees	1	0.004	
PG22APY062293	Street Trees	1	0.004	
PG22APY062294	Street Trees	1	0.004	
PG22APY062295	Street Trees	1	0.004	
PG22APY062296	Street Trees	1	0.004	
PG22APY062297	Street Trees	1	0.004	
PG22APY062298	Street Trees	1	0.004	
PG22APY062299	Street Trees	1	0.004	
PG22APY062300	Street Trees	1	0.004	
PG22APY062301	Street Trees	1	0.004	
PG22APY062302	Street Trees	1	0.004	
PG22APY062303	Street Trees	1	0.004	
PG22APY062304	Street Trees	1	0.004	
PG22APY062305	Street Trees	1	0.004	
PG22APY062306	Street Trees	1	0.004	
PG22APY062307	Street Trees	1	0.004	
PG22APY062308	Street Trees	1	0.004	
PG22APY062309	Street Trees	1	0.004	
PG22APY062310	Street Trees	1	0.004	
PG22APY062311	Street Trees	1	0.004	
PG22APY062312	Street Trees	1	0.004	
PG22APY062313	Street Trees	1	0.004	
PG22APY062314	Street Trees	1	0.004	
PG22APY062315	Street Trees	1	0.004	
PG22APY062316	Street Trees	1	0.004	
PG22APY062317	Street Trees	1	0.004	

BMP NAME	BMP TYPE	NUMBER OF BMPS	IMPERVIOUS ACRES TREATED	LENGTH RESTORED (FT)/ LANE MILES (MI)/ MASS LOADING (LBS.)
PG22APY062318	Street Trees	1	0.004	
PG22APY062319	Street Trees	1	0.004	
PG22APY062320	Street Trees	1	0.004	
PG22APY062321	Street Trees	1	0.004	
PG22APY062322	Street Trees	1	0.004	
PG22APY062323	Street Trees	1	0.004	
PG22APY062324	Street Trees	1	0.004	
PG22APY062325	Street Trees	1	0.004	
PG22APY062326	Street Trees	1	0.004	
PG22APY062327	Street Trees	1	0.004	
PG22APY062328	Street Trees	1	0.004	
PG22APY062329	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062330	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062331	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062332	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062333	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062334	Street Trees	1	0.004	
PG22APY062335	Street Trees	1	0.004	
PG22APY062336	Street Trees	1	0.004	
PG22APY062337	Street Trees	1	0.004	
PG22APY062338	Street Trees	1	0.004	
PG22APY062339	Street Trees	1	0.004	
PG22APY062340	Street Trees	1	0.004	
PG22APY062341	Street Trees	1	0.004	
PG22APY062342	Street Trees	1	0.004	

BMP NAME	BMP TYPE	NUMBER OF BMPS	IMPERVIOUS ACRES TREATED	LENGTH RESTORED (FT)/ LANE MILES (MI)/ MASS LOADING (LBS.)
PG22APY062343	Street Trees	1	0.004	
PG22APY062344	Street Trees	1	0.004	
PG22APY062345	Street Trees	1	0.004	
PG22APY062346	Street Trees	1	0.004	
PG22APY062347	Street Trees	1	0.004	
PG22APY062348	Street Trees	1	0.004	
PG22APY062349	Street Trees	1	0.004	
PG22APY062350	Street Trees	1	0.004	
PG22APY062351	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062352	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062353	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062354	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062355	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062356	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062357	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062358	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062359	Urban Tree Canopy (i.e., Pervious Turf to	1	0.0028	

BMP NAME	BMP TYPE	NUMBER OF BMPS	IMPERVIOUS ACRES TREATED	LENGTH RESTORED (FT)/ LANE MILES (MI)/ MASS LOADING (LBS.)
	Tree Canopy over Turf)			
PG22APY062360	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062361	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062362	Street Trees	1	0.004	
PG22APY062363	Street Trees	1	0.004	
PG22APY062364	Street Trees	1	0.004	
PG22APY062365	Street Trees	1	0.004	
PG22APY062366	Street Trees	1	0.004	
PG22APY062367	Street Trees	1	0.004	
PG22APY062368	Street Trees	1	0.004	
PG22APY062369	Street Trees	1	0.004	
PG22APY062370	Street Trees	1	0.004	
PG22APY062371	Street Trees	1	0.004	
PG22APY062372	Street Trees	1	0.004	
PG22APY062373	Street Trees	1	0.004	
PG22APY062374	Street Trees	1	0.004	
PG22APY062375	Street Trees	1	0.004	
PG22APY062376	Street Trees	1	0.004	
PG22APY062377	Street Trees	1	0.004	
PG22APY062378	Street Trees	1	0.004	
PG22APY062379	Street Trees	1	0.004	
PG22APY062380	Street Trees	1	0.004	
PG22APY062381	Street Trees	1	0.004	
PG22APY062382	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062383	Street Trees	1	0.004	
PG22APY062384	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	

BMP NAME	BMP TYPE	NUMBER OF BMPS	IMPERVIOUS ACRES TREATED	LENGTH RESTORED (FT)/ LANE MILES (MI)/ MASS LOADING (LBS.)
PG22APY062385	Street Trees	1	0.004	
PG22APY062386	Street Trees	1	0.004	
PG22APY062387	Street Trees	1	0.004	
PG22APY062388	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062389	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062390	Street Trees	1	0.004	
PG22APY062391	Street Trees	1	0.004	
PG22APY062392	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062393	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062394	Urban Tree Canopy (i.e., Pervious Turf to Tree Canopy over Turf)	1	0.0028	
PG22APY062395	Street Trees	1	0.004	
PG22APY062396	Street Trees	1	0.004	
PG22APY062397	Street Trees	1	0.004	
PG22APY062398	Street Trees	1	0.004	
PG22APY062399	Street Trees	1	0.004	
PG22APY062400	Street Trees	1	0.004	
PG22APY062401	Street Trees	1	0.004	
PG22APY062402	Street Trees	1	0.004	
PG22APY062403	Street Trees	1	0.004	
PG22APY062404	Street Trees	1	0.004	
PG22APY062405	Street Trees	1	0.004	
PG22APY062406	Street Trees	1	0.004	
PG22APY062407	Street Trees	1	0.004	
PG22APY062408	Street Trees	1	0.004	
PG22APY062409	Street Trees	1	0.004	

BMP NAME	BMP TYPE	NUMBER OF BMPS	IMPERVIOUS ACRES TREATED	LENGTH RESTORED (FT)/ LANE MILES (MI)/ MASS LOADING (LBS.)
PG22APY062410	Street Trees	1	0.004	
PG22APY062411	Street Trees	1	0.004	
PG22APY062412	Street Trees	1	0.004	
PG22APY062413	Street Trees	1	0.004	
PG22APY062414	Street Trees	1	0.004	
PG22APY062415	Street Trees	1	0.004	
PG22APY062416	Street Trees	1	0.004	
PG22APY062417	Street Trees	1	0.004	
PG22APY062418	Street Trees	1	0.004	
PG22APY062419	Street Trees	1	0.004	
PG22APY062420	Street Trees	1	0.004	
PG22APY062421	Street Trees	1	0.004	
PG22APY062422	Street Trees	1	0.004	
PG22APY062423	Street Trees	1	0.004	
PG22APY062424	Street Trees	1	0.004	
PG22APY062425	Street Trees	1	0.004	
Total		267	95.37	

Permit Conditions Part IV. E. 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.
Permit Conditions Part IV. E. 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.

The County has not opted this option as of FY2023 reporting period.

Permit Conditions Part IV. E. 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%*

The County is on track to meet this suggested benchmark. The County has already restored 95 acres in FY2023 (Year 1).

Permit Conditions Part IV. E. 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:

i. Actual BMP implementation rates; and

ii. 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.

For FY2023, a spreadsheet with the list of BMPs, programmatic initiatives, or alternative control practices in the BMP Portfolio format per Appendix B is provided on the DVD. The County's 5th generation NPDES permits requires the County to restore 2,137 impervious acres between December 2022 to December 2027. Table E-2 presents the permitted benchmarks per permit year in both percentages and acres for the 5th generation permit. This table does not include BMPs in planning, design, or construction to satisfy the County's Consent Decree. The Consent Decree information can be found in a separate Consent Order Supplemental Report. The table also presents equivalent impervious area (in acres) of BMPs that are currently in planning, design, and construction through 2027. As the year progress, the County will evaluate the progress and adjust the benchmark based on the actual and anticipated BMP implementation rates in subsequent reports.

Table E-2. Benchmark and schedule of restoration.

Metric	Year 1 (FY2023: 12/02/22-06/30/23)[1]	Year 2 (FY2024: 07/01/23-06/30/24)	Year 3 (FY2025: 07/01/24-06/30/25)	Year 4 (FY2026: 07/01/25-06/30/26)	Year 5 (FY2027: 07/01/26-06/30/27)
Permit Required Cumulative Percent Impervious Acre	2.92%	10%	20%	40%	100%
Permit Required Cumulative Impervious Acres	62	214	427	855	2,137
Annual Impervious Acres[2]	95	671	1,105	325	201
Cumulative Impervious Acres[2]	95	766	1,872	2,196	2,397

[1]Prorated from 5% to 2.92% (for 7 months instead of 12 months) to meet FY2023 reporting period.

[2]Restoration projects completed in FY 2023 or in the planning, design, or construction phase, therefore load reductions and EIAs are estimated. The actual load reduction and EIAs will be determined after project completion.

Permit Conditions Part IV. E. 9: Any trading credits or "Nutrient Credits" acquired by Prince George's County to meet its prior MS4 permit requirements including conditions of the Consent Decree are equivalent to 18.1 lbs/acre TN, 2.9 lbs/acre TP, and 454.6 lbs/acre TSS. The balance of these credits not replaced with stormwater management BMPs, programmatic initiatives, or alternative control practices prior to December 2, 2022 shall:

a. Be continued and verified annually under this permit in accordance with the Maryland Water Quality Trading and Offset Program (COMAR 26.08.11) until they are replaced; and

b. Be replaced with stormwater management BMPs, programmatic initiatives, or alternative control practices in accordance with the 2021 Accounting Guidance prior to expiration of this permit.

This condition is not applicable as the County is not claiming nutrient trading credits.

F. COUNTYWIDE TMDL STORMWATER IMPLEMENTATION PLAN

Permit Condition Part IV. F. 1: Where Prince George's County has submitted an implementation plan for a TMDL identified in Appendix A and that plan has yet to be approved, Prince George's County shall, within one year of the effective date of this permit, address all outstanding comments needed for the Department's approval of the plan.

The TMDL restoration plans were developed and submitted to MDE in December 2015, with revisions based on MDE comments received in 2015. These plans were for the following: Anacostia River (biological oxygen demand, bacteria, nutrients, sediment); Mattawoman Creek (nitrogen); Upper Patuxent River (including Rocky Gorge Reservoir) (bacteria, phosphorus, sediment); Piscataway Creek (bacteria); PCB-Impacted Water Bodies (Anacostia, Mattawoman, Piscataway, Potomac); and countywide trash. Additional plans were submitted in 2019 for the Lower and Middle Patuxent River (sediment) and tidal Patuxent River (PCBs). In 2022, the County submitted a restoration plan for sediment in the Piscataway Creek watershed. There are currently no additional County MS4 WLAs requiring restoration plans. The existing plans are currently being updated based on 2022 MDE guidance and the 2023 MDE comments on the Piscataway Creek sediment TMDL restoration plan. No further action is required by the County as this requirement is deemed completed.

All County restoration plans are included on the County's watershed assessments and studies website (https://www.pgcdoe.net/pgc_watershedassesments) after they have been reviewed by MDE and the County has addressed any comments.

Permit Condition Part IV. F. 2. Within one year of EPA's approval or establishment of a new TMDL, Prince George's County shall submit an implementation plan to the Department for approval. The TMDL implementation plan shall be based on the Department's TMDL analyses, or equivalent and comparable Prince George's County water quality analyses, that includes:

a. A list of stormwater BMPs, programmatic initiatives, or alternative control practices that will be implemented to reduce pollutants for the TMDL;
b. A description of the County's analyses and methods, and how they are comparable with the Department's TMDL analyses; and
c. Final implementation dates and benchmarks for meeting the TMDL's applicable stormwater WLA. 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.

There is no new TMDL approved in recent years. This condition will be addressed when a new TMDL plan approved by MDE comes into effect.

Permit Condition 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;

The County developed a Countywide Stormwater TMDL Implementation Plan that reports its progress towards meeting TMDL WLAs in the County. The one Countywide Stormwater TMDL Implementation Plan is included on the DVD.

A summary of the completed BMPs, programs, and initiatives to meet the established pollutant reduction goals is provided in Table F-1. Also, completed restoration activities in the County are itemized on the DVD accompanying this report in the MDE geodatabase format under the feature classes RestBMP, AltBMP Line, AltBMP Point, AltBMP Polygon, and Impervious Surface Associated Table. In the current MS4 permit period (January 2014 (FY2014) through FY 2022), the County has restored 5,695 acres under the NPDES MS4 permit. This restoration progress was accomplished through more than 827 projects costing over $349 million.

Table F-1. Summary of Completed Projects through FY 2023.

Watershed Code	Watershed Name	Number of Projects	Impervious Acres Restored[1]	Implementation Cost ($)[2]
Restoration BMPs through CIP and CWP Projects, and Redevelopment (see Geodatabase Record: RestBMP)				
2131101	Patuxent River lower	5	0.88	$1,616,970
2131102	Patuxent River middle	5	1.45	$767,796
2131103	Western Branch	101	729.20	$61,083,675
2131104	Patuxent River upper	29	203.48	$14,564,550
2131107	Rocky Gorge Dam	0	0.00	$0
2140102	Potomac River M tidal	0	0.00	$0
2140111	Mattawoman Creek	3	39.47	$1,954,489
2140201	Potomac River U tidal	55	89.26	$10,906,808
2140203	Piscataway Creek	35	157.50	$17,681,428
2140204	Oxon Creek	35	6.15	$3,751,969
2140205	Anacostia River	379	846.23	$73,952,692
		647	**2,073.62**	**$186,280,377**
Septic System Upgrade or Removal (see Geodatabase Record: AltBMPPoint)				
2131101	Patuxent River lower	5	1.30	$70,000
2131102	Patuxent River middle	18	4.68	$252,000
2131103	Western Branch	53	17.29	$364,000
2131104	Patuxent River upper	24	7.67	$182,000
2131107	Rocky Gorge Dam	1	0.39	$0
2140102	Potomac River M tidal	0	0.00	$0
2140111	Mattawoman Creek	4	1.43	$14,000

Watershed Code	Watershed Name	Number of Projects	Impervious Acres Restored[1]	Implementation Cost ($)[2]
2140201	Potomac River U tidal	26	9.88	$28,000
2140203	Piscataway Creek	34	11.96	$140,000
2140204	Oxon Creek	8	3.12	$0
2140205	Anacostia River	59	23.01	$0
		232	**80.73**	**$1,050,000**
Tree Planting (see Geodatabase Record: AltBMPPoly)				
2131101	Patuxent River lower	56	8.82	$416,295
2131102	Patuxent River middle	552	6.604	$538,999
2131103	Western Branch	21349	91.614526	$14,373,147
2131104	Patuxent River upper	5238	20.9939	$3,545,710
2131107	Rocky Gorge Dam	88	0.352	$57,112
2140102	Potomac River M tidal	3	0.012	$1,947
2140111	Mattawoman Creek	1723	6.892	$1,118,227
2140201	Potomac River U tidal	6761	29.0485	$4,660,731
2140203	Piscataway Creek	11051	44.43601	$7,536,312
2140204	Oxon Creek	1347	5.418	$944,171
2140205	Anacostia River	13755	58.581643	$10,532,806
		61,923	**272.77**	**$43,725,457**
Stream Restoration[3] and Outfall Stabilization Projects (see Geodatabase Record: AltBMPLine)				
2131101	Patuxent River lower	2	347.23	$15,364,108
2131102	Patuxent River middle	1	93.90	$3,282,018
2131103	Western Branch	9	564.52	$24,883,345
2131104	Patuxent River upper	4	341.52	$13,214,217
2131107	Rocky Gorge Dam	0	0.00	$0
2140102	Potomac River M tidal	0	0.00	$0
2140111	Mattawoman Creek	1	98.53	$4,318,041
2140201	Potomac River U tidal	5	144.35	$3,147,954
2140203	Piscataway Creek	20	920.56	$30,832,115
2140204	Oxon Creek	2	21.23	$1,117,313
2140205	Anacostia River	16	519.06	$21,410,313
		60	**3,050.90**	**$117,569,424**
Inlet Cleaning and Street Sweeping (see Geodatabase Record: AltBMPPoly)[4]				
2131102	Patuxent River middle	193	0.458	$1,456
2131103	Western Branch	5561	49.35	$113,568
2131104	Patuxent River upper	1590	7.51	$17,472
2131107	Rocky Gorge Dam	191	0.47	$1,456
2140201	Potomac River U tidal	3831	37.63	$81,900
2140203	Piscataway Creek	1883	10.54	$22,932
2140204	Oxon Creek	2127	21.87	$35,672

Watershed Code	Watershed Name	Number of Projects	Impervious Acres Restored[1]	Implementation Cost ($)[2]
2140205	Anacostia River	8270	89.49	$157,976
		23,646	**217.32**	**$432,432**
Grand Total		**86,521**	**5,695.36**	**$349,057,690**

[1] Impervious acre's restoration through all programs (inlet cleaning, tree planting, septic, micro scale, and structural BMP).
[2] Zero cost indicates no cost to the County; however, IA credits are claimed.
[3] Stream Restoration Projects include WSSC consent decree for sewer line repair in the stream valley. Stream Restoration cost estimates are not provided for WSSC projects.
[4] County does not have itemized costs associated with this category as these are operational programs.

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

The County continues to perform various restoration activities that are outlined in its restoration plans. The Clean Water Partnership (formerly called the Private Public Partnership) continues to design and build water quality restoration projects. Similarly, the County is continuing to implement projects throughout the County and has active projects in various stages that cover over 3,325 acres of impervious area that will be credited towards the Consent Decree and towards the permit requirements (see Table F-36).

The County has updated its TMDL load reduction accounting methodology to align nutrient and sediment baseline, target, and progress loads with the MDE methodology and data in the MDE's April 2022 TMDL Implementation Progress and Planning Tool (TIPP Tool) and its 2021 Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated. The TMDL compliance tables in this report are updated to match the methodology and data in the TIPP Tool and WLA guidance.

Because of this change, the baseline and target progress load that are presented in this annual report will not be directly comparable to previous annual reports. These new baseline and target loads will be reflected in planned updates to restoration plans over the next year, when MDE will have chance to review our revised loads. In addition, the County reevaluated past restoration progress and updated the yearly progress reductions. Since the calculations in this report use recent guidelines and data, there might be small changes in future annual reports if MDE changes its TIPP Tool or WLA guidance. Baseline and target loads should be considered draft until reviewed by MDE.

County progress towards local TMDLs

As mentioned above, nutrient and sediment loads were calculated using methodology and data from the MDE TIPP Tool and their 2021 guidance. Neither the TIPP Tool or guidance has information for loading rates or BMP efficiencies for bacteria, BOD, or PCBs. Target loads should be considered draft until reviewed by MDE.

During discussions with MDE, MDE indicated that progress towards meeting bacteria and PCB TMDLs will be tracked through programmatic activities such as watershed monitoring, source elimination, and public outreach. MDE 2022 guidance on bacteria TMDL watershed implementation plans identify issues and inaccuracies in quantifying bacteria loading rates and BMP efficiencies. The guidance describes source tracking and elimination to address bacteria TMDLs instead of traditional BMPs. Therefore, bacteria load reduction tables are not presented in this annual report. In its 2022 PCB restoration guidance, MDE describes a similar source tracking approach and does not require PCB load reductions to be tracked. Additionally, MDE has stated that they will not develop BOD loading rates or BMP efficiencies. MDE stated that if a permittee meets its nutrient reduction, that the BOD reduction for that watershed will be met. Therefore, BOD loads are not presented in this annual report. Table F-2 lists the local TMDLs and their associated tables.

Table F-2. Local TMDLs and Associated Tables.

Main Watershed	Analyte	Table
Anacostia	Total Nitrogen, Total Phosphorus, Total Suspended Solids	Table F-3, Table F-4, Table F-5, Table F-6, Table F-7
Mattawoman	Total Nitrogen, Total Phosphorus	Table F-8
Piscataway	Total Suspended Solids	Table F-9
Lower Patuxent	Total Suspended Solids	Table F-10
Middle Patuxent	Total Suspended Solids	Table F-11
Upper Patuxent	Total Suspended Solids	Table F-12
Rocky Gorge	Total Phosphorus	Table F-13

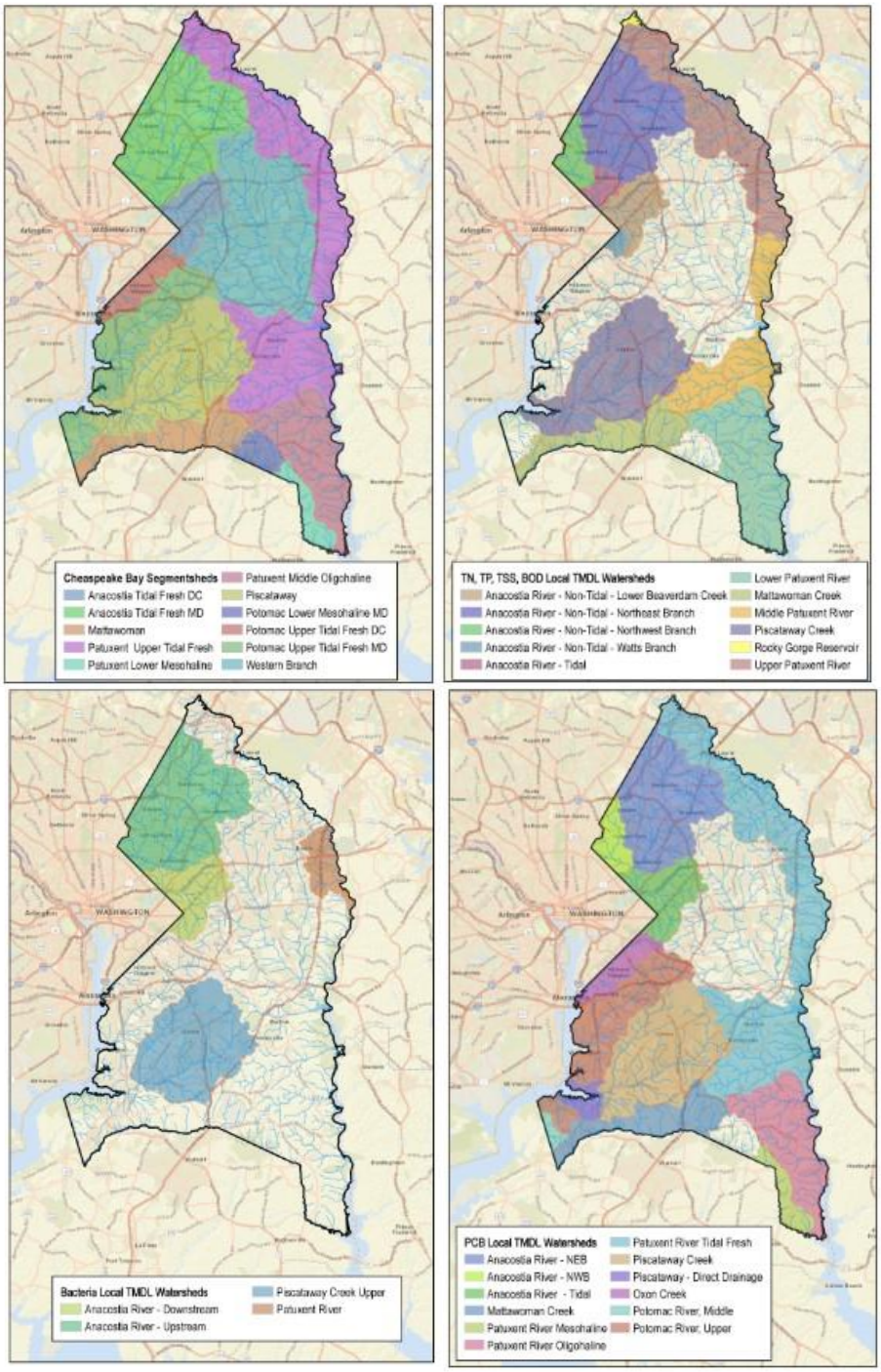


Figure F-1. Local TMDL and Chesapeake Bay Allocation Watersheds.

Table F-3 through Table F-13 show the pollutant load reductions for the local TMDLs from all completed projects.

Table F-3. Anacostia River (Tidal [Not incl. loads from Watts Br & LBC]) Local TMDL: Current Achieved Reductions

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
TMDL Issue Date	2008	2008	2007
Target Load Reduction[1]	16,307.95	2,000.426	5,863,671
BMP Reduction – FY 2008	0.00	0.00	0
BMP Reduction – FY 2009	0.00	0.00	0
BMP Reduction – FY 2010	2.43	0.297	1,157
BMP Reduction – FY 2011	2.43	0.297	1,157
BMP Reduction – FY 2012	0.00	0.00	0
BMP Reduction – FY 2013	0.66	0.081	308
4th and 5th Generation Permit			
BMP Reduction – FY 2014	0.13	0.002	94
BMP Reduction – FY 2015	1.36	0.222	526
BMP Reduction – FY 2016	0.63	0.089	257
BMP Reduction – FY 2017	39.70	7.180	23,519
BMP Reduction – FY 2018	0.44	0.065	171
BMP Reduction – FY 2019	0.11	0.013	53
BMP Reduction – FY 2020	2.69	0.212	1,479
BMP Reduction – FY 2021	296.32	87.425	169,561
BMP Reduction – FY 2022	145.77	24.853	107,748
BMP Reduction – FY 2023[2]	1.68	0.233	597
Total BMP Reduction	**494.35**	**120.968**	**306,628**
Percent Reduction of Target	**3.0%**	**6.0%**	**5.2%**

[1] *TMDL required load reduction for MS4 areas.*

[2] The 5th generation permit was issued December 2, 2022.

Table F-4. Anacostia River (Non-Tidal: Lower Beaverdam Creek) Local TMDL: Current Achieved Reductions

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
TMDL Issue Date	2008	2008	2007
Target Load Reduction[1]	44,246.94	5,386.821	15,339,757

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
BMP Reduction – FY 2008	0.00	0.00	0
BMP Reduction – FY 2009	0.00	0.00	0
BMP Reduction – FY 2010	0.76	0.119	279
BMP Reduction – FY 2011	16.60	3.329	10,346
BMP Reduction – FY 2012	12.54	11.369	41,464
BMP Reduction – FY 2013	32.37	3.929	15,479
4th and 5th Generation Permit			
BMP Reduction – FY 2014	0.03	0.004	14
BMP Reduction – FY 2015	0.22	0.000	157
BMP Reduction – FY 2016	4.67	0.584	2,135
BMP Reduction – FY 2017	284.25	52.264	181,172
BMP Reduction – FY 2018	187.59	58.244	194,533
BMP Reduction – FY 2019	2.37	0.191	1,314
BMP Reduction – FY 2020	162.17	34.388	128,828
BMP Reduction – FY 2021	448.00	248.000	116,745
BMP Reduction – FY 2022	1.40	0.202	572
BMP Reduction – FY 2023[2]	45.04	16.448	60,967
Total BMP Reduction	**1,198.01**	**429.072**	**754,005**
Percent Reduction of Target	**2.7%**	**8.0%**	**4.9%**

[1] *TMDL required load reduction for MS4 areas.*
[2] The 5th generation permit was issued December 2, 2022.

Table F-5. Anacostia River (Non-Tidal: Northeast Branch) Local TMDL: Current Achieved Reductions

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
TMDL Issue Date	2008	2008	2007
Target Load Reduction[1]	83,487.01	10,407.728	28,868,384
BMP Reduction – FY 2008	0.00	0.00	0
BMP Reduction – FY 2009	0.00	0.00	0
BMP Reduction – FY 2010	79.71	16.432	52,214
BMP Reduction – FY 2011	0.00	0.00	0
BMP Reduction – FY 2012	0.00	0.00	0

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
BMP Reduction – FY 2013	105.19	95.355	347,768
4th and 5th Generation Permit			
BMP Reduction – FY 2014	0.46	0.039	252
BMP Reduction – FY 2015	37.39	32.624	118,763
BMP Reduction – FY 2016	11.63	1.986	6,836
BMP Reduction – FY 2017	1,264.30	259.568	819,996
BMP Reduction – FY 2018	2,707.00	524.729	1,863,897
BMP Reduction – FY 2019	113.01	18.191	42,437
BMP Reduction – FY 2020	536.66	105.177	343,779
BMP Reduction – FY 2021	2,698.41	648.275	1,613,608
BMP Reduction – FY 2022	221.91	197.054	722,657
BMP Reduction – FY 2023[2]	259.32	51.313	169,758
Total BMP Reduction	**8,034.99**	**1,950.742**	**6,101,964**
Percent Reduction of Target	**9.6%**	**18.7%**	**21.1%**

[1] *TMDL required load reduction for MS4 areas.*
[2] The 5th generation permit was issued December 2, 2022.

Table F-6. Anacostia River (Non-Tidal: Northwest Branch) Local TMDL: Current Achieved Reductions

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
TMDL Issue Date	2008	2008	2007
Target Load Reduction[1]	29,338.79	3,751.421	10,213,722
BMP Reduction – FY 2008	6.44	0.955	3,220
BMP Reduction – FY 2009	0.00	0.00	0
BMP Reduction – FY 2010	6.03	0.725	2,907
BMP Reduction – FY 2011	0.00	0.00	0
BMP Reduction – FY 2012	0.00	0.00	0
BMP Reduction – FY 2013	25.18	4.767	14,527
4th and 5th Generation Permit			
BMP Reduction – FY 2014	0.15	0.003	103
BMP Reduction – FY 2015	0.38	0.035	202
BMP Reduction – FY 2016	2.14	0.269	939
BMP Reduction – FY 2017	2,192.60	220.755	97,985

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
BMP Reduction – FY 2018	9.39	1.400	3,588
BMP Reduction – FY 2019	56.10	9.395	39,597
BMP Reduction – FY 2020	10.67	1.430	4,698
BMP Reduction – FY 2021	761.74	232.103	180,969
BMP Reduction – FY 2022	0.0	0.0	0
BMP Reduction – FY 2023[2]	28.07	3.957	9,304
Total BMP Reduction	**3,093.43**	**475.006**	**356,429**
Percent Reduction of Target	**10.5%**	**12.7%**	**3.5%**

[1] *TMDL required load reduction for MS4 areas.*
[2] The 5th generation permit was issued December 2, 2022.

Table F-7. Anacostia River (Non-Tidal: Watts Branch) Local TMDL: Current Achieved Reductions

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
TMDL Issue Date	2008	2008	2007
Target Load Reduction[1]	6,398.40	823.687	2,206,264
BMP Reduction – FY 2008	0.00	0.00	0
BMP Reduction – FY 2009	0.00	0.00	0
BMP Reduction – FY 2010	165.08	149.670	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 and 5th Generation Permit			
BMP Reduction – FY 2014	0.00	0.00	0
BMP Reduction – FY 2015	0.10	0.012	51
BMP Reduction – FY 2016	0.03	0.003	12
BMP Reduction – FY 2017	14.05	10.508	38,551
BMP Reduction – FY 2018	196.91	40.880	122,315
BMP Reduction – FY 2019	3.17	0.545	2,323
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[2]	0.58	0.081	208

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
Total BMP Reduction	**379.93**	**201.699**	**709,315**
Percent Reduction of Target	**5.9%**	**24.5%**	**32.2%**

[1] *TMDL required load reduction for MS4 areas.*

[2] The 5th generation permit was issued December 2, 2022.

Table F-8. Mattawoman Creek Local TMDL – Current Achieved Reductions

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
TMDL Issue Date	2005	2005
Target Load Reduction[1]	9,280.86	1,093.864
4th and 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	13.77	2.223
BMP Reduction – FY 2018	495.79	113.795
BMP Reduction – FY 2019	0.00	0.00
BMP Reduction – FY 2020	109.83	25.708
BMP Reduction – FY 2021	369.48	334.999
BMP Reduction – FY 2022	0.00	0.00
BMP Reduction – FY 2023[2]	10.36	1.672
Total BMP Reduction	**999.21**	**478.393**
Percent Reduction of Target	**10.8%**	**43.7%**

[1] *TMDL required load reduction for MS4 areas.*

[2] The 5th generation permit was issued December 2, 2022.

Table F-9. Piscataway Creek – Current Achieved Reductions

Pollutant	Total Suspended Solids (lbs./year)
TMDL Issue Date	2019
Target Load Reduction[1]	17,072,807
4th and 5th Generation Permit	
BMP Reduction – FY 2014[2]	0[2]

Pollutant	Total Suspended Solids (lbs./year)
BMP Reduction – FY 2015[2]	0[2]
BMP Reduction – FY 2016[2]	0[2]
BMP Reduction – FY 2017[2]	0[2]
BMP Reduction – FY 2018[2]	0[2]
BMP Reduction – FY 2019	36,696
BMP Reduction – FY 2020	39,606
BMP Reduction – FY 2021	2,352,036
BMP Reduction – FY 2022	1,725,731
BMP Reduction – FY 2023[3]	205,072
Total BMP Reduction	**4,359,140**
Percent Reduction of Target	**25.5%**

[1] *TMDL required load reduction for MS4 areas.*

[2] *Prior to development of TMDL. Not included in restoration totals.*

[3] The 5th generation permit was issued December 2, 2022.

Table F-10. Lower Patuxent Local TMDL – Current Achieved Reductions

Pollutant	Total Suspended Solids (lbs./year)
TMDL Issue Date	2018
Target Load Reduction[1]	3,593,205
4th and 5th Generation Permit	
BMP Reduction – FY 2014[2]	0[2]
BMP Reduction – FY 2015[2]	0[2]
BMP Reduction – FY 2016[2]	0[2]
BMP Reduction – FY 2017[2]	0[2]
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[3]	219
Total BMP Reduction	**3,681,775**
Percent Reduction of Target	**102.5%[4]**

[1] *TMDL required load reduction for MS4 areas.*

[2] *Prior to development of TMDL. Not included in restoration totals.*

[3] The 5th generation permit was issued December 2, 2022.

[4] The County will discuss TMDLs that appear to be met through BMP reductions with MDE. TMDL compliance is expected to be confirmed through monitoring.

Table F-11. Middle Patuxent Local TMDL – Current Achieved Reductions

Pollutant	Total Suspended Solids (lbs./year)
TMDL Issue Date	2018
Target Load Reduction[1]	3,616,615
4th and 5th Generation Permit	
BMP Reduction – FY 2014[2]	0[2]
BMP Reduction – FY 2015[2]	0[2]
BMP Reduction – FY 2016[2]	0[2]
BMP Reduction – FY 2017[2]	0[2]
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[3]	2,584
Total BMP Reduction	**9,336**
Percent Reduction of Target	**0.3%**

[1] TMDL required load reduction for MS4 areas.
[2] Prior to development of TMDL. Not included in restoration totals.
[3] The 5th generation permit was issued December 2, 2022.

Table F-12. Upper Patuxent Local TMDL – Current Achieved Reductions

Pollutant	Total Suspended Solids (lbs./year)
TMDL Issue Date	2011
Target Load Reduction[1]	1,894,824
3rd Generation Permit	
BMP Reduction – FY 2011	0
BMP Reduction – FY 2012	976,944
BMP Reduction – FY 2013	0
4th and 5th Generation Permit	
BMP Reduction – FY 2014	101

Pollutant	Total Suspended Solids (lbs./year)
BMP Reduction – FY 2015	33,864
BMP Reduction – FY 2016	447
BMP Reduction – FY 2017	14,561
BMP Reduction – FY 2018	309,752
BMP Reduction – FY 2019	4,312
BMP Reduction – FY 2020	2,116,417
BMP Reduction – FY 2021	660,220
BMP Reduction – FY 2022	0
BMP Reduction – FY 2023[2]	12,883
Total BMP Reduction	**4,129,502**
Percent Reduction of Target	**218%[3]**

[1] *TMDL required load reduction for MS4 areas.*

[2] The 5th generation permit was issued December 2, 2022.

[3] The County will discuss TMDLs that appear to be met through BMP reductions with MDE. TMDL compliance is expected to be confirmed through monitoring.

Table F-13. Rocky Gorge Local TMDL: Current Achieved Reductions

Pollutant	Total Phosphorus (lbs./year)
TMDL Issue Date	2008
Target Load Reduction[1]	12.543
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 and 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	0.016
BMP Reduction – FY 2018	0.00
BMP Reduction – FY 2019	0.00
BMP Reduction – FY 2020	0.00

Pollutant	Total Phosphorus (lbs./year)
BMP Reduction – FY 2021	0.00
BMP Reduction – FY 2022	0.00
BMP Reduction – FY 2023[2]	0.049
Total BMP Reduction	0.064
Percent Reduction of Target	**0.5%**

[1] *TMDL required load reduction for MS4 areas.*
[2] The 5th generation permit was issued December 2, 2022.

Table F-24Table F-14 through Table F-24 show County's anticipated annual restoration targets to meet local TMDLs, in addition to the actual achieved reductions and reductions from BMPs in the planning design, or construction phases. The planned BMP reductions are based on BMPs in planning, design, or construction phases. The actual and planned BMP load reductions leave load reduction gap. The estimated annual load reductions are the annual load reductions needed to fill this gap. These assume treating 2 percent of the untreated impervious area in the watershed per year. Using that implementation average as a guide, the end date to implement this WIP fully is determined. The projected yearly reductions and end dates in this report have been adjusted since last year's annual report using the average annual reductions completed and projected in each watershed to determine the revised TMDL end date. As mentioned above, the County will be reevaluating and updating the local restoration plans using guidance and input from MDE. These updates will include revising the restoration plan end dates. Target loads were recently recalculated as part of an ongoing County effort and should be considered draft until reviewed by MDE.

Table F-14. Annual Load Reduction Targets for Anacostia River (Tidal) Local TMDLs

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)	Status
2007 (Actual)	N/A	N/A	0	Reduced
2008 (Actual)	0.00	0.00	0	Reduced
2009 (Actual)	0.00	0.00	0	Reduced
2010 (Actual)	2.43	0.30	1,157	Reduced
2011 (Actual)	2.43	0.30	1,157	Reduced
2012 (Actual)	0.00	0.00	0	Reduced
2013 (Actual)	0.66	0.08	308	Reduced
2014 (Actual)	0.13	0.00	94	Reduced
2015 (Actual)	1.36	0.22	526	Reduced
2016 (Actual)	0.63	0.09	257	Reduced
2017 (Actual)	39.70	7.18	23,519	Reduced

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)	Status
2018 (Actual)	0.44	0.07	171	Reduced
2019 (Actual)	0.11	0.01	53	Reduced
2020 (Actual)	2.69	0.21	1,479	Reduced
2021 (Actual)	296.32	87.43	169,561	Reduced
2022 (Actual)	145.77	24.85	107,748	Reduced
2023 (Actual)	2.06	0.29	731	Reduced
2024 (Planned)	0.00	0.00	0	Planned[1]
2025 (Planned)	0.00	0.00	0	Planned[1]
2026 (Planned)	0.00	0.00	0	Planned[1]
2027 (Planned)	0.00	0.00	0	Planned[1]
Total Restoration	494.73	121.02	306,761	Planned[1]
Estimated Annual Reductions Through (YEAR)	180 (2111)	50 (2061)	211,263 (2050)	Estimated[2]
Target Reduction	**16,307.95**	**2,000.43**	**5,863,671**	**Target**

[1] Restoration projects are in the planning, design, or construction phase, therefore load reductions and EIAs are estimated. The actual load reduction and EIAs will be determined after project completion.

[2] Estimated annual reductions are the annual reductions needed to meet the TMDL target reduction after actual and planned reductions are subtracted from the targe load reduction. The project annual reductions are estimated by annually treating 2 percent of the untreated impervious area in the watershed until the TMDL target reduction is met.

Table F-15. Annual Load Reduction Targets for Anacostia River (Non-Tidal: Lower Beaverdam Creek) Local TMDLs

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)	Status
2007 (Actual)	N/A	N/A	0	Reduced
2008 (Actual)	0.00	0.00	0	Reduced
2009 (Actual)	0.00	0.00	0	Reduced
2010 (Actual)	0.76	0.119	279	Reduced
2011 (Actual)	16.60	3.329	10,346	Reduced
2012 (Actual)	12.54	11.369	41,464	Reduced
2013 (Actual)	32.37	3.929	15,479	Reduced
2014 (Actual)	0.03	0.004	14	Reduced
2015 (Actual)	0.22	0.0004	157	Reduced
2016 (Actual)	4.67	0.584	2,135	Reduced
2017 (Actual)	283.66	52.183	180,964	Reduced
2018 (Actual)	187.59	58.244	194,533	Reduced

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)	Status
2019 (Actual)	2.37	0.191	1,314	Reduced
2020 (Actual)	162.17	34.388	128,828	Reduced
2021 (Actual)	448.00	248.000	116,745	Reduced
2022 (Actual)	1.40	0.202	572	Reduced
2023 (Actual)	41.88	16.010	59,843	Reduced
2024 (Planned)	122.25	110.840	404,240	Planned[1]
2025 (Planned)	0.00	0.00	0	Planned[1]
2026 (Planned)	0.00	0.00	0	Planned[1]
2027 (Planned)	0.00	0.00	0	Planned[1]
Total Restoration	1,316.51	539.39	1,160,133	Planned[1]
Estimated annual reduction through (YEAR)	490 (2111)	129 (2061)	539,193 (2050)	Estimated[2]
Target Reduction	**44,246.94**	**5,386.82**	**15,339,757**	**Target**

[1] Restoration projects are in the planning, design, or construction phase, therefore load reductions and EIAs are estimated. The actual load reduction and EIAs will be determined after project completion.

[2] Estimated annual reductions are the annual reductions needed to meet the TMDL target reduction after actual and planned reductions are subtracted from the targe load reduction. The project annual reductions are estimated by annually treating 2 percent of the untreated impervious area in the watershed until the TMDL target reduction is met.

Table F-16. Annual Load Reduction Targets for Anacostia River (Non-Tidal: Northeast Branch) Local TMDLs

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)	Status
2007 (Actual)	N/A	N/A	0	Reduced
2008 (Actual)	0.00	0.00	0	Reduced
2009 (Actual)	0.00	0.00	0	Reduced
2010 (Actual)	79.71	16.43	52,214	Reduced
2011 (Actual)	0.00	0.00	0	Reduced
2012 (Actual)	0.00	0.00	0	Reduced
2013 (Actual)	105.19	95.36	347,768	Reduced
2014 (Actual)	0.46	0.04	252	Reduced
2015 (Actual)	37.39	32.62	118,763	Reduced
2016 (Actual)	11.63	1.99	6,836	Reduced
2017 (Actual)	1,264.30	259.57	819,996	Reduced

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)	Status
2018 (Actual)	2,707.00	524.73	1,863,897	Reduced
2019 (Actual)	113.01	18.19	42,437	Reduced
2020 (Actual)	536.66	105.18	343,779	Reduced
2021 (Actual)	2,698.41	648.28	1,613,608	Reduced
2022 (Actual)	221.91	197.05	722,657	Reduced
2023 (Actual)	259.32	51.31	169,758	Reduced
2024 (Planned)	1,876.29	351.474	1,329,318	Planned[1]
2025 (Planned)	0.00	0.00	0	Planned[1]
2026 (Planned)	5.02	0.77	2,157	Planned[1]
2027 (Planned)	0.00	0.00	0	Planned[1]
Total Restoration	9,916.30	2,302.98	7,433,440	Planned[1]
Estimated Annual Reductions Through (YEAR)	840 (2111)	216 (2061)	814,897 (2050)	Estimated[2]
Target Reduction	**83,487.01**	**10,407.73**	**28,868,384**	**Target**

[1] Restoration projects are in the planning, design, or construction phase, therefore load reductions and EIAs are estimated. The actual load reduction and EIAs will be determined after project completion.

[2] Estimated annual reductions are the annual reductions needed to meet the TMDL target reduction after actual and planned reductions are subtracted from the targe load reduction. The project annual reductions are estimated by annually treating 2 percent of the untreated impervious area in the watershed until the TMDL target reduction is met.

Table F-17. Annual Load Reduction Targets for Anacostia River (Non-Tidal: Northwest Branch) Local TMDLs

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)	Status
2007 (Actual)	N/A	N/A	0	Reduced
2008 (Actual)	6.44	0.96	3,220	Reduced
2009 (Actual)	0.00	0.00	0	Reduced
2010 (Actual)	6.03	0.73	2,907	Reduced
2011 (Actual)	0.00	0.00	0	Reduced
2012 (Actual)	0.00	0.00	0	Reduced
2013 (Actual)	25.18	4.767	14,527	Reduced
2014 (Actual)	0.15	0.003	103	Reduced
2015 (Actual)	0.38	0.035	202	Reduced
2016 (Actual)	2.14	0.269	939	Reduced

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)	Status
2017 (Actual)	2,192.60	220.755	97,985	Reduced
2018 (Actual)	9.39	1.400	3,588	Reduced
2019 (Actual)	56.10	9.395	39,597	Reduced
2020 (Actual)	10.67	1.430	4,698	Reduced
2021 (Actual)	761.74	232.103	180,969	Reduced
2022 (Actual)	0.00	0.00	0	Reduced
2023 (Actual)	28.07	3.957	9,304	Reduced
2024 (Planned)	0.00	0.00	0	Planned[1]
2025 (Planned)	4.95	0.921	1,112	Planned[1]
2026 (Planned)	0.00	0.00	0	Planned[1]
2027 (Planned)	0.00	0.00	0	Planned[1]
Total Restoration	3,103.84	476.72	359,152	Planned[1]
Estimated Annual Reductions Through (YEAR)	300 (2111)	87 (2061)	374,705 (2050)	Estimated[2]
Target Reduction	**29,338.79**	**3,751.42**	**10,213,722**	**Target**

[1] Restoration projects are in the planning, design, or construction phase, therefore load reductions and EIAs are estimated. The actual load reduction and EIAs will be determined after project completion.

[2] Estimated annual reductions are the annual reductions needed to meet the TMDL target reduction after actual and planned reductions are subtracted from the targe load reduction. The project annual reductions are estimated by annually treating 2 percent of the untreated impervious area in the watershed until the TMDL target reduction is met.

Table F-18. Annual Load Reduction Targets for Anacostia River (Non-Tidal: Watts Branch) Local TMDLs

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)	Status
2007 (Actual)	N/A	N/A	0	Reduced
2008 (Actual)	0.00	0.00	0	Reduced
2009 (Actual)	0.00	0.00	0	Reduced
2010 (Actual)	165.08	149.67	545,855	Reduced
2011 (Actual)	0.00	0.00	0	Reduced
2012 (Actual)	0.00	0.00	0	Reduced
2013 (Actual)	0.00	0.00	0	Reduced
2014 *(Actual)*	0.00	0.00	0	Reduced
2015 (Actual)	0.10	0.01	51	Reduced
2016 (Actual)	0.03	0.00	12	Reduced

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)	Status
2017 (Actual)	14.05	10.51	38,551	Reduced
2018 (Actual)	196.91	40.88	122,315	Reduced
2019 (Actual)	3.17	0.55	2,323	Reduced
2020 (Actual)	0.00	0.00	0	Reduced
2021 (Actual)	0.00	0.00	0	Reduced
2022 (Actual)	0.00	0.00	0	Reduced
2023 (Actual)	0.58	0.08	208	Reduced
2024 (Planned)	0.00	0.00	0	Planned[1]
2025 (Planned)	41.55	37.67	137,392	Planned[1]
2026 (Planned)	0.00	0.00	0	Planned[1]
2027 (Planned)	0.00	0.00	0	Planned[1]
Total Restoration	421.47	239.37	846,707	Planned[1]
Estimated Annual Reductions Through (YEAR)	68 (2111)	16 (2060)	51,687 (2050)	Estimated[2]
Target Reduction	**6,398.40**	**823.69**	**2,206,264**	**Target**

[1] Restoration projects are in the planning, design, or construction phase, therefore load reductions and EIAs are estimated. The actual load reduction and EIAs will be determined after project completion.

[2] Estimated annual reductions are the annual reductions needed to meet the TMDL target reduction after actual and planned reductions are subtracted from the targe load reduction. The project annual reductions are estimated by annually treating 2 percent of the untreated impervious area in the watershed until the TMDL target reduction is met.

Table F-19. Annual Load Reduction Targets for Mattawoman Creek Local TMDLs

Pollutant	Total Nitrogen (lbs./year) [2]	Total Phosphorus (lbs./year) [2]	Status
2005 *(Actual)*	0.00	0.000	Reduced
2006 *(Actual)*	0.00	0.000	Reduced
2007 *(Actual)*	0.00	0.000	Reduced
2008 *(Actual)*	0.00	0.000	Reduced
2009 *(Actual)*	0.00	0.000	Reduced
2010 *(Actual)*	0.00	0.000	Reduced
2011 *(Actual)*	0.00	0.000	Reduced
2012 *(Actual)*	0.00	0.000	Reduced
2013 *(Actual)*	0.00	0.000	Reduced
2014 *(Actual)*	0.00	0.000	Reduced
2015 (Actual)	0.00	0.000	Reduced
2016 (Actual)	0.00	0.000	Reduced
2017 (Actual)	13.75	2.219	Reduced

Pollutant	Total Nitrogen (lbs./year) [2]	Total Phosphorus (lbs./year) [2]	Status
2018 (Actual)	495.79	113.795	Reduced
2019 (Actual)	0.00	0.000	Reduced
2020 (Actual)	109.83	25.708	Reduced
2021 (Actual)	369.48	334.999	Reduced
2022 (Actual)	0.00	0.000	Reduced
2023 (Actual)	10.36	1.672	Reduced
2024 (Planned)	348.59	81.174	Planned[1]
2025 (Planned)	0.00	0.000	Planned[1]
2026 (Planned)	0.00	0.000	Planned[1]
2027 (Planned)	0.00	0.000	Planned[1]
Total Restoration	1,347.82	559.57	Planned[1]
Estimated Annual Reductions Through (YEAR)	55 (2168)	13 (2065)	Estimated[2]
Target Reduction	**9,280.86**	**1,093.86**	**Target**

[1] Restoration projects are in the planning, design, or construction phase, therefore load reductions and EIAs are estimated. The actual load reduction and EIAs will be determined after project completion.
[2] Estimated annual reductions are the annual reductions needed to meet the TMDL target reduction after actual and planned reductions are subtracted from the targe load reduction. The project annual reductions are estimated by annually treating 2 percent of the untreated impervious area in the watershed until the TMDL target reduction is met.

Table F-20. Annual Load Reduction Targets for Piscataway Creek Local TMDLs

Pollutant	Total Suspended Solids (lbs./year)	Status
2014 *(Actual)*	0	Reduced
2015 (Actual)	0	Reduced
2016 (Actual)	0	Reduced
2017 (Actual)	0	Reduced
2018 (Actual)	0	Reduced
2019 (Actual)	36,696	Reduced
2020 (Actual)	39,606	Reduced
2021 (Actual)	2,352,036	Reduced
2022 (Actual)	1,725,731	Reduced
2023 (Actual)	205,072	Reduced
2024 (Planned)	80,000	Planned[1]
2025 (Planned)	4,764,495	Planned[1]
2026 (Planned)	0	Planned[1]
2027 (Planned)	0	Planned[1]
Total Restoration	9,203,636	Planned[1]
Estimated Annual Reductions Through (YEAR)	775,062 (2034)	Estimated[2]

Pollutant	Total Suspended Solids (lbs./year)	Status
Target Reduction	**17,072,807**	**Target**

[1] Restoration projects are in the planning, design, or construction phase, therefore load reductions and EIAs are estimated. The actual load reduction and EIAs will be determined after project completion.
[2] Estimated annual reductions are the annual reductions needed to meet the TMDL target reduction after actual and planned reductions are subtracted from the targe load reduction. The project annual reductions are estimated by annually treating 2 percent of the untreated impervious area in the watershed until the TMDL target reduction is met.

Table F-21. Annual Load Reduction Targets for Lower Patuxent Local TMDLs

Pollutant	Total Suspended Solids (lbs./year)	Status
2014 (Actual)[1]	0[1]	Reduced
2015 (Actual) [1]	0[1]	Reduced
2016 (Actual) [1]	0[1]	Reduced
2017 (Actual) [1]	0[1]	Reduced
2018 (Actual)	4,137	Reduced
2019 (Actual)	0	Reduced
2020 (Actual)	0	Reduced
2021 (Actual)	3,677,419	Reduced
2022 (Actual)	0	Reduced
2023 (Actual)	219	Reduced
2024 (Planned)	168,538	Projected
2025 (Planned)	768,800	Projected
2026 (Planned)	0	Planned[2]
2027 (Planned)	0	Planned[2]
Total Restoration	4,619,113	Planned[2]
Estimated Annual Reductions Through (YEAR)	Target Met[3]	Estimated
Target Reduction	**3,593,205**	**Target**

[1] Prior to development of TMDL. Not included in restoration totals.
[2] Restoration projects are in the planning, design, or construction phase, therefore load reductions and EIAs are estimated. The actual load reduction and EIAs will be determined after project completion.
[3] The County will discuss TMDLs that appear to be met through BMP reductions with MDE. TMDL compliance is expected to be confirmed through monitoring.

Table F-22. Annual Load Reduction Targets for Middle Patuxent Local TMDLs

Pollutant	Total Suspended Solids (lbs./year)	Status
2014 *(Actual)* [1]	0[1]	Reduced

Pollutant	Total Suspended Solids (lbs./year)	Status
2015 (Actual) [1]	0[1]	Reduced
2016 (Actual) [1]	0[1]	Reduced
2017 (Actual) [1]	0[1]	Reduced
2018 (Actual)	6,752	Reduced
2019 (Actual)	0	Reduced
2020 (Actual)	0	Reduced
2021 (Actual)	0	Reduced
2022 (Actual)	0	Reduced
2023 (Actual)	2,584	Reduced
2024 (Planned)	0	Planned
2025 (Planned)	0	Planned[2]
2026 (Planned)	0	Planned[2]
2027 (Planned)	0	Planned[2]
Total Restoration	9,336	Planned[2]
Estimated Annual Reductions Through (YEAR)	126,203 (2052)	Estimated[3]
Target Reduction	**3,616,655**	**Target**

[1] Prior to development of TMDL. Not included in restoration totals.
[2] Restoration projects are in the planning, design, or construction phase, therefore load reductions and EIAs are estimated. The actual load reduction and EIAs will be determined after project completion.
[3] Estimated annual reductions are the annual reductions needed to meet the TMDL target reduction after actual and planned reductions are subtracted from the targe load reduction. The project annual reductions are estimated by annually treating 2 percent of the untreated impervious area in the watershed until the TMDL target reduction is met.

Table F-23. Annual Load Reduction Targets for Upper Patuxent Local TMDLs

Pollutant	Total Suspended Solids (lbs./year)	Status
2011 (Actual)	0	Reduced
2012 (Actual)	976,944	Reduced
2013 (Actual)	0	Reduced
2014 (Actual)	101	Reduced
2015 (Actual)	33,864	Reduced
2016 (Actual)	447	Reduced
2017 (Actual)	14,561	Reduced
2018 (Actual)	309,752	Reduced
2019 (Actual)	4,312	Reduced
2020 (Actual)	2,116,417	Reduced
2021 (Actual)	660,220	Reduced

Pollutant	Total Suspended Solids (lbs./year)	Status
2022 (Actual)	0	Reduced
2023 (Actual)	12,883	Reduced
2024 (Planned)	1,108,534	Planned[1]
2025 (Planned)	0	Planned[1]
2026 (Planned)	0	Planned[1]
2027 (Planned)	0	Planned[1]
Total Restoration	5,238,036	Planned[1]
Estimated Annual Reductions Through (YEAR)	Target Met[2]	Estimated
Target Reduction	**1,894,824**	**Target**

[1] Restoration projects are in the planning, design, or construction phase, therefore load reductions and EIAs are estimated. The actual load reduction and EIAs will be determined after project completion.
[2] The County will discuss TMDLs that appear to be met through BMP reductions with MDE. TMDL compliance is expected to be confirmed through monitoring.

Table F-24. Annual Load Reduction Targets for Rocky Gorge Local TMDL

Pollutant	Total Phosphorus (lbs./year)	Status
2014 *(Actual)*	0.00	Reduced
2015 (Actual)	0.00	Reduced
2016 (Actual)	0.00	Reduced
2017 (Actual)	0.02	Reduced
2018 (Actual)	0.00	Reduced
2019 (Actual)	0.00	Reduced
2020 (Actual)	0.00	Reduced
2021 (Actual)	0.00	Reduced
2022 (Actual)	0.00	Reduced
2023 (Actual)	0.05	Reduced
2024 (Planned)	155.00	Planned[1]
2025 (Planned)	0	Planned[1]
2026 (Planned)	0	Planned[1]
2027 (Planned)	0	Planned[1]
Total Restoration	155.06	Planned[1]
Estimated Annual Reductions Through (YEAR)	Target Met[2]	Estimated
Target Reduction	**12.15**	**Target**

[1] Restoration projects are in the planning, design, or construction phase, therefore load reductions and EIAs are estimated. The actual load reduction and EIAs will be determined after project completion.

[2] The County will discuss TMDLs that appear to be met through BMP reductions with MDE. TMDL compliance is expected to be confirmed through monitoring.

County progress towards the Bay TMDL

Table F-25 through Table F-35 below show the progress of the County's restoration efforts toward the Chesapeake Bay TMDL (Phase II watershed implementation plan, 2025 target year) for each of the Chesapeake Bay allocation watersheds in the County. Target loads were recently recalculated as part of an ongoing County effort and should be considered draft until reviewed by MDE.

The load reported in the Chesapeake Bay progress tables represent edge-of-tide loads, which are the nutrient and sediment loads that are delivered to the Bay. 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. For some watersheds and analytes, the edge-of-tide and edge-of-stream loads are the same. One example of this is Mattawoman Creek watershed for phosphorus and sediment, but not nitrogen.

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 the following tables, the target reduction and percent reduction are listed as "N/A."

Table F-25. Anacostia Tidal Fresh DC – Chesapeake Bay TMDL Progress

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
TMDL Issuance Date	2010	2010	2010
Target Load Reduction[1]	13,160.39	2,208.616	N/A
3rd Generation Permit			
BMP Reduction – FY 2010	133.23	104.986	240,257
BMP Reduction – FY 2011	13.34	2.333	4,551
BMP Reduction – FY 2012	10.07	7.969	18,241
BMP Reduction – FY 2013	26.01	2.754	6,809
4th and 5th Generation Permit			
BMP Reduction – FY 2014	0.02	0.003	6
BMP Reduction – FY 2015	0.26	0.009	91
BMP Reduction – FY 2016	3.77	0.412	945
BMP Reduction – FY 2017	239.64	43.996	96,661
BMP Reduction – FY 2018	308.90	69.475	139,389
BMP Reduction – FY 2019	4.45	0.515	1,600
BMP Reduction – FY 2020	130.28	24.102	56,674
BMP Reduction – FY 2021	359.91	173.822	51,359
BMP Reduction – FY 2022	1.13	0.142	252

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
BMP Reduction – FY 2023[2]	34.11	11.278	26,418
Total BMP Reduction	**1,264.65**	**441.739**	**643,162**
Percent Reduction of Target	**9.6%**	**20.0%**	**N/A**

[1] *TMDL-required load reduction for MS4 areas*
[2] The 5th generation permit was issued December 2, 2022.

Table F-26. Anacostia Tidal Fresh MD – Chesapeake Bay TMDL Progress

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
TMDL Issuance Date	2010	2010	2010
Target Load Reduction[1]	22,106.90	7,538.200	N/A
3rd Generation Permit			
BMP Reduction – FY 2010	67.56	16.824	45,351
BMP Reduction – FY 2011	1.86	0.286	933
BMP Reduction – FY 2012	0.00	0.00	0
BMP Reduction – FY 2013	100.39	96.584	292,194
4th and 5th Generation Permit			
BMP Reduction – FY 2014	0.57	0.042	361
BMP Reduction – FY 2015	29.98	31.693	96,289
BMP Reduction – FY 2016	11.04	2.260	6,472
BMP Reduction – FY 2017	2,679.50	469.996	758,902
BMP Reduction – FY 2018	2,081.48	507.187	1,505,000
BMP Reduction – FY 2019	129.65	26.602	66,147
BMP Reduction – FY 2020	421.39	102.960	282,003
BMP Reduction – FY 2021	2,878.01	932.844	1,582,748
BMP Reduction – FY 2022	281.50	213.899	669,003
BMP Reduction – FY 2023[2]	217.36	52.750	143,504
Total BMP Reduction	**8,899.82**	**2,453.803**	**5,448,815**
Percent Reduction of Target	**40.3%**	**32.6%**	**N/A**

[1] *TMDL-required load reduction for MS4 areas*
[2] The 5th generation permit was issued December 2, 2022.

Table F-27. Mattawoman Creek Watershed – Chesapeake Bay TMDL Progress

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
TMDL Issuance Date	2010	2010	2010

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
Target Load Reduction[1]	1,414.52	761.050	N/A
3rd Generation Permit			
BMP Reduction – FY 2010	0.00	0.00	0
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 and 5th Generation Permit			
BMP Reduction – FY 2014	0.00	0.00	0
BMP Reduction – FY 2015	0.00	0.00	0
BMP Reduction – FY 2016	0.00	0.00	0
BMP Reduction – FY 2017	10.98	2.219	5,821
BMP Reduction – FY 2018	396.16	113.795	316,428
BMP Reduction – FY 2019	0.00	0.00	0
BMP Reduction – FY 2020	87.76	25.708	66,080
BMP Reduction – FY 2021	295.24	334.999	1,221,760
BMP Reduction – FY 2022	0.00	0.00	0
BMP Reduction – FY 2023[2]	8.28	1.672	4,388
Total BMP Reduction	**798.42**	**478.393**	**1,614,477**
Percent Reduction of Target	**56.4%**	**62.9%**	**N/A**

[1] *TMDL-required load reduction for MS4 areas*
[2] The 5th generation permit was issued December 2, 2022.

Table F-28. Patuxent River Lower Mesohaline – Chesapeake Bay TMDL Progress

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
TMDL Issuance Date	2010	2010	2010
Target Load Reduction[1]	857.67	261.688	N/A
3rd Generation Permit			
BMP Reduction – FY 2010	0.00	0.00	0
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 and 5th Generation Permit			
BMP Reduction – FY 2014	0.00	0.00	0
BMP Reduction – FY 2015	0.00	0.00	0
BMP Reduction – FY 2016	0.00	0.00	0

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
BMP Reduction – FY 2017	0.09	0.021	42
BMP Reduction – FY 2018	3.17	0.658	1,276
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[2]	0.06	0.014	28
Total BMP Reduction	**3.33**	**0.693**	**1,347**
Percent Reduction of Target	**0.4%**	**0.3%**	**N/A**

[1] *TMDL-required load reduction for MS4 areas*
[2] The 5th generation permit was issued December 2, 2022.

Table F-29. Patuxent River Middle Oligohaline – Chesapeake Bay TMDL Progress

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
TMDL Issuance Date	2010	2010	2010
Target Load Reduction[1]	3,678.83	836.944	N/A
3rd Generation Permit			
BMP Reduction – FY 2010	0.00	0.00	0
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 and 5th Generation Permit			
BMP Reduction – FY 2014	0.00	0.00	0
BMP Reduction – FY 2015	0.07	0.010	15
BMP Reduction – FY 2016	0.00	0.00	0
BMP Reduction – FY 2017	143.58	21.048	12,374
BMP Reduction – FY 2018	5.79	0.885	1,090
BMP Reduction – FY 2019	0.00	0.00	0
BMP Reduction – FY 2020	0.00	0.00	0
BMP Reduction – FY 2021	985.09	639.099	1,401,306
BMP Reduction – FY 2022	0.00	0.00	0
BMP Reduction – FY 2023[2]	0.35	0.060	73
Total BMP Reduction	**1,134.87**	**661.102**	**1,414,857**
Percent Reduction of Target	**30.8%**	**79.0%**	**N/A**

[1] *TMDL-required load reduction for MS4 areas*
[2] The 5th generation permit was issued December 2, 2022.

Table F-30. Patuxent River Upper Tidal Fresh – Chesapeake Bay TMDL Progress

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
TMDL Issuance Date	2010	2010	2010
Target Load Reduction[1]	14,367.88	4,914.645	N/A
3rd Generation Permit			
BMP Reduction – FY 2010	11.77	2.132	1,448
BMP Reduction – FY 2011	0.00	0.00	0
BMP Reduction – FY 2012	202.86	188.870	258,275
BMP Reduction – FY 2013	0.00	0.00	0
4th and 5th Generation Permit			
BMP Reduction – FY 2014	0.30	0.036	62
BMP Reduction – FY 2015	6.90	6.541	8,953
BMP Reduction – FY 2016	1.53	0.300	208
BMP Reduction – FY 2017	109.79	22.134	11,090
BMP Reduction – FY 2018	1,585.43	644.831	346,997
BMP Reduction – FY 2019	9.03	1.615	1,140
BMP Reduction – FY 2020	2,918.87	770.280	559,740
BMP Reduction – FY 2021	802.52	468.361	482,378
BMP Reduction – FY 2022	0.00	0.00	0
BMP Reduction – FY 2023[2]	50.18	12.276	5,817
Total BMP Reduction	**5,698.71**	**2,117.272**	**1,676,048**
Percent Reduction of Target	**39.7%**	**43.1%**	**N/A**

[1] *TMDL-required load reduction for MS4 areas*

[2] The 5th generation permit was issued December 2, 2022.

Table F-31. Piscataway Creek Watershed – Chesapeake Bay TMDL Progress

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
TMDL Issuance Date	2010	2010	2010
Target Load Reduction[1]	18,848.04	28,396.633	N/A
3rd Generation Permit			
BMP Reduction – FY 2010	0.00	0.00	0
BMP Reduction – FY 2011	0.00	0.00	0
BMP Reduction – FY 2012	140.24	144.210	515,042
BMP Reduction – FY 2013	0.00	0.00	0

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
4th and 5th Generation Permit			
BMP Reduction – FY 2014	0.05	0.047	26
BMP Reduction – FY 2015	11.79	12.130	42,870
BMP Reduction – FY 2016	10.77	10.344	5,504
BMP Reduction – FY 2017	163.70	202.224	103,936
BMP Reduction – FY 2018	1,109.65	1,504.161	796,043
BMP Reduction – FY 2019	59.42	57.900	30,829
BMP Reduction – FY 2020	75.89	70.639	33,273
BMP Reduction – FY 2021	4,243.15	826.588	1,975,956
BMP Reduction – FY 2022	4,852.07	559.894	1,449,794
BMP Reduction – FY 2023[2]	263.28	251.192	172,282
Total BMP Reduction	**10,930.00**	**3,639.329**	**5,125,553**
Percent Reduction of Target	**58.0%**	**12.8%**	**N/A**

[1] *TMDL-required load reduction for MS4 areas*
[2] The 5th generation permit was issued December 2, 2022.

Table F-32. Potomac Lower Mesohaline – Chesapeake Bay TMDL Progress

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
TMDL Issuance Date	2010	2010	2010
Target Load Reduction[1]	377.89	161.960	N/A
3rd Generation Permit			
BMP Reduction – FY 2010	0.00	0.00	0
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 and 5th Generation Permit			
BMP Reduction – FY 2014	0.00	0.00	0
BMP Reduction – FY 2015	0.00	0.00	0
BMP Reduction – FY 2016	0.00	0.00	0
BMP Reduction – FY 2017	0.00	0.00	0
BMP Reduction – FY 2018	0.00	0.00	0
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

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
BMP Reduction – FY 2023[2]			
Total BMP Reduction	0.00	0.00	0
Percent Reduction of Target	**0.0%**	**0.0%**	**N/A**

[1] *TMDL-required load reduction for MS4 areas*
[2] The 5th generation permit was issued December 2, 2022.

Table F-33. Potomac Upper Tidal Fresh DC – Chesapeake Bay TMDL Progress

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
TMDL Issuance Date	2010	2010	2010
Target Load Reduction[1]	7,241.95	12,544.064	N/A
3rd Generation Permit			
BMP Reduction – FY 2010	0.00	0.00	0
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 and 5th Generation Permit			
BMP Reduction – FY 2014	2.33	3.967	1,006
BMP Reduction – FY 2015	0.12	0.158	36
BMP Reduction – FY 2016	0.14	0.232	62
BMP Reduction – FY 2017	24.57	33.081	6,136
BMP Reduction – FY 2018	0.00	0.00	0
BMP Reduction – FY 2019	33.70	34.625	53,802
BMP Reduction – FY 2020	23.35	29.420	5,701
BMP Reduction – FY 2021	0.00	0.00	0
BMP Reduction – FY 2022	0.00	0.00	0
BMP Reduction – FY 2023[2]	6.54	11.174	1,351
Total BMP Reduction	**90.76**	**112.658**	**68,095**
Percent Reduction of Target	**1.3%**	**0.9%**	**N/A**

[1] *TMDL-required load reduction for MS4 areas*
[2] The 5th generation permit was issued December 2, 2022.

Table F-34. Potomac Upper Tidal Fresh MD – Chesapeake Bay TMDL Progress

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
TMDL Issuance Date	2010	2010	2010

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
Target Load Reduction[1]	19,574.35	4,338.558	N/A
3rd Generation Permit			
BMP Reduction – FY 2010	0.00	0.00	0
BMP Reduction – FY 2011	0.00	0.00	0
BMP Reduction – FY 2012	0.00	0.00	0
BMP Reduction – FY 2013	1.93	1.434	4,788
4th and 5th Generation Permit			
BMP Reduction – FY 2014	10.43	1.581	3,269
BMP Reduction – FY 2015	20.55	15.257	50,960
BMP Reduction – FY 2016	72.76	36.487	114,237
BMP Reduction – FY 2017	63.67	10.725	26,336
BMP Reduction – FY 2018	953.90	198.784	548,316
BMP Reduction – FY 2019	79.87	14.973	47,595
BMP Reduction – FY 2020	282.40	55.872	155,862
BMP Reduction – FY 2021	449.11	119.155	235,051
BMP Reduction – FY 2022	231.50	40.514	134,973
BMP Reduction – FY 2023[2]	36.45	4.961	10,816
Total BMP Reduction	**2,202.28**	**499.702**	**1,332,115**
Percent Reduction of Target	**11.3%**	**11.5%**	**N/A**

[1] *TMDL-required load reduction for MS4 areas*
[2] The 5th generation permit was issued December 2, 2022.

Table F-35. Western Branch Watershed – Chesapeake Bay TMDL Progress

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
TMDL Issuance Date	2010	2010	2010
Target Load Reduction[1]	20,738.54	15,611.475	N/A
3rd Generation Permit			
BMP Reduction – FY 2010	0.00	0.00	0
BMP Reduction – FY 2011	8.92	14.186	29,009
BMP Reduction – FY 2012	0.00	0.00	0
BMP Reduction – FY 2013	10.66	15.328	30,435
4th and 5th Generation Permit			
BMP Reduction – FY 2014	0.43	0.216	139
BMP Reduction – FY 2015	39.91	63.108	128,851
BMP Reduction – FY 2016	1.93	0.965	780

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
BMP Reduction – FY 2017	405.36	258.974	208,964
BMP Reduction – FY 2018	1,352.84	966.482	765,553
BMP Reduction – FY 2019	96.47	67.762	51,031
BMP Reduction – FY 2020	741.08	533.747	408,861
BMP Reduction – FY 2021	346.51	245.681	201,036
BMP Reduction – FY 2022	565.88	369.152	447,080
BMP Reduction – FY 2023[2]	809.13	594.656	451,198
Total BMP Reduction	**4,379.14**	**3,130.257**	**2,722,936**
Percent Reduction of Target	**21.1%**	**20.1%**	**N/A**

[1] *TMDL-required load reduction for MS4 areas.*
[2] The 5th generation permit was issued December 2, 2022.

Permit Condition 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:

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

A summary of the proposed BMPs in County's inventory under planning, design, or under construction is provided in Table F-36. This table includes those BMPs that will be credited towards the Consent Decree and towards the 5th generation permit requirements. The County's inventory represents future projects deemed viable to meet its restoration goal. Additional projects in the inventory are included with the consideration that several of these projects may be dropped in the future because of the limitations related to permitting, right of way, or utility conflicts. In addition, impervious acres credits of these projects may vary as they move from planning stage to completion. Total projected implementation cost to complete these projects are around $120.1 million. The County's current planned project list includes CIP, CWP, and redevelopment projects.

Table F-36. Summary of Projects under Planning, Design, or Construction in FY 2023

Watershed Code	Watershed Name	Number of BMPs	Impervious Acres Under Restoration[1]	Implementation Cost
Restoration BMPs through CIP and CWP Projects (see Geodatabase Table: BMP)				
2131101	Patuxent River lower	1	0.31	$714,559
2131102	Patuxent River middle	0	0	$0
2131103	Western Branch	5	280.78	$12,700,173
2131104	Patuxent River upper	1	25.17	$67,000
2131107	Rocky Gorge Dam	5	0.5	$1,279,655

Watershed Code	Watershed Name	Number of BMPs	Impervious Acres Under Restoration[1]	Implementation Cost
2140102	Potomac River M tidal	0	0	$0
2140111	Mattawoman Creek	1	14.25	$0
2140201	Potomac River U tidal	0	0	$0
2140203	Piscataway Creek	0	0	$0
2140204	Oxon Creek	1	70.13	$3,489,360
2140205	Anacostia River	4	176.85	$19,594,302
		18	**567.99**	**$37,845,049**
Tree Planting and Impervious Surface Removal (see Geodatabase Record: AltBMPPoly)				
2131101	Patuxent River lower	0	0	$0
2131102	Patuxent River middle	0	0	$0
2131103	Western Branch	0	0	$0
2131104	Patuxent River upper	0	0	$0
2131107	Rocky Gorge Dam	0	0	$0
2140102	Potomac River M tidal	0	0	$0
2140111	Mattawoman Creek	0	0	$0
2140201	Potomac River U tidal	0	0	$0
2140203	Piscataway Creek	1	26.51	$789,776
2140204	Oxon Creek	0	0	$0
2140205	Anacostia River	1	0.19	$725,000
		2	**26.70**	**$1,514,776**
Stream Restoration[2] or Outfall Stabilization Projects (see Geodatabase Record: AltBMPLine)				
2131101	Patuxent River lower	10	558.48	$22,283,077
2131102	Patuxent River middle	0	0	$0
2131103	Western Branch	5	718.43	$17,198,978
2131104	Patuxent River upper	2	421.79	$8,085,189
2131107	Rocky Gorge Dam	1	55.8	$2,800,675
2140102	Potomac River M tidal	0	0	$0
2140111	Mattawoman Creek	0	0	$0
2140201	Potomac River U tidal	4	404.64	$12,138,123
2140203	Piscataway Creek	3	404.12	$12,155,099
2140204	Oxon Creek	1	67.09	$5,894,499
2140205	Anacostia River	1	0	$173,864
		27	**2,630.35**	**$80,729,504**
	Grand Total	**47**	**3,225**	**$120,089,329**

[1] Impervious acre's restoration through all programs (inlet cleaning, tree planting, septic, micro scale, and structural BMP).

To date since permit inception, 5,695 acres of impervious area credits have been achieved through the end of FY2023 and another 3,225 acres are in active planning, design, or construction.

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:

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. The updates shall describe the status of trash elimination efforts including resources (e.g., personnel and financial) expended and the effectiveness of all program components including:

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; and

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

Trash and Litter Program: Anacostia Trash TMDL

The County continued practices for litter removal in FY 2023 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. In person litter reduction outreach events were suspended due to COVID19 social distancing requirements.

Even with COVID-19 challenges, litter reduction efforts resulted in the removal of 363,002 pounds of litter in the Anacostia River Watershed which exceeds the target annual load reduction of 170,628 pounds per year. The County's investments in litter prevention and capture measures have positioned the County to increase our litter load reduction efforts in FY 2023 and beyond. By continuing to implement a countywide anti-litter marketing campaign, utilizing 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 will continue to overcome the challenges of COVID-19 social distancing restrictions to deliver the litter reduction goals.

During COVID-19 restrictions, the County continues to conduct countywide trash reduction efforts through contracted services for in-stream cleanups that extend into overbank areas. County staff is also standing up 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.

Cleanup Activities

Table F-37 outlines the enacted FY2023 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.

For selected cleanup events within the Anacostia watershed, volunteers collected both point and nonpoint source 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 FY2023 MS4 Permit reduction goal. This factor is reflective of the ratio of the TMDL's MS4 waste load allocation (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, which is 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 in FY 2023. Roadside Litter Removal contractors removed 409,325 pounds of trash (actual pounds without deductions) and 229 discarded tires. These contractors performed cleanups within adjacent riparian buffers within road right of way and along roadways at various locations within the Anacostia watershed. The In -Stream contractor cleanups were not conducted during FY23.

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 etc.), contractors segregated these items from the bagged litter. Loads of bagged litter and all loose items were weighed and disposed at the County landfill. Due to inconsistent reporting by the contractors of the number of bags of litter collected at each site, 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.

Table F-37 summarizes the trash reduction resulting from litter reduction activities in the Anacostia watershed during FY2023. Approximately 563,775 pounds were removed from various locations within the watershed which included municipalities. Of the total tonnage collected, 3,725 pounds of litter were recorded in PGCLitterTRAK as collected within municipal jurisdictional boundaries during the COVID19 Pandemic that resulted in reduced government and public activity. Within the County jurisdictional boundaries, 888,200 pounds of litter was collected. Factoring in reductions for non-point source items and partially full beverage bottles and cans, the County claims a load reduction of 363,002 pounds for all efforts in FY2023 within the Anacostia River Watershed.

Table F-37. Estimated Anacostia Watershed Trash Reduction in FY 2023

Activity Category	Activity/Location	Number of Bags of Trash Collected	Actual Amount (pounds)	Annual Load Reduction Counted (pounds)	Calculation Methodology
Community Cleanups	Various Individual clean ups in the Anacostia River Watershed	112	2,800	1,797	Total number of bags X 0.7 X 25 lbs. X 0.917 (accounts for liquid in bottles (glass and plastic) and cans
Additional Roadside Litter Removal-Contracted	Anacostia River Watershed	16,373	409,325	262,746	
Corvias BMP Clean Ups	Various locations in Anacostia River Watershed (specific locations recorded in PGCLitterTRAK)	6,066	151,650	97,344	Total number of bags X 0.7 X 25lbs X 0.917 (accounts for liquid in bottles (glass and plastic) and cans
Bandalongs	Arundel Canal Bandalong	0	0	476.5	Total number of bags X 0.7 X 25lbs X 0.917 (accounts for liquid in bottles (glass and plastic) and cans
	Cabin Branch Bandalong		0	346.5	
	Guilford Run Bandalong		0	293.6	
TOTAL		22,551	563,775.00	363,003.60	

The Implementation Plan for the Anacostia River Watershed Trash Total Maximum Daily Load in Prince George's County, dated March 2015, set a trash reduction benchmark of 170,628 pounds per year. FY 2023 marks the 9th year of the County's NPDES MS4 permit cycle under this implementation plan. As the County moves into a new permit cycle, 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, Spencer the Sprout. Permitting and installation of the County's third BandalongTM trash trap is projected by the end of FY 2023. This trap will further reduce the litter load on the Anacostia River in FY 2023 and future years by capturing floatables along the Cabin Branch (a tributary to Lower Beaverdam Creek). With the successful implementation of these activities, increased roadside litter removal by contractors, and after COVID-19 restrictions are lifted, the County expects to meet the current annual trash load reduction target.

The results of instream monitoring performed by the Metropolitan Washington Council of Governments (MWCOG) from 2011 to 2023, are shown in Table F-38 and Table F-39. MWCOG monitors twice a year and conducts a bottle count at fifteen in-stream stations within the County. The table below illustrates the number of bottles surveyed at fifteen locations within the Anacostia watershed.

While the activities outlined in Table F-37 are specific to the Anacostia 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 watershed.

Table F-38. Stream Monitoring Data – Plastic Bottle Composition by Volume of Trash Mix

Year	Number of Surveys per Year	Total Number of Items	Total Number of Plastic Bottles	Percent Plastic Bottles
2011	2	1,569	263	16.8
2012	1	288	62	21.5
2013	2	725	136	18.8
2014	2	817	93	11.4
2015	2	882	95	10.7
2016	2	1,755	185	10.5
2017	2	2,020	286	14.1
2018	2	2,436	705	28.9
2019	2	4,007	1,014	25.3
2020	2	2,935	637	21.7
2021	2	3,547	520	14.7
2022	2	3,147	628	20.0
2023	2	3,405	849	24.9

(Monitoring data was provided by MWCOG)

Table F-39. Stream Monitoring Data – Plastic Bottle Composition by Weight of Trash Mix

Year	Number of Surveys per Year	Total Weight (grams)	Total Plastic Bottle Weight (grams)	Percent Weight Plastic Bottles
2011	2	292,713	15,731	5.4
2012	1	19,037	4,320	22.7
2013	2	93,158	8,300	8.9
2014	2	73,758	7,410	10.0
2015	2	73,448	8,480	11.5
2016	2	158,153	15,065	9.5
2017	2	182,950	20,550	11.2
2018	2	209,318	38,645	18
2019	2	405,261	62,070	15.3
2020	2	215,729	33,747	15.6
2021	2	274,531	26,820	9.8
2022	2	226,061	25,330	11.2
2023	2	207,640	52,150	25.1

(Monitoring data was provided by MWCOG)

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 21 concentrated cleanups each year. Through this program, DoE, DPIE and DPW&T work with local civic and homeowner associations to provide a wide range of cleanup and maintenance services over a 2-week period. Services provided by this program include bulky trash collection, the tagging and removal

of abandoned vehicles, housing code/zoning ordinance violation surveys, storm drain outfall screening and sampling, roadside litter pickup, tree trimming, and storm drain maintenance. T

Table F-40. Comprehensive Community Cleanup Program performance.

Community	Zoning Housing Code Enforcement		Bulky Trash		Vehicle Audit	
	Housing Code Violations Issued	Zoning Code Violations Issued	Tires Collected	Trash Collected (Tons)	Violations Issues	Vehicles Towed
Presley Manor	70	0	0	1.22		
Kettering (Phase 1)	72	0	1	1.57		
Kettering (Phase2)	30	0	0	0.86		
Kettering (Phase 3)	17	0	2	1.79		
Kettering (Phase 4)	12	**0**	0	0.00		
Beltsville (Phase 1)	126	0	2	0.63		
Beltsville (Phase 2)	204	0	3	0.61		
Beltsville (Phase 3)	255	0	2	0.51		
Beltsville (Phase 4)	102	0	2	0.30		
Riverdale Hgts/Crestwood/ Riverdale Hills	130	0	0	1.40		
Willow Wood Ests.	9	0	0	2.39		
Camp Springs (Phase 1)	108	0	9	1.43		
Camp Springs (Phase 2)	184	0	0	2.37		
Camp Springs (Phase31)	144	0	0	1.70		
Chillum Ray	6	0	0	1.94		
Eastpines	10	0	0	1.09		
Lewisdale (Phase 1)	17	0	1	1.90		
Lewisdale (Phase 2)	219	0	0	0.96		
Lewisdale (Phase 3)	35	0	0	1.04		
Tantallon South	49	0	0	1.52		
Birchwood City/Clearview Manor/Eastover Knolls			5	3.20		
Total	**1,799**	**0**	**13**	**28.43**		

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 throughout the County 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 2023 was 30 tons or 60,000 pounds of litter removed from communities across Prince George's County.

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 881,450 pounds of trash and debris at the landfill.

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 F-2. In-stream baseline trash surveys are performed two times per year (i.e., 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 very reasonable estimate of general instream trash accumulation/loading rates. Also, precipitation data is obtained from the nearest weather station. 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.

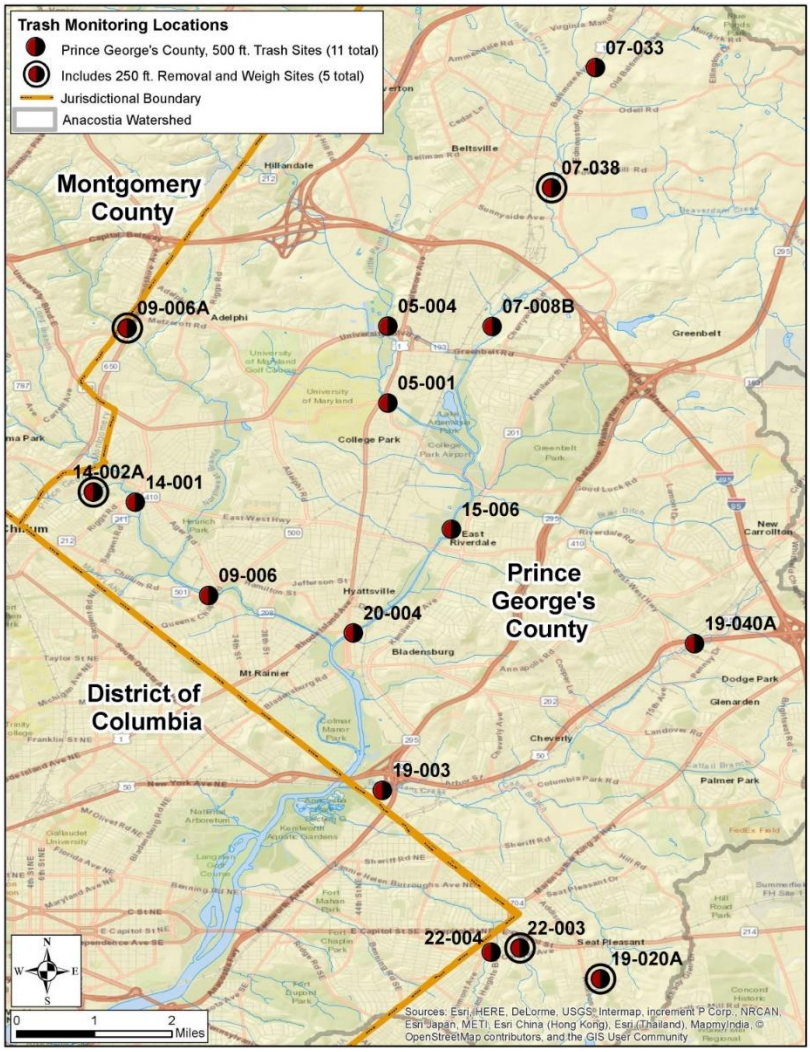


Figure F-2. Anacostia TMDL-Related Trash Monitoring Locations

Education and Outreach on Litter

The County engages in many education and outreach events focused on schools and the general 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. Due to COVID19 related school and government closures, all in-person outreach events were limited to approximately two (2) presentations.

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 stormwater management (SWM) program requires stenciling on all stormdrain 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 have been painted on storm drain covers. In FY 2023, storm drain stenciling efforts were remain suspended due to COVID19 school and very limited activity took place. In an activity on March 1, 2023, in City of Hyattsville, about 30 inlets were stenciled by eight (8) volunteers.

Recycling

The Prince George's County Department of the Environment, Recycling Section has continued to support/promote the source reduction and waste diversion initiatives.

These efforts have contributed significantly to the County's state recognition as a leader in Waste Diversion for the past several years. Though an EPA grant, which funded curbside compost collection service for residential areas, has ended, services continue in these piloted areas, and exponential growth in program participation is partially attributed to a multiphase expansion project which accounts for nearly 40% of the County's trash and recycling service base. With the utilization of the GORE Mega Heap composting system, Prince George's County hosts the largest municipal composting facility of its kind on the East Coast and is aligned to accept and process an additional 32,000 tons of food scraps.

Realizing the importance of environmental sustainability, Prince George's County continues to prepare for the future. Keep Prince George's County Beautiful, Inc. (KPGCB), the local affiliate of the nationally recognized Keep America Beautiful, in partnership with Prince George's County Public Schools, remains instrumental in supporting teachers and students in environmental education. KPGCB serves as a major resource to assist schools in litter reduction, recycling, and composting. In addition, KPGCB serves as a resource to assist schools in becoming Maryland Green Schools. The Maryland Green Schools Program (MDGS) is a sustainable school program that is nationally recognized as having a significant impact on students and schools. The program is aligned with the goals of the 2014 Chesapeake Bay Watershed Agreement and supports Maryland State Department of Education graduation requirements and standards. It should be noted that Prince George's County Public Schools continues to lead the State with 152 certified Maryland Green Schools. KPGCB partners with the Department of the Environment to recognize schools that have exemplified the best environmental practices through the annual Waste Diversion & Recycling Awards Program. Last year we recognized 10 schools in Prince Georges County.

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. A total of 42 tours were organized during FY2023. A detail of the tours is provided in a spreadsheet on the DVD.

Enforcement

Illegal Dumping Enforcement

DPIE's Enforcement Division conducts on-site inspections of residential, commercial, and industrial properties to ensure such properties are properly maintained and in compliance with the County Code. This division enforces the housing and property maintenance codes for all residential dwellings, anti-litter and weed ordinances for properties in unincorporated areas, and the zoning ordinance for private properties.

Other related functions include:

- Regulating placement of signs on private property,
- Removing illegally posted signs in public rights-of-way,
- Inspecting all residential dwellings to ensure that they are maintained in a safe and secure manner consistent with the County Code, and
- Issuing licenses for all residential single-family rental properties.

In FY 2023, issued 3,406 violation notices, 899 administrative citations, and 375 civil citations in response to trash-related complaints. The Division cleaned 173 vacant properties through the Clean Lot Program. Contractors were hired to remove and dispose of the illegally dumped items at these properties.

FY 2023 goals

For FY 2023, under ongoing COVID-19 restrictions, 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.

Existing programs and strategies will continue to evolve based on the status of COVID-19 restrictions. The last of three (3) instream trash capture devices (BandalongTM) was installed in FY2021 at Cabin Branch. 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 FY2024, the County's litter reduction programs will continue to evolve and adapt to the ongoing COVID-19 restrictions. 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.

Permit Condition Part IV. F. 4: Prince George's County shall provide continual outreach to the public and other stakeholders, including other jurisdictions or agencies holding stormwater WLAs in the same watersheds, regarding its TMDL stormwater implementation plans. Prince George's County shall solicit input from the public, collaborate with stakeholders, and incorporate any relevant comments that can aid in achieving local stormwater WLAs. To allow for public participation, Prince George's County shall:

a. Maintain a list of interested parties for notification of TMDL development actions;
b. Provide notice on the County's webpage outlining how the public may obtain information on the development of TMDL stormwater implementation plans and opportunities for comment;
c. Provide copies of TMDL stormwater implementation plans to interested parties upon request;
d. Allow a minimum 30-day comment period before finalizing TMDL stormwater implementation plans; and
e. Document in final TMDL stormwater implementation plans how the County provided public outreach and adequately addressed all relevant comments.

In mid-July 2014, two public meetings were held during the initial development phase of the restoration plans. At these meetings, the County staff broadly presented the County's vision and method to develop the restoration plans. The draft restoration plans were then finalized in October 2014. The plans were posted online for public review and comment. The County finalized all plans and submitted them to MDE for review and approval in 2015. Additionally public meetings and public comment periods were held for subsequent plans in 2019 and 2021.

There are currently no additional County MS4 WLAs requiring restoration plans. Consequently, no further work was required to be completed in FY 2021 for this permit condition.

All public meeting materials related to the County's restoration plans are provided on the County's watershed assessments and studies website (https://www.pgcdoe.net/pgc_watershedassesments), which can be accessed from the County's NPDES MS4 Permit website.

G. ASSESSMENT OF CONTROLS

Permit Condition Part IV. G: Prince George's County shall conduct BMP effectiveness and watershed assessment monitoring, and polychlorinated biphenyls (PCB) source tracking for assessing progress toward improving local water quality and restoring the Chesapeake Bay. The 2021 MS4 Monitoring Guidelines: BMP Effectiveness and Watershed Assessments (hereafter 2021 Monitoring Guidelines) shall be referenced for addressing the technical guidelines and requirements as outlined in the latest permit.

As part of its stormwater management activities, the County has developed a long-term, multi-objective monitoring program that also satisfies monitoring requirements for the countywide NPDES MS4 permit. Since June 2007, the County has conducted chemical, physical, and biological monitoring in the Bear Branch watershed to assess watershed improvement as the result of several restoration retrofits and other environmental improvement efforts. The County also conducts physical monitoring in the Black Branch watershed to determine the effectiveness of its stormwater management practices for stream channel protection. Complete annual monitoring reports with supporting documents for Bear Branch and Black Branch are provided in their respective folders on the DVD under Assessment of Controls.

Permit Condition Part IV. G. 1. a: The County shall collaborate with the Department in a Pooled Monitoring Advisory Committee administered by the Chesapeake Bay Trust (CBT) for determining monitoring needs and selecting appropriate monitoring studies. To implement the required monitoring, the County shall pay $100,000 per year, or an amount to be proposed by the jurisdiction based on demonstrated past permit monitoring expenditures, into a pooled monitoring CBT fund. Enrollment in the program shall be demonstrated through a memorandum of understanding (MOU) between the County and CBT by September 1 of each year. The terms of the BMP effectiveness MOU are described in the 2021 Monitoring Guidelines. The County shall remain in the program for the duration of this permit term; or

Prince George's County has contacted the Chesapeake Bay Trust (CBT) in September 2023 for discussion and coordination with MDE relating to the poled monitoring option for BMP effectiveness. Current status of this process has produced the first draft agreement and has been reviewed by MDE and will be further processed through each respective legal office of the County and CBT. The County is committed to provide the necessary funds in accordance with NPDES permit section G1a. As per MDE instruction the County will continue with Bear Branch monitoring till FY 2024 (June 2024), the expected date for the final poled monitoring agreement.

Permit Condition Part IV. G. 1. b: The County shall continue monitoring the ~~Black~~ Bear Branch watershed, or select and submit for the Department's approval a new BMP effectiveness study for monitoring by April 2, 2023 or by July 1 of each year. Monitoring activities shall occur where the cumulative effects of watershed restoration activities, performed in compliance with this permit, can be assessed.

1. BMP EFFECTIVENESS MONITORING

Monitoring Locations

The County completed its sixteenth (16th) full year of chemical and physical monitoring and its seventeenth (17th) year of biological and physical surveys in the Bear Branch watershed. As shown in Figure G-1, the chemical monitoring was done at Stations 003 and 005, physical monitoring was done at cross sections XS1 through XS5, and biological and physical survey were done at stations 06-006C and 06-008B.

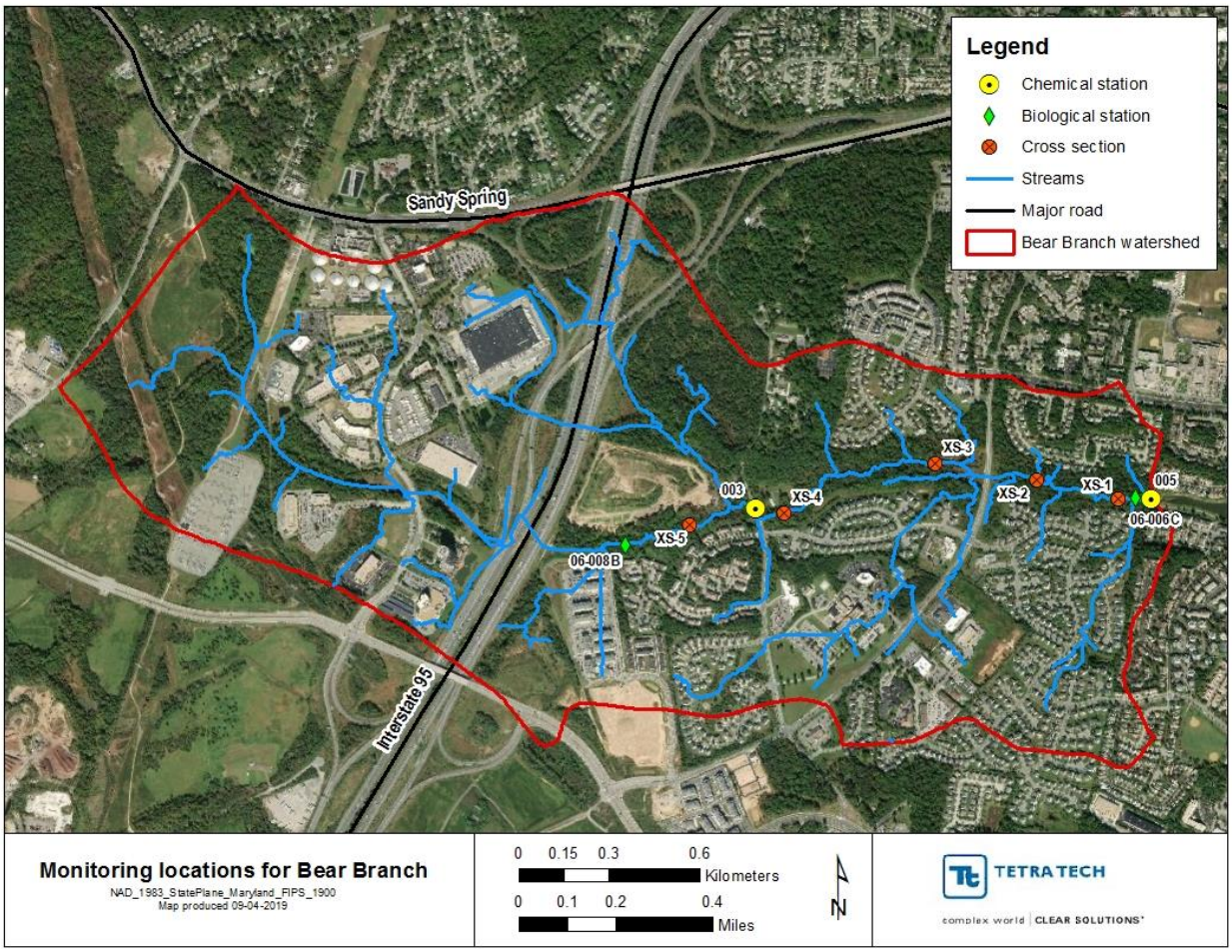


Figure G-1. Bear Branch Monitoring Locations

Chemical Monitoring

Permit Condition Part IV. G. 1. b. (i):

- *Twelve (12) storm events shall be monitored per year at each monitoring location with at least two occurring per quarter. Quarters shall be based on the calendar year. If exceptional weather patterns (e.g., dry weather periods) or other circumstances (e.g., equipment failures) occur during the reporting year, the County shall provide documentation of such circumstance(s).*

Chemical Monitoring Locations and Sampling

Four quarterly baseflow samples and eleven stormflow samples (one complete) were collected at stations 003 and 005 in Bear Branch. Additionally, one set of baseflow samples were taken in lieu of storm samples for the automatic sampling parameters and the manual sampling parameters during February.

While monitoring, the primary difficulties encountered during FY 2023 were power loss resulting in data gaps, equipment damage from suspected vandalism at station 005 and that many storm events consisted of an overnight peak that limited staff's ability to collect parameter 2 samples (E. coli). Additionally, some laboratory issues occurred that resulted in certain parameters not being reported for certain storm events. More details on these anomalies are provided in section 3.1.6 of Bear Branch Annual Report.

Chemical monitoring was performed in Bear Branch watershed at the monitoring stations listed in Table G-1 below:

Table G-1. Chemical Monitoring Locations in Bear Branch Watershed

Station	Station Type	Location	Drainage Area (acres)	Latitude	Longitude
003	In-stream	East of Contee Road	659	39.09023	-76.88478
005	In-stream	200 feet behind the end of Chapel Cove Drive	1,089	39.09044	-76.86980

Sampling events at each monitoring stations are provided in Table G-2 below. During FY 2023, automatic storm samples were collected in seven (7) months, but due to extended dry periods and limited storm events, was unable to do so during July, September, January, March, and May. A second storm event sample was collected in the months of August, October, and April to compensate for missed months.

Table G-2. Chemical Monitoring Sampling Events

Sample Month	Station 003 (In stream)				Station 005 (In stream)			
	Wet Weather		Dry Weather		Wet Weather		Dry Weather	
	Parameter Set 1	Parameter Set 2	In Lieu	Baseflow Sample	Parameter Set 1	Parameter Set 2	In Lieu	Baseflow Sample
July								
August	XX				XX			

Sample Month	Station 003 (In stream)				Station 005 (In stream)			
	Wet Weather		Dry Weather		Wet Weather		Dry Weather	
	Parameter Set 1	Parameter Set 2	In Lieu	Baseflow Sample	Parameter Set 1	Parameter Set 2	In Lieu	Baseflow Sample
September				Q				Q
October	XX	X			XX	X		
November	X	X			X	X		
December	X	X			X	X		
January				Q				Q
February	X		B1, B2		X		B1, B2	
March								
April	XX	X		Q	XX	X		Q
May								
June	X	X		Q	X	X		Q

Notes: X = sample collected; B1 = manual baseflow sample collected in lieu of storm samples for param. set 1; B2 = manual baseflow sample collected in lieu of storm samples for param. set 2; Param. set 1 = parameters typically collected through automatic sampling: Cl, TN, NO3+NO2, total ammonia, TSS, TP, OP, BOD5 and conductivity; Param. set 2 = parameters typically collected through manual sampling: E. coli, Q = quarterly baseflow sample collected.

Permit Condition Part IV. G. 1. b. (i):

- *Discrete samples of stormwater flow shall be collected at the monitoring stations using automated or manual sampling methods*

Chemical Monitoring Methods

Storm samples were collected manually and with automated sampling equipment. Baseflow samples were collected manually. Stream stage, pH, and temperature have been measured continuously at stations 003 and 005 since June 15, 2007, when the monitoring stations were relocated to the Bear Branch watershed. Flow was measured continuously at station 003 and 005.

Permit Condition Part IV.G.1 b. (i):

- *At least three (3) samples determined to be representative of each storm event shall be submitted to a laboratory for analysis according to methods listed under 40 CFR Part 136 and event mean concentrations (EMC) shall be calculated.*
- *Baseflow sampling shall occur quarterly at the mid-point of each season (e.g., February 15 for the first quarter, May 15 for the second quarter).*
- *Stormwater flow and baseflow measurements shall be recorded at the outfall and in-stream stations for the following parameters:*

Biochemical Oxygen Demand (BOD5)
Total Kjeldahl Nitrogen (TKN)
Total Suspended Solids (TSS)
E. coli or enterococcus
Orthophosphate
Total Ammonia (sewar signal)
Nitrate plus Nitrite
Total Phosphorus (TP)
Chloride
Discharge (flow)

Chemical Monitoring Parameters

Three one-liter bottles were collected manually from the automated samplers, placed on ice and held at 4 degrees Celsius (°C) until delivery to the laboratory. The Samples were delivered to a laboratory for analysis of metals (copper [Cu], lead [Pb], and zinc [Zn]), 5-day biological oxygen demand (BOD_5), total ammonia (NH_3), nitrate plus nitrite ($NO_3 + NO_2$), total Kjeldahl nitrogen (TKN), total phosphorus (TP), total nitrogen (TN), total suspended solids(TSS), chloride, orthophosphate (OP), , *Escherichia coli (E. coli), temperature and pH.*

For *E. coli*, grab samples were collected because of the need for specialized containers and, in the case of E. coli, a short holding time. If possible, these grab samples are collected during the same storm event as samples collected by the automated samplers. Occasionally, it is not possible to collect grab samples at the same time as automated samples because of safety concerns associated with storm events that occur overnight or have hazardous conditions. If manual grab samples cannot be collected at the same time as automated samples, they were collected for another storm event that same quarter.

Table G-3 presents the required parameters analyzed and the analytical procedure. Microbac Laboratories, Inc., in Baltimore, Maryland, analyzed the samples. The results of this analysis can be found on page 4-1 in "Prince George's County, Maryland—Long-Term Stormwater Monitoring Program—Bear Branch", which is saved on DVD, under Assessment of Controls\Bear Branch folder.

Table G-3. Monitoring Parameters

Parameter	EPA method	Holding time at 4 °C	Project reporting limit	Units
Copper (Cu)	EPA 200.8/6020	6 months	1	µg/L
Lead (Pb)	EPA 200.8/6020	6 months	1	µg/L
Zinc (Zn)	EPA 200.8/6020	6 months	5	µg/L
5-day biochemical oxygen demand BOD_5	SM (20) 5210B	48 hours	2–5	mg/L
Ammonia NH_3	SM-NH3 G-2011	28 days	0.02	mg/L
Nitrate + nitrite $NO_3 + NO_2$	EPA 353.2	28 days	0.05–0.1	mg/L
Kjeldahl Rogengen TKN	SM (20) 4500N-org/NH3-G	28 days	0.1	mg/L
Nitrogen TN	TKN + NO3+NO2	28 days	0.1	mg/L
TP	EPA 365.1	28 days	0.01	mg/L
Orthophosphate OP	SM 4500-P F-2011	48 hours	0.04	mg/L
Suspended solids TSS	SM (20) 2540D	7 days	2	mg/L
Chloride	EPA 300.0, Rv. 2.1	28 days	0.5	mg/L

Parameter	EPA method	Holding time at 4 °C	Project reporting limit	Units
E. coli	SM (20) 9221F	6-8 hours total	2	MPN/100 mL
pH	EPA 150.1	In-stream measurement	--	Standard units (SU)
Temperature	EPA 170.1	In-stream measurement	--	°C

Notes: µg/L = micrograms per liter; mg/L = milligrams per liter; MPN/100 mL = most probable number per 100 milliliters.

Permit Condition Part IV. G. 1. b. (i):

- *Continuous measurements shall be recorded for the parameters listed below at the in-stream monitoring station or other practical location based on the approved study design:*
  Temperature pH Discharge (flow) Turbidity(optional) Conductivity
- *Data collected from stormwater, baseflow, and continuous monitoring shall be used to estimate annual and seasonal pollutant loads and reductions, and for the calibration of watershed assessment models.*
- *If the County elects to continue monitoring the Black Branch watershed, or selects a new BMP effectiveness study for monitoring, the County shall submit a revised sampling plan for approval to address the new monitoring parameters provided above with the first annual report. An approved sampling plan under a prior MS4 permit for the County shall continue until the Department approves a new sampling plan proposed under this permit.*

Flow Measurement and Event Mean Concentration Calculation

Both chemical monitoring stations (003 and 005) are equipped with an auto sampler (ISCO 4220), which uses a pressure transducer to continually measure depth of water (stream level) and initiate the collection of storm event samples. The auto sampler contains data loggers that store the water level, pH, and temperature data for the station. Data are downloaded at least monthly with a rapid transfer device for later processing and analysis in the office.

Each auto sampler is programmed with a unique stream stage point so that stream-level rise in response to a storm event will cause the flow meter to activate the sampler and begin sample collection. Stream stage activation levels are unique for each station and are periodically changed to ensure adequate storm sampling. Changes in the flow meter programming are made during extended dry periods and to account for seasonal fluctuations.

Stage data were analyzed to determine total baseflow and stormflow volumes during the monitoring period. Stage was recorded at 5-minute intervals. Stage-to-flow rate conversions were made using rating curves. The curves involve power functions, developed through regression analysis, that relate measured stage-to-flow relationships. To date, seventy-five (75) stage-to-flow measurements have been taken at station 003. Forty-two (42) measurements have been taken at station 005 prior to the ponding conditions during the Laurel Lake dredging project, six (6) measurements were taken after the ponding conditions created, and twenty-five (25) measurements have been taken since the ponding has receded. After the stream restoration project was completed and the location of the probes were shifted in December of 2021, 6 measurements were taken. The data were plotted, and a relationship between stage and flow was determined. That relationship was then used to calculate the flow at the monitoring stations for subsequent use in determining event mean concentrations (EMCs).

For both chemical monitoring stations, individual EMCs by parameter and storm were computed by flow-weighting the concentration data obtained at discrete points using the following equation:

$$\frac{C_r Q_r + C_p Q_p + C_f Q_f}{Q_r + Q_p + Q_f}$$

Where,

C was the concentration of each sampled parameter;

Q was the instantaneous discharge at the time of the sample; and r, p, and f indicate the discrete sample—rising limb, peak, and falling limb, respectively.

EMCs are reported to MDE in a yearly database submission. The EMCs were used in calculating the loading rates. Total seasonal pollutant loads were estimated for stormflow and baseflow by applying the median storm EMCs to unmeasured flows. Those values were then divided by total drainage area and summed to determine total annual loads.

Biological Monitoring

Permit Condition Part IV. G. 1. b. (ii):

- *Benthic macroinvertebrate samples shall be gathered each spring between the outfall and in-stream stations or other practical locations based on a Department approved study design*

Biological Monitoring Locations

Monitoring was performed in spring 2023 in the Bear Branch watershed. Two assessment locations were surveyed; these locations are described in Table G-4. One station is upstream of station 005 (station 06-006C) and about 90 feet upstream of the confluence of Bear Branch and Laurel Lake. The newer station (station 06-008B) is on the mainstem of Bear Branch northeast of the end of Bonnet Lane, upstream of Contee Road, and approximately 250 meters downstream of I–95.

Table G-4. Locations of Sampling Stations

Station	Location	Area (acres)	Latitude/longitude
06-006C	Corner of Chapel Cover Road and Dover Court, approximately 90 feet upstream of outfall on right bank upstream of Laurel Lake	989	39.09052 / –76.87026
06-008B	Bonnet Lane on northeastern end	394	39.089125 / –76.88988

Permit Condition Part IV. G. 1. b. (ii):

- *The County shall use the Maryland Biological Stream Survey (MBSS) sampling protocols for biological and stream habitat assessment.*

Bioassessment Protocols

The method used was a modification of EPA's Rapid Bioassessment Protocols (RBP) III for use in the Coastal Plain physiographic region where the County is located. A 100-meter reach of channel was assessed using the 20-jab method. For 2023, the Biological Monitoring and Assessment Program Plan was updated to a 75-meter reach to align with Maryland Biological Stream Survey (MBSS) methods more closely. In this method, 20 one-meter sections of stream are sampled using a D-frame net with a mesh size of 600 micrometers. Sampling was distributed throughout the available physical habitat (e.g., undercut banks, riffles, snags) in rough proportion to its occurrence within the assessment reach. Organisms collected were preserved in 95 percent ethyl alcohol and returned to the laboratory for identification. Sample identification results were recorded as a list of taxa (a unit of biological classification) and numbers of individuals of each (counts).

Benthic macroinvertebrate samples collected in the spring were assessed using the Maryland Department of Natural Resource' Maryland Biological Stream Survey's (MBSS) benthic index of biotic integrity (B-IBI, Southerland et al. 2005). The MBSS Coastal Plain index consists of seven metrics scored 1, 3, or 5 and then averaged for a final score between 1 and 5. A higher score is closer to reference conditions, and a lower score is indicative of impairment. Table G-5 describes the MBSS B-IBI assessment values.

Table G-5. Narrative and Numeric Assessments Ratings for the MBSS Biological Indices B-IBI

Narrative Assessment	Index Score
Good	4.0–5.0
Fair	3.0–3.9
Poor	2.0–2.9
Very poor	1.0–1.9

Physical Monitoring

Permit Condition Part IV. G. 1. b. (iii):

- *A geomorphologic stream assessment shall be conducted between the outfall and in-stream monitoring locations or in a reasonable area based on the approved monitoring design. This assessment shall include annual comparison of permanently monumented stream channel cross-sections and the stream profile; and*

Monitoring Protocols (physical)

During this reporting period, the stream physical condition was assessed using longitudinal profile data, cross-sectional analysis, and geomorphic characterization. These assessments are completed each year in the fall. Fall 2022 was the sixteenth (16th) year that the County has performed a geomorphologic assessment in the Bear Branch watershed.

A longitudinal profile was measured from the upstream end of the culvert at Van Dusen Road to approximately 4,400 feet upstream. A benchmark was established in 2007 and was used as a common reference datum to relate past work. However, the benchmark was not able to be found in 2017. Consequently, a new benchmark was established for reference between the 2017 data and future

monitoring work. Throughout the profile, the elevations and locations of the thalweg were surveyed using a total station data collector.

Five monumented cross sections were installed in the assessment area in the Bear Branch watershed; the latitudinal and longitudinal coordinates of these cross sections are noted in Table G-6. Four cross sections (XS-1 through XS-4) are between station 003 and station 005, and one cross section (XS-5) is farther upstream. The cross sections were monumented with 0.5-inch rebar topped with orange survey caps. Engineering flagging also was hung near the ends of each cross section. All cross sections were tied into the longitudinal profile.

Particle size was estimated near each cross section, along an assessment reach length of approximately 20 to 24 bankfull channel widths. In addition, an attempt was made to identify a geomorphological feature that corresponds to a channel-forming (bankfull) discharge so that a Rosgen Level II classification could be made. Finally, an analysis of bank erosion potential was made using methodologies described in Rosgen (1996). Vertical stability was tracked via the thalweg profile and by locating the presence of nickpoints as indicators of headcutting processes.

Table G-6. Location of Five Monumented Cross Sections

Cross Section	Longitude				Latitude			
	Degrees	Minutes	Seconds		Degrees	Minutes	Seconds	
XS-1	76	52	15.293	W	39	5	25.806	N
XS-2	76	52	26.601	W	39	5	27.835	N
XS-3a	76	52	40.440	W	39	5	29.820	N
XS-4	76	53	1.609	W	39	5	24.333	N
XS-5	76	53	14.774	W	39	5	23.021	N

[a] *Relocated for the 2009 survey. Rebar monuments were replaced in 2011 because of stream restoration construction.*

Permit Condition Part IV. G. 1. b. (iii):

- *A hydrologic and/or hydraulic model shall be used (e.g., TR- 20, HEC-2, HEC-RAS, HSPF, SWMM) in the fourth year of the permit to analyze the effects of rainfall; discharge rates; stage; and, if necessary, continuous flow on channel geometry.*

Channel Geometry Analysis

As required by the permit, a hydrologic and/or hydraulic model will be used in FY2026 to analyze the effects of rainfall; discharge rates; stage; and, if necessary, continuous flow on channel geometry.

Permit Condition Part IV. G. 1. b. (iv): The County shall describe in detail its monitoring activities for the previous year and include the following:

- *EMCs submitted on the Department's long-term monitoring MS4 Geodatabase as specified in PART V below;*
- *Chemical, biological, and physical monitoring results and a combined analysis for the approved monitoring locations;*
- *Any available analysis of surrogate relationships with the above monitoring parameters; and*
- *Any requests and accompanying justifications for proposed modifications to the monitoring program.*

Monitoring Results

A full analysis of the monitoring results is provided in the Bear Branch monitoring report, *Prince George's County, Maryland—Long-Term Stormwater Monitoring Program —Bear Branch Annual Report 2023,* included on the DVD, under Assessment of Controls\Bear Branch. This report and the attached chemical long-term monitoring database meet the reporting requirements for the NPDES MS4 program. Specific report sections for each monitoring requirement are described below in Table G-7.

Table G-7. Index of Monitoring Report Activities (*Long-Term Stormwater Monitoring Program —Bear Branch Annual Report 2023)*

Monitoring Activity	Report Section	Page
1(a)(i) Storm Event Sampling Frequency	3.1.2	3-10
1(a)(ii) Storm Event Sampling Procedure	3.1.2	3-10
1(a)(iii) Parameters Requiring EMC Calculations	3.1.3	3-11
1(a)(iv) Continuous Flow Monitoring	3.1.4	3-11
1(b)(i) Biological Sampling Locations	3.2.1	3-15
1(b)(ii) Biological Sampling Method	3.2.1	3-15
1(c)(i) Geomorphological Stream Assessment Location and Methods	3.3.1	3-16
1(c)(ii) Stream Habitat Assessment	3.2.2	3-16
1(c)(iii) Hydrologic and Hydraulic Modeling	--	--
1(d)(i) Reporting EMCs on MDE's Database	--	--
1(d)(ii) Results and Analysis of Monitoring Data	4.0	4-1
1(d)(iii) Proposed Modifications to the Monitoring Program	--	--

2. WATERSHED ASSESSMENT MONITORING

Permit Condition Part IV. F. 2. b: The County shall submit a comprehensive plan for watershed assessment and trend monitoring by April 2, 2024 related to stream biology and habitat, bacteria, and chlorides and commence monitoring upon the Department's approval. The plan shall follow the 2021 Monitoring Guidelines and include:

i. Biological and habitat assessment monitoring at randomly selected stream sites using MBSS protocols;
ii. Bacteria (i.e., E. coli, Enterococcus spp., or fecal coliform monitoring); and
iii. Chloride assessments at two locations.

The County developed a draft plan for watershed assessment and trend monitoring related to stream biology and habitat, bacteria, and chloride. The County performed an internal review of the plan to finalize the plan for submission to MDE. The County is currently updating the monitoring plan based on recent MDE communication and guidance (October 20, 2023). The final plan will be submitted to MDE by April 2, 2024.

3. PCB SOURCE TRACKING

Within one year of permit issuance, the County shall develop a PCB source tracking monitoring plan for all applicable TMDL WLAs where watershed 18 reductions are required to meet water quality standards. The County shall submit results and provide updates annually on the monitoring efforts.

The County is developing a preliminary draft countywide strategy, sample analysis plan, and quality assurance project plan based on the 2022 MDE PCB restoration guidance. The County has collected data and geospatial information identified in the 2022 guidance. The County has started subwatershed prioritization as part of the source track down study. The County plans to have completed the draft countywide strategy, sample analysis plan, and quality assurance project plan by the end of 2023, with initial sampling beginning in spring 2024. In the Summer of 2023, The County completed a Sediment and PCB reduction plan in the area of 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 (4) selected sites. This work was partially funded through a grant from the Chesapeake Bay Trust.

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Figure G-2. Locations of Cross Sections in Black Branch and Tributary 1 Watersheds

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H. PROGRAM FUNDING

Permit Conditions Part IV. G:

1. *Annually, a fiscal analysis of the capital, operation, and maintenance expenditures necessary to comply with all conditions of this permit shall be submitted as required in PART V below.*

Fiscal Analysis

This information is provided in the MDE's MS4 geodatabase on DVD.

2. *Adequate program funding to comply with all conditions of this permit shall be maintained. Lack of funding DoEs not constitute a justification for noncompliance with the terms of this permit.*

A financial assurance plan showing the County meeting its 100-percent requirement of the projected expenses for 2023 and 2024 was submitted with last year's report.

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APPENDIX A

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AA. RESPONSE TO MDE'S COMMENTS

Dated June 30, 2023, MDE provided its comments on the County's 2022 NPDES MS4 annual report and requested that the County provide response with the 2023 NPDES MS4 annual report submittal. Table AA-1 below provides the County's response to MDE's comments.

Table AA-1. County Response to MDE's June 30, 2023, Comments

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
Part V.A Annual Reporting	•The Prince George's County FY 2022 annual report was submitted to the Maryland Department of Environment (Department) in accordance with reporting requirements under the permit.	Comment Noted.
	•The County is now covered under a new permit issued on December 2, 2022. Reporting under the new permit is due at the end of each calendar year. The next report must be submitted by December 31, 2023.	Comment Noted.
Part V.B Legal Authority	•Prince George's County continues to maintain adequate legal authority in accordance with the term of this National Pollutant Discharge Elimination System (NPDES) municipal separate storm sewer system (MS4) permit.	Comment Noted.
Part IV.C Source Identification	•The Department has distributed a revised geodatabase shell consistent with updates proposed in the November 2021 Draft Supplement User's Guide to the Geodatabase. The County has made substantial progress in migrating into the latest reporting schema. The Department is requesting that the County provide final comments on the new reporting schema no later than the FY 2023 annual report. The following comments apply to the geodatabase submittal:	The County's final comments document is provided on the DVD under "MDE comments" folder. The comments provided are related to BMP drainage area feature class, stream restoration and shoreline protocols, outfall feature class, and TMDL progress associated tables.
	○Outfalls: ▪ The County is reporting 2,593 outfalls. The attribute table partially reflects the updated schema. The field INDUSTRIAL is not included. The County provided MAJOR_MINOR information that included	The two fields "Industrial" and "Major_Minor" are redundant. Outfall table was modified so that there is only one field capturing attributes for Major MS4 Outfall instead of two. Field INDUSTRIAL in Outfall Feature Class was

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	the outfall size within that field. Please note that the MAJOR_MINOR field is limited to domain entries "Major" and "Minor" and the size of the outfall should be noted in SIZE_OUTFALL.	deleted. A new Domain dMajOutfallType was added to MDE GDB, with the following categories: ○Code: 12 Description: Industrial Outfall 12" or greater ○Code: 36 Description: Outfall 36" or greater ○Code: 50 Description: Outfall with Drainage Area rather than 50 acres ○Code: Min Description: Minor Outfall This domain was then applied to the field MAJOR_MINOR in Outfall Feature Class and populated accordingly. In the latest schema received on September 9, 2023, this field was removed by MDE.
	○Best management practices (BMPs): ▪ The database has 5,583 BMPs and 116 stream restorations or outfall stabilizations.	Comment Noted.
	▪ The County has provided data for the Quan_Man field to indicate the level of quantity management for historical BMPs. The County is commended for the substantial effort behind capturing this newly recommended data. This is important asset management information related to flood management and the Department encourages the County to continue efforts to populate the remaining fields.	Comment Noted.
	▪ The County has made great progress migrating into the new format. Recommendations for improvements include the following: ○ Continue populating the PRMT_ISSUANCE_YR_CREDIT for all BMP records where restoration	Agreed.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	credit was claimed. Because the County is continuing efforts to meet restoration requirements in the prior permit, most records should include the date 2014 (with an exception of credits obtained in early permits). This applies to all alternative BMP records as well.	
	○ The PE_TOTAL_STORAGE field needs to be filled out for all records where restoration credit is claimed (this includes all records with a construction purpose CONV, REST, and REDE).	The County needs more clarification on this field. It seems like it is a redundant field. In the case of a Restoration or Conversion of an Existing BMP, the PE_TOTAL_STORAGE value would be the same as the PE_ADR field, which is already mandatory for all BMPs.
	○ The WQT_IMP_ACR_CREDIT field needs to be populated for all records where restoration credit is claimed. For credits claimed in previous permit terms, this field will be equal to the TOT_IMP_ACR_CREDIT field.	The County needs more clarification on this field. We request to meet with MDE or provide additional information with an example in the future so that the County can begin populating this information.
	○ For future redevelopment credits, please ensure that all redevelopment records only represent treatment for existing impervious area and use the REDE code. Treatment for new development impervious area should use the code NEWD and this treatment should be recorded under a new BMP ID. This is the case even if imperviousness from both records drain to the same BMP. This will allow for easier credit reporting for redevelopment projects.	Agreed. DPIE will start to collect this information at the time of design as well as at the time of As-Built during the completion of each permit and in the future DPIE will provide the data accordingly in geodatabase.
	○ All converted BMPs must include information in the field PE_PRE_CONV. The credit available for these converted BMPs is based on an increase in	Comment noted. This comment is addressed in the current submittal. See these updates in the geodatabase.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	treatment level between pre- and post- conversion. Please provide all information to verify the credit.	
	○BMP Drainage Area: ▪ Please continue to update the BMP_DRAIN_ID for all fields.	Comment noted.
	▪ 5,463 BMP drainage area records are provided. It appears that there are certain scenarios where small-scale practices include a one-to- many relationship. If this is the case, please include an explanation in future annual reports.	BMP Feature Class has BMP DA ID. This allows for one-to-many relationship between BMPs and DA's. The real world application is that pre-treatment BMPs have the same DA as WQ BMP. There is no reason, from a permit compliance or water quality analysis perspective, to have identical BMP Drainage Area Feature Class polygons overlap each other.
	○Alternative BMP data: ▪ Alternative BMPs have been migrated into the new schema. Please continue to populate this information in accordance with the November 2021 Draft Supplement to the Geodatabase User's Guide.	Comment Noted.
	▪ Please continue to populate PRMT_ISSUANCE_YR_CREDIT for all alternative BMPs.	Comment Noted.
	▪ Please provide a project description for all alternative line BMPs. This can include the name of the stream or location of the channel being restored. The codes submitted in this field do not offer a clear description.	Comment noted and addressed in this geodatabase submittal. All records used the stream name or downstream name as the project description.
	○The local TMDL and Chesapeake Bay TMDL data tables have been reported as feature classes. The Department will consider whether this approach is appropriate for all permittees.	Comment Noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	•The County has submitted a storm drain system map. The County must maintain the map and provide annual updates in each annual report.	Comment Noted.
Part IV.D.1 Stormwater Management	•The County adequately maintains stormwater program data to show compliance with the three-step review process for implementing environmental site design (ESD) to the maximum extent practicable (MEP).	Comment noted.
	•The Department's September 14, 2016 correspondence requested that the County forward any proposed changes to the stormwater ordinance or policies related to stormwater management plan review and approval. The County must coordinate with the Department on any changes to stormwater polices, the County design manual, or ordinance.	DPIE has been and will continue reporting and coordinating with all concerned agencies and departments any changes to stormwater policies, the county design manual and /or ordinance.
	•The County reported a total of 10,016 stormwater construction inspections were performed in FY 2022 and issued 15 violations. This represented a slight decrease in the number of inspections from FY 2022 of 11,417, however, the overall trend of construction inspections has increased substantially since 2014. Please continue to update Table D-2 in future annual reports.	Comment Noted
	•The County geodatabase reports that 204 BMPs have failed inspections which is a slight decrease from the FY 2022 report which had 207 failed inspections. However, the geodatabase indicates that 85 of these BMPs have not been re-inspected before 2019. The County needs to pursue appropriate enforcement to bring these failed BMPs into compliance.	The county has addressed 92 BMPs which are passing in FY2023. The County is working on the rest of the BMPs to be brought into compliance by FY2024 submittal.
	•All BMPs must be on a triennial inspection rotation. There are 627 BMPs that have not been inspected prior to 2019. These BMPs need to be inspected and brought into the three-year inspection cycle. It is likely many of these BMPs that have not had recent inspections will be in failed condition. The County must submit a plan	The county has addressed 261 BMPs, which are brought into the three-year inspection cycle in FY2023. The County is working on the rest of the BMPs to be brought into compliance by FY2024 submittal.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	to correct this deficiency in the next annual report.	
	•The County has made substantial progress in completing built date information. Please continue efforts to populate the remaining 112 records.	Comment Noted.
	•The County submitted stormwater approval data to justify stormwater exemptions granted during FY 2022 as requested by the Department in past annual report reviews. There are a few records that show more "new impervious area" than actual disturbed area. Please check this information.	Noted. This should be a typo or an error at the time of data population in the geodatabase. We will make those corrections.
Part IV.D.2 Erosion and Sediment Control	•The Department performed an erosion and sediment control delegation review in the fall of 2022. The Department provided a summary of the review to the County in the February 13, 2023 correspondence and has granted continued delegation of erosion and sediment control enforcement authority through June 30, 2025.	Comment noted.
	•The County reported 101 construction projects with an earth disturbance of one acre or more. These projects disturbed a total of 1,363 acres collectively.	Comment noted.
Part IV.D.3 Illicit Discharge Detection and Elimination (IDDE)	•The County performed dry weather discharge screenings at 151 outfalls, conducted chemical testing on 75 observed flows, and identified suspected illicit discharges at six outfalls. The County appropriately investigated and resolved all discharges.	Comment noted.
	•Please ensure that the database accurately reflects findings. The discharge source of the flows investigated were all labeled "unknown".	Comment noted. Per MDE Geodatabase Schema "Unknown – Explanation required in general comments." The County has provided its findings in the general comments.
	•The County conducted visual surveys of 110 commercial and industrial complexes and identified 69 potential water quality concerns. The County demonstrated appropriate documentation of follow up, education, and	Comment noted. The County has continued its efforts.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	resolution of these concerns. The County maintained a consistent level of implementation and the Department requests that the County continue this effort in the next permit term.	
	•The Department had advised that the County maintain a consistent level of effort on visual screenings in past annual report reviews. As an example, the FY 2019 report indicated that 37 inspections took place with 14 water quality concerns investigated. This represented a decreased level of effort compared to prior years. The FY 2020 report indicated that 52 visual screenings took place, and 20 water quality concerns were investigated. The increased effort documented in FY 2021 represents a commitment by the County to maintain a consistent level of screening throughout the permit term.	Comment noted.
	•The County continues to maintain a program to address and respond to illegal discharges, dumping, and spills. The County's report demonstrates success at identifying illicit discharges and resolving pollution violations.	Comment noted.
	•The Department recommends that the County begin preparing for new permit requirements that include prioritizing field screening efforts, submitting a plan and schedule for screening prioritized outfalls, and developing written SOPs for outfall screenings, investigations, enforcement, and complaint response.	Comments noted.
Part IV.D.4 Trash and Litter	•The County provided the status of trash reduction efforts and an evaluation of programs for meeting goals outlined in the Anacostia trash total maximum daily load (TMDL) work plan. Overall, the County's program remains comprehensive due to proactive (education/outreach) and reactive approaches (clean-ups). The County plans to increase efforts in FY 2023 as pandemic restrictions have been eased.	Comment noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	•The County shall report on progress toward meeting the Anacostia trash TMDL in future annual reports based on new permit requirements outlined in PART IV.F.3.d.	Comment noted.
	•The County has additional programs outside of the Anacostia watershed such as the Comprehensive Community Cleanup, the Clean Up/Green Up, Roadside Cleanup, Education and Outreach, Storm Drain Stenciling, and Recycling Programs.	Comment noted.
Part IV.D.5 Property Management and Maintenance	•The County applied 14,911 tons of calcium chloride salt (decreased from 17,500 tons in the previous year) and 75,618 gallons of salt brine (increased from 52,236 the previous year) during four storm events in the winter season. The County reported a 14% reduction in salt usage.	Comment noted.
	•The County has implemented practices and technologies to enhance efficient application of winter weather materials. These include: monitoring road conditions and weather to determine appropriate application; mandatory annual winter weather management training for all staff and contractors; and ongoing upgrades to equipment and vehicles with tracking technology. Please continue to report on these efforts	Comment noted.
	•The County trained 350 staff at its public facilities and provided a status of ongoing good housekeeping practices implemented by co-permittees including staff training in stormwater management and pollution prevention topics.	Comment noted.
	•The Department recommends that Prince George's County begin preparing for new requirements anticipated in the next permit. The new permit will include additional efforts toward litter and debris removal (see PART IV.D.4.e) and implementing good housekeeping plans (GHP) (see PART IV.D.4.b) and development of salt management plans (see PART IV.D.4.d).	Comment noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	•As a reminder, the permit requires developing a Salt Management Plan (SMP) to submit in the third year annual report. Further information on the required contents of a SMP are found in the permit. The Department notes that the County currently implements most of the aspects of a SMP, including: tracking use of deicing materials and snowfall, providing training to winter weather operator employees, and evaluating new equipment and technologies.	Comment noted.
Part IV.D.6 Public Education	•The County promotes environmental awareness and education outreach efforts to the public in coordination with watershed restoration projects. The County's efforts have reached thousands of attendees as noted in the FY 2022 spreadsheet Event Report. The County noted that 105 events related to trash clean ups, tree plantings, outreach to local schools, environmental events, climate initiatives, conservation landscaping, stewardship programs, and numerous pet waste initiatives.	Comment noted.
Part IV.E Restoration Plans and Total Maximum Daily Loads (TMDLs)	•The County is required to complete impervious area restoration for 6,105 acres for the 2014 permit. The County has reported that 5,231 acres have been completed as of FY 2022. This represents an increase of 1,054 acres in the last fiscal year. In addition, the County reports that an additional 1,538 acres of restoration are currently in the planning process to meet this requirement and contribute to meeting requirements under the new permit.	Comment noted.
	•All alternative BMPs have passing inspections, which represents an improvement over prior reporting years. Please ensure that all practices receiving credit under the 2014 permit have had inspections within the required timeframe of the permit.	Comment noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	•As noted in prior annual report reviews, more information is required to verify credits claimed on stream restoration BMPs with very large credits (and equivalent impervious acre conversion factors or EIAf) relative to other projects. For the FY 2022, report, the projects in question include:	Comment noted. Additional documents supporting the EIAf claimed is provided on the DVD.
	▪ PG22ALN00019 reported a credit of 499 acres for nearly 25,000 linear feet of restoration. Based on these numbers, the Department calculated an EIA_f of 0.075 acres per linear foot.	Same response as above.
	▪ PG19ALN101490 reported a credit of 224 acres for restoring 1,139 linear feet of stream channel. Based on these numbers, the Department calculated an EIAf of 0.19.	Same response as above.
	▪ PG19ALN101480 reported a credit of 184 acres for restoring 1,936 linear feet of stream channel. Based on these numbers, the Department calculated an EIAf of 0.10.	Same response as above.
	▪ Similar questions were raised in the FY 2021 review for PG19ALN101100, PG19ALN101090, PG18ALN102910. Documentation of load reduction calculations for these large projects should be submitted in future reports so that the Department may verify the credit.	Same response as above.
	▪ The County should provide calculation for the projects noted above in accordance with the Chesapeake Bay Program expert panel protocols in the next annual report.	Same response as above.
	•Restoration credit associated with major pond retrofit projects will continue to be evaluated by the Department.	Comment noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	The following comments pertain to the TMDL Restoration Plans:	
	•Under the reissued permit, the County will be required to annually document in a Countywide Stormwater TMDL Implementation Plan updated progress toward meeting TMDL WLAs listed in Appendix A of the new permit. This information shall be submitted as a separate report and include a summary of restoration implementation, net pollutant reductions achieved, and an updated list of proposed restoration BMPs in accordance with permit requirements (see PART IV.F.3.).	Comment noted. A Countywide TMDL Implementation Plan Progress document is provided on the DVD.
	•The County has begun calculating revised loading rates and targeted load reductions in accordance with the most recent guidance developed by the Department. These revised numbers are based on most recent modeling methods for calculating watershed specific loading rates and therefore provide a new baseline for assessing progress in the future. The Department commends the County for this initiative.	Comment noted.
Part IV.F Assessment of Controls	•The Department received the Prince George's County monitoring plan proposal (the Plan) on February 3, 2023 to continue monitoring in the Bear Branch watershed. However, the monitoring proposal does not address the Department's recommendations outlined in past annual report reviews pertaining to a suitable monitoring location. Therefore, the Department has determined that the Plan does not meet the intent of the permit.	Comment noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	•The County shall submit a monitoring proposal for the Watershed Assessment requirements of the permit. Please coordinate with the Department as soon as possible to ensure that the monitoring proposal will meet the intent of the permit.	Comment noted. The County has opted pooled monitoring. Please see response below.
	•The County's reissued permit allows the option to participate in a Pooled Monitoring Program administered by the Chesapeake Bay Trust. The Department has encouraged the County to perform monitoring in a new location for reasons documented in past annual report reviews. If the County is not able to find a suitable monitoring location, the Department encourages the County to consider the Pooled Monitoring Program option.	Comment noted. Prince George's County has contacted the CBT in September 2023 for discussion and coordination with MDE relating to the pooled monitoring option for BMP effectiveness. Current status of this process has produced the first draft agreement and has been reviewed by MDE and will be further processed through each respective legal office of the County and CBT. The County is committed to provide the necessary funds in accordance with NPDES permit section G1a. As per MDE instruction the County will continue with Bear Branch monitoring till FY 2024 (June 2024), the expected date for the final pooled monitoring agreement.
	•In the interim, the County shall continue its monitoring efforts at Bear Branch and report its findings to the Department in accordance with Part IV.F. of the permit. This includes the sampling of 12 storms per year and the reporting of all required parameters. Reasons for any missing data should be clearly stated in the narrative and in the GEN_COMMENTS section of the geodatabase. However, all efforts must be made to capture this data.	Comment noted.
Part IV.G Program Funding	•The County provided a Watershed Protection and Restoration Program (WPRP) Annual Report for FY 2022 as required. Using the same template, the WPRP Annual Report should be submitted as a narrative file in the geodatabase with the County's next MS4 annual report.	Comment noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	•The County's expenditures for capital and operating budgets for implementing NPDES stormwater permit requirements have steadily increased over the permit term. The operating budget in FY 2022 decreased from $79,302,100 to $70,068,100, however, the capital budget increased from $63,912,333 to $108,465,000. Overall, this demonstrates slight increase over the prior year funding and a substantial commitment to the County's NPDES MS4 program.	Comment noted.
Supplemental Report	•A supplemental report was provided describing program implementation within the 26 municipalities covered under the County's permit. The report described public education, outreach, construction site runoff controls, post construction stormwater management, and pollution prevention programs. Detailed descriptions of public outreach events, illicit discharge corrective actions, and good housekeeping activities were provided.	Comment noted.
	•The County performs outfall screening and commercial and industrial visual surveys within the municipal boundaries of 13 municipalities during the reporting year. The County should include a summary of outfall screening measures performed in the remaining jurisdictions qualifying for coverage under the general permit in the next annual report.	Comment noted. The County focused its outfall screenings and commercial and industrial visual surveys in municipalities that were identified as Hot Spots and in the Anacostia watershed in FY 2022 & 2023. In FY 2024, the County will resume inspections in all 26 municipalities.
	•The County is commended for coordinating training and promoting pollution prevention for MS4 program activities with the County municipal partners.	Comment noted.
Supplemental Environmental Project	•Prince George's County Department of Environment, Stormwater Management Division, provided correspondence on April 28, 2023 noting that the Supplemental Environmental Project (SEP) proposed at the James E. Duckworth School has been relocated. This action was necessary due to the County Board of Education plans to demolish the school in the	Comment noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	coming years. The new project will now be implemented in three locations. These include the Paint Branch Unitarian Church, the Surrattsville High School, and Skyline Elementary School. This change in location is acceptable.	
	•The Department notes that the change in location for the SEP provides an opportunity to expand outreach and education programs to three different communities located in a qualifying area of environmental justice (EJ) concern. The Department has the following comments on this submittal:	Comment noted.
	○The Paint Branch Unitarian Church project will result in implementation of stormwater best management practices (BMPs) to treat upland runoff, and good housekeeping measures to reduce pollution potential on site and include education and outreach opportunities to the church membership.	Comment noted.
	▪ Please provide construction plans for the project and as-built plans when they are available.	Response is provided in Appendix B.
	▪ In the next Interim Consent Decree report, please provide a summary of education and outreach activities. In addition, please report progress toward implementing good housekeeping practices such as reducing fertilizer and pesticide use and other pollution prevention methods.	Response is provided in Appendix B.
	○The BMP implementation at Surrattsville High School and Skyline Elementary School have been completed.	Response is provided in Appendix B.
	▪ Please provide design plans for BMP installation for these projects. In addition, please submit as-built plans when available.	Response is provided in Appendix B.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	▪ In the next Interim Consent Decree annual report, include a summary of stormwater workshops and education and outreach initiatives.	Response is provided in Appendix B.
	•Please provide pictures of existing and proposed conditions (when available).	Response is provided in Appendix B.
	•Please include a description of how these projects are engaging underserved communities in the next Interim Consent Decree report.	Response is provided in Appendix B.
Impervious Surface Restoration Plan and Schedule	•The Interim Consent Decree report indicates that 5,230 acres of restoration have taken place as of FY 2022.	Comment noted.
	•The schedule indicates that the County is on track to meet the restoration requirement by the end of FY 2024. In addition, the County projects that 5,951 acres of restoration will be completed by the end of FY 2023.	Comment noted.
	•Please provide a status of progress made through FY 2023 by August 30, 2023. This number can be preliminary recognizing that corrections may be made in the FY 2024 Interim Consent Decree report.	A status update letter dated August 23, 2023, was provided to MDE on the consent decree items.
BMPs with Failed Inspections	•The County reported that of the 474 BMPs identified with failed inspections, a total of 69 remain to be brought into compliance. The County is to be commended for the substantial progress on this issue. However, the annual report indicates that 627 BMPs have not had inspections prior to 2019, and many of these are labeled as "passing" their last inspection. Please provide progress on bringing all BMPs into the three-year inspection cycle. It is likely many BMPs that have not been inspected over an	Comment noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	extended period are likely failing and the County needs to provide a plan for this issue.	
	•A schedule for the work noted above shall be provided in the next interim report.	The update is provided in the interim report per MDE's request.
BMPs and As-Builts	•The County has made substantial progress in obtaining as built information and is on track to meet this requirement by FY 2024.	Comment noted.
Restoration BMPs	•The County has made progress in bringing all restoration BMPs into compliance, reporting that just six active BMPs have failed inspections. These will be repaired by FY 2024.	Comment noted.
	•Please provide an update in the next interim report.	The update is provided in the consent order interim report per MDE's request, which is included in the reporting package.
Stream Restoration Inspection	•All stream restoration projects have passing inspections and this issue has been rectified. Please continue to report on the status of this issue in future annual reports.	Comment noted.
Outfall Stabilization Calculations	•This violation has been addressed.	Comment noted.
TMDL Plan Completion Dates	•The County has begun calculating revised loading rates and targeted load reductions in accordance with the most recent guidance available on the Department" website on the TMDL Stormwater Implementation Resources page. These revised numbers are based on most recent modeling methods for calculating watershed specific loading rates and therefore provide a new baseline for assessing progress.	Comment noted.
	•The Department has provided comments as a separate attachment for the Piscataway Sediment TMDL plan. The approach for this plan can be used as a template for other TMDL plans.	Comment noted. The County has evaluated the Piscataway MDE commented draft for use in the other plans being prepared.

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	•The violation noted in the Consent Decree stated that there were: "numerous TMDL implementation plans with no final dates for achieving required waste load allocations." Specifically, this comment applied to TMDLs in the Anacostia, Piscataway, and Upper Patuxent watersheds. Therefore, the Department advises the County to prioritize TMDL plan updates for the three watersheds noted above. These should be updated and submitted to the Department by 2024.	Comment noted.
BMP Drainage Area Information & BMP Drainage Area Linkages	•The Department has distributed a revised geodatabase shell consistent with updates proposed in the November 2021 Draft Supplement User's Guide to the Geodatabase. The County has demonstrated substantial progress in migrating BMP drainage area information as well as linking to the new format in the geodatabase.	Comment noted.
	•This violation has been addressed and progress toward geodatabase migration should continue and reported in future annual reports.	The County is using the updated format as provided by MDE in the current reporting.
IDDE SOP	•The County has addressed the Department's comments. The County's standard operating procedure for commercial and industrial visual surveys is approved	Comment noted.

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APPENDIX B