2022

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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Department of the Environment

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12/31/2022

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National Pollutant Discharge Elimination System
Municipal Separate Storm Sewer Systems

2022 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
Largo, Maryland 20774

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EXECUTIVE SUMMARY

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) 2022, the period of July 2021 through June 2022. This year's report is a continuation of the major revisions initiated in previous reports.

In FY 2022, 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 2022, the County's notable accomplishments toward meeting the MS4 goals included:

Restoration Accomplishments

- To date, 5,230.6 acres of impervious area have been treated and over 1,538 acres were in active planning, design, or construction in FY 2022.
- Through its Rain Check Rebate Program, 299 environmental sensitive design BMPs were installed in FY 2022 on private properties, treating 1.60 acres. This program provides great incentives for property owners to minimize stormwater runoff and prevent stormwater pollution in the County waterways, while at the same time providing a great educational platform for the neighborhood residents.
- Under its Stormwater Stewardship Grant Program, 12 additional projects were approved for a total of $675,000 to various not profit organization to treat impervious acres. These projects include on-the-ground efforts such as tree planting and water quality retrofit projects including tree planning, rain gardens, and bio-retention practices.

Illicit Discharge Detection and Elimination Inspections (MS4 Regulated Land)

- County inspectors evaluated 151 outfalls in spring/summer 2022 to ascertain the presence of illicit discharges. Of these outfalls, 75 received chemical testing with six (6) 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 110 commercial and industrial sources identified 69 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 283,939 pounds of litter.

- The County conducted several countywide trash reductions, litter reduction, and recycling programs. Specifically, the County continued several measures, including continuing its Adopt-A-Stream program, using the PGCLitterTRAK mobile app tracking tool, involving communities and municipalities in the Clean Sweep Initiative in the Anacostia watershed, and continuing the County's trash trap projects.

Outreach and Education

- The County hosted over 105 environmental education and outreach events, mostly virtual due to COVID 19, that promoted environmental awareness, green initiatives, and community involvement in reducing pollutants to its waterways.

- The County's Tree Planting Program planted 3,922 new trees under its Right Tree, Right Place Program.

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 2022, included on the DVD.

- The County resumed its physical monitoring of the Black Branch watershed in FY2022 to determine the effectiveness of stormwater management practices for stream channel protection. Monitoring results are provided on the DVD.

Land Development and SWM Controls

- In FY2022, 161 concept plans for stormwater control were approved.

Land Development Inspection Enforcement

- The County staff performed 10,016 stormwater construction inspections and 11,451 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) 2022, the period of July 2021 through June 2022.

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 2022. 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.

On July 20, 2022, Maryland Department of the Environment (MDE) provided its comments on the FY 2021 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 11-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. Discharges from the storm drain systems controlled by Prince George's County that may be subject to future NPDES MS4 stormwater program requirements may be added to this Permit at the discretion of the Maryland Department of the Environment (MDE). This permit was issued on January 2, 2014 and will remain in effect through January 1, 2019.

The permit was administratively extended and was in effect until December 1, 2022. The permit was reissued effective December 2, 2022.

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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-I24 or the Code of Maryland Regulations (COMAR) 26.08.0 I, 26.I7.0 I, and 26.I7.02. 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, 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 (MDE) 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, in its annual reports, submit to MDE an organizational chart detailing personnel and groups responsible for major NPDES program tasks in this permit. MDE shall be notified 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	Charlie Griffith, Associate Director Office of Storm Drain Maintenance cgriffith@co.pg.md.us 301-768-0332 (Cell)	Scott, McPhaull, Engineer III OSDM smcphaull@co.pg.md.us 301.883.5710 (office)

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	Michael Brown, Division Chief Special Service Division mobrown@co.pg.md.us 301-499-8520	See program manager
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	Michael Brown, Acting Associate Director Office of Highway Maintenance mobrown@co.pg.md.us 301-499-8520	See program manager
Storm Drain Maintenance	DPW&T/OSDM	Charlie Griffith, Associate Director Office of Storm Drain Maintenance cgriffith@co.pg.md.us 301-768-0332 (Cell)	Michael Snyder, Division Chief Storm Drain Maintenance Division, Office of Highway Maintenance 301-499-8522
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	Michael Brown, Acting Director Office of Highway Maintenance mobrown@co.pg.md.us 301-499-8520	Michael Brown, Division Chief Special Service Division mobrown@co.pg.md.us 301-499-8522
Snow and Ice Control	DPW&T/OHMD	Michael Brown, Acting Director Office of Highway Maintenance mobrown@co.pg.md.us 301-499-8520	Mary L. Holden, Planner V Office of Highway Maintenance mlholden@co.pg.md.us 240-619-9743 (cell)
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

Permit Condition	Department/ Division	Manager (s), Title/ E-mail Address, Telephone	Technical Personnel, Title/ E-mail Address, Telephone
	DoE/Director Office	Linda Lowe, Public Information Specialist Communications and Community Engagement Section lmlowe@co.pg.md.us 301-883-5952	See program manager
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

Permit Condition	Department/ Division	Manager (s), Title/ E-mail Address, Telephone	Technical Personnel, Title/ E-mail Address, Telephone
Stormwater Management Assessment	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	Consultant Services
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

Department/ Division/Section	Address
	9201 Basil Court, Suite 318, Largo, MD 20774

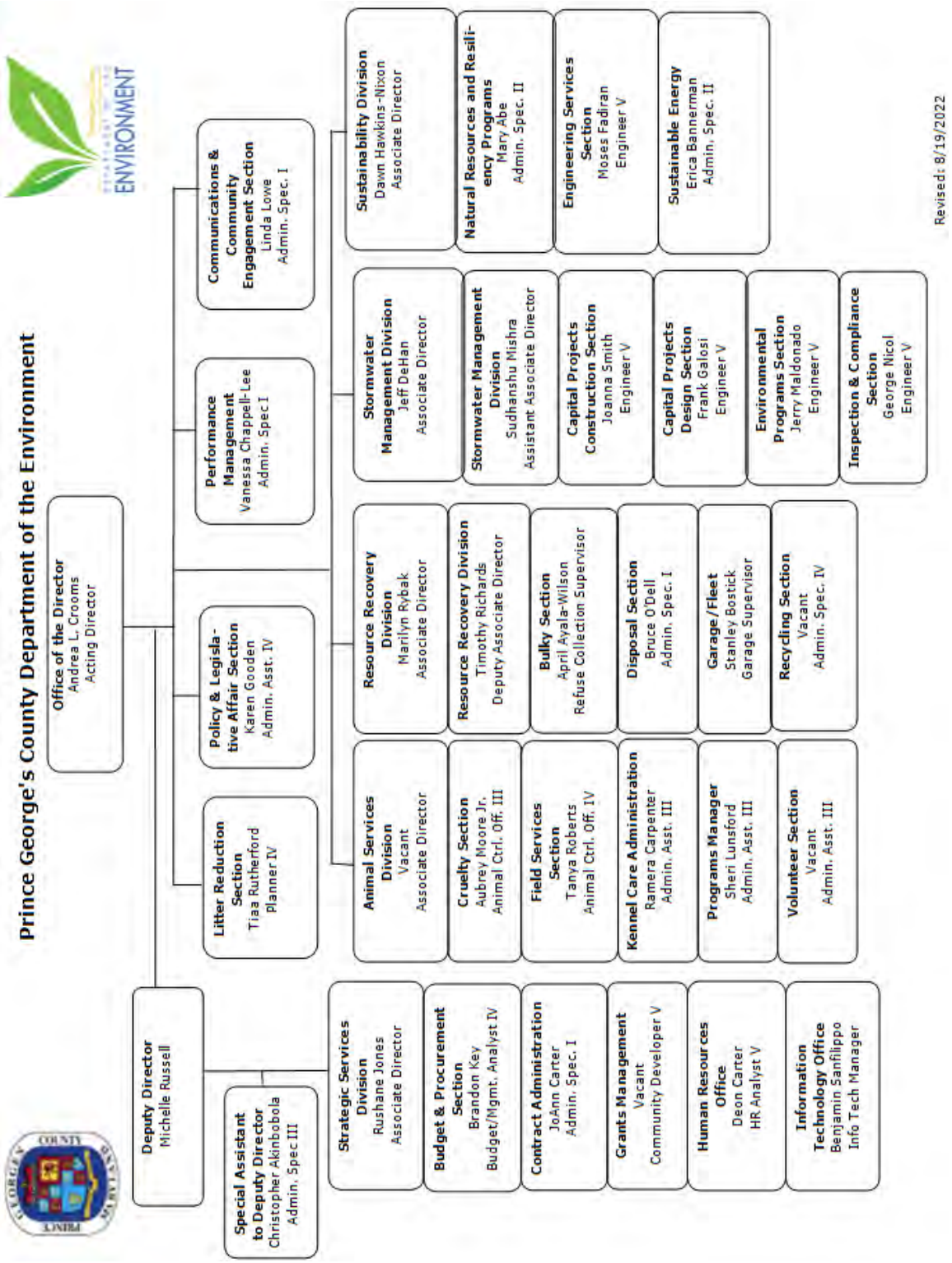

Figure A-1. Department of the Environment - Office of the Director Organizational Chart

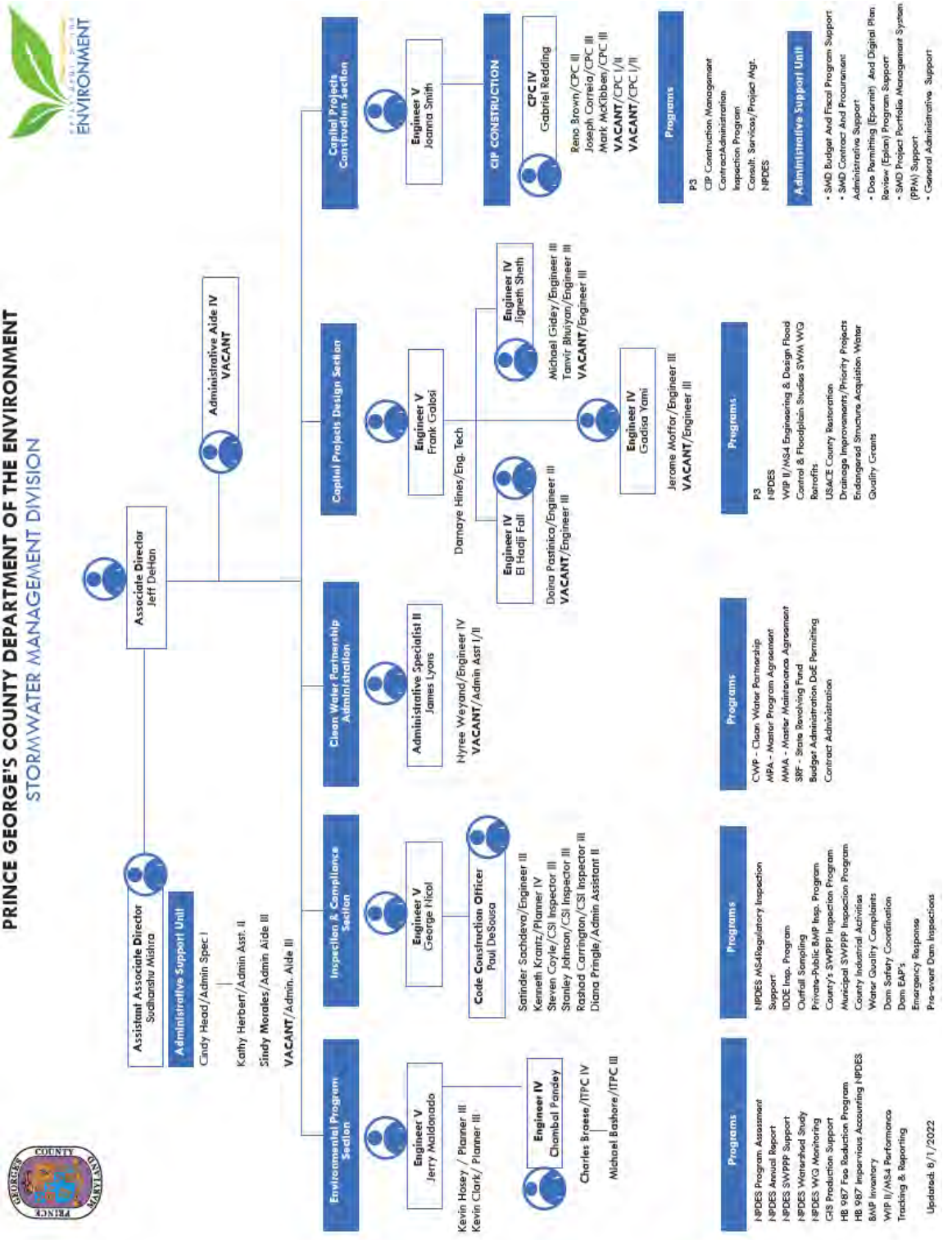

Figure A-2. Department of the Environment - Stormwater Management Division Organizational Chart

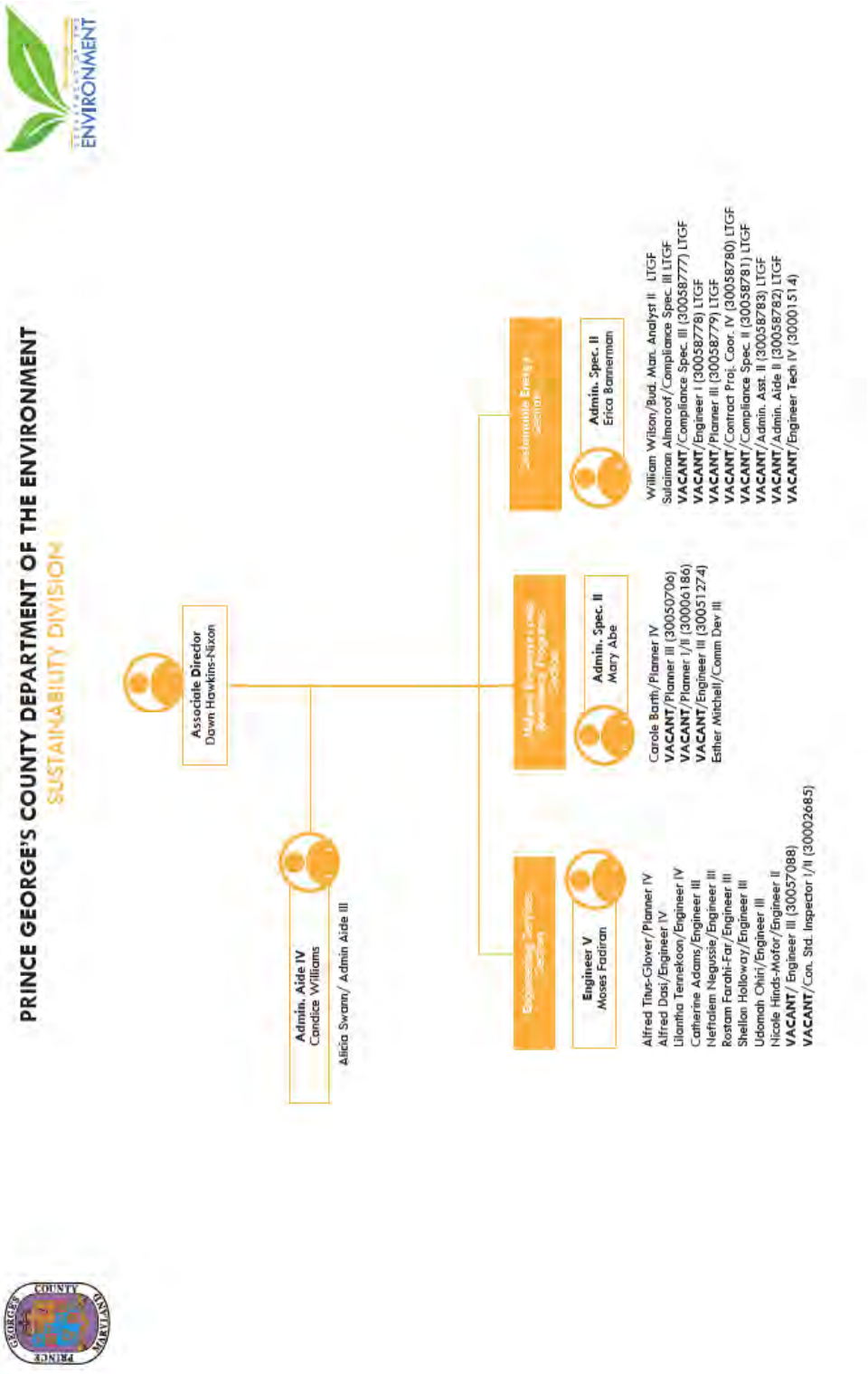

Figure A-3. Department of the Environment - Sustainability Division Organizational Chart

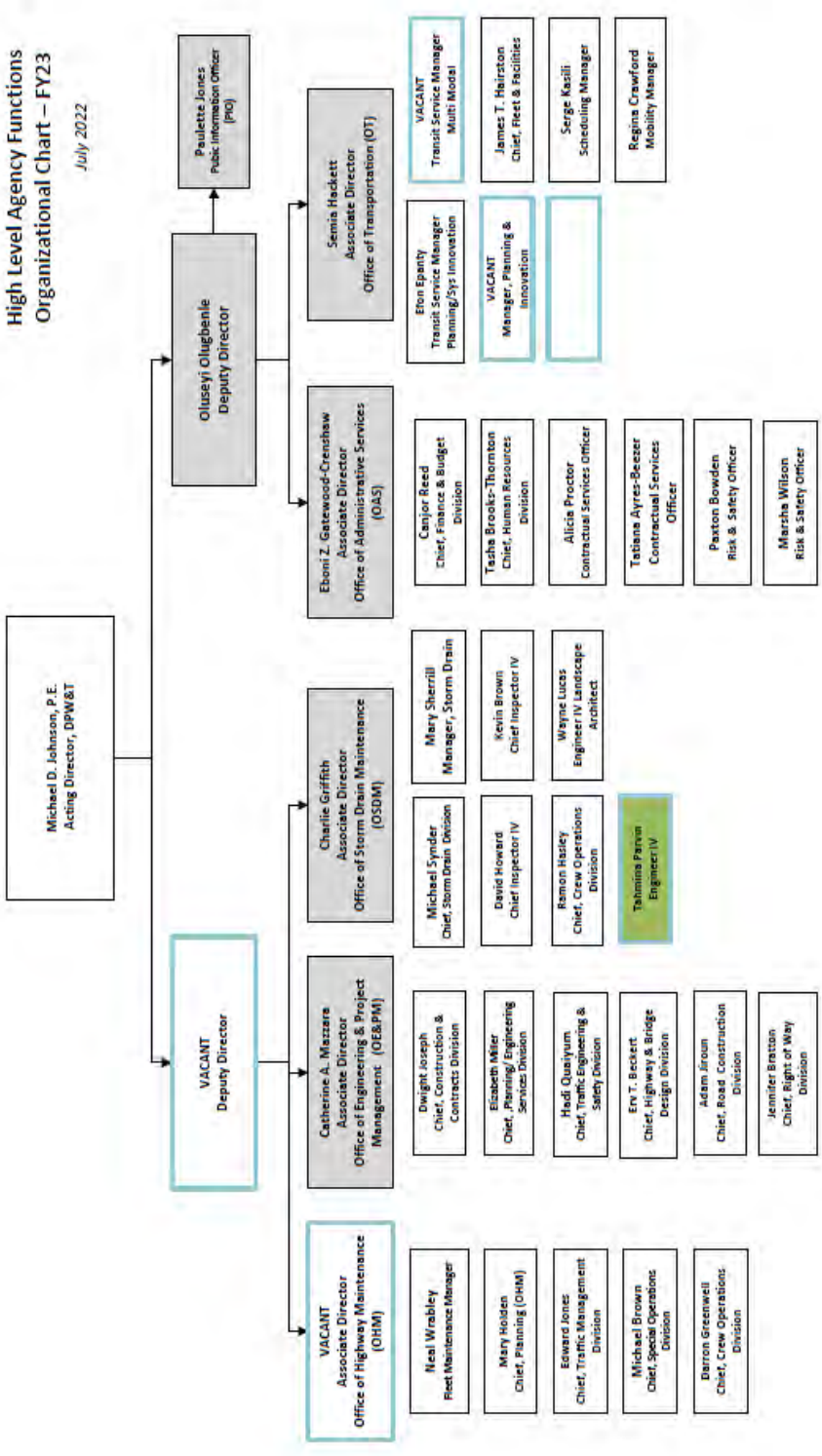

Figure A-4. Department of Public Works and Transportation - Office of the Director Organizational Chart

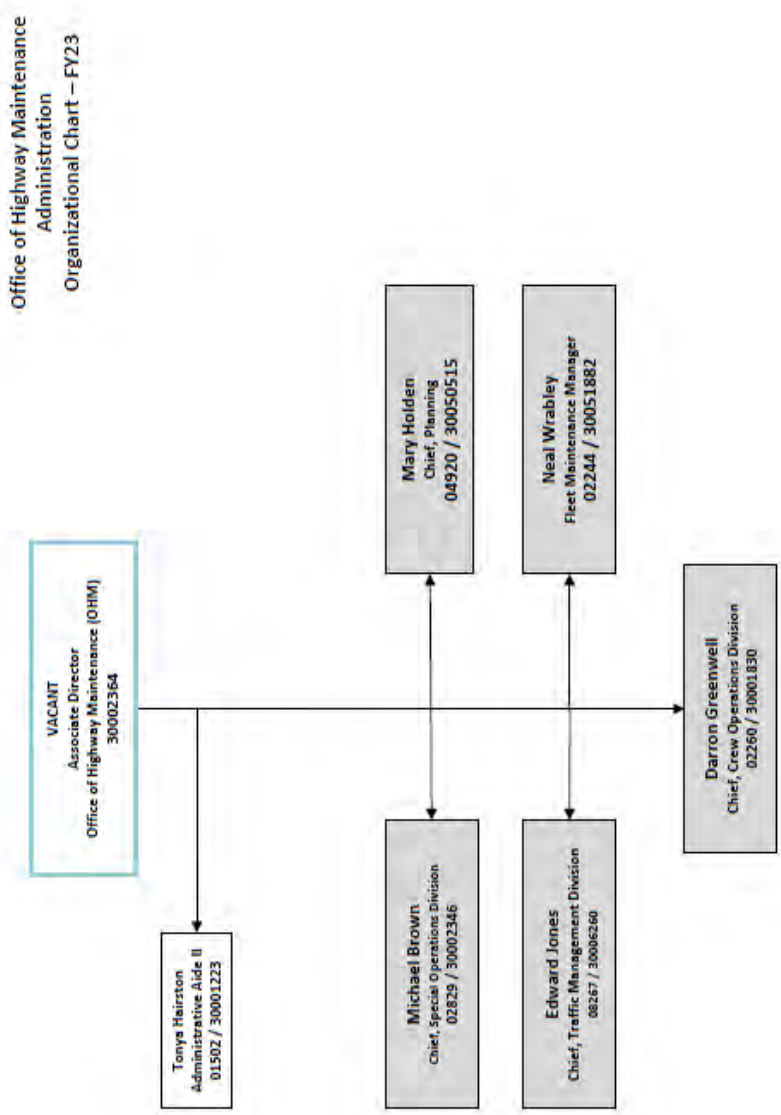

Figure A-5. Department of Public Works and Transportation - Office of Highway Maintenance (OHM) Organizational Chart

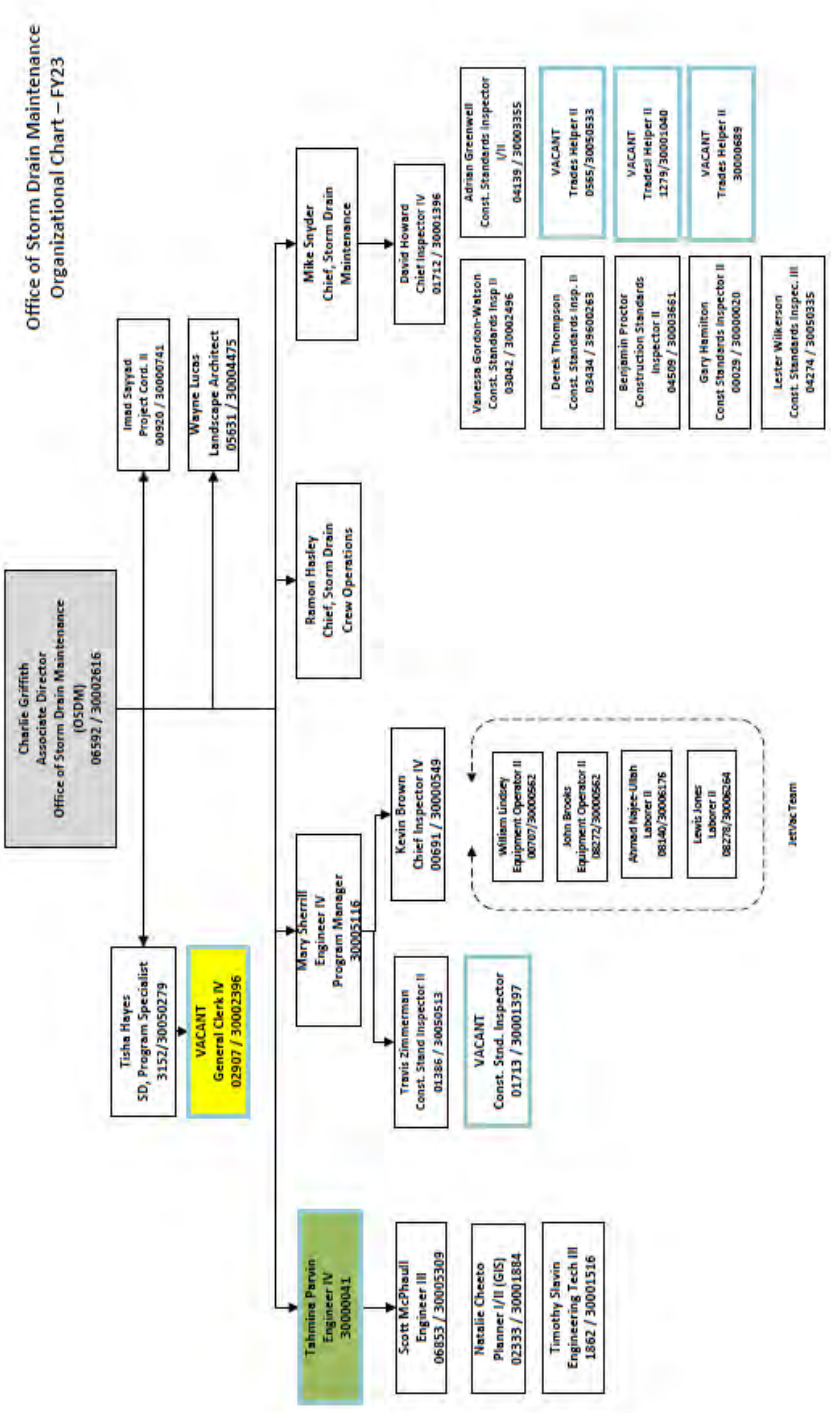

Figure A-6. Department of Public Works and Transportation, OHM - Storm Drain Maintenance Division Organizational Chart

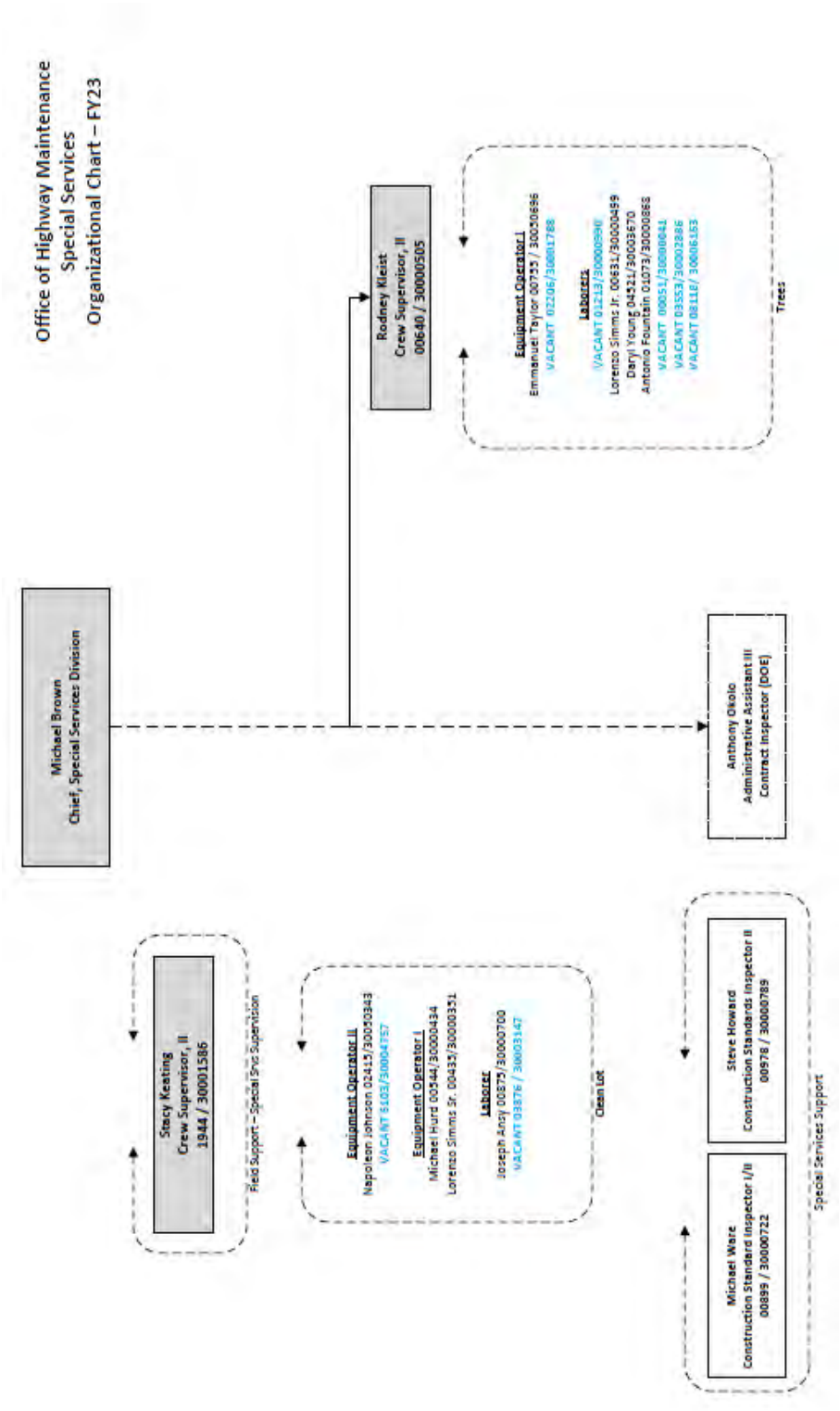

Figure A-7. Department of Public Works and Transportation (OHM) -Special Services Division

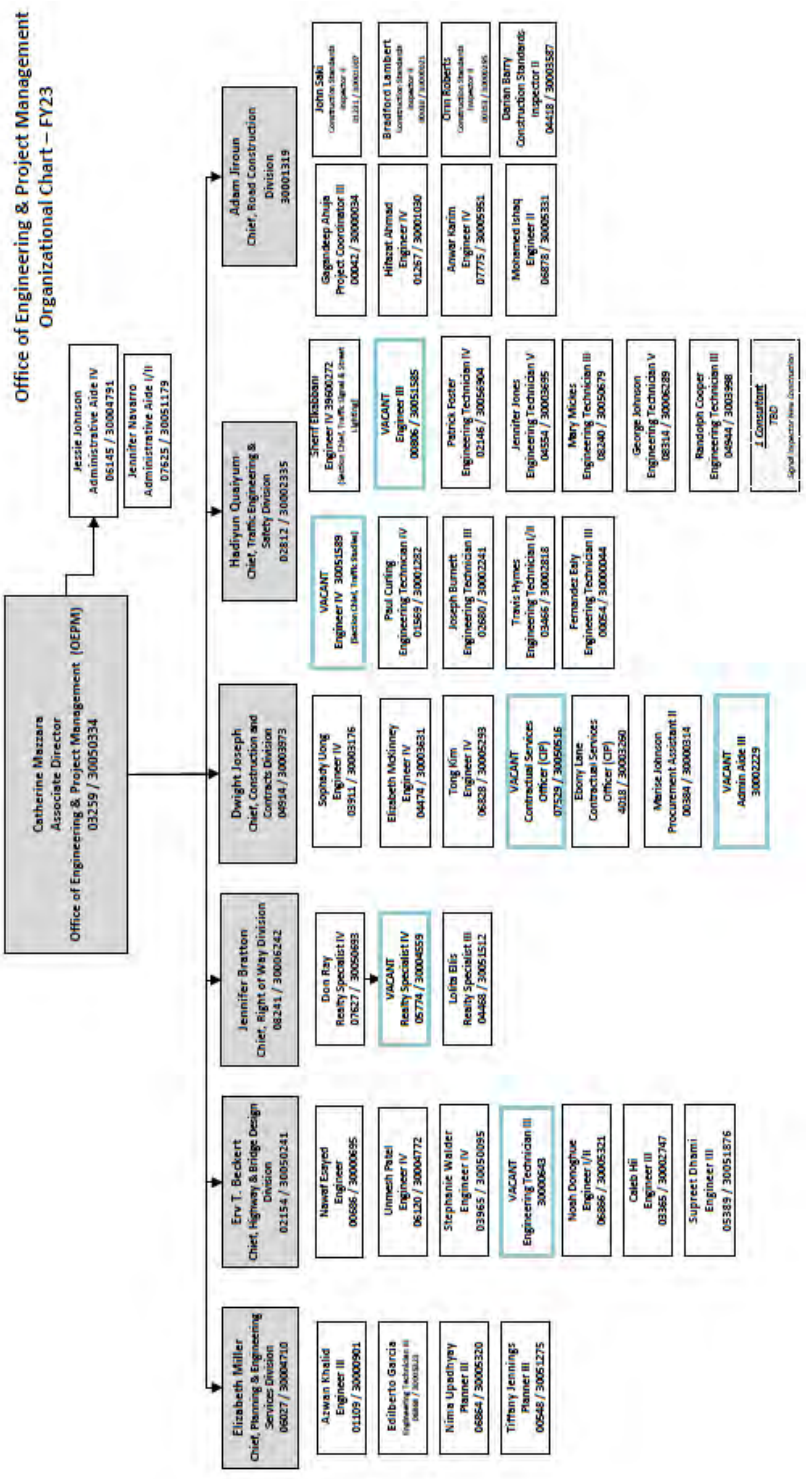

Figure A-8. Department of Public Works and Transportation - Office of Engineering and Project Management Organizational Chart

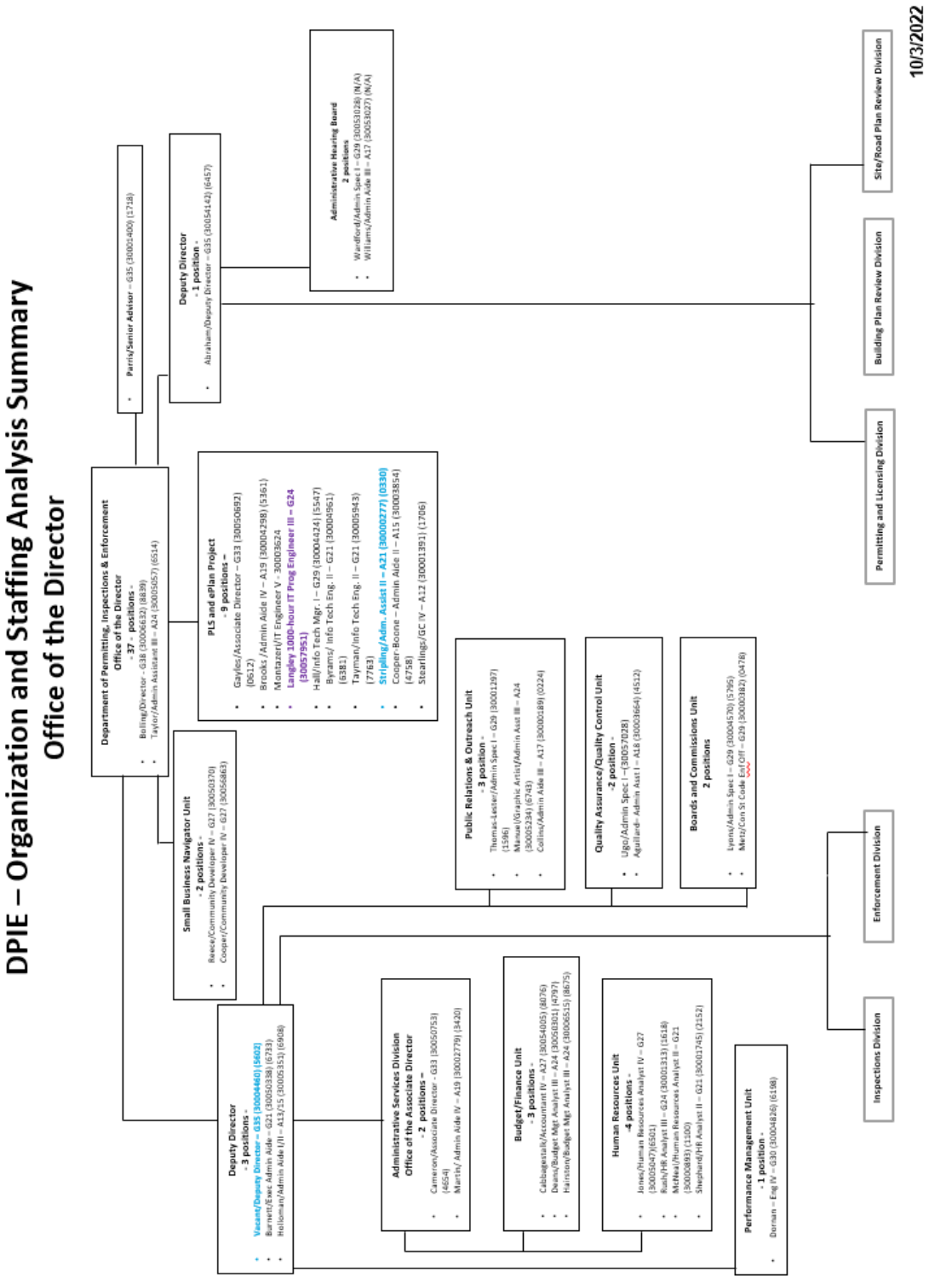

Figure A-9. Department of Permitting, Inspections and Enforcement - Organization and Staffing Analysis Summary, Office of the Director

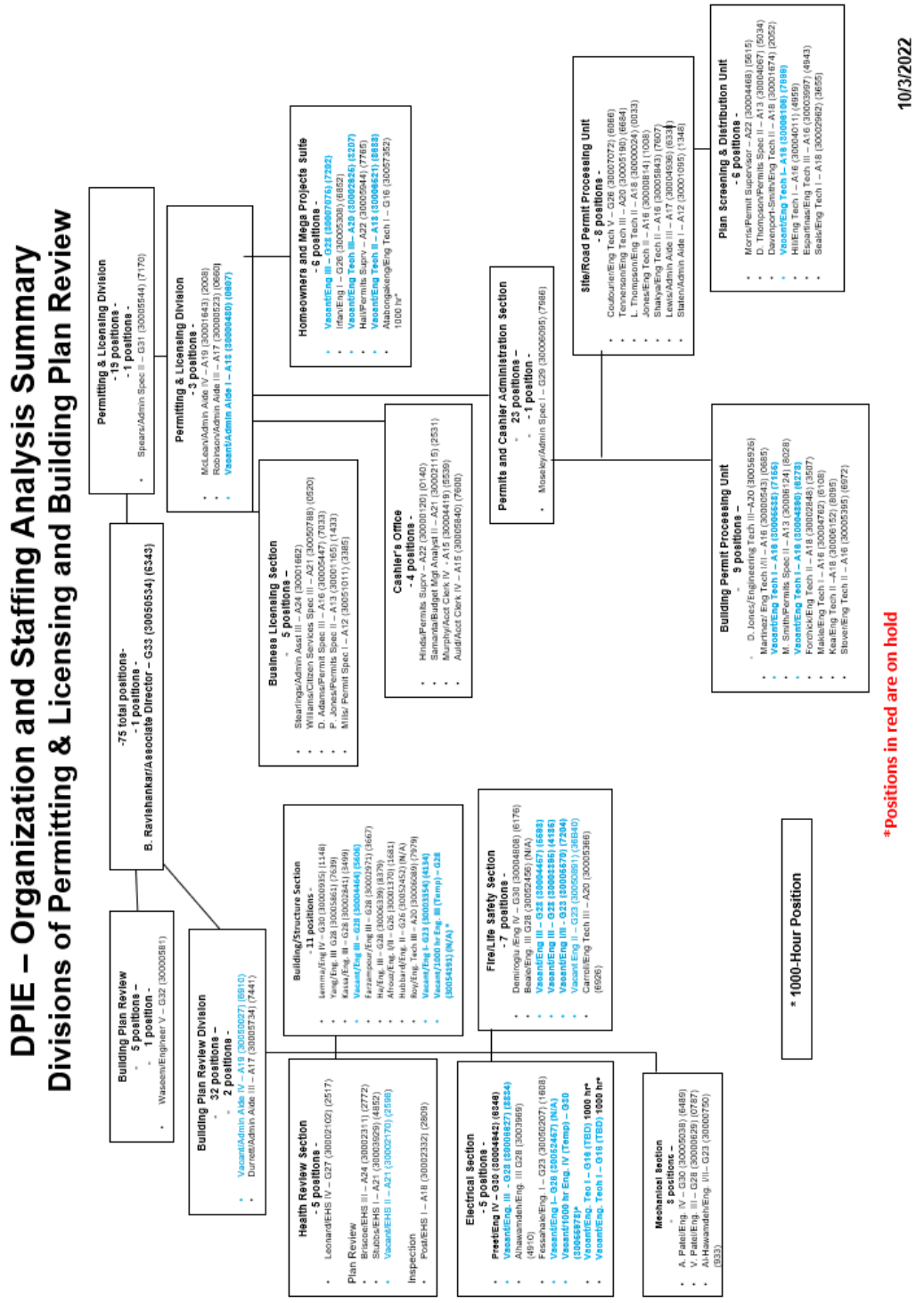

Figure A-10. Department of Permitting, Inspections and Enforcement - Organization and Staffing Analysis Summary, Permitting and Licensing Division and Building Plan Review

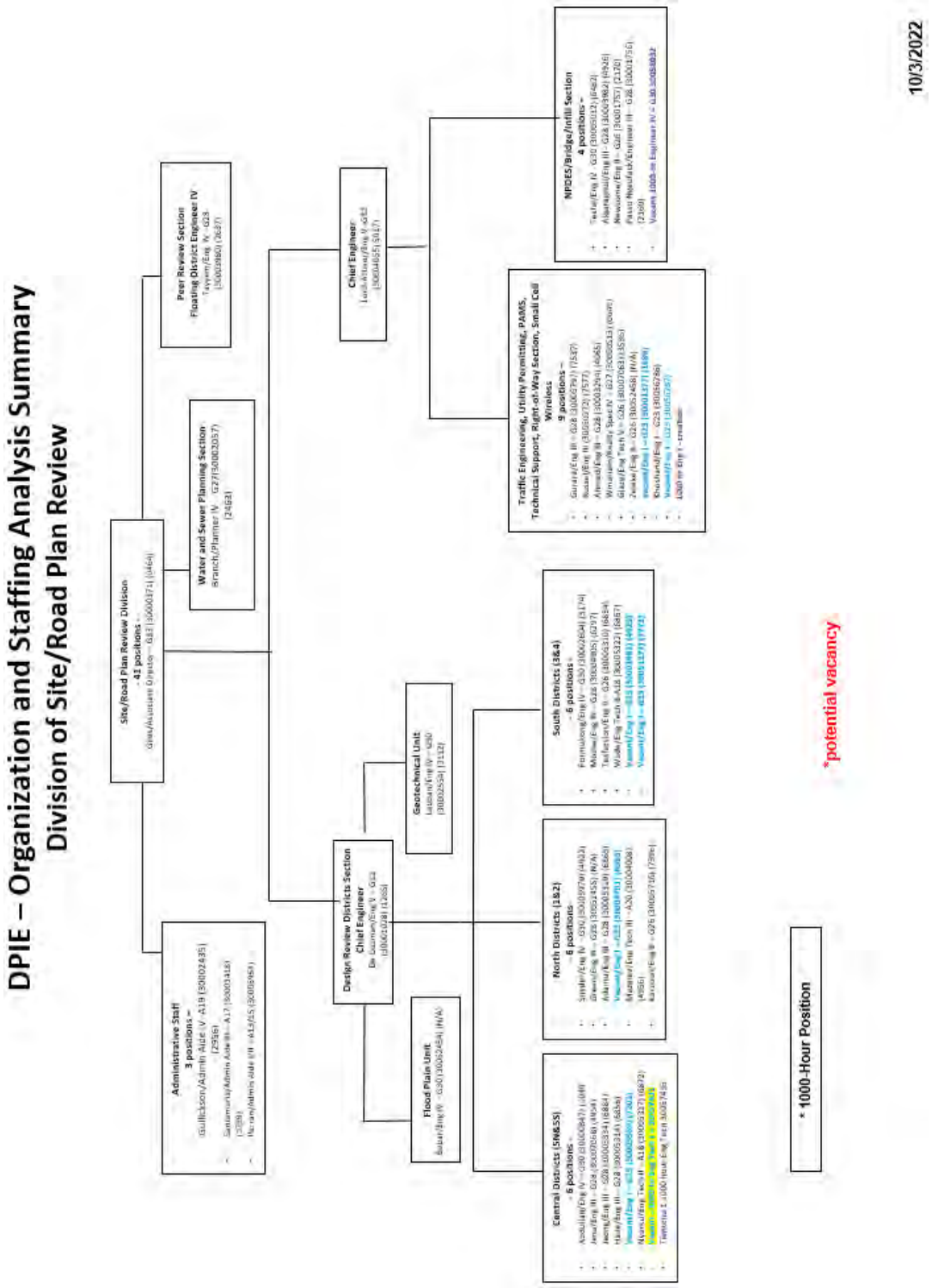

Figure A-11. Department of Permitting, Inspections and Enforcement - Organization and Staffing Analysis Summary, Site/ Road Plan Review Division

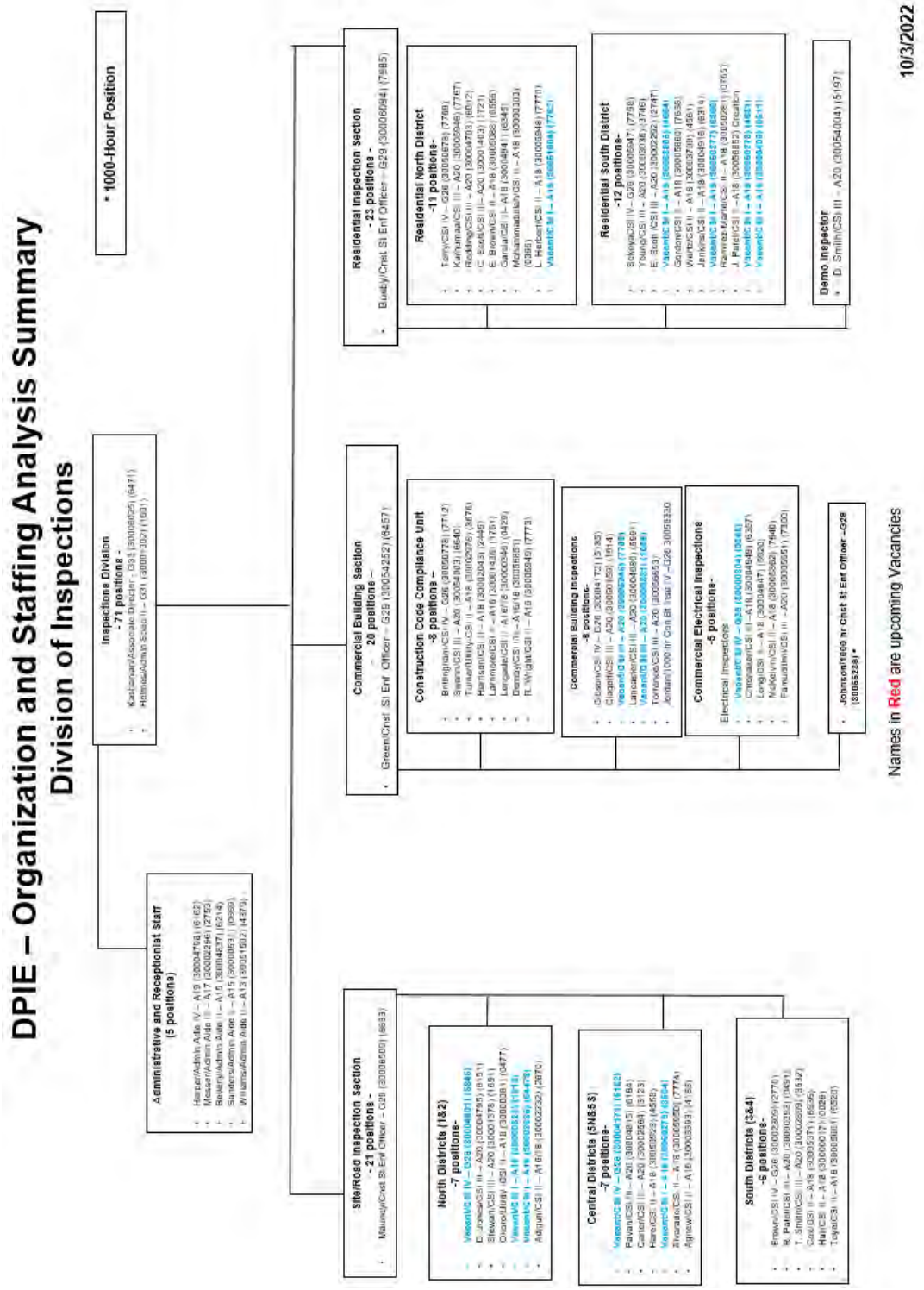

Figure A-12. Department of Permitting, Inspections and Enforcement - Organization and Staffing Analysis Summary, Inspections Division

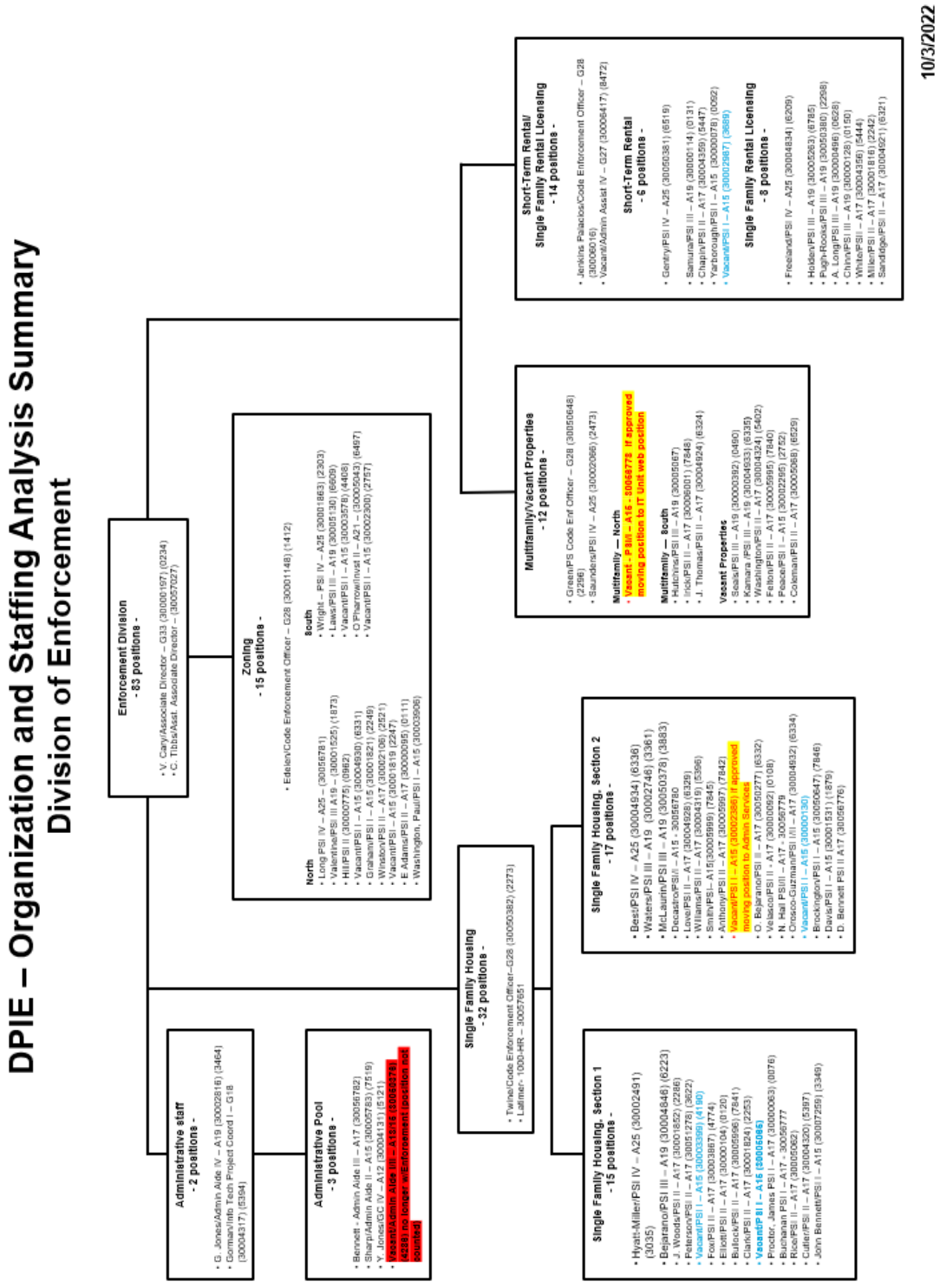

Figure A-13. Department of Permitting, Inspections and enforcement - Organization and Staffing Analysis Summary, Enforcement Division

B. LEGAL AUTHORITY

Permit Condition Part IV. B: Prince George's County shall maintain adequate legal authority in accordance with NPDES regulations 40 CFR Part 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 MDE within 30 days and make the necessary changes to maintain adequate legal authority. 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.

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C. SOURCE IDENTIFICATION

1. STORM DRAIN SYSTEM

Permit Condition Part IV. C. 1: The storm drain system information shall be submitted annually for all County watersheds within the permit area in geographic information system (GIS) format with associated tables as required in PART V of this permit. Storm drain system information will include all infrastructure, major outfalls, inlets, and associated drainage areas delineated.

In FY 2022, the County's drainage infrastructure is currently at 54,600 Inlets records and 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 now the County is reporting 2,498 Major Outfalls. Of these, 879 are Industrial Outfall 12" or greater, 1,587 are Outfall 36" or greater, 3 are 36" or Greater-Multiple Pipes, and 29 are Outfall with Drainage Area Greater than 50 acres. 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: The Industrial and Commercial Sources information shall be submitted annually for all County watersheds within the permit area in geographic information system (GIS) format with associated tables as required in PART V of this permit. The Industrial and Commercial Sources will include industrial and commercial land uses and sites that the County has determined have the potential to contribute significant pollutants.

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: The Urban Best Management Practices (BMPs) information shall be submitted annually for all County watersheds within the permit area in geographic information system (GIS) format with associated tables as required in PART V of this permit. The Urban best management practices (BMPs) stormwater management facility data shall include 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 81,929 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	5,583	2,796
Stream Restoration and Outfall Stabilization	AltBMPLine	116	51
Storm Drain Vacuuming, Street Sweeping, Tree Planting, and Impervious Area Elimination	AltBMPPoly	80,717	45,663
Septic Denitrification or Connection to WWTP	AltBMPPoint	895	192
Total		**87,311**	**48,702**

4. IMPERVIOUS SURFACES

Permit Condition Part IV. C. 4: The Impervious Surfaces information shall be submitted annually for all County watersheds within the permit area in geographic information system (GIS) format with associated tables as required in PART V of this permit. The Impervious surfaces dataset shall include public and private land use 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 FY2022, 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: The Monitoring Locations information shall be submitted annually for all County watersheds within the permit area in geographic information system (GIS) format with associated tables as required in PART V of this permit. The information shall include locations established for chemical, biological, and physical monitoring of watershed restoration efforts and the 2000 Maryland Stormwater Design Manual;

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: The Water Quality Improvement Projects information shall be submitted annually for all County watersheds within the permit area in geographic information system (GIS) format with associated tables as required in PART V of this permit. The information shall include 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 FY 2022, the BMP inventory includes 947 projects that were either in planning, under construction, or completed phases since fourth generation permit inception. 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 2022

MDE 8-digit code	Watershed Name	Number of Plans	Proposed Impervious Area (Acres)	Disturbed Area (Acres)
2131101	Patuxent River lower	5	10.789	53.360
2131102	Patuxent River middle	2	0.21	0.68
2131103	Western Branch	37	275.44	419.454
2140201	Patuxent River upper	5	7.058	11.71
2140111	Mattawoman Creek	5	22.5	19.278
2140201	Potomac River U tidal	18	53.452	179.328
2140203	Piscataway Creek	13	27.7	215.785
2140204	Oxon Creek	6	16.243	45.107
2140205	Anacostia River	70	112.9	218.873

MDE 8-digit code	Watershed Name	Number of Plans	Proposed Impervious Area (Acres)	Disturbed Area (Acres)
TOTAL		161	526.29	1,163.58

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 including, but not limited to:

i. Number of Concept, Site Development, and Final plans received. 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;
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. The total number of waivers requested and granted for qualitative and quantitative control shall be documented.

Stormwater program data shall be recorded on MDE's annual report database and submitted as required in PART V of this permit.

A summary of the stormwater controls during the concept plan approval phase in FY 2020 is provided below:

1. 161 Concept Plans approved
2. 93 Site Development Plans reviewed
3. 173 Final Plans reviewed
4. 5 Redevelopment Projects
5. 67 Stormwater Exemptions granted, a list is included on the DVD under Management Programs\Concept Exemption
6. No waivers were granted

The development of the geodatabase is also being utilized to meet the internal reporting mandates of Subtitle 32 of the Prince George's County Code:

Sec. 32-201. Annual Report

Starting in 2013, the Department shall issue an annual report and analysis by December 31st to the County Executive and the County Council on the implementation of and compliance with the stormwater management provisions contained in this Division, including projects that received administrative waivers under Section 32-170 (d), incentives under Section 32-175 (e) and variances under Section 32-176.

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 and structural stormwater management facilities including the number of inspections conducted and violation notices issued by Prince George's County

Construction inspections are performed by DPIE within three districts. The total number of site/road inspectors for FY 2022 was 18. During this reporting period, these inspectors performed a total of 10,016 stormwater inspections and issued 17 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
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 and structural stormwater management facilities 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 BMPs	BMPInspections	5,433
Alternative BMP-Stream Restoration, Shoreline Stabilization, Outfall Stabilization, and Land Cover Conversion	AltBMPLineInspections	27,151
TOTAL		32,584

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 2022 was 18. During this reporting period, these inspectors performed a total of 11,451 sediment control inspections and issued 150 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 conduct responsible personnel certification classes to educate construction site operators regarding erosion and sediment control compliance at least three times per year.

"Responsible Personnel Certification" courses were scheduled by the County's Inspections Division. However, the advent of the on-line course hosted by MDE resulted in no students registering for the County's class. MDE advised the County in an April 13, 2015 letter, that the on-line training offered by MDE satisfies the County's MS4 permit obligations. The County will continue to ensure that on-site operators have received this training. Below is a list of County inspectors who have obtained the certification:

1. Andre Stewart
2. Eric Hall
3. David Jones
4. Adigun Wasiu
5. Alvarado Alejandro
6. DeAndre Thompson
7. Robert Agnew
8. Toye Montez
9. Jason Carter *
10. Joe Brown
11. Patrick Hare
12. Scottie Mauney
13. Ramesh Patel
14. Dave Cox
15. Benjamin Okoro
16. Thomas Smith
17. Pavan Chitran
18. Ron Proctor

** Working as Chief Union Stewart*

Permit Conditions Part IV. D:
2. c: Program activity shall be recorded on MDE's annual report database and submitted as required in PART V of this permit; and
2. d: 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 2021 reporting period, Prince George's County reported a total of 101 projects with earth disturbances of an acre or more. The total earth disturbance for these 101 projects was 1,362.75 acres. Copies of the disturbed area databases were forwarded to MDE throughout the year on a quarterly basis. Overall grading permit information for FY2022 is provided on the DVD in the MS4 geodatabase.

Permit Condition Part IV. D. 3: Prince George's County shall continue to implement an inspection and enforcement program to ensure that all discharges to and from the MS4 that are not composed entirely of stormwater are either permitted by MDE or eliminated. Activities shall include, but not be limited to:

a. *Field screening at least 150 outfalls annually. Each outfall having a discharge shall be sampled using a chemical test kit. Within one year of permit issuance, an alternative program may be submitted for MDE approval that methodically identifies, investigates, and eliminates illegal connections to the County's storm drain system;*
b. *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 shall be reported annually;*
c. *Maintaining a program to address and, if necessary, respond to illegal discharges, dumping, and spills;*
d. *Using appropriate enforcement procedures for investigating and eliminating illicit discharges, illegal dumping, and spills. Significant discharges shall be reported to MDE for enforcement and/or permitting; and*
e. *Reporting illicit discharge detection and elimination activities as specified in PART V of this permit.*

3. ILLICIT DISCHARGE DETECTION AND ELIMINATION

For the FY 2022 inspections, DoE contracted Consultant services to perform field screening of 150 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.

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.

The outfall screening was conducted from May 2022 through June 2022, with 157 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 2022-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 157 inspections, 75 observed dry-weather flow. A chemical test was performed for all 75 inspections observing dry-weather flow. Six (6) 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 six (6) outfalls.

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

Outfall ID	Corrective Actions
PG21OUT091460	At the time of the consultant's inspection, this outfall was found to be discharging water with high concentration of ammonia and high turbidity. In addition, the water was reported to have a rancid smell. During the second test, the discharge had a high concentration of ammonia still. The flow was traced in the 3 inlets directly in front of the Food Lion and it may be an issue with the Stormceptor immediately upstream. The Code Enforcement Officer conducted an inspection of the Stormceptor and the storm drainage system on the property. From the inspection, it appears the cause of the high concentration of ammonia and rancid smell was due to stagnant water and decaying leaf material in the Stormceptor. The Code Enforcement Officer then met with the property owner's representative and requested the Stormceptor be clean out. The property owner complied with the request and the Stormceptor was cleaned. The County will continue to monitor the outfall and the Stormceptor at the next scheduled inspection. The issues have been resolved.

Outfall ID	Corrective Actions
PG67OUT030013	At the time of consultant's inspection, this outfall was found to be discharging rancid smelling water that had a low pH and was high in phenols and detergents. During the second test, the discharge still had a rancid odor, low pH and was traced to an ice cream distributor. The Code Enforcement Officer conducted an inspection of the property and outfall. From the inspection, it appeared the private drainage system on the property had stagnant water, leaf decay and other decaying organic material in the system which is causing the rancid odor. The Code Enforcement Officer then met with the property manager and requested their private drainage system be cleaned out. The property owner complied with the request and the drainage system was cleaned. The County will continue to monitor the outfall at the next scheduled inspection. The issues have been resolved.
PG22OUT018483	At the time of consultant's inspection, this outfall was found to have a pump around with a discharge high in ammonia. When this outfall was revisited, there was no discharge occurring from the diversion. The Code Enforcement Officer conducted an inspection of the outfall. From the inspection, it appeared the outfall discharges into a County maintained pond. At the time, the pond was drained for maintenance and a temporary pipe was placed to pipe water runoff around the pond. The Code Enforcement Officer then inspected the upstream storm drainage system and it appears the cause of the high concentration of ammonia was due to stagnant water and decaying leaf material in the drainage system. No illicit discharge was observed. The County will continue to monitor the outfall at the next scheduled inspection. The issues have been resolved.
PG88OUT058764	At the time of consultant's inspection, this outfall was found to have a dry-weather discharge that had a sewage odor and borderline readings for ammonia and turbidity, but no visible sources of pollution. When the outfall was revisited ammonia and turbidity exceeded the thresholds. The Code Enforcement Officer conducted an inspection of the outfall. From the inspection, it appears the cause of the high concentration of ammonia and the sewage odor was due to stagnant water and decaying leaf material within the storm drainage system. No illicit discharge was observed. The issues have been resolved.
PG79OUT058447	At the time of consultant's inspection, this outfall was found to have a discharge that exceeded the ammonia, detergent, and turbidity with a strong smell of sewage. Upon revisiting the structure, the discharge failed ammonia, detergent, and turbidity again. 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 and observed residents washing 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.
PG79OUT058775	At the time of consultant's inspection, this outfall was found to have a discharge that failed ammonia during the first inspection, however, it was under the threshold value during the follow-up inspection. No visible source of a possible illicit discharge

Outfall ID	Corrective Actions
	was located. The County will continue to monitor the outfall at the next scheduled inspection. The issues have been resolved.

The County also investigated the problems observed during the FY 2022 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 150 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 110 commercial and industrial complexes were inspected over the course of the inspections. A total of 69 potential water quality concerns was identified and reported to the County for follow-up investigation and/or enforcement. Of these potential water quality concerns, sixteen (16) were improper storage of materials and containers; seven (7) were oil staining of the pavement; three (3) were sediment on the property; two (2) were pavement staining from a restaurant grease waste container; thirty-seven (37) were trash & debris around the property; three (3) were water runoff from vehicle washing; and one (1) were staining of the pavement. 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 issue has 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 issue has been resolved.
- Sedimentation: The property owners were informed of the sediment on their property. The property owner is required to clean the sediment on their property and make sure it does not leave their property. When the site was re-inspected, it was observed that the property owner complied. The issue has 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 issue has 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 issue has been resolved.
- Pavement stains: The property owners were informed of the staining of the pavement from their dumpsters. They stated to the Code Enforcement Officer the liquids were from store or office trash, and no chemical liquids are being dumped into the dumpsters. The property owners were educated on good housekeeping practices, making sure no toxic liquids are placed in the dumpsters. The issue has been resolved.
- Car washing: The property owners were informed about the water runoff from washing vehicles on their property and flowing into the nearby storm drain inlet structure. The property owners were required to stop using detergents when washing their vehicles and wash their vehicles within their facility. Also, recommended they use waterless car washing

methods to eliminate The property owner complied with the request. 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 three (3) 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 a concerned resident about orange discoloration in the water in Bald Hill Branch, near the corner of Cipriano Road and Tuckerman Street in Lanham. During the investigation, the inspector observed an orange discoloration on the concrete outfall channel. After examining it closer and touching the orange substance, it was determined that the orange discoloration in the water was sediment/silt and not iron oxidizing bacteria. The inspector traced the storm drain system back into the surrounding neighborhoods but was not able to locate any evidence of any active construction being done to create the orange discoloration. The complaint was resolved.
- DoE received an e-mail from the City of College Park, MD which they received from a concerned resident about a green color and a foul smell coming from Indian Creek, a stream channel located near Lake Artemesia in Greenbelt, MD. During my investigation, the inspector did not observe any green colored water and did not smell any foul odor in the stream channel. The inspector also walked the pathway along Indian Creek to inspect the sewer manholes and stream channel for any possible sewer overflows. He found no sewer overflows or issues with the sewer line. The inspector was not able to locate the possible cause of the green color in the

water and the foul smell. Informed the City of College Park and the resident to contact DoE if it occurs again. The complaint was resolved.

- DoE received an e-mail from Oladapo John with MDE concerning a complaint they received from a concerned resident regarding the water in the stream channel which runs through Driskell Park in Hyattsville was orange. During the investigation, the inspector observed traces of orange sediment deposited in the stream channel. After contacting WSSC, the inspector was informed that over the weekend a water line break was reported on 38th Avenue, between 37th Avenue and Longfellow Street in Hyattsville. WSSC investigated and made the necessary repairs to the water line. It appears the orange discoloration in the stream channel was due to sedimentation from the water line break entering the storm drainage system and discharging into the stream channel in Driskell Park. The complaint was resolved.

Environmental Engineering Program

The Prince George's County Health Department responds to complaints about sanitary sewer overflows, failing and malfunctioning sewage disposal systems, solid waste and hazardous materials spills and dumping that may impact the waters of the State. During this reporting period the Health Department responded to 67 complaints/notifications to assess threats to local streams and waters of the state.

Illegal Dumping and Spills

DPW&T responds to illegal dumping occurring along the public road right-of-way. During FY 2022, the County received 4,612 litter service requests from citizens through the County's 311 system. DPW&T responded by removing the debris within thirty (30) working days of notification. Additional information on the County's Road maintenance litter control is found under "Litter Control" on page 80.

HMD is responsible for handling the initial response to all hazardous material spills within the County. In FY 2021, the Hazardous Materials (HAZMAT) team responded to 155 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 2022

Month	Number of Hazmat Responses	Number of Actions Taken	Response Types				Resolved	Number of Cases Referred to MDE*
			Fuel	CO	Chemical	Other		
Jul-21	10	7	4	0	2	1	7	2
Aug-21	8	8	3	1	1	3	8	1
Sep-21	5	5	2	0	0	3	5	1
Oct-21	9	6	2	0	0	4	6	2
Nov-21	9	9	4	0	1	4	9	2
Dec-21	11	11	5	0	0	6	11	4
Jan-22	5	5	1	1	0	3	5	3
Feb-22	7	7	3	0	0	4	7	2
Mar-22	11	8	3	0	1	4	8	2
Apr-22	10	8	5	0	0	3	8	3
May-22	11	9	2	0	1	6	9	4
Jun-22	6	5	1	0	0	4	5	2
Total	102	88	35	2	6	45	88	28

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

4. TRASH AND LITTER PROGRAM: ANACOSTIA TRASH TMDL

Permit Condition Part IV. D. 4. e: Report annually the progress toward implementing the trash reduction strategy. The report shall describe the status of trash elimination efforts including resources (e.g., personnel and financial) expended and the effectiveness of all program components including public education and outreach.

The County continued practices for litter removal in FY 2022 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 283,938.66 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 2022 and beyond. Though the County hopes to achieve our target reduction of 170,628 pounds in FY 2022, the impact of COVID-19 restrictions on litter collection and dramatic reduction of volunteer clean-up efforts cannot be overstated. 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, the County 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 D-6 outlines the enacted FY2022 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 FY2022 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 2022. Roadside Litter Removal contractors removed 362,745 pounds of trash (actual pounds without deductions) and 42 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 accounted for approximately 47,320 pounds of the County's annual goal of 170,628 pounds per year. Both point source and non-point source trash were collected. Non-point source trash does not include large items.

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 D-6 summarizes the trash reduction resulting from litter reduction activities in the Anacostia watershed during FY2022. Approximately 431,590 pounds were removed from various locations within the watershed which included municipalities. Of the total tonnage collected, 7,450 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, 146,831 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 283,938.66 pounds for all efforts in FY2022.

Table D-6. Estimated Anacostia Watershed Trash Reduction in FY 2022

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	262	6,550	4,204.45	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	14,509	362,745	232,833	
Municipal Cleanups	New Carrollton Various locations in Anacostia River Watershed (specific locations recorded in PGCLitterTRAK)	36	900	577.71	Total number of bags X 0.7 X 25lbs X 0.917 (accounts for liquid in bottles (glass and plastic) and cans

Activity Category	Activity/Location	Number of Bags of Trash Collected	Actual Amount (pounds)	Annual Load Reduction Counted (pounds)	Calculation Methodology
Corvias BMP Clean Ups	Various locations in Anacostia River Watershed (specific locations recorded in PGCLitterTRAK)	559	13,975	8,970.55	Total number of bags X 0.7 X 25lbs X 0.917 (accounts for liquid in bottles (glass and plastic) and cans
Contractor Services - Stream Area Cleanups	Briars Mill Branch (BHM)		2,220	1,665	Total load x 0.75 to account for non-MS4 items (exclusive of tires) which were disposed with bags at landfill
	Briars Mill Branch (Deltta)		6,420	4,815	
	Northwest Branch (Deltta)		4,000	3,000	
	Northwest Branch (BHM)		3,100	2,325	
	Lower Beaverdam (BHM)		4,280	3,210	
	Lower Beaverdam (Deltta)		3,060	2,295	
	Sligo Creek (Deltta)		2,720	2,040	
	Watts Branch (BHM)		3,860	2,895	
	Paint Branch (Deltta)		17,660	13,245	
	Sub-total		*47,320*	*35,490*	
Bandalongs	Arundel Canal Bandalong			485.29	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			376.82	
	Guilford Run Bandalong			460.84	
Outreach and Education at Schools					Trash load reduction = 0.12 x (school boundary area) x [(Low Density Res%) (1.19) + (Medium Density Res%) (19.26) + (High Density Res%) (7.88)]
TOTAL			431,590	283,938.66	

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 2022 marks the 8th 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 FY2020 with the kickoff of the County's anti-litter marketing campaign. We will build on this campaign through a partnership with the PGCPS green schools' program to complement the environmental education curriculum with anti-litter activity books. Installation of the County's third BandalongTM trash trap was completed in FY2022. This trap will further reduce the litter load on the Anacostia River in FY 2022 and future years by capturing floatables

along the Cabin Branch (a tributary to Lower Beaverdam Creek). With the successful implementation of these activities 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 2022, are shown in Table D-7 and Table D-8. 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 D-6 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 D-7. 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

(Monitoring data was provided by MWCOG)

Table D-8. 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

(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. Due to COVID-19 closures and restrictions, this Comprehensive Community Clean Up Program continued suspended activity for FY2022**.**

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 2022 was 17.41 tons or 34,820 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 1,277, 600 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 D-1. 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.

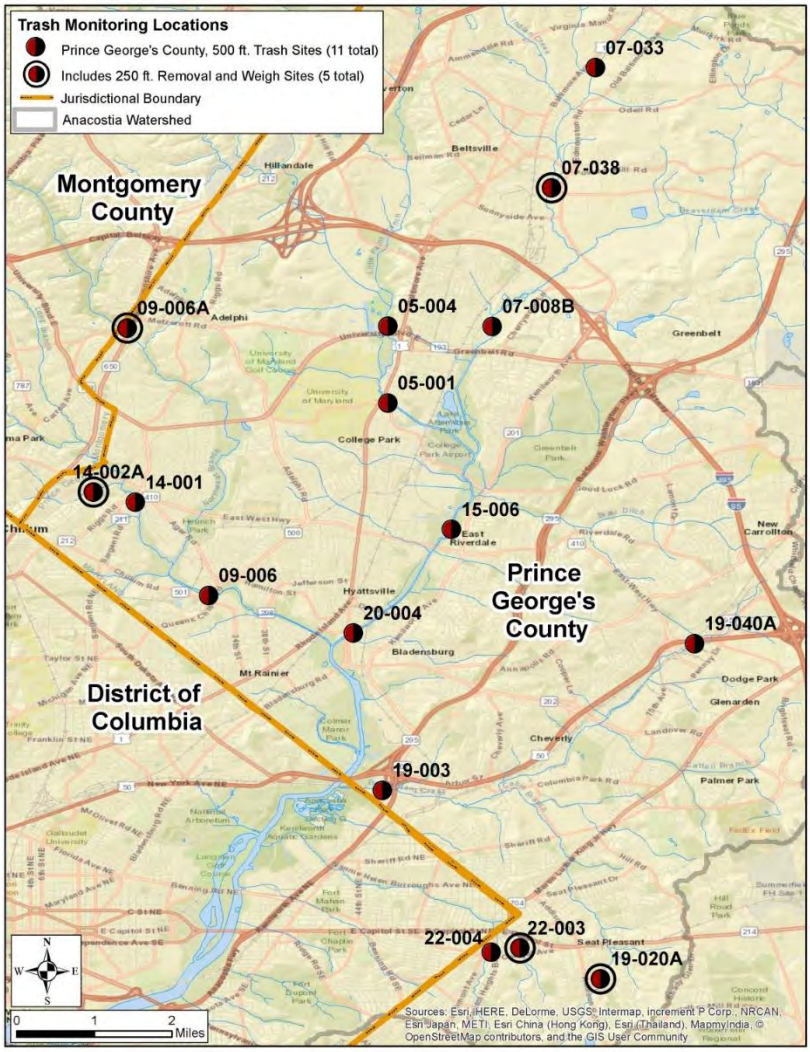

Figure D-1. Anacostia TMDL-Related Trash Monitoring Locations

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 suspended as of March 1, 2020 and this continued through June 2022.

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 2022, storm drain stenciling efforts were remain suspended due to COVID19 school and government closures.

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, the collection continues in these piloted areas, and the County has launched its first phase of expansion to service additional targeted communities. 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 (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 hosted 17 Green Team Seminars with the William S. Schmidt Outdoor Education Center and other environmentally conscientious partners. These seminars include presentations on litter reduction and hands-on activities that address the best waste management practices. This program is offered semi-annually in the spring and fall. However, in the second half of FY2021, due to COVID-19 restrictions, the County suspended these in-person events. The County is currently working to continue the program virtually and develop an online community newsletter. As part of the planned virtual outreach, speakers from various environmental groups will be provided a forum to promote programs and grant

opportunities to assist schools in achieving their environmental goals. It should be noted Prince George's County continues to lead the states with 133 certified Maryland Green Schools.

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.

Please note that due to COVID-19 restrictions, County facilities remain operational but remain closed to the public. Two tours were conducted FY2022; on June 14, 2022, for the Department of Legislative Services and on June 29, 2022, for the Alice Ferguson Foundation.

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 2022, issued 4,524 violation notices, 949 administrative citations, and 261 civil citations in response to trash-related complaints. The Division cleaned 352 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 2022, 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 will be 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 FY2023, the County's litter reduction programs will continue to evolve and adapt to the ongoing COVID-19 restrictions. 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.

5. PROPERTY MANAGEMENT AND MAINTENANCE

Permit Conditions Part IV. D. 5. a: Prince George's County shall ensure that a Notice of Intent (NOI) has been submitted to MDE and a pollution prevention plan developed for each County- owned municipal facility requiring NPDES stormwater general permit coverage. The status of pollution prevention plan development and implementation for each County-owned municipal facility shall be reviewed, documented, and submitted to MDE annually.

In FY 2021, the County continued to provide compliance assistance for the County-owned and municipal-owned industrial properties listed in Table D-9. Compliance assistance took the form of ensuring that each facility was moving towards implementing the permit requirements. This reporting year, the County's consultant KCI, assisted the contracted firm assisting the County in meeting the MS4 permit mandates, conducted quarterly and annual inspections. By focusing on improving compliance, the County continues to monitor corrective actions identified by KCI and to assist facilities in completing these corrective actions.

For FY 2021, the County continued to meet with the facility managers to discuss mechanisms to continue improving their record keeping, staff training, housekeeping, and be in compliance with the permit. In their annual meeting at the time of the comprehensive inspection, the facility managers, and the County set timelines for completing each corrective action.

The County currently provides compliance assistance to a total of nineteen (19) facilities under 12-SW permits. Ten (10) County facilities and nine (9) Municipal facilities.

Table D-9. County-Owned and Municipal-Owned Industrial Properties

Number	Name of Facility
DoE	
1	Brown Station Road Sanitary Landfill
2	Missouri Avenue Convenience Center
3	Materials Recycling Facility
4	Prince George's County's Yard Waste Composting Facility
5	Sandy Hill Creative Disposal Project
OCS	
1	Park Central Vehicle Maintenance Facility
DPW&T	

Number	Name of Facility
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

On the next several pages, each facility and their achievements for FY 2022 are described, along with the status of their stormwater pollution prevention plans (SWPPP). Specifically, Table D-10 through Table D-28 detail the status of the County-owned and municipal-owned facilities during FY 2022. These achievements and the compliance control measures are discussed at the quarterly inspections with each facility manager. At the same time, areas for long-term planning are highlighted, and the facility managers and DoE discuss any problems, structural or procedural, that are preventing the facility from meeting the control measures. Specific reporting items for the SWPPPs for FY 2022 are also provided in the updated MS4 geodatabase on DVD.

DoE Facilities

Brown Station Road Sanitary Landfill

The Brown Station Road Sanitary Landfill has accepted municipal waste since 1968. The landfill continued its efforts to improve the controls at the material stockpile area and increase monitoring and maintenance of the ponds receiving runoff from the active cells. Table D-10 below shows the status of SWPPP implementation for this reporting period.

Table D-10. Brown Station Road Sanitary Landfill Current Status

Permit Number	County Contact
12SW0401	Eric Jackson, Engineer Resource Recovery Division (RRD), DoE
FY 2022 Achievements	
Equipment and Vehicle Wash: The landfill regularly maintained an environmentally compliant wash facility. Discharge Monitoring: The landfill staff conducted visual monitoring at all outfalls. Training: Site-specific facility SWPPP training was conducted for facility staff. Record Keeping: Complete site inspections and SWPPP records were updated and kept at the facility	
Long-Term Planning	
BMP Maintenance: Routine maintenance is being performed on the ponds and perimeter ditches. The staff will continue to perform the quarterly monitoring samples. Continue to work on housekeeping.	

Missouri Avenue Convenience Center

The Missouri Avenue Convenience Center is one of the two convenience centers for County residents living outside of the residential collection services. Trash, used oil and antifreeze, and various recycling materials are collected and transferred to the Brown Station Road Sanitary Landfill for disposal. During all opening hours, the convenience center has one on-site laborer who is responsible for good housekeeping and assisting customers. Management and oversight of the facility is from the staff at the Brown Station Road Landfill. Table D-11 below shows the status of SWPPP implementation for this reporting period.

Table D-11. Missouri Avenue Convenience Center Current Status

Permit Number	County Contact
12SW2466	Eric Jackson, Engineer Resource Recovery Division (RRD), DoE
FY 2022 Achievements	
BMP Maintenance: The stormwater management facility is routinely maintained Oil and Antifreeze Recycling: The staff conducted regular maintenance of spill pallets in the collection area. Training: Site-specific facility SWPPP training was conducted for facility staff. Record Keeping: Complete SWPPP records were kept at the facility.	
Long-Term Planning	
Housekeeping: Will Continue to maintain area located around the shop.	

Materials Recycling Facility

The County's Materials Recycling Facility (MRF) is currently operated by the Maryland Environmental Service (MES) under their environmental compliance standards. The facility staff continued working with the consultant for inspection support and with the Stormwater Management Division to monitor SWPPP implementation. Table D-12 below shows the status of SWPPP implementation for this reporting period.

Table D-12. Materials Recycling Facility Current Status

Permit Number	County Contact
12SW1224	Desmond Gladden, Contract Manager Resource Recovery Division (RRD), DoE
FY 2022 Achievements	
Training: Site-specific facility SWPPP training was conducted for facility staff. BMP Maintenance: The facility conducted and documented regular maintenance of oil grit separators. Record Keeping: Complete SWPPP records were updated and kept at the facility. Discharge Monitoring: The staff conducted visual monitoring at all outfalls.	
Long-Term Planning	
House Keeping: Need to Repair asphalt located around the facility.	

Prince George's County's Yard Waste Composting Facility

The County's Yard Waste Composting Facility, commonly known as "Western Branch," is permitted individually by MDE with the individual discharge permit NPDES MDE 0065111. The facility is owned by Prince George's County, but is operated by MES who is responsible for environmental compliance. Table D-13 below shows the status of SWPPP implementation for this reporting period.

Table D-13. Prince George's County Yard Waste Composting Facility Current status

Permit Number	County Contact
12DP2792	S. Birchfield, MES For DOE Resource Recovery Division (RRD), DoE
FY 2022 Achievements	
BMP Maintenance: The stormwater management facility is currently being maintained until it can be repaired in FY2023. Record Keeping and Inspection: The staff performed regular facility inspections and complete SWPPP records were kept at the facility. Discharge Monitoring: The facility continued monitoring under the parameters of the individual permit. Training: Site-specific facility SWPPP training was conducted for facility staff.	
Long-Term Planning	
SWPPP Compliance: The facility will continue compliance efforts according to permit. BMP Maintenance: The facility will continue efforts in FY2023 to repair the Pond	

Sandy Hill Creative Disposal Project

The Sandy Hill Creative Disposal Project stopped accepting waste in 2000. The landfill currently holds a 12-SW permit where the facility is being monitored for material storage and transfer (including leachate), pond maintenance, spill prevention, and countermeasures. As with the other County facilities, the consultant assists in monitoring the facilities' progress in 12-SW. Table D-14 below shows the status of SWPPP implementation for this reporting period.

Table D-14. Sandy Hill Creative Disposal Project Current Status

Permit Number	County Contact
12SW0314A	Eric Jackson, Engineer Resource Recovery Division (RRD), DoE
FY 2022 Achievements	
Stormwater Management: Improvements of the drainage swales at the facility were completed and the stormwater management ponds were routinely maintained. Training: Site-specific facility SWPPP training was conducted for facility staff. Record Keeping: The staff performed regular facility inspections and complete SWPPP records were kept at the facility.	
Long-Term Planning	
Discharge Monitoring: The staff will regularly conduct visual monitoring at all outfalls. Stormwater Management: Staff will Develop a plan to repair and maintain Pond 3.	

Office of Central Services Facility

The Office of Central Services (OCS) is in compliance with the 12-SW Permit. Table D-15 below shows the status of SWPPP implementation for this reporting period for OCS' Central Vehicle Maintenance Facility.

Table D-15. Central Vehicle Maintenance Facility Current Status

Permit Number	County Contact
12SW2173	Richard Hilmer, Fleet Administrator Facilities Operation and Management Division, OCS
FY 2022 Achievements	
Stormwater Management: The oil/grit separator and the dry pond are routinely maintained and are functioning properly. Discharge Monitoring: The facility conducted quarterly discharge monitoring. Training: Site-specific facility SWPPP training was conducted for facility staff.	
Long-Term Planning	
SWPPP Compliance: The facility continues to maintain at high compliance effort, in accordance with the permit.	

DPW&T Facilities

All DPW&T SWPPPs were updated in January 2015, with 12-SW permit coverage issued by MDE in February 2015 (Table D-16). Non-structural BMPs, such as spill prevention and response and good housekeeping programs, are well developed and carried out by a team at each facility. Major site improvements have been completed at the Brandywine Facility, including the addition of a truck wash bay and the reconstruction of the site in accordance with current stormwater management design criteria.

Table D-16. DPW&T Facility Overview

DPW&T Facility Name	Main Function(s)	Usage Duration	Activities
Brandywine Facility	Snow Event Response for Snow District 4, Salt Dome, Truck Wash, Material Storage and Services for South County	Year-Round	Crew Dispatch for South County
Ritchie Service Complex	Countywide Command Center and Snow Event Response for Snow Districts 2, 3 and 5, Salt Dome, Central Materials Storage and Main Maintenance Depot	Year-Round	Equipment Maintenance, Road Crew Dispatch, Materials Storage, OHM Headquarters
Glenn Dale Facility	Snow Event Response for Snow District 1, Salt Dome, Material Storage and Services for North County	Year-Round	Crew Dispatch for North County

Table D-17 through Table D-19 show the status of SWPPP implementation for the DPW&T facilities.

Brandywine Facility

Table D-17. Brandywine Facility Current Status

Permit Number	County Contact
12SW1223	Mary Holden, Program Manager Office of Highway Maintenance, DPW&T
FY 2022 Achievements	
Facility Construction: Construction of major site improvements, including a redesign of the site in accordance with current stormwater management design criteria, and the installation of a truck wash were completed in the fall of 2021. Staff Education and Training: SWPPP training was conducted on June 16, 2022. Records are being stored on-site, as required. Record Keeping: Record keeping is compliant with the permit including a chemical storage inventory and MSDS catalog.	
Long-Term Planning	
BMP maintenance and good housekeeping practices continue.	

Ritchie Service Complex

Table D-18. Ritchie Service Complex Current Status

Permit Number	County Contact
12SW0521	Mary Holden, Program Manager Office of Highway Maintenance, DPW&T
2022 Achievements	
Staff Education and Training: Management level SWPPP training for "The Bus" vendor was conducted on February 4, 2022. In person onsite SWPPP training for OHM and OSDM staff were performed on June 28, 2022, June 29, 2022, and June 30, 2022. Records kept on site. Record Keeping: Record keeping is compliant with the permit including a chemical storage inventory and MSDS catalog.	
Long Term Planning	
BMP maintenance and good housekeeping practices continue.	

Glenn Dale Facility

Table D-19. Glenn Dale Facility Current Status

Permit Number	County Contact
12SW1234	Mary Holden, Program Manager Office of Highway Maintenance, DPW&T
2022 Achievements	
Staff Education and Training: In person onsite SWPPP training was conducted on June 14, 2022. Record Keeping: Record keeping is compliant with the permit including a chemical storage inventory and MSDS catalog.	
Long Term Planning	
BMP maintenance and good housekeeping practices continue.	

Municipal NPDES General Industrial Discharge Permit Status

The permit status of the nine Prince George's County municipalities with 12-SW industrial permit coverage is described in the next few pages. Table D-20 through Table D-27 show the status of SWPPP implementation for each municipality.

Town of Cheverly

Table D-20. Town of Cheverly DPW Current Status

Permit Number	County Contact
12SW0197	Stephen Bryman, Department of Public Works Director
FY 2022 Achievements	
BMP Maintenance: Oil/grit separator is routinely maintained. Record Keeping: Complete SWPPP records were updated and kept at the facility. Training: Site-specific facility SWPPP training was conducted for facility staff.	
Long-Term Planning	
Housekeeping: The facility will improve housekeeping (oil Drop off) and record keeping.	

City of College Park

Table D-21. City of College Park DPW Current Status

Permit Number	County Contact
12SW2148	Robert Marsili, Assistant Director of Operations and Facilities
FY 2022 Achievements	
Record Keeping: Complete SWPPP records are updated kept at the facility. BMP Maintenance: Stormwater management facilities are routinely maintained. Training: Site-specific facility SWPPP training was conducted for facility staff.	
Long-Term Planning	
Discharge Monitoring: The City continues to conduct quarterly discharge monitoring.	

City of Greenbelt

Table D-22. City of Greenbelt DPW Current Status

Permit Number	County Contact
12SW2145	Jim Sterling, Department of Public Works Director
FY 2022 Achievements	
Record Keeping: Complete SWPPP records were kept at the facility. Discharge Monitoring: The facility conducted quarterly discharge monitoring. Training: Site-specific facility SWPPP training was conducted for facility staff. BMP Maintenance: Bioretention facilities are routinely maintained.	

Permit Number	County Contact
Long-Term Planning	
SWPPP Compliance: The facility continues to work in compliance with the permit.	

City of Hyattsville

Table D-23. City of Hyattsville DPW Current Status

Permit Number	County Contact
12SW2150	Leslie Riddle, Department of Public Works Director
FY 2022 Achievements	
Record Keeping: Complete SWPPP records were kept at the facility. BMP Maintenance: Oil/grit separator and rain garden are routinely maintained. Training: Site-specific facility SWPPP training was conducted for facility staff.	
Long-Term Planning	
DPW Facility: The city will continue to improve in their housekeeping of the facility, in accordance with the permit.	

City of Laurel

Table D-24. City of Laurel DPW Current Status

Permit Number	County Contact
12SW1841	Courtney Clardy, SWPPP Coordinator
FY 2022 Achievements	
BMP Maintenance: Stormceptor and oil/grit separator are routinely maintained. Record Keeping: Complete SWPPP records were updated and kept at the facility. Training: Site-specific facility SWPPP training was conducted for facility staff.	
Long-Term Planning	
Housekeeping: Continue to improve the maintenance for the used oil recycling center.	

City of New Carrollton

Table D-25. City of New Carrollton DPW Current Status

Permit Number	County Contact
12SW2144	Andre Triplett, Department of Public Works Director
FY 2022 Achievements	
Housekeeping: Housekeeping methods are being implemented for heavy equipment parked at the facility. BMP Maintenance: The Bioretention facility and Oil/grit separator are routinely maintained. Training: Site-specific facility SWPPP training was conducted for facility staff.	
Long-Term Planning	
Housekeeping: The City continues to improve in their record keeping, in accordance with the permit.	

Town of Riverdale Park

Table D-26. Town of Riverdale Park DPW Current Status

Permit Number	County Contact
12SW2146	James Davis, Department of Public Works Operations Manager
FY 2022 Achievements	
BMP Maintenance: Bioretention facility is routinely maintained per the plans. Record Keeping: Complete SWPPP records are being updated were kept at the facility. Training: Site-specific facility SWPPP training was conducted for facility staff.	
Long-Term Planning	
Housekeeping: The Town continues to improve in its housekeeping of the facility, in accordance with the permit.	

City of Seat Pleasant

Table D-27. City of Seat Pleasant DPW Current Status

Permit Number	County Contact
12SW2143	Jenchesky Santiago, Administrative Assistant
FY 2022 Achievements	
Stormwater Management: Construction of the new facility is completed and now the site plan will be updated to show any changes. Housekeeping: The staff performed good housekeeping through the new facility. Record Keeping: The city will continue improving record keeping at the newly opened facility.	
Long-Term Planning	
Record Keeping: The SWPPP will be modified to reflect the new facility and operations. Training: Site-specific facility SWPPP training will be conducted for facility staff.	

Town of Bladensburg

Table D-28. Town of Bladensburg DPW Current Status

Permit Number	County Contact
12SW3437	Purnell Hall, Director of Public Works
FY 2022 Achievements	
Housekeeping: The staff performed good housekeeping through the facility Record Keeping: Complete SWPPP records were updated and kept at the facility. Training: Site-specific facility SWPPP training was conducted for facility staff.	
Long-Term Planning	
Record Keeping: The town continues to improve it's recordkeeping of the facility, in accordance with the permit.	

Street Sweeping

Permit Conditions Part IV. D. 5. b: The County shall continue to implement a program to reduce pollutants associated with maintenance activities at County-owned facilities including parks, roadways, and parking lots. The maintenance program shall include these or MDE approved alternative activities:

- *i. Street sweeping;*
- *ii. Inlet inspection and cleaning;*
- *iii. Reducing the use of pesticides, herbicides, fertilizers, and other pollutants associated with vegetation management through increased use of integrated pest management;*
- *iv. Reducing the use of winter weather deicing materials through research, continual testing and improvement of materials, equipment calibration, employee training, and effective decision-making; and*
- *v. Ensuring that all County staff receives adequate training in pollution prevention and good housekeeping practices.*

The County shall report annually on the changes in any maintenance practices and the overall pollutant reductions resulting from the maintenance program. Within one year of permit issuance, an alternative maintenance program may be submitted for MDE approval indicating the activities to be undertaken and associated pollutant reductions.

The County's street sweeping operations are limited to selected arterial, collector, and industrial streets, with service to residential subdivision streets provided on a request only basis. Between August 2021 and May 2022, the contractor performed three (3) spring cycles and six (6) fall cycles in each of our service areas, with a summary provided in Table D-29 below.

Table D-29. Street Sweeping Summary

Route No.	Start date	End date	Miles Swept	Tons for disposal
Spring Arterial Roadways	5/2/2022	5/5/2022	206	28.4
Spring Arterial Roadways	5/2/2022	5/5/2022	76.6	39.8
Spring Arterial Roadways	5/19/2022	5/31/2022	118	46.9
Fall Arterial Roadways	8/19/2021	8/27/2021	192	36.6
Fall Arterial Roadways	8/30/2021	9/7/2021	140.6	51.4
Fall Arterial Roadways	9/8/2021	9/9/2021	121.4	23.7
Fall Arterial Roadways	9/13/2021	9/14/2021	91	21.5
Fall Arterial Roadways	9/20/2021	9/27/2021	192	19.8
Fall Arterial Roadways	9/28/2021	10/1/202	117.3	*
TOTAL			1,254.9	268.01

**Tonnage not provided by the vendor*

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

Storm drain maintenance is targeted 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 1,363 service requests from constituents, inspected 948 inlets, and cleaned 56,745 linear feet of stormdrain pipe.

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 24,533 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 2022, the County followed these protocols.

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 as often as 24 times per year. Major collector, arterial, and primary roadways are serviced bi-weekly. Locations of the litter pickup routes are shown in Figure D-2. Over 9,700 miles of roadway were serviced in the litter control program in this reporting period.

During this reporting period, DPW&T received 4,612 citizen requests for illegal dumping and litter removal through the County's 311 system. Illegal dumping in the right-of-way is removed within five (5) working days of notification. Cumulatively, DPW&T litter control programs removed 3,430 tons of debris and solid waste from County roadways during this reporting period.

Snow and Ice Control Program

The 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-2. 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 mobilized for 8 snow and ice control events and used a total of 14,911 tons of salt, a 14% reduction over the salt usage from the 2020-21 snow season. Of the 8 storms, the County only treated hills, cold spots and bridges during 4 events, averaging 269 tons per storm. Four events required the county to treat all roadways, with an average salt usage of 3,465 tons of salt per storm.

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 not utilized in the January 3, 2022, storm because the County received late notification from Accuweather of the impending major storm. For the remaining 4 mobilizations where brine was not utilized, 3 storms were forecasted as beginning as rain events and 1 mobilization occurred due to freezing overnight conditions where icy roadways could occur. The County used 75,618 gallon of salt brine during the 21-22 snow season, a 44 percent increase in salt brine over the 20-21 snow season.

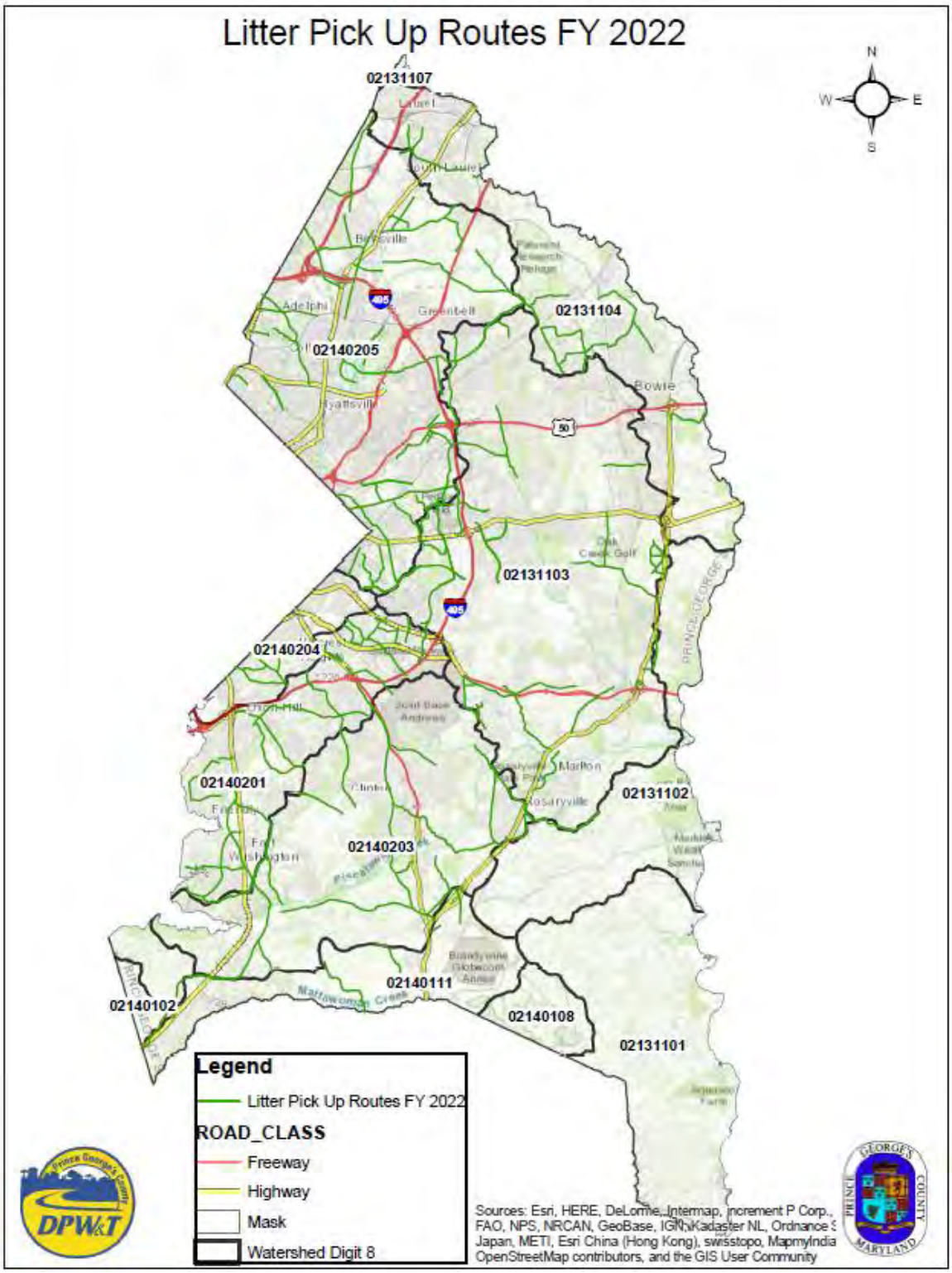

Figure D-2. Litter Pick Up Routes

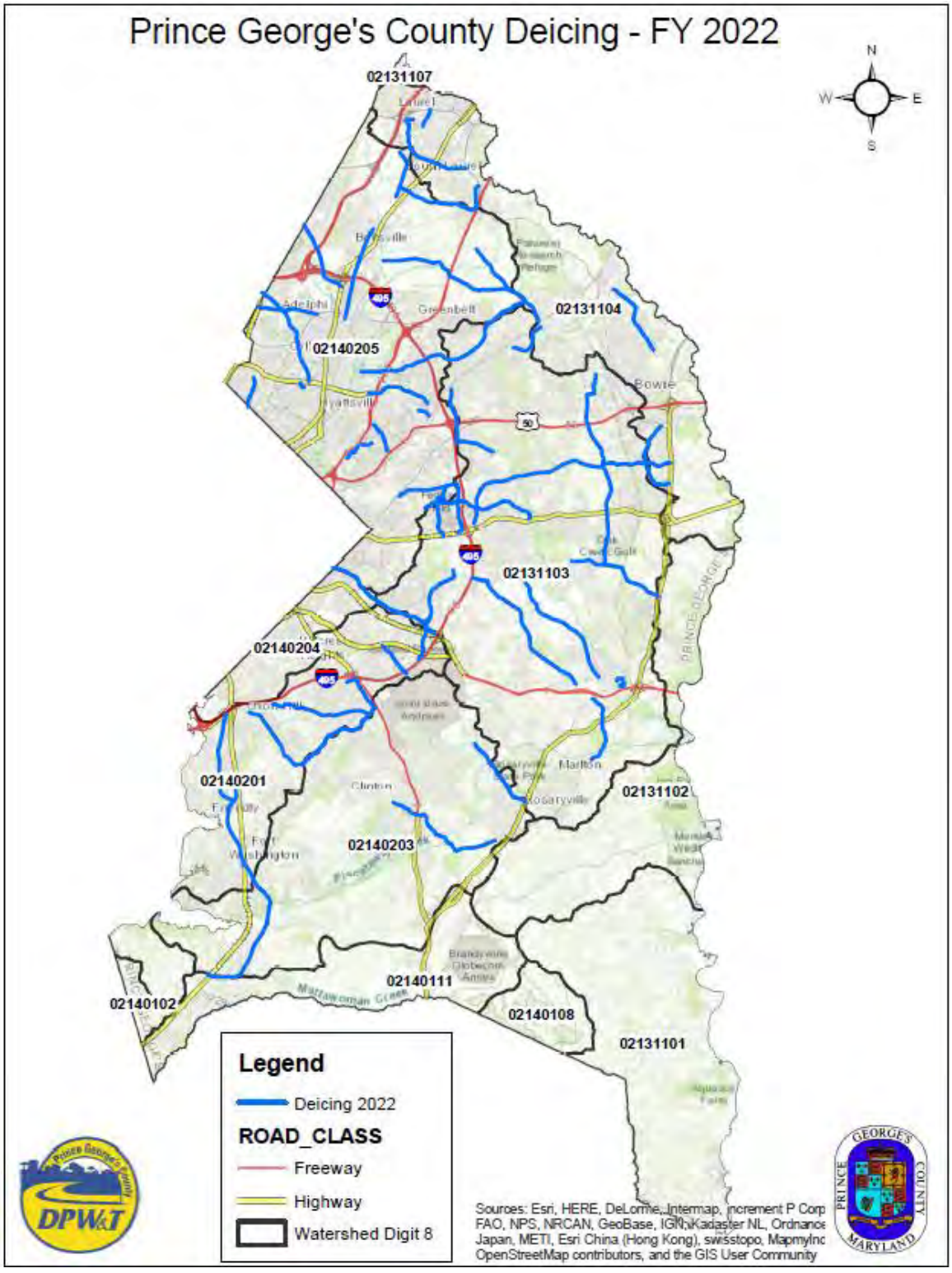

Figure D-3. De-Icing Map

6. PUBLIC EDUCATION

Permit Condition Part IV. D. 6. a: 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.

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 60.

Permit Conditions Part IV. D. 6. b: The County shall continue to implement a public outreach and education campaign which provide information to inform the general public about the benefits of:

- *A. Increasing water conservation;*
- *B. Residential and community stormwater management implementation and facility maintenance;*
- *C. Proper erosion and sediment control practices;*
- *D. Increasing proper disposal of household hazardous waste;*
- *E. Improving lawn care and landscape management (e.g., the proper use of herbicides, pesticides, and fertilizers, ice control and snow removal, cash for clippers, etc.);*
- *F. Residential car care and washing; and*
- *G. Proper pet waste management.*

DoE 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.

A total of 105 virtual and in-person events at different locations within the County were hosted this year (Figure D-4). These events provided information or discussed benefits of one or more categories described in the bulleted items A through G of the permit condition *Part IV.D.6.b* above throughout the County Boundary. In addition to its extensive environmental public participation programs, which are primarily targeted to the County's adult population, DoE is also committed to the environmental education of the County's youth.

A list of the FY 2022 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.

Figure D-4. Public Outreach Events Locations

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 despite COVID restrictions. 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 53 events reaching almost 3,000 people to engage communities and individuals in restoration, promoting sustainable solutions and leveraging community action. This is about the same level of participation as FY21 despite ongoing pandemic issues. Most of these events were virtual.

In 2022, Climate Action became the lens for focusing NRCR's programs as the Climate Action Plan (CAP) advanced. On May 6, 2022, County Executive Alsobrooks issued *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 Executive Order creates a Resident Advisory Group for Climate Action and Environmental Justice, which will be comprised of a cross-section of Prince George's County community members that will be selected to represent the geographic, age, economic, gender and racial diversity of the County.

The Climate Action Plan itself was formally adopted by the County's legislative body on June 21, 2022. The *Equitable Community Engagement, Education, and Outreach* section of the CAP states "Community members must be empowered to act on a personal and collective level to reduce their carbon footprints and build climate resilience." Engaging residents in building climate resilience necessarily includes outreach on stormwater management and blue-green infrastructure.

In FY22 NRCR began a GIS analysis of tree canopy, drainage and flooding complaints, equity indicators, and other relevant data by subwatershed. This analysis will inform both our engagement and programmatic efforts in FY23.

In October of 2021, the Prince George's County Council passed CB-046-2021, the *Stormwater Management and Residential Resilience Retrofit Program* bill. This bill enacted new rebates for conservation landscaping, natural landscape restoration, and urban soil restoration. These practices all provide stormwater management benefits. The new rebate program will debut in FY23.

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 35 municipalities and HOAs. More than 200 pet waste stations have been installed in communities across the County.

During FY 2022, as communities continued struggling to maintain staffing levels due to the pandemic, DoE continued its suspension of the installation of pet waste stations and signs. (Although the Barnaby Woods HOA received 3 signs and 20 leash dispensers before the suspension.) DoE expects to resume that portion of the pet waste campaign in the calendar year 2022.

In FY 2022, 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 Smithsonian Folklife Festival on the national mall where it received news attention and generated social media selfies under the hashtag #2022Folklife and #onechesapeake with QR codes that say Scoop the Poop (Figure D-6).

Also, in FY2022, DoE continued providing "scoop the poop" signs to Homeowners Associations (HOAs) and Civic Associations. The signs are a great option for communities that want to initiate a pet waste campaign but lack funds for maintaining a pet waste station. The signs are available in two versions: one designed for playgrounds and the other for general high-use areas (Figure D-6).

Figure D-5. Scoop the Poop at 2022 Smithsonian Folklife Festival

Figure D-6. Signs designed for playgrounds and general high-use areas

DoE also continued working on the Pet Waste Management Program Guidebook for Municipalities, HOAs and Civic Associations. The guidebook (currently being finalized) is a resource for communities interested in building effective local pet waste outreach campaigns. It covers topics such as defining and documenting the problem, determining the most suitable program for your community, and how to assess campaign progress. The guidebook also establishes how the County's Pet Waste Campaign will support communities in future.

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"

M-NCPPC Environmental Outreach and Education

M-NCPPC offers a wide variety of education programs and outreach opportunities through their Special Programs Division and Natural and Historical Resources Division. They have classroom programs that educate students on subjects such as watersheds, wetlands, native plants, stormwater, pollution, wildlife, insects, dinosaurs and much more. M-NCPPC naturalists and park rangers also attend career days at Prince George's County schools. Through each career day staff shares their environmental knowledge and passion. These are great opportunities to educate students and encourage them to become stewards of the environment.

M-NCPPC staff also offers on-site programs, so that classes can visit one of their nature centers or waterfront parks. Programs at these sites include river ecology boat tours, nature hikes and other hands-on activities. Patuxent River Park and Bladensburg Waterfront Park are unique sites that offers a wide variety of on-site programs for adults and students. Bladensburg Waterfront Park and Patuxent River Park partners with many state and national agencies to conduct wetland and water quality research along the Patuxent River.

Boat tours are one of best ways to engage people in environmental stewardship. It provides them an opportunity to experience the waterways. Bladensburg Waterfront Park and Patuxent River Park arrange boat tours, often combined with trash pick-up, invasive removal or other service activity that promotes environmental stewardships and helps reduce stormwater pollution. In addition, Bladensburg arranges events that focused on landscaping practices (erosion, chemicals, native plants, or pollinators) and river cleanup.

M-NCPPC has a very strong volunteer program. They have thousands of volunteers each year who give their time towards environmental projects. These projects include river cleanups, pond cleanups, park/trail cleanups, non-native invasive plant removal, nest box monitoring, water quality monitoring, and public education. All volunteer programs have a strong educational component.

Some of these volunteer opportunities are one-time projects, but M-NCPPC also has a strong Adopt-A-Trail and Adopt-A-Park programs. Local schools, churches, groups, and families make a 2-year

commitment to taking care of a specific section of trail or park. Many of the trail sections run parallel to streambeds, and so by adopting the trail, many of these groups also clean the streams.

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: 80,712 lbs
- Hazardous Waste Liquids: 25,724 gallons
- Electronics: 230.391 tons
- Residents Served: 1,634 residents

Conservation Landscaping

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. UMD Extension Master Gardeners in Prince George's County trained an additional 3 Bay-Wise Master Gardeners in FY22 for a total complement of 44 Bay-Wise Master Gardeners. 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 Integrative 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 2022

- During this time period, University of Maryland Extension Master Gardener Volunteers in Prince George's County certified Ten (10) residents' yards and 2 community gardens 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 Baden and Accokeek food pantries with 500 lbs of produce from the Clinton Demonstration Vegetable Garden.
- Winter Sowing Workshop at the Soil Conservation District
- Taught Baywise to 44 Master Gardener trainees
- Advised 3 churches on establishing a community garden and sustainable gardening practices
- Advised Charles Herbert Flowers on site location for garden and talked to the students about protecting soil and controlling stormwater runoff.
- In cooperation with UMD Extension and DOE, provided 20 residents at Lamont Elementary School with grow boxes, tomato and pepper plants, bean, lettuce and spinach seeds.
- Montpelier Herb and Tea Festival discussed Baywise principals at a manned table with residents

- Discussed raised bed gardening and water conservation with Flintstone ES.

Summer Youth Enrichment Program (SYEP)

In FY22, 140 SYEP students learned about sustainable gardening using native plantings to ward off the extreme weather conditions for this area, manage stormwater, 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 FY22, 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. In FY22, The NDC completed projects within 25 communities with the following accomplishments reported; approximately 959 high risk or dying trees were removed, 647 trees were pruned, and 3,922 trees were planted. Figure D-7 illustrates the communities where projects were conducted in FY 2022. Table D-30 lists the number of trees planted since program inception.

Table D-30. Right Tree, Right Place Program Accomplishments (2011-2022)

NPDES Year	Trees Planted (approximate) [1]
July 1 - October 31, 2011	1,400
November 1, 2011 - October 31, 2012	4,500
November 1, 2012 - December 31, 2013	4,300
January 1, 2014 - July 01, 2014	5,300
July 1, 2014 - June 30, 2015	5,157
July 1, 2015 - July 01, 2016	3,242
July 1, 2016 – June 30, 2017	4,700
July 1, 2017 – June 30, 2018	4,800
July 1, 2018 – June 30, 2019	6,699
July 1, 2019 – June 30, 2020	7,025
July 1, 2020 – June 30, 2021	6,981
July 1, 2021 – June 30, 2022	3,922

NPDES Year	Trees Planted (approximate) [1]
TOTAL	*58,026*

[1] *The total also includes trees planted under the Transforming Neighborhoods Initiative.*

In the fiscal year 2022, the COVID 19 pandemic largely shifted the program's administration and approaches, namely surrounding community engagement strategies. Because of COVID-19, the RTRP program has had to cancel all in-person community meeting presentations, fieldwork, and in-person interaction until further notice. The RTRP program has historically relied on human interaction; including with older residents, to function. However, reception to virtual meeting platforms was overwhelmingly positive. The process may be even more inclusive than physical meetings since residents do not need to leave their homes.

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 2022 was 41.8 tons or 83,600 pounds 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 2022 Growing Green with Pride events were held on October 30, 2021, and April 23, 2022. The achievement realized through this partnership is detailed in Table D-31, table includes both Spring and Fall Events.

Table D-31. Growing Green with Pride Program Achievements in FY 2022

Achievement	Amount
Sites	212
Volunteers	5,722
Trees Installed	636
Shrubs Installed	726
Perennials and Ornamental Grasses Planted	2,388
Spring Flowering Bulbs Planted	10,000
Landscape Designs by NDC	18
Litter and Debris Collected	42 tons

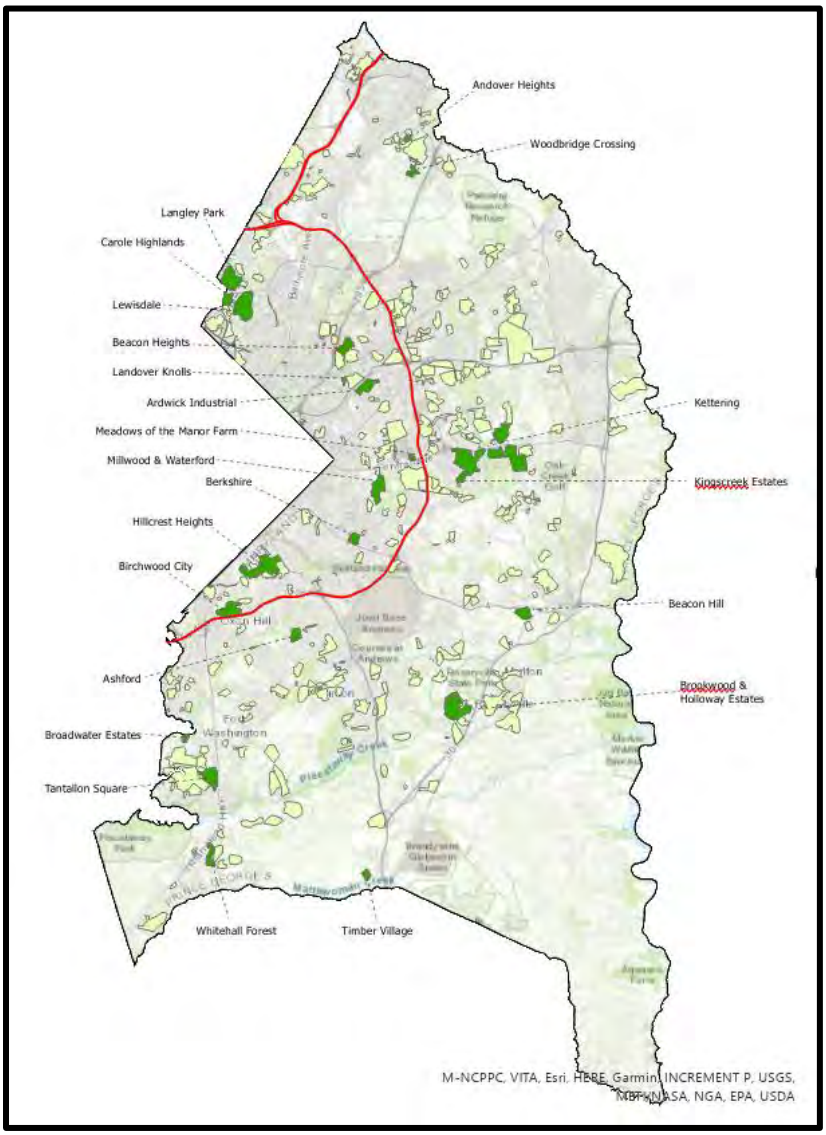

Figure D-7. Right Tree, Right Place Program Project Areas

Arbor Day & Tree City

Members of the Prince George's County Beautification Committee (PGCBC), volunteers, and the staff and students at Mattaponi Elementary School planted 18 native trees in honor of Arbor Day. In 2022, a total of 6,637 trees were planted in Prince George's County, earning a Tree City USA award for the 39th 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 51st anniversary in Prince George's County was in 2021. 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 2022, the Beautification Committee recognized ninety-four (94) landscapes for award. Due to COVID-19, there will be no ceremony this year. Certificates and golden trowels were mailed to 94 participants.

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, the Tree ReLEAF Program continued to operate with reduced staff, and COVID-19 restrictions also impacted the program. Two (2) Tree ReLeaf project were completed resulting in a planting of 84 native trees.

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.

The Arbor Day Every Day Program seeks to increase native trees and shrubs planted on school property by working with County schools. The program educates students on the everyday importance of trees, empowers them to enhance their community, and provides funds or trees for planting projects. DoE assists with the development of planting and maintenance plans, orders and arranges delivery of trees and materials, marks the holes for plants based on the planting plan, and provides training on planting and care. DoE also coordinates with the Board of Education to ensure that plantings will not interfere with planned construction or maintenance projects.

The schools are responsible for year-round care for two years and recruiting staff to dig holes and plant the trees. Schools interested in applying to the Arbor Day Every Day program submit an intent-to-apply form, schedule a consultation with DoE staff, and fill out a program application. DoE then works with the schools to develop the planting and post-planting maintenance plan. During the last fiscal year, DoE was only able to complete one school planting due to COVID-19 restrictions. Ten trees were planted at The Academy of Saint Matthias the Apostle in Lanham.

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.

Tree Planting Demonstration Program

During the last fiscal year, DoE was unable to conduct any school-based tree planting demonstrations due to COVID-19 restrictions, however, DoE planted trees at the University of Maryland Extension Demonstration Garden in Clinton. The garden is used for classes and workshops as well as training Master Gardeners. Adding trees to this facility will enhance its training utility.

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 D-8 for the targeted areas. In FY2022, 2,127 trees were planted by Stormwater Stewardship grantees.

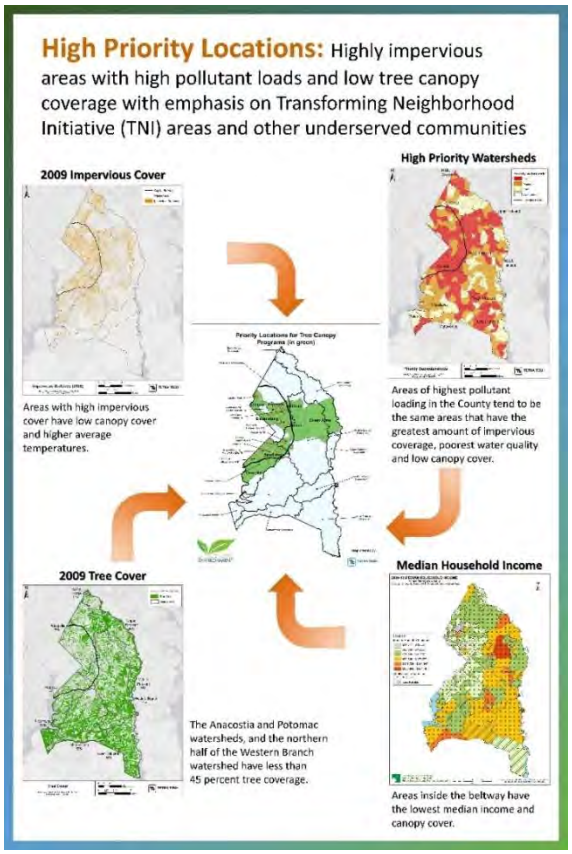

Figure D-8. High Priority Locations

Permit Conditions Part IV. D. 6. c: Provide information regarding the following water quality issues to the regulated community when requested:

i. NPDES permitting requirements;
ii. Pollution prevention plan development;
iii. Proper housekeeping; and
iv. Spill prevention and response.

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-9. 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

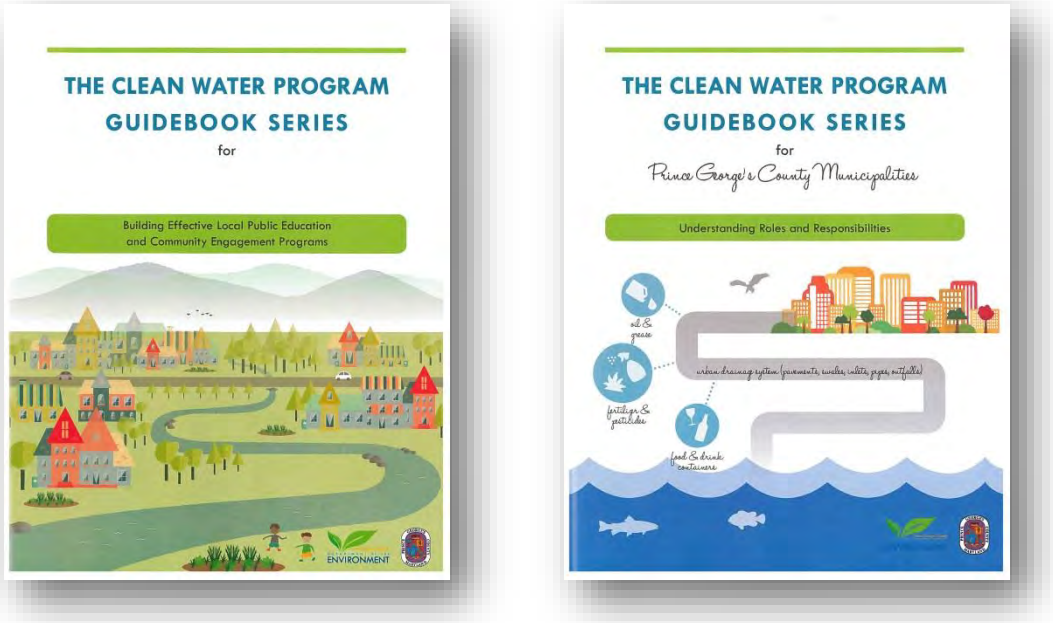

Figure D-9. The Clean Water Program Guidebook Series

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 68.

Volunteer Neighborhood Community Cleanup Program

The Volunteer Neighborhood Cleanup Program, facilitated by DoE, assists communities in cleanup efforts to control litter. Active participation in the cleanup of a local neighborhood, park, road, street, or pond removes potential stormwater pollutants and builds community pride. Many participating groups further enhance and beautify their areas by planting trees, sowing seeds, weeding, watering, and mowing grass. Due to COVID, no new activity took place during this reporting period.

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 66.

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-32 , 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 FY22, approximately 225 individuals toured Western Branch. As a result of the unforeseen COVID-19 outbreak, in person tours were postponed or held virtually.

Table D-32. FY 2022 Countywide Waste Reduction Participation Events

Name of Event (Participant)	Date of Event	No. of Participants
Tour of Western Branch	July 13, 2021	10
Tour of Western Branch – SYEP virtual tour	August 11, 2021	75
Tour of the MRF -SYEP	August 11, 2021	75
Tour of Western Branch	August 18, 2021	15
590 Flyer Distribution	August 19, 2021	8
Tour of Western Branch	September 15, 2021	3
Tour of the MRF – Ribbon Cutting – New Optical Sorter	September 28, 2021	24
Tour of Western Branch	October 21, 2021	6
Tour of Western Branch	November 3, 2021	2
Tour of Western Branch – Audubon Naturalist Society (ANS): Virtual Tour	November 11, 2021	3
Americas Recycle Day Display	November 16, 2021	1
Tour of Western Branch	November 22, 2021	4
Tour of Western Branch	December 14, 2021	5
Christmas Tree Recycling Program Display	December 15, 2021	6
Christmas Tree Recycling Program Display	December 16, 2021	6
Tour of Western Branch - Virtual	January 27, 2022	1
Tour of Western Branch	February 4, 2022	6
Tour of Western Branch	February 15, 2022	1
Tour of Western Branch	February 17, 2022	7

Name of Event (Participant)	Date of Event	No. of Participants
Tour of Western Branch	March 2, 2022	1
Tour of Western Branch	March 22, 2022	5
Tour of Western Branch	April 29, 2022	55
Tour of the MRF – Maryland Legislative Service	June 15, 2022	12
Tour of Western Branch	June 15, 2022	14
Tour of Western Branch	June 29, 2022	12
Tour of the MRF – Teachers – Alice Ferguson Foundation	June 29, 2022	14

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 second phase of its Food Scrap Composting Expansion Program to service approximately 18,000 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.

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 172,000 households in the County. As shown in Figure D-10, the OCF received over 46,000 tons of yard waste in FY22.

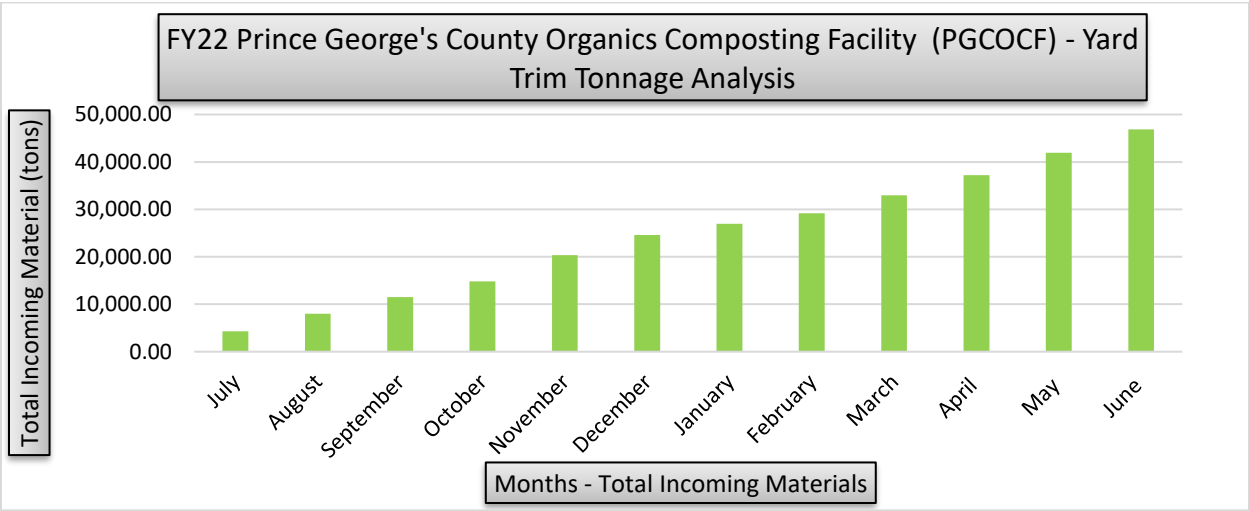

Figure D-10. Yard Waste Composting – FY 2022

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

Prince George's County was excited to purchase eight state-of-the-art Proterra battery-electric buses for the County's fixed-route transit service, "TheBus". The new zero emissions electric vehicles will help reduce nitrogen oxide emissions, while furthering the Prince George's County Department of Public Works and Transportation's vision to reimagine public transportation through innovation. In addition to lessening the carbon footprint, these buses provide a cost-effective alternative to diesel vehicles and have a 120-mile capacity between charges. The new buses will be added to DPW&T's growing fleet of recently purchased electric vehicles. Prior to receiving this latest grant, DPW&T was awarded the Low or No Emissions (Low-No) Program Grant from the Federal Transit Administration (FTA). The Low-No Grant allowed the agency to purchase four Proterra battery-electric buses and three charging stations. 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 service throughout the County, while doing its part to protect the 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 20, 2022. 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.

E. RESTORATION PLANS AND TMDL

1. WATERSHED ASSESSMENTS

Permit Conditions Part IV. E. 1:
a: By the end of the permit term, Prince George's County shall complete detailed watershed assessments for the entire County. Watershed assessments conducted during previous permit cycles may be used to comply with this requirement, provided the assessments include all of the items listed in PART IV.E.1.b. below. Assessments shall be performed at an appropriate watershed scale (e.g., Maryland's hierarchical eight or twelve-digit sub-basins) and be based on MDE's TMDL analysis or an equivalent and comparable County water quality analysis; and
b: Watershed assessments by the County shall:

i. Determine current water quality conditions;
ii. Include the results of a visual watershed inspection;
iii. Identify and rank water quality problems;
iv. Prioritize all structural and nonstructural water quality improvement projects; and
v. Specify pollutant load reduction benchmarks and deadlines that demonstrate progress toward meeting all applicable stormwater WLAs.

Prince George's County, population 871,233 (2011 Maryland State Data Center), is located in the south-central portion of Maryland with a geographic area of 498 square miles, 487 square miles of land and 11 square miles of water. A major drainage divide bisects the County in a north-south direction, with approximately half of the County draining in an easterly direction to the Patuxent River, and the remaining half of the County draining in a westerly direction to the Potomac River. Lands draining to the Patuxent River are primarily located in the County's rural tier, with the exception of the Western Branch watershed. A map of the County's major watersheds is shown in Figure E-1.

As required by the permit, the County conducted its watershed countywide watershed assessment that included the following:

- Current water quality conditions,
- Results of a visual watershed inspection,
- Identify and rank water quality problems,
- Water quality improvement effectiveness, and
- Pollutant load reduction benchmarks.

A complete report of the countywide watershed assessment with supporting documents was provided on the DVD in the "Countywide Watershed Assessment" folder in FY 2018 submittal.

2. RESTORATION PLANS

Permit Condition Part IV. E. 2. a. Para 1: Within one year of permit issuance, Prince George's County shall submit an impervious surface area assessment consistent with the methods described in the MDE document "Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated, Guidance for National Pollutant Discharge Elimination System Stormwater Permits" (MDE, June 2011 or subsequent versions). Upon approval by MDE, this impervious surface area assessment shall serve as the baseline for the restoration efforts required in this permit.

The County completed its initial impervious surface area baseline assessment that was submitted with the 2014 annual report. The revised assessment along with the supporting documents was submitted to MDE on May 20, 2015. On July 17, 2015, MDE conditionally agreed with the impervious area baseline assessment provided that the County would make final adjustments.

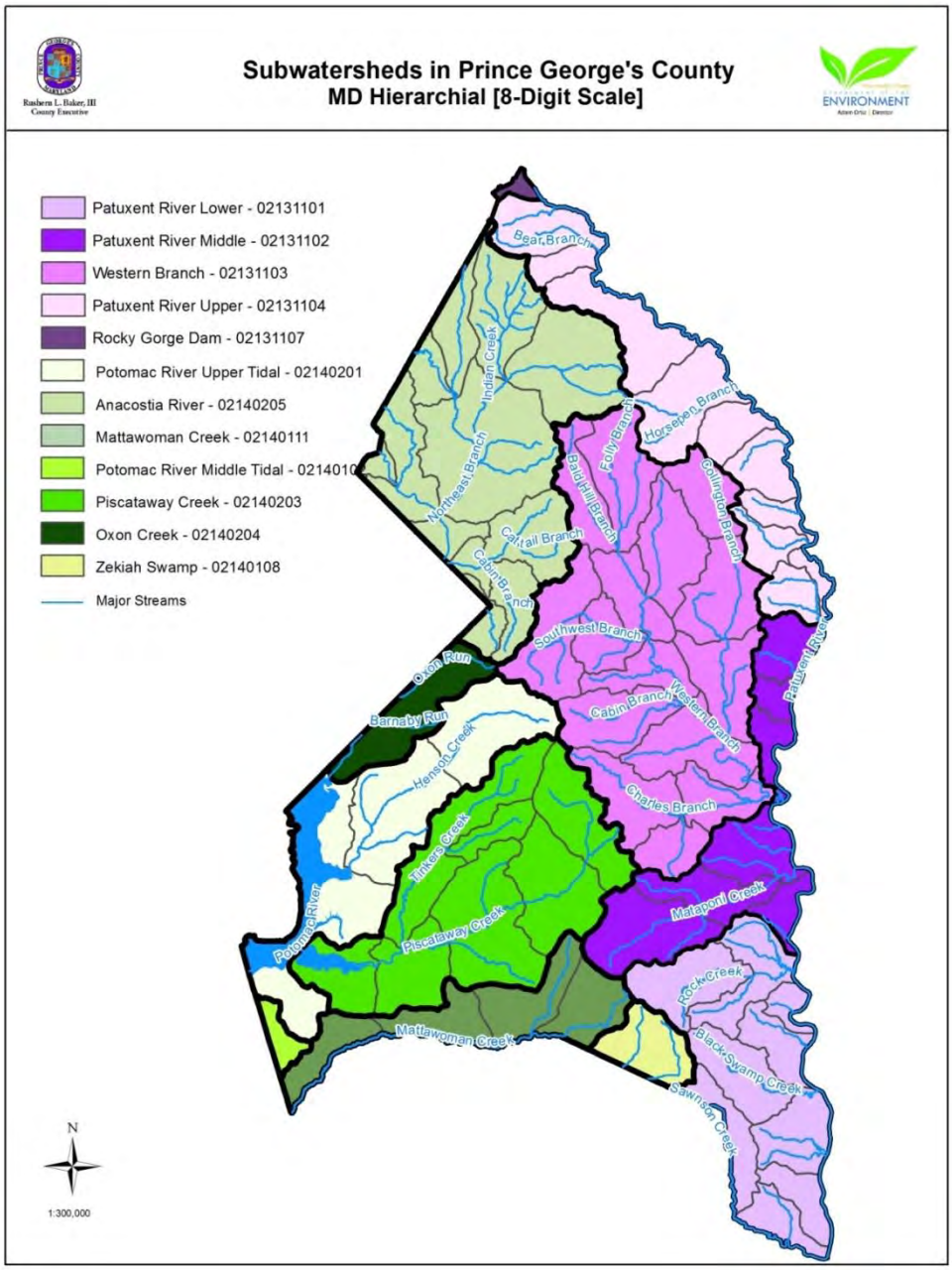

Figure E-1. Major Watersheds

Permit Condition Part IV. E. 2. a. Para 2: By the end of this permit term, Prince George's County shall commence and complete the implementation of restoration efforts for twenty percent of the County's impervious surface area consistent with the methodology described in the MDE document cited in PART IV.E.2.a. that has not already been restored to the MEP. Equivalent acres restored of impervious surfaces, through new retrofits or the retrofit of pre-2002 structural BMPs, shall be based upon the treatment of the WQv criteria and associated list of practices defined in the 2000 Maryland Stormwater Design Manual. For alternate BMPs, the basis for calculation of equivalent impervious acres restored is based upon the pollutant loads from forested cover.

The county has put forth a plan to restore 6,105 acres by the end of CY 2024. As of FY 2022, the County has already restored 5,230.6 acres towards this goal. To meet the goal of 6,105 acres, the county includes in its inventory about 1,538 impervious acres of restoration through projects that are either in active planning (concept plan), design or construction (see page 136).

Permit Condition Part IV. E. 2. b: Within one year of permit issuance, Prince George's County shall submit to MDE for approval a restoration plan for each stormwater WLA approved by EPA prior to the effective date of the permit. The County shall submit restoration plans for subsequent TMDL WLAs within one year of EPA approval. Upon approval by MDE, these restoration plans will be enforceable under this permit. As part of the restoration plans, Prince George's County shall:

- *i. Include the final date for meeting applicable WLAs and a detailed schedule for implementing all structural and nonstructural water quality improvement projects, enhanced stormwater management programs, and alternative stormwater control initiatives necessary for meeting applicable WLAs;*
- *ii. Provide detailed cost estimates for individual projects, programs, controls, and plan implementation;*
- *iii. Evaluate and track the implementation of restoration plans through monitoring or modeling to document the progress toward meeting established benchmarks, deadlines, and stormwater WLAs; and*
- *iv. Develop an ongoing, iterative process that continuously implements structural and nonstructural restoration projects, program enhancements, new and additional programs, and alternative BMPs where EPA approved TMDL stormwater WLAs are not being met according to the benchmarks and deadlines established as part of the County's watershed assessments.*

The TMDL restoration plans were developed and submitted to MDE in December 2015. No further action is required by the County as this requirement is deemed completed.

3. PUBLIC PARTICIPATION

Permit Conditions Part IV. E. 3: Prince George's County shall provide continual outreach to the public regarding the development of its watershed assessments and restoration plans. Additionally, the County shall allow for public participation in the TMDL process, solicit input, and incorporate any relevant ideas and program improvements that can aid in achieving TMDLs and water quality standards. Prince George's County shall provide:

a. Notice in a local newspaper and the County's web site outlining how the public may obtain information on the development of watershed assessments and stormwater watershed restoration plans and opportunities for comment;
b. Procedures for providing copies of watershed assessments and restoration plans to interested parties upon request;
c. A minimum 30 day comment period before finalizing watershed assessments and stormwater watershed restoration plans; and
d. A summary in each annual report of how the County addressed or will address any material comment received from the public.

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. Consequently, no further work was required to be completed in FY 2021 for this permit condition.

4. TMDL COMPLIANCE

Permit Condition Part IV. E. 4: Prince George's County shall evaluate and document its progress toward meeting all applicable stormwater WLAs included in EPA approved TMDLs. An annual TMDL assessment report with tables shall be submitted to MDE. This assessment shall include complete descriptions of the analytical methodology used to evaluate the effectiveness of the County's restoration plans and how these plans are working toward achieving compliance with EPA approved TMDLs. Prince George's County shall further provide:

a. Estimated net change in pollutant load reductions from all completed structural and nonstructural water quality improvement projects, enhanced stormwater management programs, and alternative stormwater control initiatives;

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 4,000 acres of impervious area (see Table E-37).

The County is in the progress of updating its TMDL load reduction accounting methodology. This update will align nutrient and sediment baseline, target, and progress loads with the new MDE methodology and data in the MDE's TMDL Implementation Progress and Planning Tool (TIPP Tool) and its 2021 draft Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated. The County is looking onward to new guidance and calculation methodologies, therefore, the TMDL

compliance tables in this report are updated to match the methodology and data in the TIPP Tool and draft guidance in anticipation of the changes in the upcoming MS4 permit renewal.

Because of this change, the baseline and target progress loads 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 two years, 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.

In this annual report, the County is also updating the geography that is reported in each of the tables. The County's draft MS4 permit lists several local TMDLs using smaller geographies. For instance, in the draft MS4 permit, MDE requests that load reductions for nutrients and sediment are presented by tidal and nontidal portions of the Anacostia River watershed. This annual report presents progress on the two portions, whereas in prior MS4 annual reports, the County combined those portions into one table for the entire Anacostia River watershed. Figure E-2 presents the local TMDL and Chesapeake Bay TMDL allocation watersheds to help readers understand the different reporting geographies.

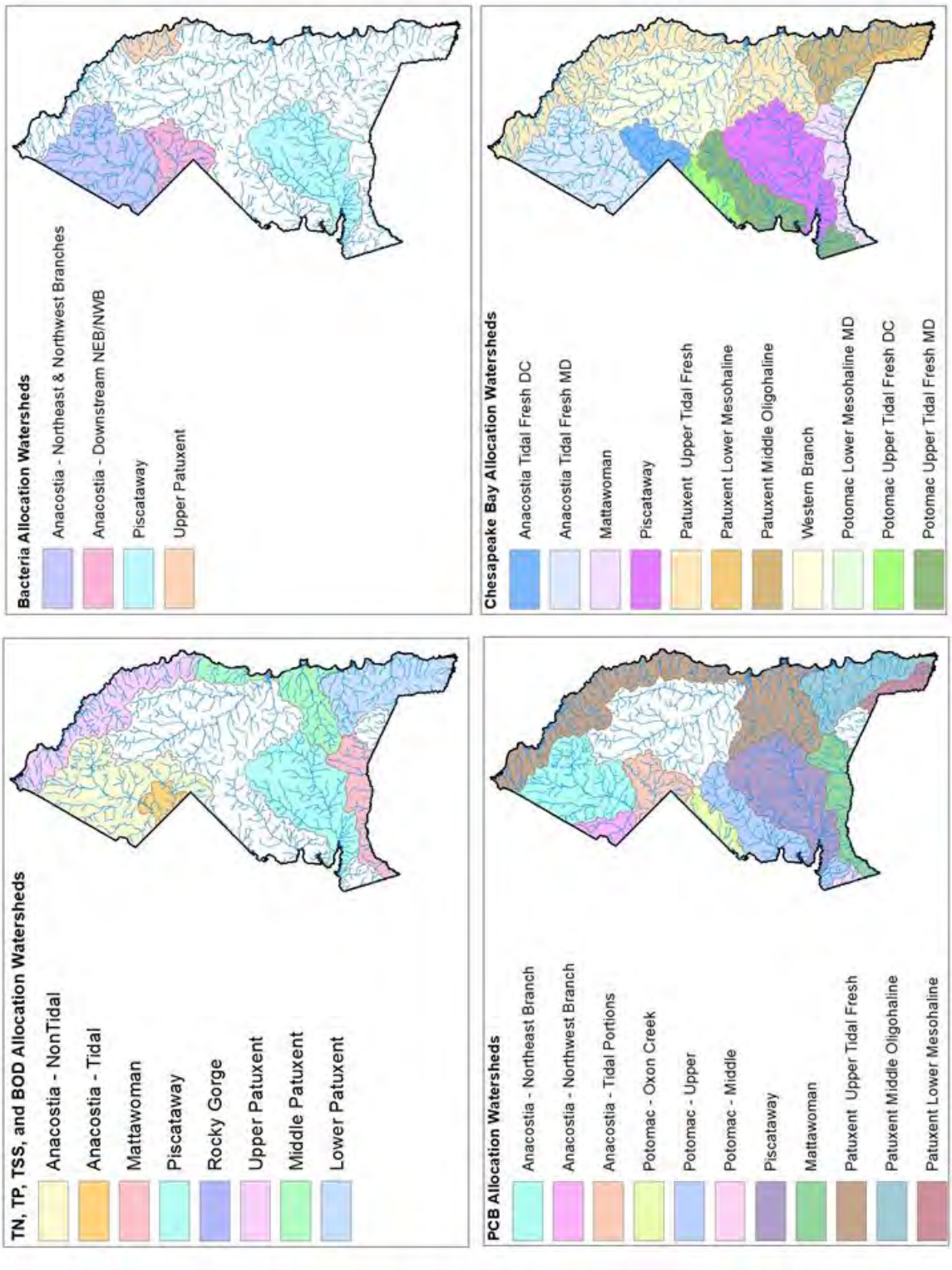

Figure E-2. Local TMDL and Chesapeake Bay Allocation Watersheds.

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 E-1 lists the local TMDLs and their associated tables.

Table E-1. Local TMDLs and Associated Tables.

Watershed	Total Nitrogen	Total Phosphorus	Total Suspended Solids
Anacostia	Table E-2: NonTidal Table E-4: Tidal	Table E-2: NonTidal Table E-4: Tidal	Table E-2: NonTidal Table E-4: Tidal
Mattawoman	--	Table E-6	--
Piscataway	--	--	Table E-8
Lower Patuxent	--	--	Table E-10
Middle Patuxent	--	--	Table E-12
Upper Patuxent	--	--	Table E-14
Rocky Gorge	--	Table E-16	--

Table E-2 through Table E-17 show the pollutant load reductions for the local TMDLs from all completed projects. The first table for each watershed is a summary of the current achieved reductions. The second table is the restoration summary provided from the MDE TIPP tool.

Table E-2. Anacostia River – Non-Tidal 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]	150,483.86	18,711.06	51,856,325
BMP Reduction – FY 2008	6.44	0.96	3,220
BMP Reduction – FY 2009	0.00	0.00	0
BMP Reduction – FY 2010	251.58	166.95	601,255

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
BMP Reduction – FY 2011	16.60	3.33	10,346
BMP Reduction – FY 2012	12.54	11.37	41,464
BMP Reduction – FY 2013	177.33	106.49	383,097
4th Generation Permit			
BMP Reduction – FY 2014	0.61	0.04	355
BMP Reduction – FY 2015	37.87	32.67	119,016
BMP Reduction – FY 2016	118.25	18.23	49,704
BMP Reduction – FY 2017	3,751.64	537.60	1,117,593
BMP Reduction – FY 2018	3,107.72	631.63	2,207,607
BMP Reduction – FY 2019	218.08	35.27	104,594
BMP Reduction – FY 2020	717.33	142.33	485,643
BMP Reduction – FY 2021	4,823.88	1,220.15	2,081,601
BMP Reduction – FY 2022	225.87	197.71	724,009
Total BMP Reduction	13,465.73	3,104.72	7,929,504
Percent Reduction of Target	8.9%	16.6%	15.3%

1 TMDL required load reduction for MS4 areas.

Table E-3. Anacostia River – Non-Tidal Local TMDL: TIPP Tool Summary

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
Baseline			
Impairment Baseline Load	185,782.55	23,043.17	61,007,441
Target Reduction %	81.0%	81.2%	85.0%
Target Load	35,298.68	4,332.12	9,151,116
Total Reduction Required	150,483.86	18,711.06	51,856,325
Permit			
Permit Load	172,781.31	20,227.55	54,117,320
Permit % Reduction	7.0%	12.2%	11.3%
Progress			
Total Progress Load	172,316.82	19,938.46	53,077,937
Progress % Reduction	7.2%	13.5%	13.0%
Milestone 1 (BMPs by 2025)			
Total Load after Implementation	170,637.32	19,564.06	51,703,466
Implementation % Reduction	8.2%	15.1%	15.3%
Milestone 2 (BMPs by 2027)			
Total Load after Implementation	169,404.72	17,301.94	43,463,047
Implementation % Reduction	8.8%	24.9%	28.8%

Table E-4. Anacostia River - Tidal 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]	27,505.41	3,408.51	9,812,041
BMP Reduction – FY 2007	4.17[2]	0.70[2]	3,118
BMP Reduction – FY 2008	0.00	0.00	0
BMP Reduction – FY 2009	0.00	0.00	0
BMP Reduction – FY 2010	0.00	0.00	0
BMP Reduction – FY 2011	2.43	0.30	1,157
BMP Reduction – FY 2012	5.25	0.80	2,069
BMP Reduction – FY 2013	0.00	0.00	0
4th Generation Permit			
BMP Reduction – FY 2014	0.16	0.01	108
BMP Reduction – FY 2015	6.21	0.82	2,799
BMP Reduction – FY 2016	3.43	0.48	1,415
BMP Reduction – FY 2017	69.04	11.31	35,522
BMP Reduction – FY 2018	11.43	1.68	4,534
BMP Reduction – FY 2019	13.78	1.86	5,982
BMP Reduction – FY 2020	25.31	3.50	10,744
BMP Reduction – FY 2021	1,203.50	584.87	408,125
BMP Reduction – FY 2022	154.81	26.21	111,248
Total BMP Reduction	1,496.01	631.92	587,130
Percent Reduction of Target	**5.4%**	**18.5%**	**6.0%**

1 TMDL required load reduction for MS4 areas
2 Prior to development of TMDL. Not included in restoration totals.

Table E-5. Anacostia River – Tidal Local TMDL: TIPP Tool Summary

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
Baseline			
Impairment Baseline Load	33,957.29	4,197.67	11,543,578
Target Reduction %	81.0%	81.2%	85.0%
Target Load	6,451.89	789.16	1,731,537
Total Reduction Required	27,505.41	3,408.51	9,812,041
Permit			
Permit Load	32,469.62	3,566.93	10,963,101
Permit % Reduction	4.4%	15.0%	5.0%

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
Progress			
Total Progress Load	32,461.28	3,565.76	10,956,448
Progress % Reduction	4.4%	15.1%	5.1%
Milestone 1 (BMPs by 2025)			
Total Load after Implementation	32,168.94	3,309.32	10,022,418
Implementation % Reduction	5.3%	21.2%	13.2%
Milestone 2 (BMPs by 2027)			
Total Load after Implementation	32,168.94	3,309.32	10,022,418
Implementation % Reduction	5.3%	21.2%	13.2%

Table E-6. 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]	8,803.52	1,040.37
BMP Reduction – FY 2005–FY 2013	0.00	0.00
4th Generation Permit		
BMP Reduction – FY 2014	0.00	0.00
BMP Reduction – FY 2015	1.05	0.20
BMP Reduction – FY 2016	0.00	0.00
BMP Reduction – FY 2017	13.75	2.22
BMP Reduction – FY 2018	495.79	113.80
BMP Reduction – FY 2019	0.00	0.00
BMP Reduction – FY 2020	109.83	25.71
BMP Reduction – FY 2021	369.48	335.00
BMP Reduction – FY 2022	0.22	0.04
Total BMP Reduction	990.11	476.96
Percent Reduction of Target	**11.2%**	**45.8%**

1 TMDL required load reduction for MS4 areas.

Table E-7. Mattawoman Creek Local TMDL: TIPP Tool Summary

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
Baseline		
Impairment Baseline Load	16,302.82	2,213.55
Target Reduction %	54.0%	47.0%
Target Load	7,499.30	1,173.18
Total Reduction Required	8,803.52	1,040.37

Label	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)
Permit		
Permit Load	15,312.71	1,736.59
Permit % Reduction	6.1%	21.5%
Progress		
Total Progress Load	15,312.71	1,736.59
Progress % Reduction	6.1%	21.5%
Milestone 1 (BMPs by 2025)		
Total Load after Implementation	15,302.35	1,734.92
Implementation % Reduction	6.1%	21.6%
Milestone 2 (BMPs by 2027)		
Total Load after Implementation	15,302.35	1,734.92
Implementation % Reduction	6.1%	21.6%

Table E-8. Piscataway Creek – Current Achieved Reductions

Pollutant	Total Suspended Solids (lbs./year)
TMDL Issue Date	2019
Target Load Reduction[1]	17,079,836
BMP Reduction – Prior to FY 2013[2]	1,962,022[2]
4th Generation Permit	
BMP Reduction – FY 2014[2]	31[2]
BMP Reduction – FY 2015[2]	51,029[2]
BMP Reduction – FY 2016[2]	44,911[2]
BMP Reduction – FY 2017[2]	127,803[2]
BMP Reduction – FY 2018[2]	967,129[2]
BMP Reduction – FY 2019	36,696
BMP Reduction – FY 2020	42,249
BMP Reduction – FY 2021	2,352,036
BMP Reduction – FY 2022	1,730,395
Total BMP Reduction	4,161,376
Percent Reduction of Target	**24.4%**

1 TMDL required load reduction for MS4 areas.
2 Prior to development of TMDL. Not included in restoration totals.

Table E-9. Piscataway Creek Local TMDL: TIPP Tool Summary

Label	Total Suspended Solids (lbs./year)
Baseline	
Impairment Baseline Load	33,489,874

Label	Total Suspended Solids (lbs./year)
Target Reduction %	51.0%
Target Load	16,410,038
Total Reduction Required	17,079,836
Permit	
Permit Load	29,328,498
Permit % Reduction	12.4%
Progress	
Total Progress Load	29,328,498
Progress % Reduction	12.4%
Milestone 1 (BMPs by 2025)	
Total Load after Implementation	24,810,071
Implementation % Reduction	25.9%
Milestone 2 (BMPs by 2027)	
Total Load after Implementation	24,810,071
Implementation % Reduction	25.9%

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

Pollutant	Total Suspended Solids (lbs./year)
TMDL Issue Date	2018
Target Load Reduction[1]	3,250,240
4th Generation Permit	
BMP Reduction – FY 2014[2]	0[2]
BMP Reduction – FY 2015[2]	39[2]
BMP Reduction – FY 2016[2]	0[2]
BMP Reduction – FY 2017[2]	32,514[2]
BMP Reduction – FY 2018	4,137
BMP Reduction – FY 2019	0
BMP Reduction – FY 2020	0
BMP Reduction – FY 2021	4,042,619
BMP Reduction – FY 2022	0
Total BMP Reduction	4,046,756
Percent Reduction of Target	**125%[3]**

1 TMDL required load reduction for MS4 areas.
2 Prior to development of TMDL. Not included in restoration totals.
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 E-11. Lower Patuxent Local TMDL: TIPP Tool Summary

Label	Total Suspended Solids (lbs./year)
Baseline	
Impairment Baseline Load	5,328,263
Target Reduction %	61.0%
Target Load	2,078,023
Total Reduction Required	3,250,240
Permit	
Permit Load	1,281,507
Permit % Reduction	75.9%
Progress	
Total Progress Load	1,281,507
Progress % Reduction	75.9%
Milestone 1 (BMPs by 2025)	
Total Load after Implementation	512,488
Implementation % Reduction	90.4%
Milestone 2 (BMPs by 2027)	
Total Load after Implementation	512,488
Implementation % Reduction	90.4%

Table E-12. Middle Patuxent Local TMDL – Current Achieved Reductions

Pollutant	Total Suspended Solids (lbs./year)
TMDL Issue Date	2018
Target Load Reduction[1]	3,575,868
4th Generation Permit	
BMP Reduction – FY 2014[2]	135[2]
BMP Reduction – FY 2015[2]	105[2]
BMP Reduction – FY 2016[2]	0[2]
BMP Reduction – FY 2017[2]	18,994[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
Total BMP Reduction	6,752
Percent Reduction of Target	**0.19%**

1 TMDL required load reduction for MS4 areas.
2 Prior to development of TMDL. Not included in restoration totals.

Table E-13. Middle Patuxent Local TMDL: TIPP Tool Summary

Label	Total Suspended Solids (lbs./year)
Baseline	
Impairment Baseline Load	6,385,479
Target Reduction %	56.0%
Target Load	2,809,611
Total Reduction Required	3,575,868
Permit	
Permit Load	6,378,726
Permit % Reduction	0.1%
Progress	
Total Progress Load	6,378,726
Progress % Reduction	0.1%
Milestone 1 (BMPs by 2025)	
Total Load after Implementation	5,752,175
Implementation % Reduction	9.9%
Milestone 2 (BMPs by 2027)	
Total Load after Implementation	5,752,175
Implementation % Reduction	9.9%

Table E-14. Upper Patuxent Local TMDL – Current Achieved Reductions

Pollutant	Total Suspended Solids (lbs./year)
TMDL Issue Date	2011
Target Load Reduction[1]	1,897,184
3rd Generation Permit	
BMP Reduction – FY 2010[2]	5,477[2]
BMP Reduction – FY 2011	0
BMP Reduction – FY 2012	976,944
BMP Reduction – FY 2013	0
4th Generation Permit	
BMP Reduction – FY 2014	101
BMP Reduction – FY 2015	33,864
BMP Reduction – FY 2016	447
BMP Reduction – FY 2017	14,561
BMP Reduction – FY 2018	315,455
BMP Reduction – FY 2019	4,312
BMP Reduction – FY 2020	2,116,403
BMP Reduction – FY 2021	668,108

Pollutant	Total Suspended Solids (lbs./year)
BMP Reduction – FY 2022	0
Total BMP Reduction	4,130,196
Percent Reduction of Target	**218%[3]**

1 TMDL required load reduction for MS4 areas.
2 Prior to development of TMDL. Not included in restoration totals.
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 E-15. Upper Patuxent Local TMDL: TIPP Tool Summary

Label	Total Suspended Solids (lbs./year)
Baseline	
Impairment Baseline Load	16,641,961
Target Reduction %	11.4%
Target Load	14,744,778
Total Reduction Required	1,897,184
Permit	
Permit Load	13,488,709
Permit % Reduction	18.9%
Progress	
Total Progress Load	12,511,765
Progress % Reduction	24.8%
Milestone 1 (BMPs by 2025)	
Total Load after Implementation	11,390,348
Implementation % Reduction	31.6%
Milestone 2 (BMPs by 2027)	
Total Load after Implementation	11,390,348
Implementation % Reduction	31.6%

Table E-16. Rocky Gorge Local TMDL: Current Achieved Reductions

Pollutant	Total Phosphorus (lbs./year)
TMDL Issue Date	2008
Target Load Reduction[1]	12.15
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

Pollutant	Total Phosphorus (lbs./year)
BMP Reduction – FY 2013	0.00
4th Generation Permit	
BMP Reduction – FY 2014	0.00
BMP Reduction – FY 2015	0.00
BMP Reduction – FY 2016	0.00
BMP Reduction – FY 2017	0.02
BMP Reduction – FY 2018	0.00
BMP Reduction – FY 2019	0.00
BMP Reduction – FY 2020	0.00
BMP Reduction – FY 2021	0.00
BMP Reduction – FY 2022	0.00
Total BMP Reduction	0.02
Percent Reduction of Target	**0.13%**

1 TMDL required load reduction for MS4 areas.

Table E-17. Rocky Gorge Local TMDL: TIPP Tool Summary

Label	Total Phosphorus (lbs./year)
Baseline	
Impairment Baseline Load	80.99
Target Reduction %	15.0%
Target Load	68.84
Total Reduction Required	12.15
Permit	
Permit Load	80.97
Permit % Reduction	0.0%
Progress	
Total Progress Load	80.97
Progress % Reduction	0.0%
Milestone 1 (BMPs by 2025)	
Total Load after Implementation	0.00
Implementation % Reduction	100.0%
Milestone 2 (BMPs by 2027)	
Total Load after Implementation	0.00
Implementation % Reduction	100.0%

Permit Condition Part IV. E. 4:

b. A comparison of the net change in pollutant load reductions detailed above with the established benchmarks, deadlines, and applicable stormwater WLAs;

Local TMDL Benchmarks

Table E-18 through Table E-25 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. These new targets replace the original time estimates developed in the County's 2014 restoration plans and are based on the County's progress up to the current reporting year. 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 E-18. Annual Load Reduction Targets for Anacostia Watershed Non-Tidal Local TMDLs

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)	Status
Prior to 2010 (Actual)	6.44	0.96	3,220	Reduced
2010 (Actual)	251.58	166.95	601,255	Reduced
2011 (Actual)	16.60	3.33	10,346	Reduced
2012 (Actual)	12.54	11.37	41,464	Reduced
2013 (Actual)	177.33	106.49	383,097	Reduced
2014 *(Actual)*	0.61	0.04	355	Reduced
2015 (Actual)	37.87	32.67	119,016	Reduced
2016 (Actual)	118.25	18.23	49,704	Reduced
2017 (Actual)	3,751.64	537.60	1,117,593	Reduced
2018 (Actual)	3,107.72	631.63	2,207,607	Reduced
2019 (Actual)	218.08	35.27	104,594	Reduced
2020 (Actual)	717.33	142.33	485,643	Reduced
2021 (Actual)	4,823.88	1,220.15	2,081,601	Reduced
2022 (Actual)	225.87	197.71	724,009	Reduced
2023 (*Planned*)	216.72	62.82	219,958	Planned
2024 (*Planned*)	1,462.78	311.58	1,154,513	Planned
2025 (*Planned*)	0.00	0.00	0	Planned
2026 (*Planned*)	5.02	0.77	2,157	Planned
2027 (*Planned*)	2,907.08	2,635.75	9,612,733	Planned
Total Restoration	18,057.32	6,115.63	18,918,865	Planned
Estimated annual reduction through (YEAR)	950 (2162)	322 (2062)	995,730 (2056)	Projected
Target Reduction	**150,483.86**	**18,711.06**	**51,856,325**	**Target**

Table E-19. 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)*	NA	NA	3,118	Reduced
2010 (Actual)	2.43	0.30	1,157	Reduced
2011 (Actual)	5.25	0.80	2,069	Reduced
2012 (Actual)	0.00	0.00	0	Reduced
2013 (Actual)	0.66	0.08	308	Reduced
2014 *(Actual)*	0.16	0.01	108	Reduced
2015 (Actual)	6.21	0.82	2,799	Reduced
2016 (Actual)	3.43	0.48	1,415	Reduced
2017 (Actual)	69.04	11.31	35,522	Reduced
2018 (Actual)	11.43	1.68	4,534	Reduced
2019 (Actual)	13.78	1.86	5,982	Reduced
2020 (Actual)	25.31	3.50	10,744	Reduced
2021 (Actual)	1,203.50	584.87	408,125	Reduced
2022 (Actual)	154.81	26.21	111,248	Reduced
2023 (*Planned*)	168.16	148.21	540,169	Planned
2024 (*Planned*)	124.18	108.23	393,861	Planned
2025 (*Planned*)	0.00	0.00	0	Planned
Total Restoration	1,788.36	888.36	1,521,160	Planned
Estimated Annual Reductions Through (YEAR)	112 (2252)	56 (2068)	89,480 (2115)	Projected
Target Reduction	**27,505.41**	**3,408.51**	**9,812,041**	**Target**

Table E-20. Annual Load Reduction Targets for Mattawoman Creek Local TMDLs

Pollutant	Total Nitrogen (lbs./year) [2]	Total Phosphorus (lbs./year) [2]	Status
2014 *(Actual)*	0.00	0.00	Reduced
2015 (Actual)	1.05	0.20	Reduced
2016 (Actual)	0.00	0.00	Reduced
2017 (Actual)	13.75	2.22	Reduced
2018 (Actual)	495.79	113.80	Reduced
2019 (Actual)	0.00	0.00	Reduced
2020 (Actual)	109.83	25.71	Reduced
2021 (Actual)	369.48	335.00	Reduced
2022 (Actual)	0.22	0.04	Reduced
2023 (*Planned*)	0.00	0.00	Planned

Pollutant	Total Nitrogen (lbs./year) [2]	Total Phosphorus (lbs./year) [2]	Status
2024 (*Planned*)	10.36	1.67	Planned
2025 (*Planned*)	0.00	0.00	Planned
Total Restoration	1,000.47	478.63	Planned
Estimated Annual Reductions Through (YEAR)	100 (2101)	48 (2034)	Projected
Target Reduction	**8,803.52**	**1,040.37**	**Target**

Table E-21. Annual Load Reduction Targets for Piscataway Creek Local TMDLs

Pollutant	Total Suspended Solids (lbs./year)	Status
2014 *(Actual)*	31	Reduced
2015 (Actual)	51,029	Reduced
2016 (Actual)	44,911	Reduced
2017 (Actual)	127,803	Reduced
2018 (Actual)	967,129	Reduced
2019 (Actual)	36,696	Reduced
2020 (Actual)	42,249	Reduced
2021 (Actual)	2,352,036	Reduced
2022 (Actual)	1,730,395	Reduced
2023 (*Planned*)	390,478	Planned
2024 (*Planned*)	108,474	Planned
2025 (*Planned*)	4,019,475	Planned
Total Restoration	8,679,803	Planned
Estimated Annual Reductions Through (YEAR)	822,559 (2033)	Projected
Target Reduction	**17,079,836**	**Target**

Table E-22. 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]	39[1]	Reduced
2016 (Actual) [1]	0[1]	Reduced
2017 (Actual) [1]	32,514[1]	Reduced
2018 (Actual)	4,137	Reduced

Pollutant	Total Suspended Solids (lbs./year)	Status
2019 (Actual)	0	Reduced
2020 (Actual)	0	Reduced
2021 (Actual)	4,042,619	Reduced
2022 (Actual)	0	Reduced
2023 (*Planned*)	0	Projected
2024 (*Planned*)	0	Projected
2025 (*Planned*)	0	Projected
Total Restoration	**>3,250,240**	Planned
Estimated Annual Reductions Through (YEAR)	Target Met[2]	Projected
Target Reduction	**3,250,240**	**Target**

1 Prior to development of TMDL. Not included in restoration totals.
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 E-23. Annual Load Reduction Targets for Middle Patuxent Local TMDLs

Pollutant	Total Suspended Solids (lbs./year)	Status
2014 *(Actual)* [1]	135[1]	Reduced
2015 (Actual) [1]	105[1]	Reduced
2016 (Actual) [1]	0[1]	Reduced
2017 (Actual) [1]	18,994[1]	Reduced
2018 (Actual)	6,752	Reduced
2019 (Actual)	0	Reduced
2020 (Actual)	0	Reduced
2021 (Actual)	0	Reduced
2022 (Actual)	0	Reduced
2023 (*Planned*)	0	Planned
2024 (*Planned*)	2,584	Planned
2025 (*Planned*)	623,968	Planned
Total Restoration	633,304	Planned
Estimated Annual Reductions Through (YEAR)	54,378 (2077)	Projected
Target Reduction	**3,575,868**	**Target**

1 Prior to development of TMDL. Not included in restoration totals.

Table E-24. Annual Load Reduction Targets for Upper Patuxent Local TMDLs

Pollutant	Total Suspended Solids (lbs./year)	Status
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)	315,455	Reduced
2019 (Actual)	4,312	Reduced
2020 (Actual)	2,116,403	Reduced
2021 (Actual)	668,108	Reduced
2022 (Actual)	0	Reduced
2023 (*Planned*)	609,326	Planned
2024 (*Planned*)	512,091	Planned
2025 (*Planned*)	0	Planned
Total Restoration	**>4,130,196**	Planned
Estimated Annual Reductions Through (YEAR)	Target Met[1]	Projected
Target Reduction	**4,130,196**	**Target**

1 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 E-25. Annual Load Reduction Targets for Rocky Gorge Local TMDL

Pollutant	Total Phosphorus (lbs./year)	Status
2014 *(Actual)*	0	Reduced
2015 (Actual)	0	Reduced
2016 (Actual)	0	Reduced
2017 (Actual)	0.02	Reduced
2018 (Actual)	0	Reduced
2019 (Actual)	0	Reduced
2020 (Actual)	0	Reduced
2021 (Actual)	0	Reduced
2022 (Actual)	0	Reduced
2023 (*Planned*)	0	Planned
2024 (*Planned*)	87.09	Planned
2025 (Planned)	0	Planned
Total Restoration	**>12.15**	Planned

Pollutant	Total Phosphorus (lbs./year)	Status
Estimated Annual Reductions Through (YEAR)	Target Met[1]	Projected
Target Reduction	**12.15**	**Target**

1 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 E-26 through

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
TMDL Issuance Date	2010	2010	2010
Target Load Reduction[1]	19,671.42	4,379.99	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	1.43	4,788
4th Generation Permit			
BMP Reduction – FY 2014	10.43	1.58	3,269
BMP Reduction – FY 2015	20.55	15.26	50,960
BMP Reduction – FY 2016	95.13	41.35	124,740
BMP Reduction – FY 2017	65.40	10.98	26,912
BMP Reduction – FY 2018	954.39	198.86	548,464
BMP Reduction – FY 2019	81.43	15.21	48,072
BMP Reduction – FY 2020	292.78	57.35	159,403
BMP Reduction – FY 2021	399.24	85.08	175,418
BMP Reduction – FY 2022	231.50	40.51	134,973
Total BMP Reduction	2,152.77	467.62	1,276,998
Percent Reduction of Target	**10.9%**	**10.7%**	**N/A**

[1] TMDL-required load reduction for MS4 areas

Table E-36 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 E-26. 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]	13,024.18	2,203.34	N/A
3rd Generation Permit			
BMP Reduction – FY 2010	133.23	104.99	240,257
BMP Reduction – FY 2011	15.61	2.69	4,952
BMP Reduction – FY 2012	10.07	7.97	18,241
BMP Reduction – FY 2013	25.50	2.70	6,677
4th Generation Permit			
BMP Reduction – FY 2014	0.02	0.00	6
BMP Reduction – FY 2015	3.98	0.42	1,022
BMP Reduction – FY 2016	3.75	0.41	936
BMP Reduction – FY 2017	243.69	44.51	97,578
BMP Reduction – FY 2018	308.90	69.48	139,389
BMP Reduction – FY 2019	17.63	2.05	4,189
BMP Reduction – FY 2020	135.81	24.92	58,678
BMP Reduction – FY 2021	735.70	349.42	106,687
BMP Reduction – FY 2022	8.39	1.09	1,791
Total BMP Reduction	1,642.28	610.66	680,404
Percent Reduction of Target	**12.6%**	**27.7%**	**N/A**

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

Table E-27. 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]	21,890.22	7,428.25	N/A
3rd Generation Permit			
BMP Reduction – FY 2010	67.56	16.82	45,351
BMP Reduction – FY 2011	1.86	0.29	933

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
BMP Reduction – FY 2012	0.00	0.00	0
BMP Reduction – FY 2013	112.04	99.01	296,726
4th Generation Permit			
BMP Reduction – FY 2014	0.57	0.04	361
BMP Reduction – FY 2015	29.98	31.69	96,289
BMP Reduction – FY 2016	89.65	17.47	39,477
BMP Reduction – FY 2017	2,694.80	467.88	750,470
BMP Reduction – FY 2018	2,095.14	514.89	1,527,270
BMP Reduction – FY 2019	160.83	32.97	81,431
BMP Reduction – FY 2020	439.45	106.29	292,518
BMP Reduction – FY 2021	3,916.24	1,259.29	1,810,855
BMP Reduction – FY 2022	283.65	214.33	669,788
Total BMP Reduction	9,891.76	2,760.95	5,611,469
Percent Reduction of Target	**45.2%**	**37.2%**	**N/A**

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

Table E-28. 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
Target Load Reduction[1]	1,341.77	723.83	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 Generation Permit			
BMP Reduction – FY 2014	0.00	0.00	0
BMP Reduction – FY 2015	0.84	0.20	280
BMP Reduction – FY 2016	0.00	0.00	0
BMP Reduction – FY 2017	10.98	2.22	5,821
BMP Reduction – FY 2018	396.16	113.80	316,428
BMP Reduction – FY 2019	0.00	0.00	0
BMP Reduction – FY 2020	87.76	25.71	66,080
BMP Reduction – FY 2021	295.24	335.00	1,221,760
BMP Reduction – FY 2022	0.17	0.04	167
Total BMP Reduction	791.15	476.96	1,610,536

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
Percent Reduction of Target	**59.0%**	**65.9%**	**N/A**

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

Table E-29. 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]	857.12	261.52	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 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	0.09	0.02	42
BMP Reduction – FY 2018	3.17	0.66	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
Total BMP Reduction	3.27	0.68	1,318
Percent Reduction of Target	**0.38%**	**0.26%**	**N/A**

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

Table E-30. 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]	3,288.63	754.29	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

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
4th Generation Permit			
BMP Reduction – FY 2014	0.00	0.00	0
BMP Reduction – FY 2015	0.07	0.01	15
BMP Reduction – FY 2016	0.00	0.00	0
BMP Reduction – FY 2017	143.58	21.05	12,374
BMP Reduction – FY 2018	5.79	0.88	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	773.84	1,540,468
BMP Reduction – FY 2022	0.00	0.00	0
Total BMP Reduction	1,134.52	795.78	1,553,946
Percent Reduction of Target	**34.5%**	**105.5%[2]**	**N/A**

[1] TMDL-required load reduction for MS4 areas

[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 E-31. 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]	14,233.43	4,888.25	N/A
3rd Generation Permit			
BMP Reduction – FY 2010	11.77	2.13	1,448
BMP Reduction – FY 2011	0.00	0.00	0
BMP Reduction – FY 2012	202.86	188.87	258,275
BMP Reduction – FY 2013	0.00	0.00	0
4th Generation Permit			
BMP Reduction – FY 2014	0.30	0.04	62
BMP Reduction – FY 2015	6.90	6.54	8,953
BMP Reduction – FY 2016	1.53	0.30	208
BMP Reduction – FY 2017	109.32	22.03	11,030
BMP Reduction – FY 2018	1,599.56	647.48	348,504
BMP Reduction – FY 2019	11.61	2.77	1,559
BMP Reduction – FY 2020	2,918.85	770.28	559,737
BMP Reduction – FY 2021	821.22	472.17	484,463

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
BMP Reduction – FY 2022	0.00	0.00	0
Total BMP Reduction	5,683.92	2,112.60	1,674,240
Percent Reduction of Target	**39.9%**	**43.2%**	**N/A**

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

Table E-32. 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]	18,789.29	28,409.51	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	144.21	515,042
BMP Reduction – FY 2013	0.00	0.00	0
4th Generation Permit			
BMP Reduction – FY 2014	0.05	0.05	26
BMP Reduction – FY 2015	11.79	12.13	42,870
BMP Reduction – FY 2016	71.33	69.77	37,730
BMP Reduction – FY 2017	171.41	209.21	107,368
BMP Reduction – FY 2018	1,144.85	1,536.56	812,489
BMP Reduction – FY 2019	59.42	57.90	30,829
BMP Reduction – FY 2020	80.06	74.73	35,493
BMP Reduction – FY 2021	4,243.15	826.59	1,975,956
BMP Reduction – FY 2022	4,856.75	566.02	1,453,712
Total BMP Reduction	10,779.05	3,497.16	5,011,515
Percent Reduction of Target	**57.4%**	**12.3%**	**N/A**

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

Table E-33. 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]	320.08	137.24	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

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
BMP Reduction – FY 2013	0.00	0.00	0
4th 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
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*

Table E-34. 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]	7,265.70	12,611.24	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 Generation Permit			
BMP Reduction – FY 2014	0.00	0.00	0
BMP Reduction – FY 2015	0.12	0.16	36
BMP Reduction – FY 2016	0.14	0.23	62
BMP Reduction – FY 2017	26.31	35.29	6,630
BMP Reduction – FY 2018	35.58	36.54	54,132
BMP Reduction – FY 2019	0.00	0.00	0
BMP Reduction – FY 2020	23.35	29.42	5,701
BMP Reduction – FY 2021	0.95	1.16	251
BMP Reduction – FY 2022	0.00	0.00	0
Total BMP Reduction	86.45	102.80	66,813
Percent Reduction of Target	**1.2%**	**0.8%**	**N/A**

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

Table E-35. 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
Target Load Reduction[1]	19,671.42	4,379.99	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	1.43	4,788
4th Generation Permit			
BMP Reduction – FY 2014	10.43	1.58	3,269
BMP Reduction – FY 2015	20.55	15.26	50,960
BMP Reduction – FY 2016	95.13	41.35	124,740
BMP Reduction – FY 2017	65.40	10.98	26,912
BMP Reduction – FY 2018	954.39	198.86	548,464
BMP Reduction – FY 2019	81.43	15.21	48,072
BMP Reduction – FY 2020	292.78	57.35	159,403
BMP Reduction – FY 2021	399.24	85.08	175,418
BMP Reduction – FY 2022	231.50	40.51	134,973
Total BMP Reduction	2,152.77	467.62	1,276,998
Percent Reduction of Target	**10.9%**	**10.7%**	**N/A**

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

Table E-36. 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]	20,583.22	15,590.45	N/A
3rd Generation Permit			
BMP Reduction – FY 2010	0.00	0.00	0
BMP Reduction – FY 2011	8.92	14.19	29,009
BMP Reduction – FY 2012	0.00	0.00	0
BMP Reduction – FY 2013	10.66	15.33	30,435
4th Generation Permit			
BMP Reduction – FY 2014	0.43	0.22	139
BMP Reduction – FY 2015	39.91	63.11	128,851

Pollutant	Total Nitrogen (lbs./year)	Total Phosphorus (lbs./year)	Total Suspended Solids (lbs./year)
BMP Reduction – FY 2016	2.58	1.29	1,051
BMP Reduction – FY 2017	405.75	259.24	209,145
BMP Reduction – FY 2018	1,353.61	966.86	765,872
BMP Reduction – FY 2019	96.47	67.76	51,031
BMP Reduction – FY 2020	746.02	536.42	410,492
BMP Reduction – FY 2021	350.56	247.87	202,579
BMP Reduction – FY 2022	145.41	177.27	325,440
Total BMP Reduction	3,160.32	2,349.54	2,154,043
Percent Reduction of Target	**15.4%**	**15.1%**	**N/A**

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

Permit Condition Part IV. E. 4:

c. Itemized costs for completed projects, programs, and initiatives to meet established pollutant reduction benchmarks and deadlines;

A summary of the completed projects, programs, and initiatives to meet the established pollutant reduction goals is provided in Table E-37. 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 (half of FY2014) through FY 2022), the County has restored more than 5,230 acres under the NPDES MS4 permit. This restoration progress was accomplished through more than 873 projects costing approximately $302 million.

Table E-37. Summary of Completed Projects through FY 2022.

Watershed Code	Watershed Name	Number of Projects	Impervious Acres Restored[1]	Implementation Cost ($)
Restoration BMPs through CIP and CWP Projects, and Redevelopment (see Geodatabase Record: RestBMP)				
02131101	Patuxent River lower	3	0.88	$755,227
02131102	Patuxent River middle	5	1.45	$767,796
02131103	Western Branch	60	639.77	$53,417,860
02131104	Patuxent River upper	26	204.88	$14,564,551
02140111	Mattawoman Creek	3	39.47	$1,954,489
02140201	Potomac River U tidal	35	89.69	$10,978,150
02140203	Piscataway Creek	25	127.92	$12,586,987
02140204	Oxon Creek	11	6.15	$3,751,975
02140205	Anacostia River	242	832.94	$71,477,420
		410	**1,943.15**	**$170,254,455**
Septic System Upgrade or Removal (see Geodatabase Record: AltBMPPoint)[2]				

Watershed Code	Watershed Name	Number of Projects	Impervious Acres Restored[1]	Implementation Cost ($)
02131101	Patuxent River lower	5	1.30	$70,000
02131102	Patuxent River middle	18	4.68	$252,000
02131103	Western Branch	53	17.29	$364,000
02131104	Patuxent River upper	24	7.67	$182,000
02131107	Rocky Gorge Dam	1	0.39	$0
02140111	Mattawoman Creek	4	1.43	$14,000
02140201	Potomac River U tidal	26	9.88	$28,000
02140203	Piscataway Creek	34	11.96	$140,000
02140204	Oxon Creek	8	3.12	$0
02140205	Anacostia River	59	23.01	$0
		232	**80.73**	**$1,050,000**
Tree Planting (see Geodatabase Record: AltBMPPoly)				
02131101	Patuxent River lower	2	8.68	$393,577
02131102	Patuxent River middle	2	5.16	$305,334
02131103	Western Branch	9	45.87	$6,949,895
02131104	Patuxent River upper	6	7.79	$1,403,110
02131107	Rocky Gorge Dam	1	0.08	$13,626
02140102	Potomac River M tidal	1	0.00	$649
02140111	Mattawoman Creek	1	4.03	$653,412
02140201	Potomac River U tidal	5	13.31	$2,107,198
02140203	Piscataway Creek	3	23.20	$4,089,376
02140204	Oxon Creek	5	2.76	$513,147
02140205	Anacostia River	67	22.56	$4,628,489
		102	**133.44**	**$21,057,813**
Inlet Cleaning and Street Sweeping (see Geodatabase Record: AltBMPPoly)[3]				
02131102	Patuxent River middle	8	0.24	$0
02131103	Western Branch	11	57.73	$0
02131104	Patuxent River upper	9	11.02	$0
02131107	Rocky Gorge Dam	9	0.25	$0
02140201	Potomac River U tidal	11	35.36	$0
02140203	Piscataway Creek	10	17.10	$0
02140204	Oxon Creek	10	17.67	$0
02140205	Anacostia River	11	68.04	$0
		79	**207.41**	**$0**
Stream Restoration[4] and Outfall Stabilization Projects (see Geodatabase Record: AltBMPLine)				
02131101	Patuxent River lower	2	347.23	$15,364,108
02131103	Western Branch	7	564.03	$23,386,863
02131104	Patuxent River upper	3	330.27	$12,264,217
02140111	Mattawoman Creek	1	98.53	$4,318,041

Watershed Code	Watershed Name	Number of Projects	Impervious Acres Restored[1]	Implementation Cost ($)
02140201	Potomac River U tidal	6	158.66	$6,220,794
02140203	Piscataway Creek	16	817.36	$24,899,845
02140204	Oxon Creek	2	21.23	$1,117,313
02140205	Anacostia River	13	528.56	$22,033,826
		50	**2,865.87**	**$109,605,007**
Grand Total		**873**	**5,230.6**	**$301,967,276**

[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] County does not have itemized costs associated with this category as these are operational programs.
[4] 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.

Permit Condition Part IV. E. 4:
d. Cost estimates for completing all projects, programs, and alternatives necessary for meeting applicable stormwater WLAs; and

Implementation cost for completing all projects in County's inventory under planning, design, or under construction is provided in Table E-38. The Table E-38 includes projects that would treat 1,538 acres to meet 6,105 acres restoration goal and additional future projects towards TMDL efforts going forward. The additional projects in the inventory are included with the consideration that future funding is available, also 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 over $79 million.

Table E-38. Projects under Planning, Design, or Construction in FY 2022.

REST BMP ID	Site Name	REST BMP Type	Total Impervious Acres	Projected Implementation Fiscal Year	Cost ($)
PG18RST147220	Cross Creek #7	PWET	4.24	2023	-
PG17ALN000012	Bear Branch Stream Restoration Phase II	STRE	341.79	2023	4,720,189
PG18RST101020	Sherwood Forest North Pond	PWET	20.43	2023	1,410,000
PG18RST103400	Hakes Lakewood	PWET	60.83	2023	3,112,552
PG19RST000011	Riverside Pond A (5701 Rivertech Court)	PWET	9.3	2023	2,780,500
PG19ALN000132	Outfall 222 - Rock Oak Terrace, Cheltenham (Plat 6, Parcel D)	STRE	5.6	2023	1,700,000
PG17RST000132	Marietta Woods- 6507 Woodstream Dr	PWET	25.9	2023	2,420,040

REST BMP ID	Site Name	REST BMP Type	Total Impervious Acres	Projected Implementation Fiscal Year	Cost ($)
PG17RST107570	Foxchase II A	PWET	28.78	2023	2,891,130
PG17ALN000039	Colmar Manor Park Shoreline Restoration- 4398 Lawrence St	SHST	19.6	2023	1,349,901
PG19ALN000134	Outfall 434 – James Street, Upper Marlboro (Parcel C)	OUT	7.1	2023	785,000
PG17RST000309	Inglewood Business Center - 1440 McCormick Drive	PWET	110.31	2023	3,304,407
PG19RST000015	Sprigg Request Road Pond, Woodmore	PWET	11.6	2023	1,561,884
PG17ALN000050	Windsor Park Outfall Restoration	STRE	19	2023	1,335,000
PG20ALN000008	Outfall Restoration Projects - Anacostia Watershed - Carrington Avenue - Outfall 34	OUT	24.6	2023	1,973,000
PG20ALN000009	Outfall Restoration Projects - Piscataway Watershed - Penny Avenue - Outfall 166	OUT	23.4	2023	2,021,000
PG20ALN000007	Outfall 66 - Rhode Island Avenue	OUT	7.7	2023	1,224,500
PG18ALN124621	Patuxent River Shoreline - Magruders Ferry	SHST	27	2024	1,830,901
PG17RST000127	Hanover Parkway Production Pond 26	PWET	73.9	2024	4,780,720
PG18RST102020	9-POND 3308 Toledo Rd	PWET	140.13	2024	5,896,000
PG19RST141210	Summerfield 1 - Chatsfield Way	PWET	97.78	2024	3,497,436
PG19ALN000128	Careybrook Lane, 401 - Water Quality Project	STRE	22.4	2024	3,530,614
PG19ALN000140	Owens Road Stream Restoration- Phase II and BMP Facility Project, 1106 Owens Road, Oxon Hill	STRE	50	2024	2,580,000
PG17ALN000044	Beaverdam 20 Stream Restoration	STRE	11.1	2024	843,660
PG19RST000013	Oxon Run # 8 - Galloway Drive, 5513	WSHW	33.8	2024	2,937,435
PG20ALN000003	Onslow Way - Phase 2 Stream Restoration	STRE	11.1	2024	1,610,000
PG17ALN000035	Potomac River Waterfront Park Shore	SHST	13.2	2024	3,050,000
PG20ALN000002	SR-77 Walker Branch	STRE	112	2024	4,335,000

REST BMP ID	Site Name	REST BMP Type	Total Impervious Acres	Projected Implementation Fiscal Year	Cost ($)
PG20ALN000012	Cheverly East Neighborhood Park Stream Restoration & Outfall 1	STRE	46.2	2024	3,932,000
PG21ALN175090	Upper Patuxent Watershed SR-27	STRE	73	2024	1,880,000
PG21RST175100	Gehani Woods	STRE	102	2024	4,958,000
PG22ALN000532	Outfall 726 - Sharon Road, Temple Hills	STRE	4	2024	760,000
			1,538		79,010,870

To date since permit inception, about 5,230.6 acres of impervious area credits have been achieved and another 1,538 acres are in active planning, design, or construction in FY 2022. In addition to the projects listed above, restoration projects are also implemented through Prince George's County Stormwater Stewardship Grant Program. Details of this program are provided in the next section on page 145.

Permit Condition Part IV. E. 4:

e. A description of a plan for implementing additional watershed restoration actions that can be enforced when benchmarks, deadlines, and applicable stormwater WLAs are not being met or when projected funding is inadequate.

Additional Restoration Activities

A variety of restoration activities are being implemented, which includes both, on-the-ground BMP, and programmatic initiatives. On-the-ground BMP practices include ESD (environmental site design) practices such as permeable pavements, disconnection of rooftop runoff, and micro-bioretention, and structural BMPs, such as infiltration practices and wet ponds. On-the-ground BMP projects consist of retrofits of older stormwater management facilities for better removal of pollutants or/and installation of new facilities. Various programs in the County are utilized to install structural BMPs on public and private lands. Some of these programs are:

- Clean Water Partnership Program,
- Rain Check Rebate Program,
- Countywide Green/Complete Streets Program,
- Countywide Channel Programs,
- Countywide Strom Drain Inventory Programs,
- Outfall Program,
- Alternative Compliance Program, and
- Prince George's County Stormwater Stewardship Grant Program

Programmatic initiatives consist of enhancing programs to promote tree planting, domestic and urban animal control, pet waste pickup, and residential/commercial lawn care education amongst other programs. These initiatives involve an expanded public outreach campaign to inform the public of ways

they can contribute to the restoration of the local watersheds. The County will initiate and strengthen various County programs to support these initiatives.

The current revenue sources that will provide funding for the restoration programs are from the stormwater ad valorem tax and the Clean Water Act fee. In addition to these, grants from Federal, State, and other sources will be pursued and are expected to be an essential contribution for funding of restoration activities.

Clean Water Partnership Program

This reporting year (FY2022) was the first year of Phase 3 of the Clean Water Partnership (CWP). CWP Phase 3 is a 3-year commitment by the County to primarily address the Corrective Actions in Article II-3 of the Consent Decree dated May 10, 2021. The goal of the CWP is to design, permit and construct certain BMPs listed in Exhibit A of the Consent Decree – Impervious Surface Restoration Plan, and meet the Final Restoration Goal by June 26, 2024. This reporting year CWP completed 4 stormwater retrofit projects that resulted in a Restoration Credit of 478.26 acres.

Outreach

The Clean Water Partnership regularly conducts outreach events and activities to educate community members about stormwater management and involve stakeholders in the process. During FY 2022, outreach staff participated in 105 outreach events involving approximately 1,040 participants and distributed 2,500 outreach materials such as flyers, brochures and door knockers. Current Clean Water Partnership social-economic development programs inclusive of public outreach and community involvement are described in more detail below.

Mentor-Protégé Program

The Mentor Protégé Program for Phase III began in July 2021 with the 5th Clean Water Partnership cohort. This cohort included five companies: two County-based small minority business enterprises, two MDOT minority business enterprises, and one single-owner minority-owned firm. Bright Horizon Ventures; Carter Landscaping; Hamma Down Enterprises; SunRay Lawn and Landscape, LLC.; Carter Landscaping; and Villatoro and Sons Landscaping's graduation was held on June 23, 2022, at the Clean Water Partnership office in Largo.

The Clean Water Partnership is currently in the process of selecting a pilot project for Cohort 5, which will act as a live teaching mechanism to provide the Protégés with a full understanding of how stormwater best management practices are designed and installed. The pilot project format will serve an open-book process for the Protégés from bidding to final construction and closeout. This includes project design, construction management, general contracting, BMP construction, landscaping, closeout, and final inspection. This process is unique to the Clean Water Partnership Mentor-Protégé Program and was incorporated based on feedback received from County-Based minority businesses, who felt that other small business development programs do not provide a fair opportunity to put "boots on the ground." Cohort participants are provided the opportunity to bid on the pilot project. It is anticipated that at least three of the protégés will be selected to perform the work. All cohort protégés, including those who are not selected, are invited to bi-weekly project site visits to observe all phases of construction.

With the addition of Cohort 5, forty-five firms have completed the CWP Mentor Protégé Program. Approximately sixty percent of those firms have pursued contracting opportunities, submitting bids and receiving over $45 million in awards. While the CWP continues to outreach to County-Based and Minority-Owned Businesses, particularly landscape companies, the response rate has been low. This may be due to coming out of the Covid-19 pandemic, the number of firms already participating with the CWP, landscapers and other earthwork companies preferring to work in the residential market, or other factors. To address this issue, the Mentor Protégé Program has increased business outreach and now allows for a longer enrollment period for new firms.

Cohort 5 was smaller in comparison to the previous ones. However, two firms made notable progress during the Program year. Villatoro and Sons was a one-person landscaping company with the owner Nelson Villatoro working the back office and operations. Villatoro now has one three-person crew and will have his best revenue year since the start of his company. Nelson repositioned his company to focus on environmental stewardship, leveraging Prince George's County Raincheck Rebate Program. Similarly, SunRay Lawn & Landscape has reframed its mission and focus as an industry leader in Green Infrastructure maintenance, closing its largest functional maintenance project in the company's history. SunRay's business model has changed, and the company's workforce has increased, anticipating 2022 to be its most successful year. Just two more examples sustain the County and Corvias' belief that investing in local and minority businesses builds industry capacity

Clean Water Partnership Schools Program – Treating & Teaching

The Treating & Teaching Program began in FY2016 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.

In FY2022, the CWP completed one (1) project at a Prince George's County school, increasing the total number of CWP PGCPS projects to 56. New schools identified by PGCPS are evaluated for opportunities to incorporate green stormwater retrofits to manage untreated runoff from impervious areas and reduce the impact of sediments and pollution that flows into our natural waterways. 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 2022. 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.

Stream Restoration Program

As development continues and heavy rains become more frequent, our streams, especially in urban settings are inundated with erosive flows. Restoring and stabilizing streams to make them more resilient has become an important strategy for managing sediment loads. In FY22 the Clean Water Partnership completed three (3) stream restoration projects. One of the streams is in an urban setting, and two are in more rural residential areas of the County.

Municipal Engagement

Numerous Clean Water Partnership restoration activities were conducted within municipal boundaries during FY2022. Several restoration projects that were in the design or construction phase in FY2022 were located within the county's 26 municipalities that are covered by this permit.

Maintenance and Litter Reduction

Two very important and measurable aspects of the CWP's maintenance program are trash and sediment collection. In addition to structural and landscape maintenance, Clean Water Partnership crews regularly remove trash and sediment from project sites to support BMP performance and appearance. During routine maintenance work conducted during FY2022, crews visited 304 sites, picked up 2,838 bags of litter weighing roughly 56,760 pounds, and removed approximately 131,450 pounds of sediment from the County's stormwater assets.

Rain Check Rebate Program

Since Prince George's County initiated the Rain Check Rebate Program back in 2013, the program has become a great incentive for County property owners interested in installing approved stormwater management practices on their properties. Many of the property owners in the County are interested in helping to minimize stormwater runoff and prevent stormwater pollution in the County waterways but lacked the funding to install BMPs on their property to help with stormwater runoff and pollution. The program provides eligible applicants the opportunity to receive rebates for installing approved stormwater BMPs. Homeowners, businesses, homeowner associations, condominium associations, civic associations, multi-family dwellings, and nonprofit entities can recoup some of the costs of installing practices covered by the program. To ensure the continued success of this program, public outreach events are conducted to promote the adoption of endorsed stormwater management practices and gain maximum participation by the property owners in the County. Another incentive for property owners to participate in the Rain Check Rebate Program is that they are eligible for a fee reduction credit on the Clean Water Act fee included in their tax bill, for installing stormwater management practices on their property. Table E-39 identifies the overall performance of the Rain Check Rebate Program in FY 2021.

Since July 2014, DoE continues to partner with the Chesapeake Bay Trust (CBT) on the administrative and operational functions of the Rain Check Rebate Program. CBT staff handle inquiries from community members about the Program; review and process applications; examine property owner's paperwork for completeness; aid those who need help completing their applications; and perform pre- and post inspection site visits. CBT staff regularly communicate and reports to the County staff on outreach efforts and request feedback from County staff on all institutional and construction requests that require pre-approval. DoE oversees total program management, processes final payments, and

guides CBT efforts to increase program participation through continued emphasis on residential & commercial property owners, homeowner & civic associations, and nonprofit organizations.

DoE also partnered with the Low Impact Development Center (LID Center) to implement a Contractors Certification Program. Working with the LID Center, a two-day certification course for professional landscapers and other green businesses has been developed. The contractor's training course teaches landscape professionals and other green businesses how to plan, design, construct and maintain Rain Check Rebate practices. The course exercises provide guidance on practice selection, site assessment and site selection. Participants who successfully complete the certification course will be added to the County's public list of landscape professionals who have completed the Rain Check Rebate Contractor Training. The goal of this program is to provide a list of "qualified contractors" to property owners looking for services under the Rain Check Rebate Program, at the same time supporting the County's Jobs and Opportunity Act of 2016 by promoting local business development and job growth.

During FY 2022, a total of 299 BMPs were installed using this program treating 1.60 impervious acres. A report detailing Rain Check Rebate Program performance in FY 2022 is provided in the DVD, under Restoration Plans and TMDL/Rain Check Rebate.

Table E-39. Rain Check Rebate Program Performance in FY 2022

Projects	Total Applications		Applications Processed in FY 2021		Applications In Process	Actual Number of BMPs Installed	Impervious Area Treated (square feet)	Total Amount of Rebate Approved
	Received in FY 2022	Pending from FY 2021	Denied	Approved				
Cisterns	7	11	3	3	12	6	1,666	$4,019
Pavement Removal	50	47	11	21	65	21	6,781	$35,482
Permeable Pavement	56	50	13	19	74	19	6,741	$56,088
Rain Barrels	102	95	31	52	114	106	28,336	$12,916
Rain Gardens	43	53	22	16	58	18	4,640	$32,773
Urban Tree Canopy	54	34	12	22	54	129	21,355	$17,634
Green Roof	1	0	0	0	1	0	0	$0
TOTAL	**313**	**290**	**92**	**133**	**378**	**299**	**69,519**	**$158,912**

Countywide Green/Complete Streets Program

DPW&T initiated a countywide Green/Complete Streets Program during the 2011 reporting year as a strategy for addressing mounting MS4 and TMDL treatment requirements. The program seeks out opportunities to incorporate stormwater control measures, environmental enhancements, and community amenities within the DPW&T Capital Improvements Program. The types of enhancements that are being evaluated include low impact design, impervious removal, tree shading, environmental site design in the right-of-way, energy-efficient lighting, and the utilization of recycled materials.

To identify where existing roadway standards could be modified, an evaluation of the County's standard roadway cross sections and details was completed in 2016. Through this evaluation, DPW&T created and approved the County's first urban street standards which reduce standard pavement widths, encourage bicycle and pedestrian use, and increase the opportunity for water quality BMPs to be incorporated within the right-of-way. DPW&T is also currently revising its standards and specifications to incorporate green infrastructure standards for environmental site design and other sustainable stormwater practices within the right-of-way.

The Green/Complete Street Program projects are also implemented as retrofits to existing roadways and present a multitude of challenges. Typically, retrofitting existing roadways requires utility and infrastructure relocation, citizen involvement, and regulatory compliance. Due to the complexity of a typical Green/Complete Street Program project, the projected timeframe for completion from inception to construction may take five (5) years. Wherever feasible, projects will incorporate new stormwater management BMPs to provide treatment for legacy roadways when roadway maintenance includes major reconstruction.

In addition to the green components of the projects, the designs incorporate pedestrian safety and usability improvements such as linked sidewalk, paths and trails, bus shelters, LED lighting, landscaping, integrated epoxy painted bike lanes, and LED rapid-flashing warning systems located at mid-block pedestrian crossings without a traffic signal. To date the County has undertaken six Green/Complete Street projects, including:

- Ager Road – A total of 1.63 miles of Ager Road, Hamilton Street and Jamestown Road in Hyattsville is being reconstructed to improve pedestrian and cyclist safety, remove impervious area and install ESD facilities. The project created a complete multi-modal roadway corridor connecting two MDOT SHA roadways, the West Hyattsville Metro Station, M-NCPPC trail system and pedestrian generators such as parks, schools and apartment complexes. The combination of pavement removal, a bioswale, a micro-bioretention, and three submerged gravel wetland facilities provided an excess ESDv treatment of 21,660 cubic feet.
- Swann Road – 1.6 miles of Swann Road in Suitland was improved to address appearance, safety and functionality. These improvements included a new curb and gutter roadway section, tree planting, new and upgraded street lighting, a micro-bioretention facility and seven bioswales, bicycle lane installation, and sidewalk.
- Edmonston Road – 1.6 miles of roadway in Hyattsville was improved to address safety, functionality and aesthetics. These improvements included a road diet to reduce speeding, installation of curb and gutter and sidewalks. The project also improved/upgraded street lighting and installed micro-bioretention facilities between the curb and sidewalk. Construction began in 9/2016 and was completed in 9/2018.
- Montpelier Drive – 0.6 miles of roadway in South Laurel is being improved to address safety and accommodate all principal modes of transportation. Traffic calming elements include a road diet, raised medians, curb extensions, and pavement markings. The scope also includes repaving, sidewalk and driveway aprons, new high-visibility signage, and the installation of drainage inlets and underdrains, where needed. Landscaping will replace high-risk, dead and diseased trees, such as Bradford

Pear trees, with sturdier trees. The project results in the removal of 0.304 acres of impervious surface area.

- Harry S. Truman Drive – A proposed 2.4-mile project in Largo to improve safety, functionality and aesthetics. Project elements include enhancing pedestrian/ADA accessibility with sidewalk and shared-use path, ESD facilities and impervious reduction, and maintaining infrastructure in a state of good repair. Safety will be addressed by a road diet to reduce speeding, upgraded traffic signalization and roadway/pedestrian lighting. The use of permeable surfaces is being evaluated to reduce the impervious area impacts from the shared use path.
- Campus Drive – A proposed 1.0-mile project in College Park/Riverdale. The project will improve usability by constructing a multi-modal roadway with bike lanes and continuous sidewalk. Safety will be addressed through implementation of travel lane width reduction and lighting upgrades. Scope also includes tree planting and stormwater management.

Countywide Channel Programs

The Department of Public Works and Transportation (DPW&T) has completed a county-wide channel assessment program to identify and prioritize channels for replacement utilizing ecosystem restoration solutions when viable. At a preliminary level, the assessment identified the current conditions of the channels and ranked them accordingly, while seeking green infrastructure solutions, such as stream restoration and floodplain reconnections, rather than in-kind replacements for legacy stormwater conveyances, whenever possible. By embracing ecosystem friendly practices as a rule rather than exception, DPW&T aspires to fix a growing list of stormwater management hazards with the channel program. We intent to deliver substantive nonpoint pollution reductions to be applied towards the County's NPDES MS4 Permit.

The first project identified from this county-wide assessment effort, and currently under design is the Calverton Channel Rehabilitation project. Awarded a $1.9 million grant from the Maryland Department of Natural Resources, the project started construction in November 2020 and is anticipated to be completed in March 2022. The project will restore over 2,700 linear feet of stream and provide significant pollution load reductions for Little Paint Branch, a subwatershed of the Anacostia River. The project will demonstrate and pilot ecosystem restoration practices in-lieu of/or integrated with gray infrastructure repair or replacement within dedicated DPW&T easements. Positive outcomes and timely delivery will help support the agency's county-wide channel assessment.

Countywide Storm Drain Inventory Programs

DPW&T has completed the development of a geometric storm drain network schema and has populated that schema with the existing information. In January 2020, DPW&T has hired consultants to field verify the inventory and record any missing data. The field verification effort started with 72,997 structures in the inventory. As of March 2021, there are 95,779 structures in the inventory. Since January 2020, the consultants have spent over 8,500 hours in the field and have inventoried 63,499 structures. New to the inventory may indicate existing infrastructure that was not mapped. DPWT is continuing this field verification effort through FY22.

Outfall Program

DPW&T's Outfall Reconstruction program continues to address outfall repairs as they are identified. DPW&T's goal is to ensure the outfalls are stable, and to utilize green practices such as step pools, regenerative stream conveyances, and natural vegetated banks, when possible. Construction at Suitland and Regency was completed in June 2019. Construction at Trafalgar Court was completed in November 2019. Construction at 6911 Groveton was started in October 2019 and completed January 2020. Construction at West Indian Head Highway was completed in April 2021. Construction at Clear Creek was completed in March 2021. East Indian Head Highway construction is anticipated to start in October 2021.

Alternative Compliance Program

Alternative Compliance is a unique partnership between Prince George's County and qualified tax-exempt religious organizations or other 501(c) nonprofit organizations to improve water quality in the County's waterways by reducing and treating stormwater runoff. Nonprofits who participate in Alternative Compliance are eligible to receive a reduction in their Clean Water Act Fee by choosing from one of the three options:

- Option 1 requires the property owner to provide an easement to their property for County employees to install BMPs and sign a maintenance agreement for the BMPs subject to tri-annual inspection. This option enables property owners to receive a 50% fee reduction.
- Option 2 requires the property owner to participate in outreach and education events and organize at least one event from a list of environmental management events. This option enables property owners to receive a 25% fee reduction.
- Option 3 requires the property owners to use certified lawn management companies by the County to properly use and apply fertilizers and agree to green care and good housekeeping. This option enables property owners to receive a 25% fee reduction.

As of June 30, 2022, DoE has received and processed 189 applications from qualified faith-based organizations. Option 1 so far has been very successful in building and maintaining these BMP facilities. DoE has also given grants to various reputable nonprofit organizations such as Interfaith Partnership and Peoples for Change Coalition to help ACP applicants to implement Option 2 and Option 3. Also, a public website is being developed to allow Option 2 and Option 3 participant to self-report the yearly activities. This website will help DoE monitor and assess the impact of these activities on the environment and keep engaging and educating the community about clean water issues.

Prince George's County Stormwater Stewardship Grant Program

During FY 2022, the Prince George's County Government and the Chesapeake Bay Trust participated in the ninth (9^{th}) year of partnership to support projects throughout Prince George's County that aid neighborhoods while treating and controlling stormwater. The goal of this program is to improve neighborhoods, improve water quality in the County's waterways, and engage County residents in stormwater issues.

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

County residents in the restoration and protection of the local rivers and streams of Prince George's County.

Applicants included Non-profit organizations, municipalities, watershed organizations, education institutions, community associations, faith-based organizations, civic groups, and more. Table E-40 below lists the projects that were awarded in FY 2022.

Table E-40. Project Awarded in FY2022.

Project Title	Organization	Total Award Amount
Mussel Power: Empowering High School Students as Environmental Stewards	Anacostia Watershed Society	$ 22,653
Filling in the Gaps-Replenishing our Precious Canopy	Central Kenilworth Avenue Revitalization Community Development Corporation, Inc.	$ 99,990
Water Quality Retrofits for Arundel Rd between 25 and 30th Streets in Mount Rainier	City of Mount Rainier	$ 150,520
Pescando Conocimiento - Fishing for Knowledge	Defensores de la Cuenca	$ 29,964
7th Annual Festival del Río	Defensores de la Cuenca	$ 25,575
Increasing Environmental Stewardship in Minority and Underserved Communities Through Family Tree Adoption Program (FTAP)	Global Health and Education Projects, Inc.	$ 58,000
Public Outreach and Stewardship to Care for Creation along the Upper Patuxent River: A Multifaith Sacred Grounds Partnership Phase II	National Wildlife Federation	$ 30,000
Newark Road Green Street Project	Town of Colmar Manor	$ 36,318
Water Quality Retrofits for Hamilton Street, Edmonston, MD	Town of Edmonston	$ 131,785
Stormwater Management for Community Use of 5-Acre Church Property	University Christian Church	$ 50,800
SM Residential Framework in Prince George's County 2.0	University of Maryland College Park	$ 29,975
Watershed Wiggles/Meneando por la Cuenca	Washington Area Bicyclist Association	$ 9,420
TOTAL		**$675,000**

F. ASSESSMENT OF CONTROLS

Permit Condition Part IV. F: Assessment of controls is critical for determining the effectiveness of the NPDES stormwater management program and progress toward improving water quality. The County shall use chemical, biological, and physical monitoring to assess watershed restoration efforts, document BMP effectiveness, or calibrate water quality models for showing progress toward meeting any applicable WLAs developed under EPA approved TMDLs identified above. Additionally, the County shall continue physical stream monitoring in the Black Branch watershed to assess the implementation of the latest version of the 2000 Maryland Stormwater Design Manual.

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. F. 1: The County shall continue monitoring the Bear Branch watershed, or, select and submit for MDE's approval a new watershed restoration project for monitoring. Monitoring activities shall occur where the cumulative effects of watershed restoration activities can be assessed. One outfall and associated in-stream station, or other locations based on a study design approved by MDE, shall be monitored.

1. WATERSHED RESTORATION ASSESSMENT

Monitoring Locations

The County completed its fifteenth (15th) full year of chemical and physical monitoring and its sixteenth (16th) year of biological and physical surveys in the Bear Branch watershed. As shown in Figure F-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.

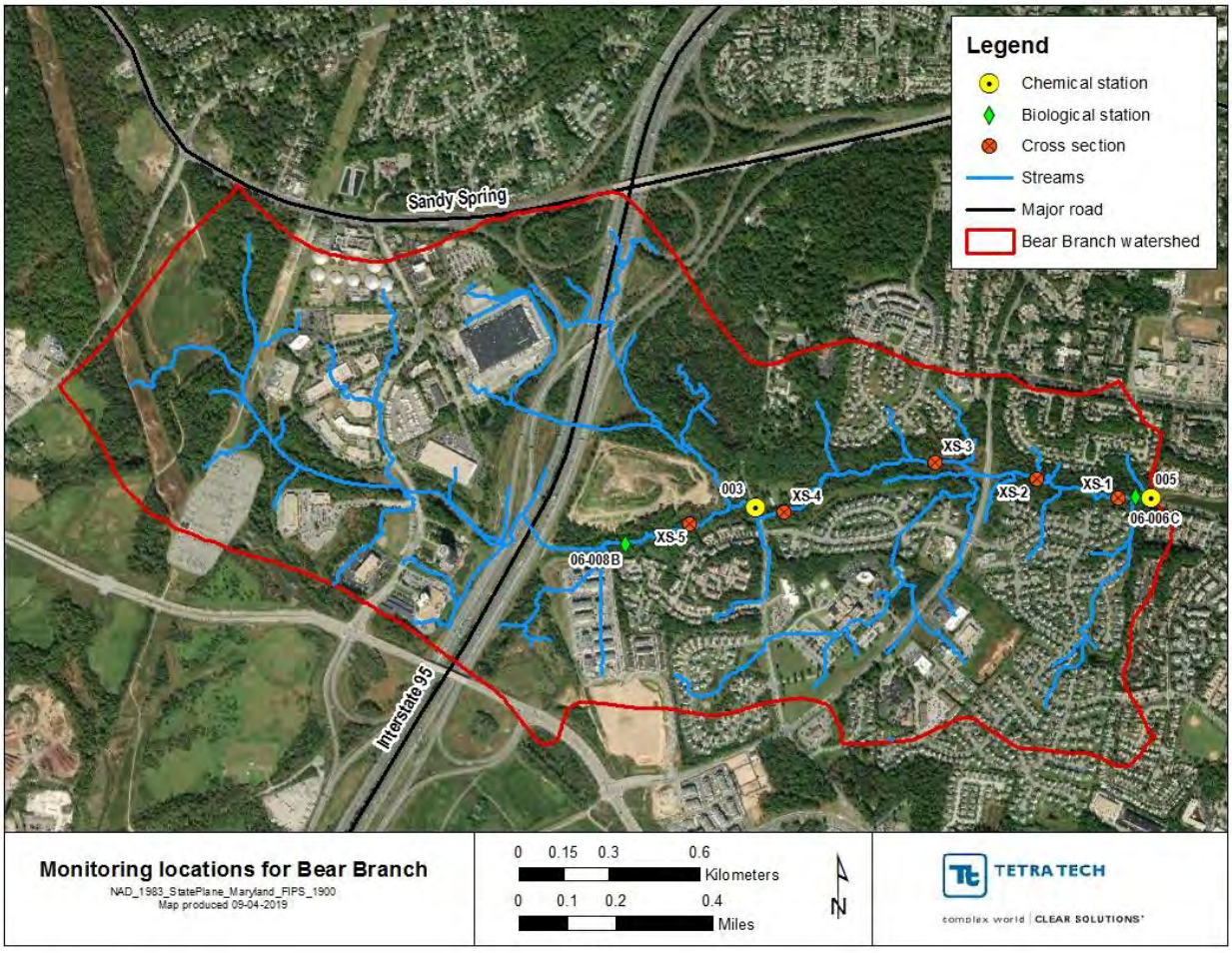

Figure F-1. Bear Branch Monitoring Locations

Chemical Monitoring

Permit Condition Part IV. F. 1. a. (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 extended dry weather periods occur, baseflow samples shall be taken at least once per month at the monitoring stations if flow is observed.

Chemical Monitoring Locations and Sampling

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

Table F-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 F-2 below. During FY 2022, automatic storm samples were collected in nine (9) months for station 003. Construction activities associated with stream restoration near station 005 caused malfunction of equipment in mid-September 2021; the station was temporally decommissioned until construction completed and site was recommissioned on November 18, 2021. The impacts of the restoration caused flow and water quality data gaps from mid-September to mid-November. Baseflows samples were collected on a quarterly basis at both stations.

Table F-2. Chemical Monitoring Sampling Events

Sample Month	Station 003 (Instream)			Station 005 (Instream)		
	Wet Weather		Dry Weather	Wet Weather		Dry Weather
	Parameter Set 1	Parameter Set 2	Baseflow Sample	Parameter Set 1	Parameter Set 2	Baseflow Sample
July			Q			Q
August						
September	XX	X		X		
October	X					
November	X		Q			Q
December	XX					
January	X			X		
February	X		Q	X		Q
March	X			X		
April	X			X		
May			Q			Q
June	X		Q			Q

Notes: X = samples collection event; Param. set 1 = parameters typically collected through automatic sampling: TKN, NO3/NO2, TSS, Cu, Zn, Pb, TP, BOD5, hardness, total phenols; Param. set 2 = parameters typically collected through manual sampling: E. coli, TPH; Q = quarterly baseflow sample collected.

Permit Condition Part IV. F. 1. a. (ii): Discrete samples of stormwater flow shall be collected at the monitoring stations using automated or manual sampling methods. Measurements of pH and water temperature shall be taken

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.

Permit Condition F1 a. (iii): 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 for:

Biochemical Oxygen Demand (BOD5)
Total Kjeldahl Nitrogen (TKN)
Nitrate plus Nitrite
Total Suspended Solids
Total Petroleum Hydrocarbons (TPH)
E. coli or enterococcus
Total Lead
Total Copper
Total Zinc
Total Phosphorus
Hardness

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), nitrate plus nitrite (NO_3/NO_2), total Kjeldahl nitrogen (TKN), total phosphorus (TP), total phenols, total petroleum hydrocarbons (TPH), *Escherichia coli (E. coli)*, and hardness.

For *E. coli* and TPH, 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 grab samples cannot be collected at the same time as automated samples, they were collected for another storm event that same month.

Table F-3 presents the required parameters analyzed and the analytical procedure. Microbac Laboratories, Inc., in Baltimore, Maryland, analyzed the samples. Hardness was added for the 2013–2014 monitoring year because it is expected to be a required monitoring parameter in the next MS4 permit for the County. 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 F-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
BOD_5	SM (20) 5210B	48 hours	2–5	mg/L
NO_3/NO_2	EPA 353.2	28 days	0.05–0.1	mg/L
TKN	SM (20) 4500N-org/NH3-G	28 days	0.1	mg/L
TP	EPA 365.1	28 days	0.01	mg/L
TSS	SM (20) 2540D	7 days	2	mg/L
E. coli	SM (20) 9221F	6-8 hours total	2	MPN/100 mL
TPH	EPA 1664A	28 days	5	mg/L

Parameter	EPA method	Holding time at 4 °C	Project reporting limit	Units
Hardness	SM (20) 2340 C	28 days	1.0	mg $CaCO_3$/L
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. F. 1. a. (iv): Continuous flow measurements shall be recorded at the in-stream monitoring station or other practical locations based on the approved study design. Data collected shall be used to estimate annual and seasonal pollutant loads and reductions, and for the calibration of watershed assessment models. Pollutant load estimates shall be reported according to any EPA approved TMDLs with stormwater WLAs.

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. F. 1. b. (i): Benthic macroinvertebrate Samples shall be gathered each Spring between the outfall and in stream stations or other practical locations based on an approved study design;

Biological Monitoring Locations

Monitoring was performed in spring 2022 in the Bear Branch watershed. Two assessment locations were surveyed; these locations are described in Table F-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 F-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. F. 1. b. (ii): The County shall use the EPA Rapid Bioassessment Protocols (RBP), Maryland Biological Stream Survey (MBSS), or other similar method approved by MDE.

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. 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 F-5 describes the MBSS B-IBI assessment values.

Table F-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. F. 1. c. (i): A geomorphologic stream assessment shall be conducted between the outfall and in stream monitoring locations or in a reasonable area based on an approved study design. This assessment shall include an annual comparison of permanently monumented stream channel cross-sections and the stream profile.

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 2021 was the fifteenth (15th) 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 F-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 F-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. F. 1. c. (ii): A stream habitat assessment shall be conducted using techniques defined by the EPA's "Rapid Bioassessment Protocol for use in Streams and Rivers," or other similar method;

Stream Habitat Assessment

Concurrent with the biological sample collection, a qualitative, visual-based assessment of habitat quality was performed in the assessment reach. Habitat scores were from the EPA rapid bioassessment protocols (RBP, Barbour et al. 1999) for low-gradient streams. The assessment consisted of ten physical habitat parameters visually assessed and assigned scores between 0 and 20. The resultant value (between 0 and 200) was then compared to the reference condition (168) and assigned a narrative description, using the descriptions in Table F-7.

Table F-7. Narrative and Numeric Assessments Ratings for the RBP Physical Habitat Quality

Narrative Assessment	Index Score
Comparable	≥ 151
Supporting	126–150
Partially Supporting	101–125
Non-Supporting	0–100

The ten physical habitat parameters evaluated include epifaunal substrate / available cover, pool substrate characterization, pool variability, sediment deposition, channel flow status, channel alteration, channel sinuosity, and three parameters that are evaluated on a 0 to 10 scale separately for each bank of the stream. The three parameters that look at each bank were bank stability, vegetative protection, and riparian vegetative zone width. Collectively, the combined scores for the metrics yield a total score for the reach that allows for comparison to optimal habitat conditions in the same physiographic region.

Permit Condition Part IV. F. 1. c. (iii): A hydrologic and/or hydraulic model shall be used (e.g., TR-20, HEC-2, HSPF, SWMM, etc.) 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 was used in FY 2019 to analyze the effects of rainfall; discharge rates; stage; and, if necessary, continuous flow on channel geometry.

Permit Condition Part IV. F. 1. d: For the annual data submittal the County shall describe in detail its monitoring activities for the previous year and include the following:

I. EMCs submitted on MDE's long-term monitoring database as specified in PART IV. A.2.d. below;

II. Chemical, biological, and physical monitoring results and a combined analysis for the Beaverdam Creek or other approved monitoring locations; and

iii. 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 2022,* 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 F-8.

Table F-8. Index of Monitoring Report Activities (*Long-Term Stormwater Monitoring Program —Bear Branch Annual Report 2022)*

Monitoring Activity	Report Section	Page
1(a)(i) Storm Event Sampling Frequency	3.1.2	3-5
1(a)(ii) Storm Event Sampling Procedure	3.1.2	3-5
1(a)(iii) Parameters Requiring EMC Calculations	3.1.3	3-6
1(a)(iv) Continuous Flow Monitoring	3.1.4	3-7
1(b)(i) Biological Sampling Locations	3.2.1	3-10
1(b)(ii) Biological Sampling Method	3.2.1	3-10
1(c)(i) Geomorphological Stream Assessment Location and Methods	3.3.2	3-12
1(c)(ii) Stream Habitat Assessment	3.2.2	3-11
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. STORMWATER MANAGEMENT ASSESSMENT

Permit Condition Part IV. F. 2. a: The County shall continue to monitor the Black Branch watershed or select and submit for MDE's approval a new watershed restoration project for determining the effectiveness of stormwater management practices for stream channel protection.

Physical Monitoring

The County began monitoring the Black Branch watershed and a small Black Branch tributary (Tributary 1) in 2001, using physical, hydrologic, and hydraulic methods. The County discontinued chemical monitoring program along Tributary 1 in March 2008. The biological monitoring was discontinued after 2007. The County continued its physical monitoring each year between August and October, except for FY 2021 due to COVID-19. For this reporting year, the County resumed its physical monitoring of the Black Branch watershed and Tributary 1 in August 2021.

Permit Condition Part IV. F. 2. b: Physical stream monitoring protocols shall include an annual stream profile and survey of permanently monumented cross-sections in Black Branch to evaluate channel stability in conjunction with the residential development of Oak Creek Club;

Monitoring Locations

To monitor and compare changes in channel geometry, 14 permanently monumented cross sections (named MS1 through MS9 along the Black Branch and T1 through T5 along the Tributary 1) were surveyed; the locations of these cross sections are shown in Figure F-2.

Permit Condition Part IV. F. 2. c: Physical stream monitoring protocols shall include a comparison of the annual stream profile and survey of the permanently monumented cross-sections with baseline conditions for assessing areas of aggradation and degradation.

Monitoring Results

Each year since 2001, the Black Branch watershed has been evaluated to determine whether there were any significant changes to the watershed's physical conditions since the baseline evaluation. For the FY 2022 report, the mainstem and Tributary 1 in the Black Branch watershed were evaluated in 2021 to determine whether any significant changes to the physical conditions of the BBW had occurred since they were last evaluated in 2019. The results are presented in the FY 2022 Black Branch Geomorphic Report with comparison to the base year of 2001. The report is provided on the DVD, under Assessment of Control\ Black Branch folder.

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

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G. 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 2022 and the projection for subsequent years is submitted with this report.

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APPENDIX A

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AA. RESPONSE TO MDE'S COMMENTS

On July 20, 2022, MDE provided its comments on County's 2021 NPDES MS4 annual report and requested that the County provide response with the 2022 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 July 20, 2022, Comments

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
Part V.A Annual Reporting	• The Prince George's County FY 2021 annual report was submitted to the Maryland Department of Environment (Department) on December 23, 2021, in accordance with reporting requirements under the permit.	Comment Noted.
	• The next annual report must be submitted by January 2, 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. Please begin migrating data into the latest reporting schema. The Department will be flexible with the County during this transition and is receptive to comments on the proposed updates as well as suggestions to make this process smooth and efficient for all permittees.	Comment Noted.
	o BMP: ▪ The database includes 4,449 BMPs all of which have a corresponding inspection record. Please continue to populate approval dates for these BMPs as this field is missing from 187 records.	There are currently 36 records with this deficiency, the County will continue to rectify this in 2023.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	▪ The County needs to use the appropriate BMP_TYPE code for each BMP. These are listed in domains associated with dBMPType" in the geodatabase schema. In addition, the BMP_CLASS code shall be used ('E', 'S', or 'A'). This information was requested in the 2018 review and to date has not been corrected.	County could not find any evidence that this issue existed in FY 2021, 2020, or 2018 submittal, using GIS based data checks. The County emailed the checks to MDE, asked MDE to perform the same checks, and provide results for comparison. MDE has acknowledged the correspondence, but not responded. Please let us know if we need to have a conversation on this in-person.
	▪ The Department understands that the County has begun migrating attribute data into the BMP feature class. The PE and Impervious Acre fields must be added to this feature class.	County has populated PE_ADR and IMP_ACRES in BMP Feature Class in MDE_NPDES_MS4_03172022 file geodatabase provided by MDE.
	▪ Numerous micro-bioretention facilities are listed as "Structural" BMPs, however, this should be classified as "ESD." Please correct this information.	This has been corrected in FY 2022 submittal.
	oBMP Drainage Area: ▪ Please continue to update the BMP_DRAIN_ID for all fields.	Comment noted.
	▪ Drainage area IDs are missing for 787 BMPs. The Department recognizes that the County is transitioning into the new format noted above. Please continue to populate this field.	This is technically incorrect, there are no Drainage Area ID's missing from BMP Drainage Area feature class. There were 787 records in BMP feature class where Drainage Area IDs are Null. This means that they didn't have a drainage area polygon to relate to at the time report was submitted. For FY 2022 submittal, BMPs relate to all 5,461 BMP drainage area records. Only 21 records in BMP feature class do not have BMP Drain ID, because they don't have a drainage area polygon digitized.
	▪ It appears there are more BMP drainage area records (4730) than actual BMPs (4449). Please check this information and correct as necessary.	According to 2017 MDE GDB Design, BMP and Rest BMP Feature Classes relate to BMP Drainage Area.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
		There were 4,449 records in BMP and 779 records in Rest BMP, which equals 5,228 BMPs for 4,730 records in BMP Drainage Area. There will always be more, BMPs than drainage areas because of pretreatment BMPs related to same drainage areas as the water quality BMPs.
	o RestBMP: ▪ The database indicates that 762 restoration BMPs have been completed during the permit term. Ten of these have failed inspection records. These BMPs shall be brought into compliance.	The County is in the process of correcting this.
	o Alternative BMP data: ▪ Please begin populating fields for the alternative BMPs along with protocol information for relevant BMPs in accordance with the November 2021 Draft Supplement to the geodatabase user's guide.	County is using MDE GDB Shell, however not all records have mandatory values. Where possible, the County will populate new schema with existing records. Some elements of new schema will be adopted for new data, but some legacy stream restoration data will remain in same format that was submitted in previous years.
	o The County is required to submit a storm drain system map as part of permit requirements. The County should maintain the map and make available as a separate GIS shapefile to the Department when requested.	Comment noted. County has created a file geodatabase with all Storm Drain Infrastructure, that will be submitted when requested.
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 performed a triennial review of the County's stormwater management program in the Summer of 2016. Results of this review were provided in the Department's September 14, 2016, correspondence. This correspondence requested that the County forward any proposed	Comment Noted

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	changes to the stormwater ordinance or policies related to stormwater management plan review and approval. Please coordinate with the Department in future years when policies, design manual, or ordinance changes are in the planning stage for Department review and approval.	
	•The County reported a total of 11,417 stormwater inspections performed in FY 2021 and issued 10 violations. This represented and increased level of inspections from FY 2020 of 9,701, yet a decrease in violations, which were 12. The County's enhanced level of inspections as noted in Table D-2 of the report since 2014 reflect enhanced oversight as well as improved compliance. Please continue to update Table D-2 in future annual reports.	Comment Noted
	•The County has made substantial progress in catching up with inspections to bring all BMP inspections on a three-year cycle in accordance with State regulations. However, according to the geodatabase, a total of 563 BMPs have not had inspections in the last three years. Of this number, a total of 165 BMPs have not been inspected during the permit term. The database indicates that the last inspection date for these BMPs was performed prior to 2014. Please provide a plan to catch up on triennial inspections and specifically address BMPs that are long overdue in the inspection cycle.	The County has reviewed the geodatabase inspection table and found there are various missing categories relating to rain check rebate (rainwater harvesting), some public BMPs identified by DPW&T have reached life expectancy and the County is looking into possible replacement. Additionally, we have found stream restoration projects that would need field inspection updates. County is in the process of developing a catchup plan.
	•The County database reports that 207 BMPs have failed inspections. This is an improvement from prior years. However, the database indicates that 43 of these BMPs have not been re-inspected since 2016. The County needs to pursue appropriate enforcement and follow up inspections to bring these failed BMPs into compliance.	Please see response to the previous comments above.
	•The Department requested a status and update on obtaining appropriate as built plans for effective BMP inspections in future annual reports. Please include the requested information in the FY 2022 annual report.	As FY2022 report, the County has worked to identify and correct 551 BMPs that were deficient due to lack of as-built plans and/or construction completion documentation. Out these 551 BMP, DoE was able to develop

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
		construction completion documentation and certification for (408) BMPs. 143 BMP will be taken off the baseline since they do no longer provide any water quality credits and/or we were not able to develop certifications. The County remains committed in working toward developing necessary documentation for all the BMPs in the inventory by December 31, 2024.
	•The County submitted stormwater approval data to justify stormwater exemptions granted during FY 2022 as requested by the Department in past annual report reviews. Please continue to provide this information for future review and evaluation.	Comment noted.
	•The County provided three technical memos to developers regarding new stormwater management procedures. As noted above, please coordinate with the Department in the future regarding any proposed changes to stormwater management policy, design, or ordinance requirements.	Comment noted.
Part IV.D.2 Erosion and Sediment Control	•The Department performed an erosion and sediment control delegation review in the fall of 2020. The Department provided a summary of the review to the County in the May 14, 2021, correspondence and has granted continued delegation of erosion and sediment control enforcement authority through June 30, 2023.	Comment noted.
	•The County has submitted quarterly reports to the Department regarding earth disturbances exceeding one acre or more.	Comment noted.
Part IV.D.3 Illicit Discharge Detection and Elimination (IDDE)	•The County's 2021 annual report specifies that 152 dry weather screenings were performed at 150 outfalls. The County submitted data for 153 screenings at 149 outfalls. The outfall IDs for the investigations that were described in the narrative do not match outfall IDs in the geodatabase. The Department requests the County ensure that the narrative is consistent	Comment noted. The County provided proof to MDE that there were no missing records on July 25th, 2022. MDE acknowledged the email with the reply that they would follow up. No further communication has been received from MDE on the matter.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	with the submitted data and to annually screen a minimum of 150 outfalls.	
	•The County performed chemical testing for 67 dry weather flows and identified two potential illicit discharges. The County followed up with appropriate enforcement and corrective actions for these sites. The geodatabase must reflect discovered illicit discharges (i.e., ILLICIT_Q, ILLICIT_ELIM, YEAR_ELIM).	Comment noted.
	•The County conducted visual surveys of 129 commercial and industrial complexes and identified 54 potential water quality concerns. The County demonstrated appropriate documentation of follow up, education, and resolution of these concerns.	Comment noted.
	•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 has reviewed the County's standard operating procedures for illicit discharge inspections and comments are provided in the interim Consent Decree Report review in Attachment 2.	Comment noted.
	•The Department recommends that the County begin preparing for requirements anticipated in	Comment noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	the next permit. New program activities may include submitting a process for prioritizing field screening efforts for the Department's review, submitting a plan and schedule for field screening prioritized outfalls, and developing written SOPs.	
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. In the past the County has met the trash TMDL goal but due to reduced public activity programs during the COVID-19 pandemic, the County was able to remove 147,081 pounds of trash from the Anacostia. While this represented a shortfall from the annual goal of 170,628, it demonstrates the County's efforts to maintain this program to the maximum extent practicable during a global pandemic.	Comment noted.
	•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 2022 as pandemic restrictions have been eased.	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.
	•The County has responded to all Department recommendations pertaining to the Anacostia Trash TMDL implementation plan.	Comment noted.
Part IV.D.1 Stormwater Management	•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.	Comment noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	Please continue to report on these efforts as the program requirements will be expanded in the re-issued permit. This includes developing a Salt Management Plan if the County does not already implement one, increased reporting, as well as staff training and public outreach.	
	• The County did not claim credit this reporting year for street sweeping but intends to use this practice in the future to meet restoration requirements in the permit. When sweeping efforts are used for restoration, under the reissued permit, the 2021 Accounting Guidance must be used. This practice must be continued annually to maintain the credit.	Comment noted.
	• The County cleaned approximately 70,000 linear feet of pipes and maintained 40,000 linear feet of storm drain channels during the reporting year.	Comment noted.
	• The County provided a status of ongoing good housekeeping practices implemented by co-permittees including staff training in stormwater management and pollution prevention topics. The County also continued to train staff at County public facilities.	Comment noted.
	• The Department recommends that Prince George's County begin preparing for new requirements anticipated in the next permit. In addition to requirements, 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).	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 at hundreds of events. Education topics included trash clean ups, tree plantings, outreach to local schools, environmental events, and numerous pet waste initiatives.	Comment noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	• Additional outreach programs include Adopt-A-Road, Prince George's Master Gardeners, Right Tree Right Place, Clean Up Green Up, Tree Releaf Grants, Stormwater Stewardship Grants for Trees, Comprehensive Community Cleanup Program, and numerous Mass Transit programs.	Comment noted.
Part IV.E Restoration Plans and Total Maximum Daily Loads (TMDLs)	• The County is required to perform impervious area restoration for 6,105 acres by the end of the permit term. The County has reported that 4,177 acres have been restored since the beginning of the permit term. The County is 1,928 acres of restoration short of the restoration requirement. However, the comments noted below indicate that calculations for three stream restoration projects need to be submitted to verify the credit.	Comment noted.
	• All stream restoration projects have passing inspections. This is an improvement over prior reporting years. However, two projects were not inspected in the last two years (PG15ALN000004 and PG14ALN000009). Please ensure these projects are inspected before the next reporting cycle.	Comment noted. The County is in the process of inspecting alternate BMPs that are overdue for a triennial inspection. Please note the two BMPs mentioned in your comment's pre-dates new stream restoration protocols. The results will be updated in the next annual report submittal.
	• Three stream restoration BMPs have a very large credit based on calculations using the Chesapeake Bay Program stream restoration protocols. More information is needed on these projects to verify the credit claimed. The projects in question include:	The County is in the process of evaluating the credits based on received design/computations from consultants. The CIP team will notify the final numbers at the conclusion of their analysis.
	▪ PG19ALN101100 (Brier's Run) reported a credit of 201.8 acres for 2,680 linear feet of restoration. Based on these numbers, the Department calculated an equivalent impervious acre conversion factor (EIAf) of .075, which appears high relative to other projects.	The County is in the process of evaluating the credits based on received design/computations from consultants. The CIP team will notify the final numbers at the conclusion of their analysis.
	▪ PG19ALN101090 (Oaklands Stream) reported a credit of 253.56 acres for 1,836 linear feet of restoration. Based on these numbers, the Department calculated an EIAf of 0.14, which appears high relative to other projects.	The County is in the process of evaluating the credits based on received design/computations from consultants. The CIP team will notify the final numbers at the conclusion of their analysis.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	▪ PG18ALN102910 (Fletchers Run) reported a credit of 101.43 acres for 760 linear feet of restoration. Based on these numbers, the Department calculated an EIAf of 0.13 which appears high relative to other projects.	The County is in the process of evaluating the credits based on received design/computations from consultants. The CIP team will notify the final numbers at the conclusion of their analysis.
	o The County should provide calculations for the projects noted above in accordance with the expert panel protocols to verify how the load reductions were determined to verify the credit. This information should be updated in the next annual report.	The County is in the process of evaluating the credits based on received design/computations from consultants. The CIP team will notify the final numbers at the conclusion of their analysis.
	• The Department was not able to confirm the restoration numbers in prior annual reports. The County had rectified this problem by adding a field in the geodatabase labeled "REST_CREDIT". This information is valuable to verify the County numbers.	Comment noted.
	• As noted in the FY 2018 annual report review, the County needs to perform first year construction inspections to verify restoration BMPs and provide a tracking system for this information for review by the Department. Please include first year inspections in the geodatabase.	This has been included in the current geodatabase submittal.
	• Restoration credit associated with major pond retrofit projects will continue to be evaluated by the Department.	Comment noted.
	The following comments pertain to the TMDL Restoration Plans:	Comment noted.
	• 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 permit. The plan must include a summary of restoration implementation, net pollutant reductions achieved, an updated list of proposed restoration, and updates related to the City's trash TMDL. (See PART IV.F.3.)	Comment noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	• The Watershed Protection, Restoration, and Planning Program expects revisions to the plans over the next 5-year permit cycle that will align with recently published pollutant specific guidance now available on the Department's website on the TMDL Stormwater Implementation Resources page.	Comment noted.
	• The County will continue to show progress toward meeting TMDL target load reductions and provide annual updates toward adaptive management strategies in the next annual report.	Comment noted.
	• 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 following summary shows current progress toward applicable local TMDL target reductions based on the most recent guidance developed by the Department.	Comment noted.
Part IV.F Assessment of Controls	• The County's reissued permit is currently in the tentative determination process and is anticipated to become final in the coming year. The monitoring requirements in the new permit will give the County 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 noted below. If the County chooses to perform monitoring under the terms of the permit, new parameters such as orthophosphate, conductivity, ammonia, chloride, and turbidity will need to be measured for each storm and base flow samples at that location. If the County is not able to find a suitable monitoring location then the Department encourages the County to consider the Pooled Monitoring Program.	Comment noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	•In FY2021, Prince George's County monitored 9 storm events at its PGC003 station and 8 storm events at its PGC005 station. In addition, the County took 4 baseflow samples at each station. The reasons given for fewer storms captured were weather constraints and sampling equipment issues. Additionally, the County cites the auto sampling equipment at PGC005 triggering early as the reason one fewer storm sample was analyzed at that station. If the County is unable to acquire data for a storm sample in a reporting year due to equipment or laboratory issues, it may capture a baseflow sample in lieu of the failed storm sample, for a total of 12 samples at each of the in-stream and outfall stations per year. In FY2021, 12 samples were captured. The County should continue to make all reasonable efforts to capture 12 storm samples in future years.	Comment noted.
	•The County submitted its Assessment of Controls data via the MS4 Geodatabase, including the ChemicalMonitoring, BiologicalMonitoring, MonitoringSite and MonitoringDrainageArea tables.	Comment noted.
	•The ChemicalMonitoring table is mostly complete; most parameters were missing for the December 2020 storm, and select parameters were missing for a few other storms, mainly total petrochemical hydrocarbons and E.coli (bacteria). "Weather and timing constraints" were cited for seven missing manual storm samples.	Comment noted.
	•The MonitoringSite and MonitoringDrainageArea tables are complete.	Comment noted.
	•The BiologicalMonitoring table is mostly complete, with Embeddedness values left empty (the County notes that because the monitoring is being conducted in a coastal plain stream, the Embeddedness metric is not applicable).	Comment noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	• Physical monitoring was conducted at Bear Branch and those results were included in a separate report submitted along with the County's Annual Report (Long-Term Stormwater Monitoring Program—Bear Branch Physical Monitoring: FY 2021 Annual Report).	Comment noted.
	• The County did not conduct any physical monitoring at Black Branch this reporting year due to "procurement backlog caused by [the] COVID-19 [pandemic]" (Annual Report, p150). The County has conducted and submitted results of its monitoring efforts in Black Branch in previous years.	Comment noted.
	• During a field visit on November 28, 2018, the Department advised the County that because restoration has not been implemented to meet the intent of monitoring requirements, the County must find a suitable monitoring location at an appropriate scale to determine. When the County identifies a candidate monitoring location suitable scale for evaluating BMP effectiveness, the following information must be submitted for the Department's review:	Comment noted.
	o A description of the length of time pre-restoration monitoring will take place;	Comment noted.
	o The drainage area and description of general conditions in the proposed watershed (drainage area shall be substantially smaller than that of Laurel Lakes watershed);	Comment noted.
	o A list of projects, including acres of restoration planned, estimate of percent impervious area treated in the watershed and projected implementation completion dates for future restoration activities;	Comment noted.
	o An estimation of the length of time it will take to implement restoration for 20% of untreated impervious area in the watershed;	Comment noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	○ A narrative describing how the monitoring will evaluate restoration implementation and resource response at the watershed scale;	Comment noted.
	○ A description of how new monitoring requirements for the draft of the new permit will be incorporated into the study design and detail alterations to field procedures, equipment, lab protocols, and other resource needs.	Comment noted.
Part IV.G Program Funding	• The County provided a Watershed Protection and Restoration Program (WPRP) Annual Report for FY 2020 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 and addressed in this submittal.
	• Using the provided template, the County's next FAP should be submitted as narrative files in the geodatabase by January 1, 2022, unless advised otherwise.	Comment noted and addressed in this submittal.
	• 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 2019 decreased from $112,602,000 to $79,302,100, however, the capital budget increased from $29,756,258 to 63,912,333. 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.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	• The County should include a plan in the next annual report to demonstrate how outfall screenings or commercial and industrial visual surveys can be performed within each municipality over the course the permit term.	Comment noted. See Appendix B for a revised SOP.
	• 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	• The Prince George's County Department of Environment, Stormwater Management Division, reported that the supplemental environmental project to install stormwater water quality practices at the James E. Duckworth School is in the concept phase.	Comment noted.
	• The Department received more detail on this project in a July 1, 2022, submittal form the County. The Department has the following comments on this submittal:	Comment noted.
	o The County should continue to provide annual milestones on this project in future interim reports.	The County will continue to provide updates on the project in future interim reports.
	o The County should include more information in the next report on how the project will be used for outreach and educational opportunities at the school.	Response is provided in Appendix B.
	o Please explain the difference between the total impervious surface restored (ISR) (16.91 acres) and the SEP ISR (3.0 acres).	Response is provided in Appendix B.
	o Provide pictures of existing conditions for documentation and comparison with future project conditions.	Response is provided in Appendix B.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	o Provide a drainage area map for the total area draining to the proposed shallow wetland/pond.	Response is provided in Appendix B.
	o Provide more information on the flow splitter to divert the first flush discharge from the bioretention facilities to the water quality facility. It appears this splitter will provide water quality for runoff that has already been treated in the proposed bioretention facilities.	Response is provided in Appendix B.
	o Provide more information on any quantity management plans for the new pond. Stormwater management computations should be provided when available.	Response is provided in Appendix B.
	o Describe the conditions at the existing outfall from the storm drain line and include pictures at this location. Provide more details on how this area will provide a stable outfall for the proposed pond and demonstrate that any existing erosion in this area will be stabilized as part of this project.	Response is provided in Appendix B.
	• The Department approves the proposal as acceptable to meet the SEP requirements in the Consent Decree. However, more information, as noted above shall be provided as details become available.	Response is provided in Appendix B.
Impervious Surface Restoration Plan and Schedule	• The Interim Consent Decree report indicates that 4,386 acres of restoration have taken place since the beginning of the permit term. However, this information is not consistent with that submitted in the County's FY 2021 annual report which indicates that 4,177 acres have been restored since the beginning of the permit term.	The 2021 interim Consent Decree submitted in December 2021 included the data per calendar year 2021 (latest up till November 2021) whereas FY 2021 NPDES annual report was based on the fiscal year (up till June 2022).
	• Using the lower number noted above, the County is still 1,928 acres of restoration short of the restoration requirement. However, the schedule indicates that the County should be on track to meet the restoration requirement.	Comment noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	•Please ensure all data in the annual report are consistent with those reported in the Consent Decree.	As mentioned above that the data reported in interim consent decree report and annual report had two different time periods (FY vs. CY). To avoid any further confusion, the data reported in 2022 for both reports (consent decree report and annual NPDES report) have the same time period based on the fiscal year (up till June 2022).
	•The County reported that of the 470 BMPs identified with failed inspections, that a total of 138 will need to be brought into compliance.	Comment noted.
	•However, the County database in the FY 2021 annual report reports that 207 BMPs have failed inspections. The Department notes that is an improvement from prior years and progress has been made on bringing the specific BMPs into compliance identified in the FY 2019 report. The Department remains concerned that the database indicates that 43 of these BMPs have not been re-inspected since 2016. The County needs to pursue appropriate enforcement and follow up inspections to bring these failed BMPs into compliance.	Comment noted.
	•A schedule for the work noted above shall be provided in the next interim report.	The County is in the process of accessing the inspection status of these 43 BMPs which correspondence to Pond Structures. DPW&T is working with the consultants to develop a schedule and will be submitted to MDE.
BMPs with missing As-Builts	•The County has selected two consultants to perform this work.	Comment noted.
	•Please provide an update in the next interim report.	The update is provided in the interim report per MDE's request.
Restoration BMPs	•The database indicates that 762 restoration BMPs have been completed during the permit term. The	Comment noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	County has made progress in bringing all restoration BMPs into compliance, reporting that just 5 active BMPs have a failed inspection as of December 31, 2021.	
	•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. This is an improvement over prior reporting years.	Comment noted.
	•The information in the Interim Consent Decree Report is not consistent with stream restoration data reported in the FY 2021 annual report. Specifically, the FY 2021 geodatabase indicates that 29 stream restoration projects were completed during the permit term beginning in January 2, 2014. However, the interim report suggests that 55 WSSC projects were removed from the County's inventory with only six County projects taking credit for stream restoration. This is a significant inconsistency with the data provided in the two reports. The County must clarify and resolve this inconsistent data reporting and ensure that data in both reports are consistent with future submittals. In addition, if any of the 29 projects noted above are removed from the County's inventory then the geodatabase should not include them.	The County consistently reviews its restoration program and revise its goal based on the review of existing condition. For the stream restoration projects, especially when they are reported in GIS based system, the number of projects indicate the line segments created in GIS. Time to time, these segments are consolidated to better represent the data and the space. In previous years, we have reported more than 84 stream restoration projects based on the line segments. In 2021 revision, we removed 55 WSSC projects and only 29 projects were reported towards restoration credits in the geodatabase.
	•Please provide an update on this issue in the next interim report.	The update is provided in the interim report per MDE's request.
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	Comment noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	loading rates and therefore provide a new baseline for assessing progress in the future.	
	• Progress on TMDL plans must be provided annually and should include adaptive management strategies toward meeting milestones and benchmarks. The completion date of TMDL must be noted to show the County is on track toward meeting waste load allocations.	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 Department understands there is a transition to this new format and the County has demonstrated progress in migrating BMP drainage area information as well as linking to the new format in the geodatabase.	Comment noted.
	• Please provide an update in the next interim report.	The County is using the updated format as provided by MDE in current reporting.
IDDE SOPs	• The procedures submitted by the County include a lists of what is done as follows:	Comment noted.
	o Data management	Comment noted.
	o The actions needed to be completed prior to the survey (e.g., identify areas to target, identify storm drain system features, notify property owners)	Comment noted.
	o The information that is collected in the "QuickCapture" application (e.g., date, inspector, address, type of business, violation type)	Comment noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	o An enforcement section stating that the County pursues voluntary compliance	Comment noted.
	o The agencies to be contacted if a violation is observed	Comment noted.
	• The Department requests the County include additional information to provide greater clarity on how the procedures noted above are implemented as follows:	Comment noted.
	o Provide examples of good housekeeping practices and violations. Photographs of good and bad practices could more clearly demonstrate what to look for in the field. This document could be a resource used by the contractors in between trainings.	Comment noted.
	o Include more detail in the enforcement section. Voluntary compliance is an appropriate starting point. Progressive enforcement should also be detailed and reflect deadlines for compliance. If the property owner does not voluntarily comply, list the next steps (e.g., 2nd notice of violation, civil citation, fines).	Comment noted.
	o Include example letters for addressing illicit discharge concerns (e.g., notification of scheduled inspection, County Letter of Entry, notices to property owners of violations).	Comment noted.
	o Include contact information for the respective agencies that may be involved (e.g., Department of Environment Stormwater Management Division, Hazardous Material Response Team, Department of Permitting, Inspections, and Enforcement).	Comment noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	• Please include the additional information noted above in revised standard operating procedures in the next interim report submittal.	A revised SOP is included with this submittal in Appendix B.

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APPENDIX B

Response to MDE's Review of the County's FY2021 Annual Report and Interim Consent Decree Report - July 20, 2022

Attachment 2 - Supplemental Environmental Project

The following are MDE's Assessment and Recommendations for the referenced section, followed by the County's comments.

- The Prince George's County Department of Environment, Stormwater Management Division, reported that the supplemental environmental project to install stormwater water quality practices at the James E. Duckworth School is in the concept phase.
- The Department received more detail on this project in a July 1, 2022, submittal from the County. The Department has the following comments on this submittal:
    - The County should continue to provide annual milestones on this project in future interim reports.

      The County will continue to provide updates on the project in future interim reports.

    - The County should include more information in the next report on how the project will be used for outreach and educational opportunities at the school.

      One of the cornerstone programs for the County's outreach and educational opportunities is the Clean Water Partnership's highly successful and continuous partnership with the Prince George's County Public Schools (PGCPS) and School Board. The Treating and Teaching Program began in FY 2016 and assists 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 and environmental literacy. In addition, 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

      As part of the Treating & Teaching program, the James E. Duckworth School will also involve intense collaboration and direction from school administrators and educators to implement a plan that meets the special needs students at this school. In addition to the program components listed above, the plan is incorporate more visuals and illustrations that comply with the school's policy and provides the students with a beneficial opportunity.

      Specifically, the outreach and education plan is to:
        - Engage the students in authentic environmental literacy programming
        - Develop the student and staff knowledge of polluted stormwater runoff and how it impacts local waterways
        - Provide professional development to facilities staff to ensure sustainability of the CWP practices

- Provide environmental literacy professional development and resources to teachers
- Design and install outdoor learning features at the school
- Provide school maintenance staff with basic stormwater knowledge
- Review plans with school staff and coordinate critical elements, such as history, planned projects and school operations
- Implement ongoing education, networking opportunities and support to school staff each year to maintain knowledge and excitement
- Facilitate connections to additional county-based and non-profit resources that can administer training, field trips and learning opportunities
- Equip teachers with the confidence, knowledge and skills to utilize their schoolyard as a classroom with the students
- Equip building supervisors with the knowledge and resources to effectively maintain the stormwater management facilities
- Instill an appreciation of how their schoolyards fit into the watershed by facilitating a river field experience
- Host recognition ceremony to acknowledge participation and commitment to the program

Treating & Teaching Partners

- The Anacostia Watershed Society
- Bradley Site Design
- Interstate Commission on the Potomac River Basin
- Low Impact Development Center
- Maryland Association for Environmental and Outdoor Education
- Maryland-National Capital Park and Planning Commission
- The Neighborhood Design Center
- Out Teach
- William S. Schmidt Outdoor Education Center
- The Chesapeake Bay Trust

- Please explain the difference between the total impervious surface restored (ISR) (16.91 acres) and the SEP ISR (3.0 acres).

  James E. Duckworth Regional School was constructed in 1978 and contains no stormwater practices on-site. Additionally, the upland area, which drains to the outfall located at the rear of the school, also contains no stormwater controls. The existing storm drain system conveys stormwater from approximately 35-acres of drainage from upland sites, including High Point High School, Powder Mill Village residential development, and numerous roadways to the terminal outfall structure. The site is located within the Anacostia Watershed.

  Since the overall restoration project will add stormwater controls for the untreated school site and upland areas, the County proposed to attribute the ISR credit associated with the school site to the SEP ISR (≈ 3 acres) and the upland ISR to be credited toward the County's MS4 ISR restoration requirement (≈ 16 acres).

- Provide pictures of existing conditions for documentation and comparison with future project conditions.

  See SEP Exhibit 1 – Existing Conditions Photos.

- Provide a drainage area map for the total area draining to the proposed shallow wetland/pond.

  See SEP Exhibit 2 – Drainage Area Map.

- Provide more information on the flow splitter to divert the first flush discharge from the bioretention facilities to the water quality facility. It appears this splitter will provide water quality for runoff that has already been treated in the proposed bioretention facilities.

  The flow splitter structure is designed to divert the first flush flow (equal to 1" of rainfall) from the existing storm drain system to the water quality facility. The time of concentration for the entire drainage area to the storm drain outfall is only ~12 minutes. The bioretention facilities only receive runoff from overland flow on the school site property. The bioretention facilities are all designed to capture and treat volumes for 2.8" – 3.0" of rainfall which will be filtered and discharged to the storm drain system over the 48-72 hours following the storm event. Since the bioretentions are sized to temporarily store a rainfall event 3 times what the flow splitter is diverting and since the storm drain system time of concentration is so short, the first flush through the storm drain will occur before the bioretention facilities begin to bypass water in larger storm events. Therefore, the County is not double counting treatment credits. Additionally, as water is filtered through the bioretention it will be released much later than the initial storm and most likely be diverted to the pond at that point. That is creating a treatment train and providing additional time before the water reaches the stream which is a benefit. Therefore, the County is not taking additional credit for this.

- Provide more information on any quantity management plans for the new pond. Stormwater management computations should be provided when available.

  The Pond only provides quality treatment volume for 1" of rainfall. Quantity control for larger storm events is not provided. However, the pond design ensures the safe conveyance of the larger storm events for dam safety reasons.

- Describe the conditions at the existing outfall from the storm drain line and include pictures at this location. Provide more details on how this area will provide a stable outfall for the proposed pond and demonstrate that any existing erosion in this area will be stabilized as part of this project.

  The existing storm drain outfalls into a stable riprap plunge pool. Photos have been provided. The outlet pipe from the water quality pond will outfall to the same plunge pool. Since the water quality pond only receives water through the storm drain flow splitter and the pond will discharge the flow back to the storm drain plunge pool, there is no increase in the discharge to the plunge pool or downstream

channel. In fact, there will be a reduction in flow for small storms since the pond will be slowing down the release.

- The Department approves the proposal as acceptable to meet the SEP requirements in the Consent Decree. However, more information, as noted above shall be provided as details become available.

SD OUTFALL DS

SD OUTFALL

M6-1 & Offline WQ Location

M6-2A,B,C,D Location

Perm Pav Location


50 LF SHEET FLOW
568 LF SHALLOW CONCENTRATED
902 LF SHALLOW CONCENTRATED
1,166 LF CHANNEL FLOW
EVANS TRAIL
CAPITAL BELTWAY
U.S. INTERSTATE ROUTE 95
E 501,250
N 500,300
N 500,650

EXHIBIT B
SMD # 02-1, IDDE Commercial and Industrial Visual Survey SOP

Document # **SMD # 02-01**	Title: **IDDE Commercial and Industrial Visual Survey SOP**	Print Date: **xx/xx/xxxx**
Revision # **1**	Prepared By: **Nicol, George, Section Head** **ICCS, DoE**	Date Prepared: **12/14/2022**
Effective Date: **12/16/2022**	Reviewed By: **DeHan, Jeff,**	Date Reviewed: **12/16/2022**
Standard: N/A	Approved By: **DeHan, Jeff, Associate Director,** **SMD, DoE**	Date Approved: **12/16/2022**

This Standard Operating Procedure ("SOP") is to be used as a guide to ensure an appropriate level of document control and dissemination is maintained and implemented. Operational and administrative integrity is essential to secure sound and confidential business practices as well as maintaining levels of professionalism and accountability within the workplace.

1. SUBJECT:

The National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit requires the County to identify industrial and commercial land uses and sites with potential sources of pollutants that can impact the water quality of the watershed. Using the standard industrial classifications (SIC codes), the County created a commercial and industrial polygon layer in 2015 to be used as a reference to identify potential industrial permittees and to flag properties for Hotspot Site Investigations during Illicit Discharge Detection Elimination (IDDE), inspections. Under PART IV.D.3 of the permit, the County is required to conduct annual visual surveys of commercial and industrial sites to locate, document, and eliminate any potential pollutant sources. These sites and inspection results must be reported to the Maryland Department of the Environment (MDE) in the County's annual NPDES report for compliance with NPDES permit requirements.

2. PURPOSE:

This document provides guidance on procedures for conducting NPDES MS4 Permit IDDE commercial and industrial visual surveys, record activities and practices on commercial and industrial sites, report possible sources of pollutants, and to advance enforcement for compliance.

3. PROCEDURE:

The County's inspection and enforcement program strives to ensure all discharges coming from or going into the County's MS4 abates contaminants from entering the watersheds. The MS4 permit requires visual surveys of commercial and industrial sites annually. Prince George's County contracts with professional engineer consultants to perform the visual surveys. While accessing the outfalls to be screened, field teams will look for and report evidence of possible sources of pollutants using the ESRI Quick Capture application on a tablet. Within the application, Commercial/Industrial points are generated to indicate where specific violations are taking place and Commercial/Industrial polygons will be verified and attributed to track which areas have been visually inspected. Using the application, commercial and industrial site inspections are organized and available in a web map. Inspections can be exported to a geodatabase or other various formats for reporting. The inspection records contain a description of the site and the findings of the inspector and include photographs as needed to document the conditions at the site.

PDF reports are then submitted to the project field team leader. All pollution source reports are then sent to Prince George's County Department of Environment (DoE), Stormwater Management Division (SWM) for review and evaluation.

Field teams will not approach possible offenders. Field crews will carry a County Letter of Entry with them at all times in the event that they are approached by residents or employees at a site.

I. Pre-Commercial and Industrial Visual Surveys

a) The County is separated into three (3) inspection areas; North, Central, South.

b) Identify areas with dense concentration of Commercial & Industrial land use using the County's Commercial Industrial Layer.

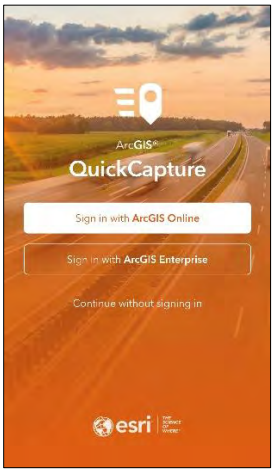
c) Identify Hot Spots aligned with higher levels of TMDLs by watershed, using GIS, identify TMDL watersheds and report incident for the TMDL category.

d) Select higher ranked Industrial & Commercial properties for annual surveys/inspections. Using historical incidents reported and investigated, applying GIS industrial layer, incident types can be ranked per impairment importance and location.

e) Using results from "d)" above, distribute volume of annual inspections/surveys within North, Central, South areas targeting those areas with highest ranking of TMDL/pollutant data.

II. Site Survey & Inspection

a) Using the QuickCapture application, a point will be generated for each commercial and industrial site inspected.



b) Record the following inspection data:

1. Inspection date

2. Inspector's name
3. Business name
4. Address
5. Identify property owner information and confirm through tax records/SDAT
6. Business type/category
7. Business sub categories
8. Violation type
9. General comments
10. Identification of storm drain system (type, structure, public or private system)
11. Maintenance responsibility (Owner, Declaration of Covenants, Maintenance Agreement) if regulated under County

c) Photographs:

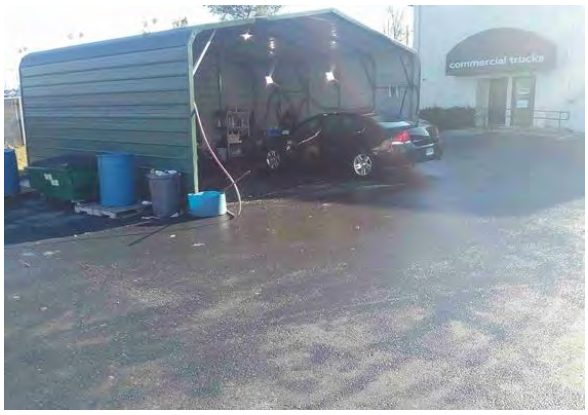
Digital photographs will be taken for all commercial and industrial inspections. Additionally, photos will be taken where problems exist. Comments will be added to each photo describing the purpose of the photo, where problems exist, existing conditions and potential non-compliant conditions. Below are photographs showing violations of poor housing practices as examples of what to look for during your inspections.

EXHIBIT B
SMD # 02-1, IDDE Commercial and Industrial Visual Survey SOP

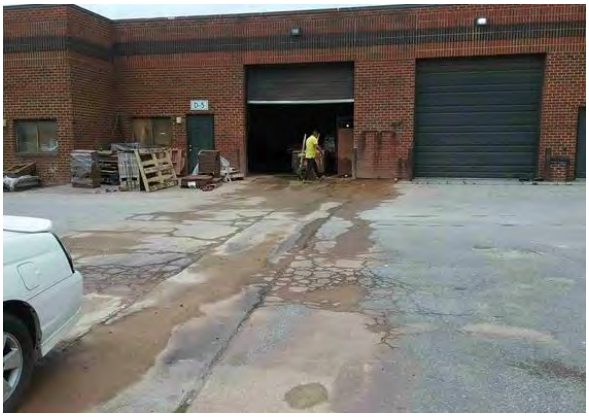
Improper storage of containers

Trash and debris not disposed properly

Sediment and sediment laden water entering storm drain system.



Vehicle washing with no water containment mat with a reclamation system



Runoff from commercial activity

Grease container spillage

	
Fluids leaking from dumpsters	Vehicle repairs & spillage of automobile fluids

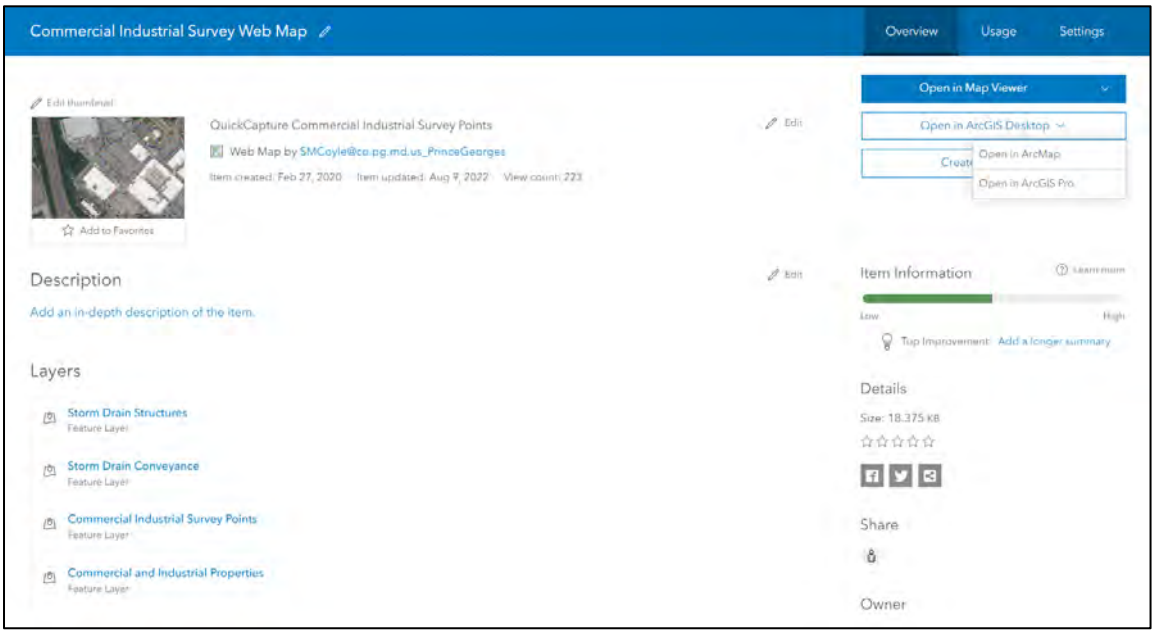
d) Perform Outfall Sampling if discharged observed entering storm drainage system.

1. Inspections will be performed following a minimum of 72 hours of dry weather.
2. Outfalls with any dry-weather discharge is tested in the field for pH, temperature, detergents, copper, phenols, chlorine, ammonia, turbidity, and dissolved oxygen.
3. If the discharge from the outfall has a concentration above the threshold limit for detergents, copper, phenols, chlorine, or ammonia, the site is revisited and retested after 4 hours, but within 24 hours, to verify the result.
4. If both tests determine that an illicit discharge is occurring, then a grab sample will be collected at the outfall. The grab sample are placed in bottles and taken to a testing laboratory within 8 hours of the collection time. The laboratory samples will be analyzed for E-coli, fluoride, specific conductance, boron, total chlorine, surfactants, total hardness, and potassium.
5. Inspector will attempt to make contact with the property owner to issue notice of violation with corrective actions.

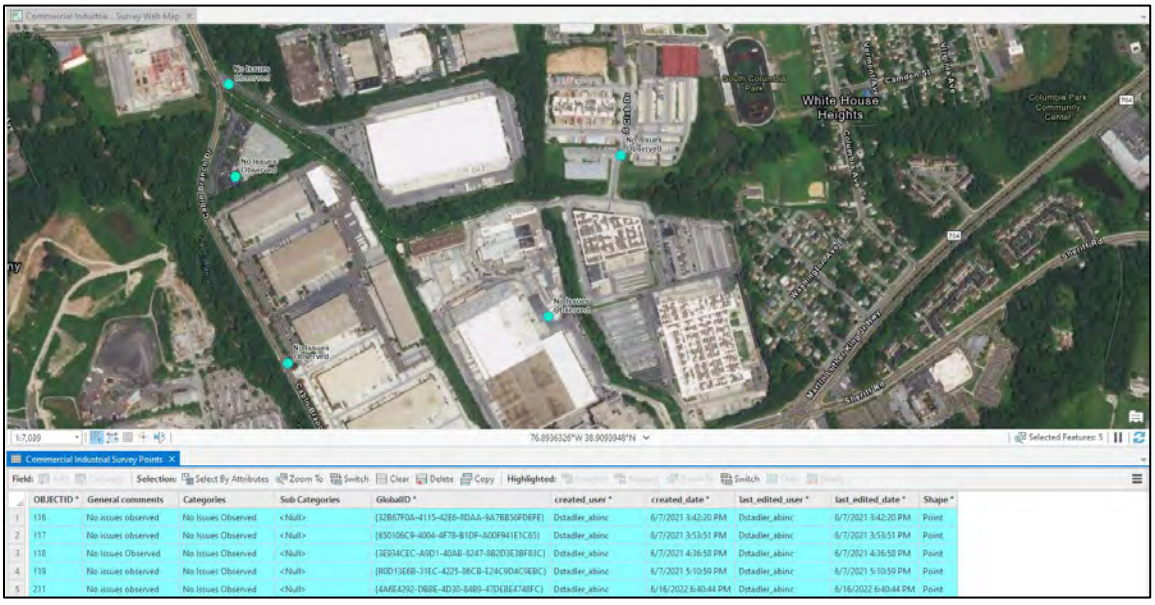
EXHIBIT B
SMD # 02-1, IDDE Commercial and Industrial Visual Survey SOP

III. Post Inspection

a) Log onto Prince George's County ArcGIS Online organization (DOE Inspection Compliance) at https://princegeorges.maps.arcgis.com/home/item.html?id=3d2db1463c084c43b4eff19ab0c99cad and navigate to commercial industrial survey point's web map.



b) Launch the web map and select the appropriate inspection point.



c) Any potential sources of pollutants observed from the inspections will be sent to County's DoE, SWM, Code Enforcement Officer.

d) If site is regulated by County, results of inspection to include status of any on-site BMP (pass/fail) as well as any corrective action needed for compliance sent to property owner.

e) If site is regulated by MDE inspection, results are forwarded by to MDE for enforcement and compliance action.

IV. Enforcement

a) If site is regulated by County, DoE Code Enforcement Officer notifies the property owner of the potential violations and pursues voluntary compliance.

- Property owners are given seven (7) days from the time they receive the inspection notice to address the corrective actions listed on the report.
- If on-site, attempt to make contact with property owner; property management representative; leasee/tenant; etc. to obtain contact information, discuss the on-site violations, and have the corrective actions addressed within seven (7) days. If needed, forward violation to DPIE for further enforcement regarding zoning violations and lack of property maintenance/housekeeping.
- If corrective actions are not addressed after 2nd violation notice, proceed with preparing documentation to forward to the County's Office of Law.

    * Paul DeSousa, Code Enforcement Officer
    Department of the Environment
    Stormwater Management Division, Inspection & Compliance Section
    Office: 301-883-5871
    Cell: 240-508-9649
    pgdesousa@co.pg.md.us

b) DoE Code Enforcement Officer notifies the County's Department of Permitting, Inspections and Enforcement (DPIE), Property Standards Division to investigate any violations concerning zoning violations and lack of property maintenance/housekeeping.

    * Bill Edelen, Code Officer
    Permitting, Inspections and Enforcement
    Enforcement Division
    Office: 301-883-6039
    wkedelen@co.pg.md.us

c) DoE Code Enforcement Officer notifies the County's Fire/EMS Department, Hazardous Material (HazMat) Response Team to respond to actual or potential leaks, spills, discharges, or releases of hazardous material.

* Lt. John Mycka
  Hazardous Materials Unit
  Prince George's County Fire/EMS Department
  Office: 301-262-6326
  JAMycka@co.pg.md.us
  Call the non-emergency phone number 301-352-1150, for the Fire/EMS Department, Hazardous Material (HazMat) Response Team for spills.
  There are three stations in the County with Haz-Mat Response Teams and they can dispatch the closest team to the spill site.

d) If site is regulated by MDE. DoE Code Enforcement Officer notifies and refers case to MDE's Water and Science Administration, Compliance Program as the regulatory authority under General Discharge Permit requirements.

* Brad Metzger
  Acting Division Chief
  Water and Science Administration
  Maryland Department of the Environment
  160 South Water Street
  Frostburg, Maryland 21532
  brad.metzger@maryland.gov
  Office: 301-689-1484 (O)

V. NPDES MS4 Permit Annual Report

A geodatabase will be submitted to MDE as part of the County's annual NPDES MS4 report on the performance and outcomes of the commercial and industrial visual surveys conducted in the County.

VI. Appendix

Examples of inspection letters and violation notices.

EXHIBIT B
SMD # 02-1, IDDE Commercial and Industrial Visual Survey SOP

Angela D. Alsobrooks
County Executive

THE PRINCE GEORGE'S COUNTY GOVERNMENT
Department of the Environment
Stormwater Management Division

Andrea L. Crooms
Director

Certified Mail: 7015 0640 0001 1571 4840

April 27, 2021

To: Petrie Elg Inglewood LLC
1919 West Street, Suite 100
Annapolis, Maryland 21401

Re: 2400 Fives Lees Lane
Lanham, Maryland 20706

Dear Property Owner:

Under the terms of the County's Stormwater Management Ordinance, Subtitle 32, Division 2 of the County Code, the County's purpose is to prevent environmental degradation from pollution discharge into the County's watercourses. We are tasked with conducting annual visual surveys of commercial and industrial areas throughout the County per the Maryland Department of the Environment, National Pollutant Discharge Elimination System, Municipal Separate Storm Sewer System Discharge Permit.

This letter serves to inform you that we recently conducted an inspection of your property. During our inspection, we observed leaks from storage containers flowing off your property and into the nearby storm drainage system, polluting the County's watercourses. As a result of our inspection, you are hereby notified that you are in violation of Subtitle 32, Division 2, Section 32-150 of the County Code, illicit discharge resulting in an adverse impact to water quality and may cause damage to a watercourse. Enclosed is an inspection report of the violations, with corrective actions necessary to eliminate the illicit discharge from your property. Failure to take the appropriate corrective action to address the illicit discharge of contaminants discharging from your property within 7 days of receiving this letter is a violation of the County Code and cause for action by the County through monetary penalties and/or proceedings in a court of law.

1801 McCormick Drive, Largo, Maryland 20774

EXHIBIT B
SMD # 02-1, IDDE Commercial and Industrial Visual Survey SOP

Your prompt attention to this matter is greatly appreciated. When the corrective actions on the inspection report are addressed and the illicit discharge is eliminated, please contact me at (301) 883-5871 or if you prefer, e-mail me at pgdesousa@co.pg.md.us to schedule a re-inspection of your property.

Sincerely,

Paul DeSousa

Paul DeSousa
Code Enforcement Officer
Inspection & Compliance Section

Enclosure(s)

EXHIBIT B
SMD # 02-1, IDDE Commercial and Industrial Visual Survey SOP

THE PRINCE GEORGE'S COUNTY GOVERNMENT
Department of the Environment
Stormwater Management Division

Angela D. Alsobrooks
County Executive

Andrea L. Crooms
Director

NOTICE OF VIOLATION

DATE:

ISSUED TO:
Address:
Certified Mail: 0000 0000 0000 0000 0000

LOCATION OF VIOLATION(Address):
Inspection ID #: xxxx-xxx
Structure ID #: xx-xxxx-xxxxxx

This notice serves as a follow-up to the County's initial inspection dated xxx and follow up inspection dated xxx of your property. These inspections identify non-complaint conditions of your propperty requiring corrections. The necessary corrective actions indicated in the prior reports have not been taken as required. The following violation(s) of the County Code concerning the lack of maintenance of your property.

CODE SECTION & TITLE (NOT EXCLUSIVE):
- **Sec. 32-141(d). Enforcement Action Upon Noncompliance**
- **Sec. 32-150(a). Existing Conditions**

CORRECTIVE ACTION REQUIRED IMMEDIATELY:
1) CITE NON-COMPLIANT CONDTION(S)and Corrective Action(s).

You are hereby notified to comply with the provisions of the law and to correct the deficiencies stated above before **(DATE-*ex. 7 days from this notice*)**.

Failure to implement the above listed corrective actions by the compliance date may be cause for a penalty to be assessed against you per Prince George's County Code Sections 28-261 (not exclusive) and/or the forwarding of the matter to the Office of Law for prosecution.

_____ Issuing Inspector

Name **(by certified mail)** Person Notified

_____ I.D # Inspector Telephone #

1801 McCormick Drive, Largo, Maryland 20774

RIGHT OF APPEAL:

Stormwater Management Ordinance — Subtitle 32, Division 3 – Section 32-198

An APPEAL of a violation notice of the Stormwater Management Ordinance claiming the true intent of the Ordinance has been misconstrued must be filed WITHIN TEN (10) DAYS OF RECEIPT OF THE NOTICE.

The above APPEALS must be filed with the BOARD OF APPEALS for Prince George's County, County Administration Building, 14741 Governor Oden Bowie Drive, Upper Marlboro, Maryland 20772. Please call (301) 952- 3220 for information.

PENALTY:

"Violation penalties" - Any person, firm, association, partnership, or corporation or combination thereof, who shall violate a provision of Subtitle 23 of the County Code or fail to comply with any of the requirements thereof, or violate a lawful order issued thereunder, shall be guilty of a misdemeanor punishable by a fine.

REQUESTS FOR EXTENSION OF COMPLIANCE DATE OR WAIVER:

All requests for time extensions must be made in writing to the Code Enforcement Officer, Department of the Environment, Stormwater Management Division, Inspection & Compliance Section, 1801 McCormick Drive, Suite 500, Largo, MD 20774. Detailed reason(s) for the waiver or request for time extension must be specified.