2020

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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12/31/2020

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National Pollutant Discharge Elimination System
Municipal Separate Storm Sewer Systems

2020 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) 2020, the period of July 2019 through June 2020. This year's report is a continuation of the major revisions initiated in previous reports.

On May 4, 2020, the Maryland Department of the Environment (MDE) provided comments on the County's 2019 NPDES MS4 annual report. In that transmittal, MDE requested that the responses be provided with the 2020 NPDES MS4 annual report submittal. Accordingly, the County has prepared a list of responses which can be found in Table AA-1 in the "Responses to MDE Comments" section of this report. Where appropriate, the response in the comment table directs the reader to additional details found in the FY 2020 report.

In FY 2020, 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 2020, the County's notable accomplishments toward meeting the MS4 goals included:

Restoration Accomplishments

- To date, 2,656 acres of impervious area have been treated and another 3,778 acres were in active planning, design, or construction in FY 2020.
- Through its Rain Check Rebate Program, 416 BMPs were installed in FY 2020 on private properties, treating 2.27 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, three projects completed treating total 7.12 impervious acres in FY 2020. These projects include on-the-ground efforts such as tree planting and water quality retrofit projects including rain gardens, and bio-retention practices.

Illicit Discharge Detection and Elimination Inspections (MS4 Regulated Land)

- County inspectors evaluated 151 outfalls in winter/summer 2020 to ascertain the presence of illicit discharges. Of these outfalls, 92 received chemical testing with seven (7) 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 52 commercial and industrial sources identified 20 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 more than 5,000 bags collected and an estimated 96 tons of trash reduced.

- 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, collaborating with the University of Maryland on a litter source reduction study specifically for Prince George's County, and continuing the County's trash trap projects.

- The County's litter control efforts through comprehensive community cleanup, litter control, and Roadside Clean Ups, Green Up programs removed more than 1,500 tons of trash and debris.

Outreach and Education

- The County hosted over 250 environmental education and outreach events with the help of approximately 400 volunteers to promote environmental awareness, green initiatives, and community involvement in reducing pollutants to its waterways during which nearly 12,000 participants took part.

- The County's Tree Planting Program removed 1,339 high-risk or dying trees and planted 7,025 new trees, under its Right Tree, Right Place Program. This provides a net increase of 5,686 new trees planted.

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 2020, included on the DVD.

- The County continued in FY 2020 its physical monitoring of the Black Branch watershed 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 FY 2020, 187 concept plans for stormwater control were approved.

Land Development Inspection Enforcement

- The County staff performed 9,701 stormwater construction inspections and 11,698 sediment control inspections.

These achievements are further described in this report, with supporting details provided in the MS4 database 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
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
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 2020 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 25 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: Storm Drainage Maintenance Division, Special Services 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) 2020, the period of July 2019 through June 2020.

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 2020. 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.

On May 4, 2020 Maryland Department of the Environment (MDE) provided its comments on the FY 2019 NPDES MS4 report. County's response to MDE's comments are included in Appendix A 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.

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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's 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, 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	Tuan Duc, P.E. Site Road Plan Review Division thduc@co.pg.md.us 301-883-5717	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 manager

Permit Condition	Department/ Division	Manager, 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 III 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	Ramesh Patel, 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/OHM	Vernon Stinnett, Associate Director Office of Highway Maintenance vlstinnett@co.pg.md.us 301-499-8520	Michael Snyder, Division Chief Storm Drainage Maintenance Division

Permit Condition	Department/ Division	Manager, 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 III 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, Title/ E-mail Address, Telephone	Technical Personnel, Title/ E-mail Address, Telephone
		301-883-6067	
Street Sweeping	DPW&T/OHMD	Vernon Stinnett, Associate Director Office of Highway Maintenance vlstinnett@co.pg.md.us 301-499-8556	Michael Brown, Division Chief Special Service Division mobrown@co.pg.md.us 301-499-8520
Recycling, Trash and Garbage Collection, Public Education	DoE/RRD	Marilyn Naumann, Associate Director Resource Recovery Division merybak@co.pg.md.us 301-780-6315	See program manager
Property Management and Maintenance			
SWPPP	DoE/SMD	George Nicol, Section Head Inspection and Compliance Section gsnicol@co.pg.md.us 301-883-5976	Ken Krantz Inspection and Compliance Section ksaibou@co.pg.md.us 301-883-5958
Street Sweeping	DPW&T/OHMD	Vernon Stinnett, Associate Director Office of Highway Maintenance vlstinnett@co.pg.md.us 301-499-8556	Michael Brown, Division Chief Special Service Division mobrown@co.pg.md.us 301-499-8520
Storm Drain Maintenance	DPW&T/OHMD	Vernon Stinnett, Associate Director Office of Highway Maintenance vlstinnett@co.pg.md.us 301-499-8556	Michael Snyder, Division Chief Storm Drain Maintenance Division, Office of Highway Maintenance 301-499-8522
Vegetation Management	DPW&T/OHMD	Vernon Stinnett, Associate Director Office of Highway Maintenance vlstinnett@co.pg.md.us 301-499-8556	Michael Brown, Division Chief Special Service Division mobrown@co.pg.md.us 301-499-8522
Roadside Litter Control	DPW&T/OHMD	Vernon Stinnett, Associate Director Office of Highway Maintenance vlstinnett@co.pg.md.us 301-499-8556	Michael Brown, Division Chief Special Service Division mobrown@co.pg.md.us 301-499-8522
Snow and Ice Control	DPW&T/OHMD	Vernon Stinnett, Associate Director Office of Highway Maintenance vlstinnett@co.pg.md.us 301-499-8556	See program manager
Public Education			
Community Outreach and Education	DoE/SD	Carole Barth, Planner II Community Outreach Promoting Empowerment	See program manager

Permit Condition	Department/ Division	Manager, Title/ E-mail Address, Telephone	Technical Personnel, Title/ E-mail Address, Telephone
		cabarth@co.pg.md.us 301-883-3264	
	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, 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/COPE:	Department of the Environment, SD, Community Outreach Promoting Empowerment Section (COPE) 1801 McCormick Drive, Suite 500, Largo, MD 20774
DoE/SD/R&DS:	Department of the Environment, SD, Research & Development Section (R&DS) 1801 McCormick Drive, Suite 500, Largo, MD 20774
DoE/SD/PSS:	Department of the Environment, SD, Program Support Section (PSS) 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)

Department/ Division/Section	Address
	8400 D'Arcy Road, Forestville, MD 20747
DPIE:	Department of Permitting, Inspections and Enforcement (DPIE) 9400 Peppercorn Place, Suite 230, Largo, MD 20774
HD/EHDC:	Health Department, Environmental Health/Disease Control Division 9201 Basil Court, Suite 318, Largo, MD 20774

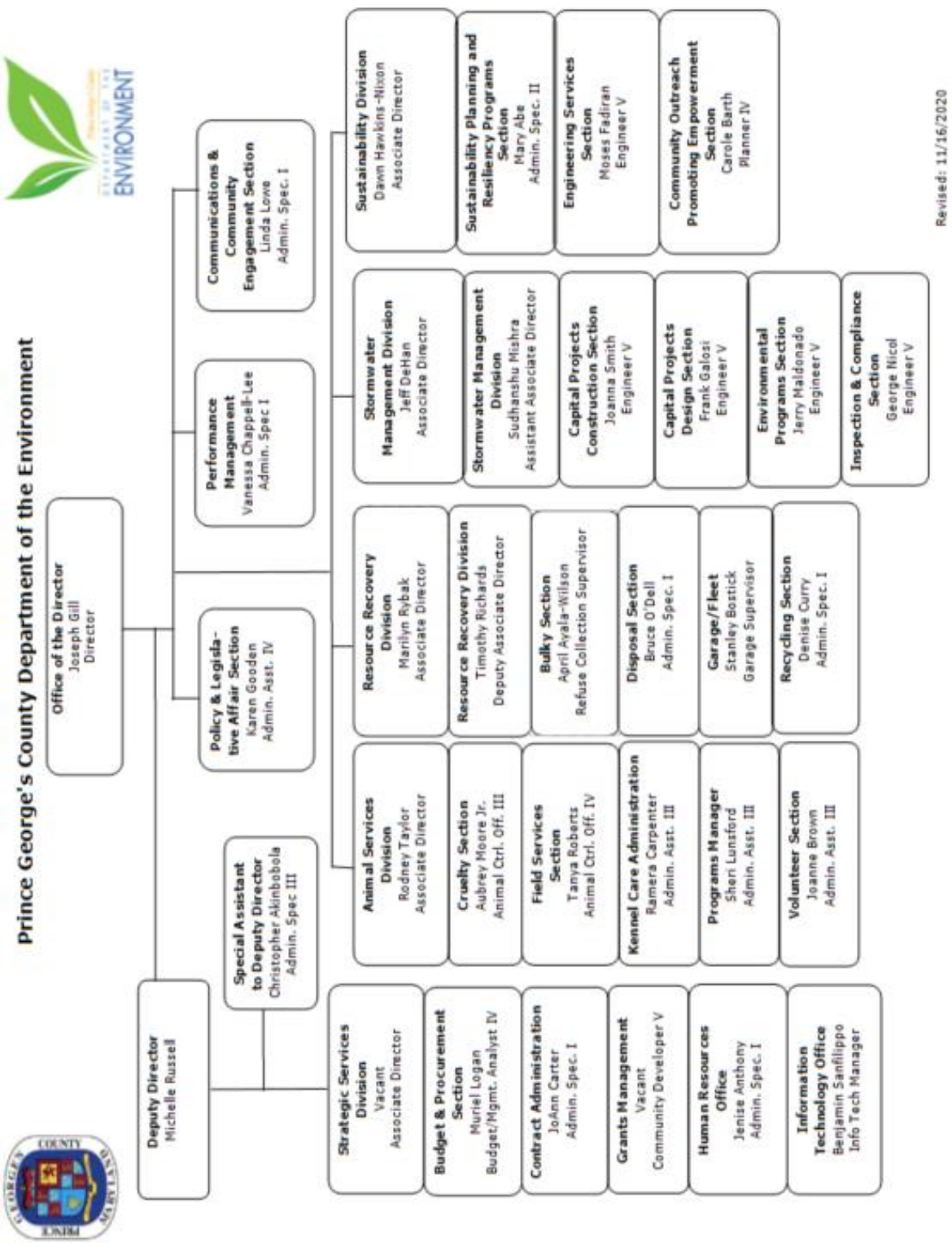

Figure A-1. Department of the Environment - Office of the Director Organizational Chart

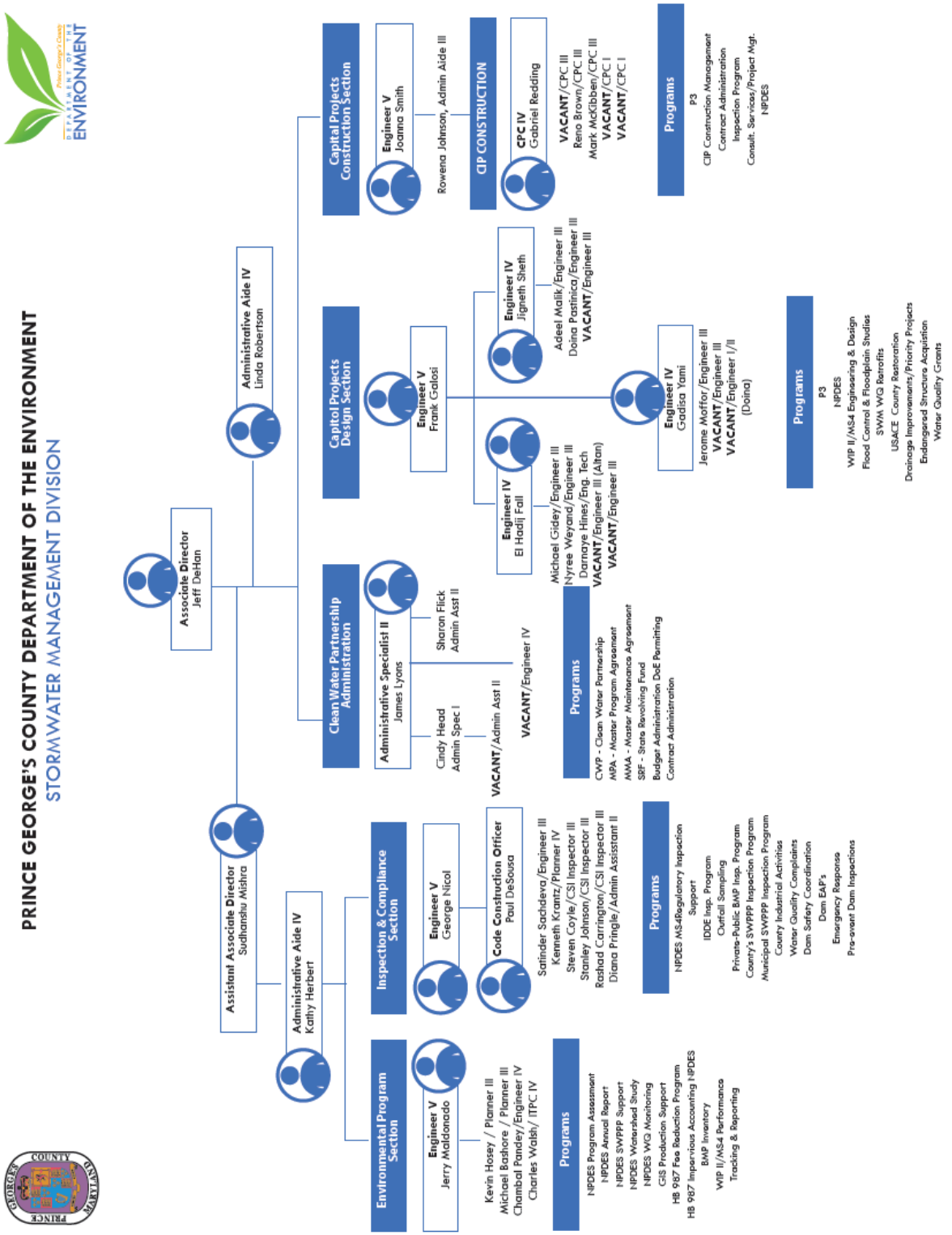

Figure A-2. Department of the Environment - Stormwater Management Division Organizational Chart

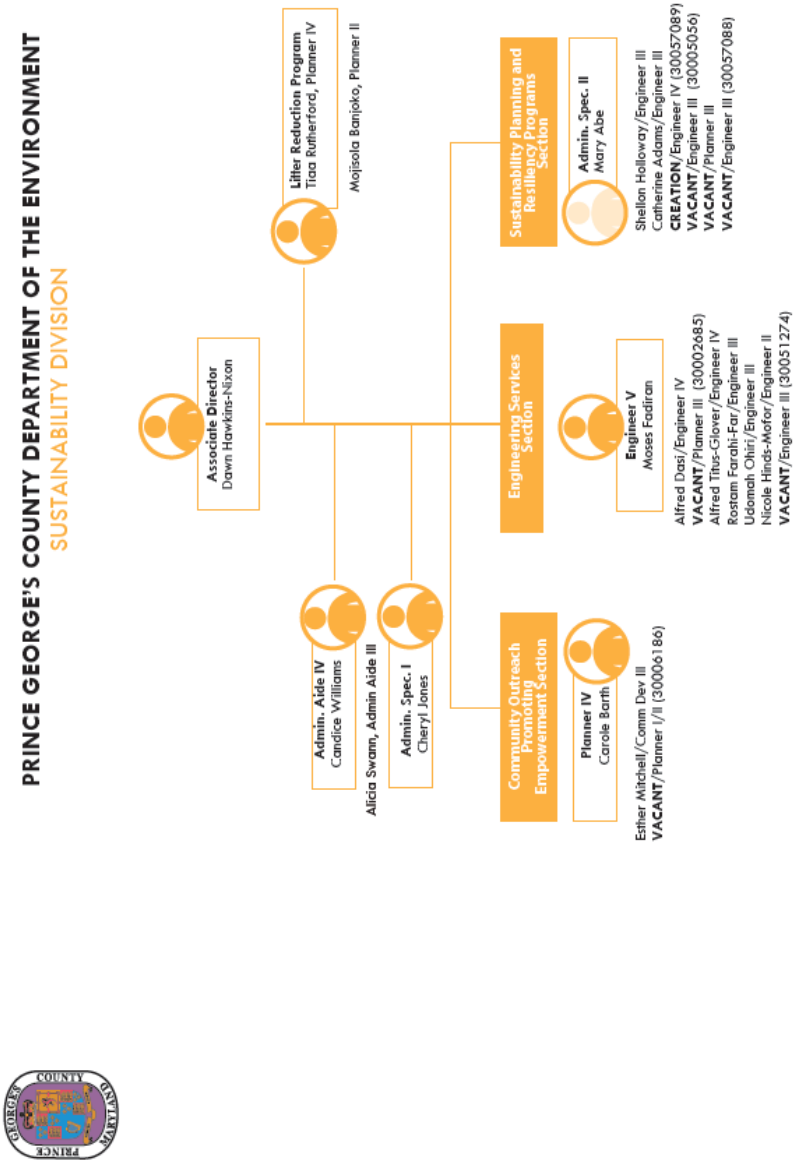

Figure A-3. Department of the Environment - Sustainability Division Organizational Chart

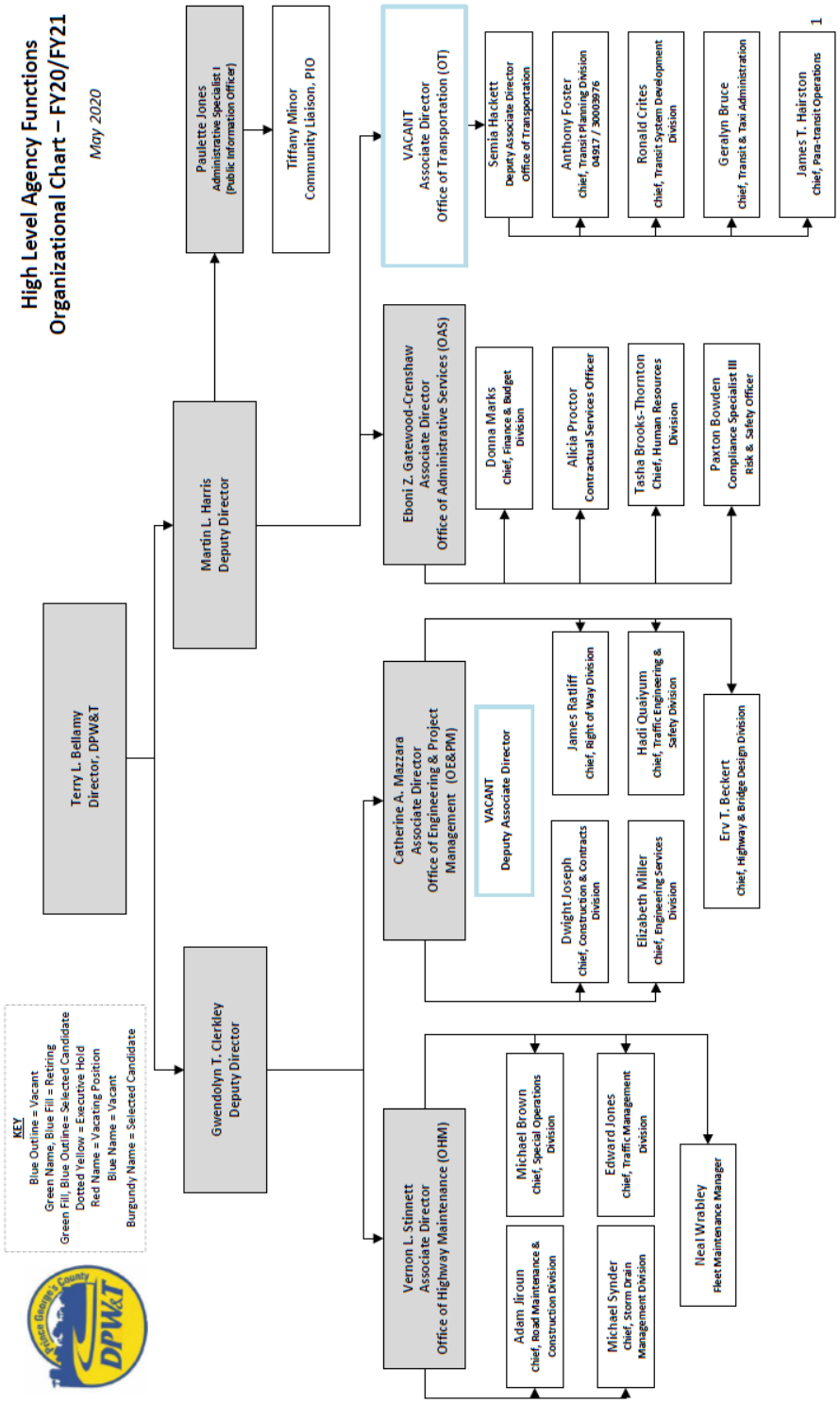

Figure A-4. Department of Public Works and Transportation - Office of the Director Organizational Chart

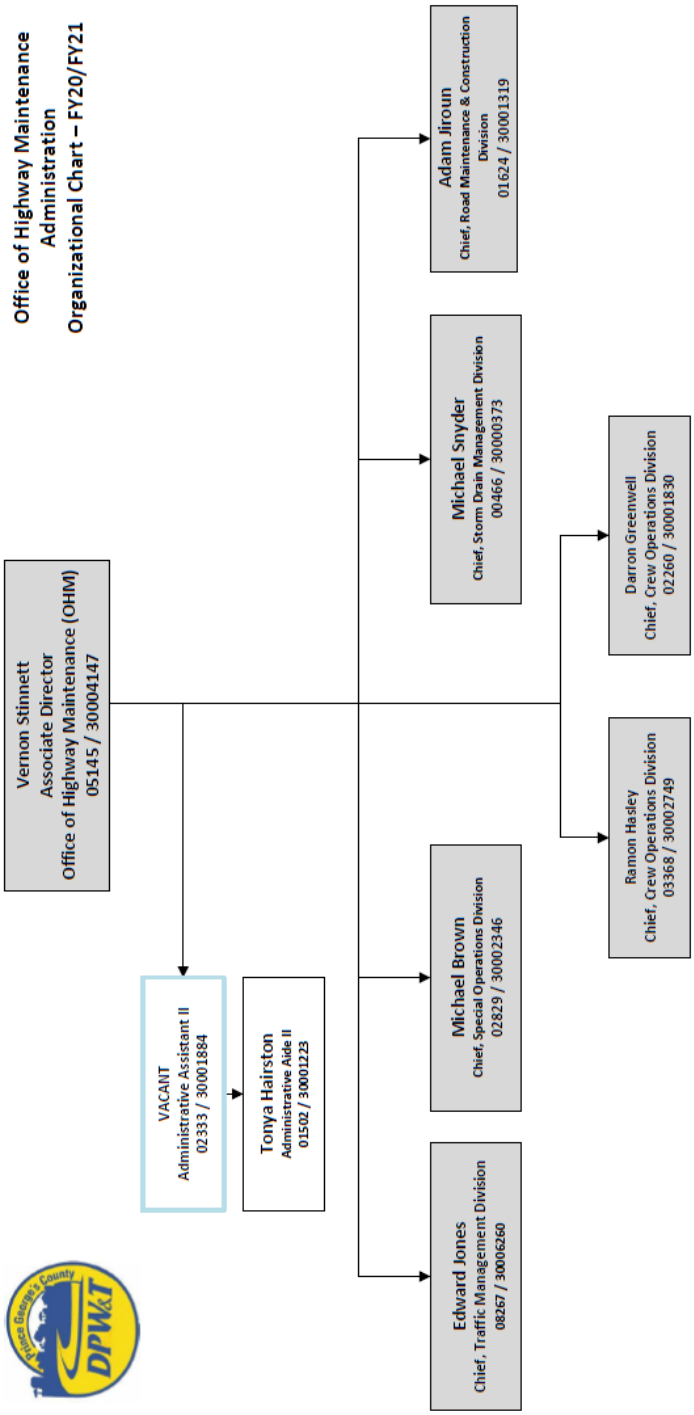

Figure A-5. Department of Public Works and Transportation - Office of Highway Maintenance (OHM) Organizational Chart

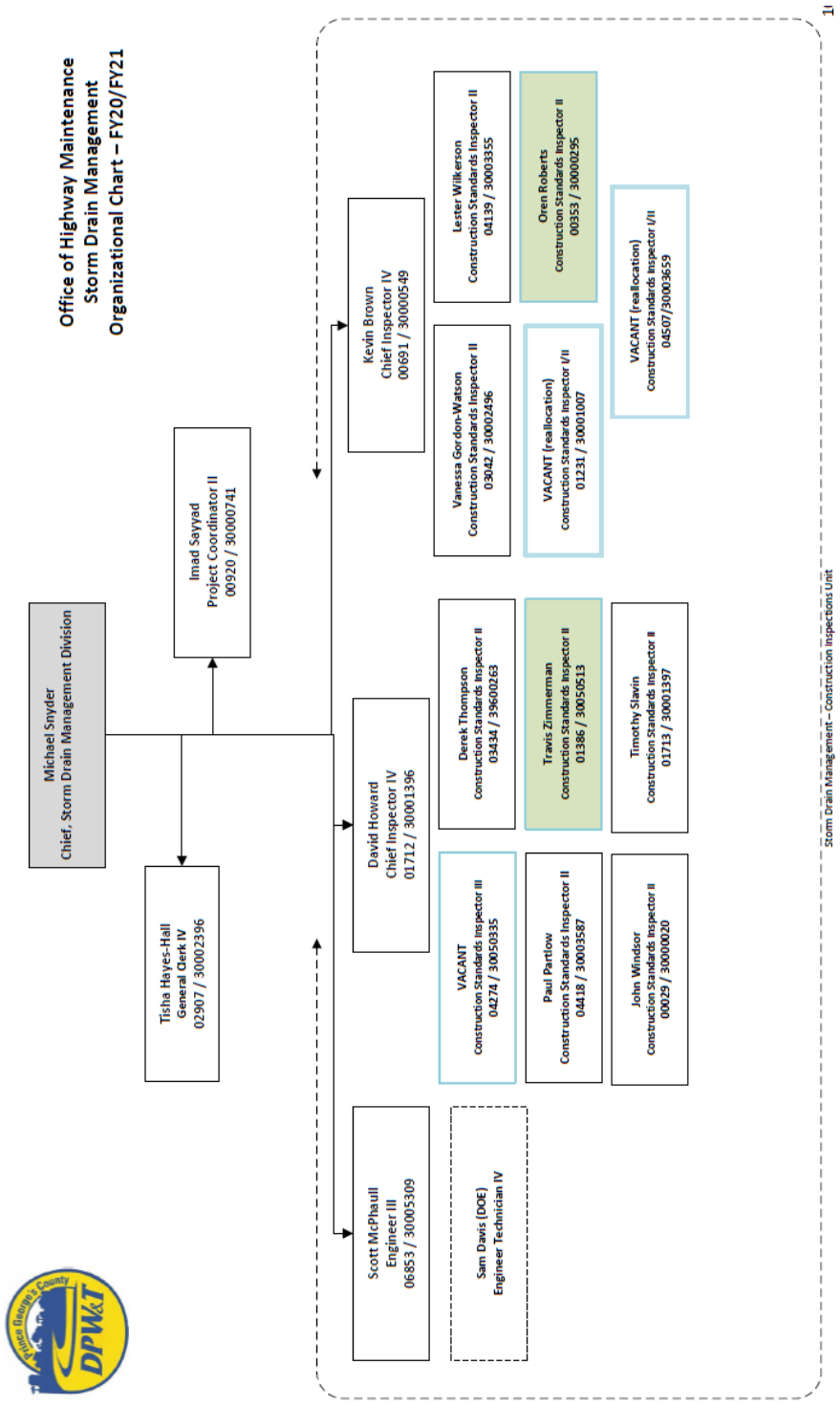

Figure A-6. Department of Public Works and Transportation, OHM - Storm Drain Maintenance Division Organizational Chart

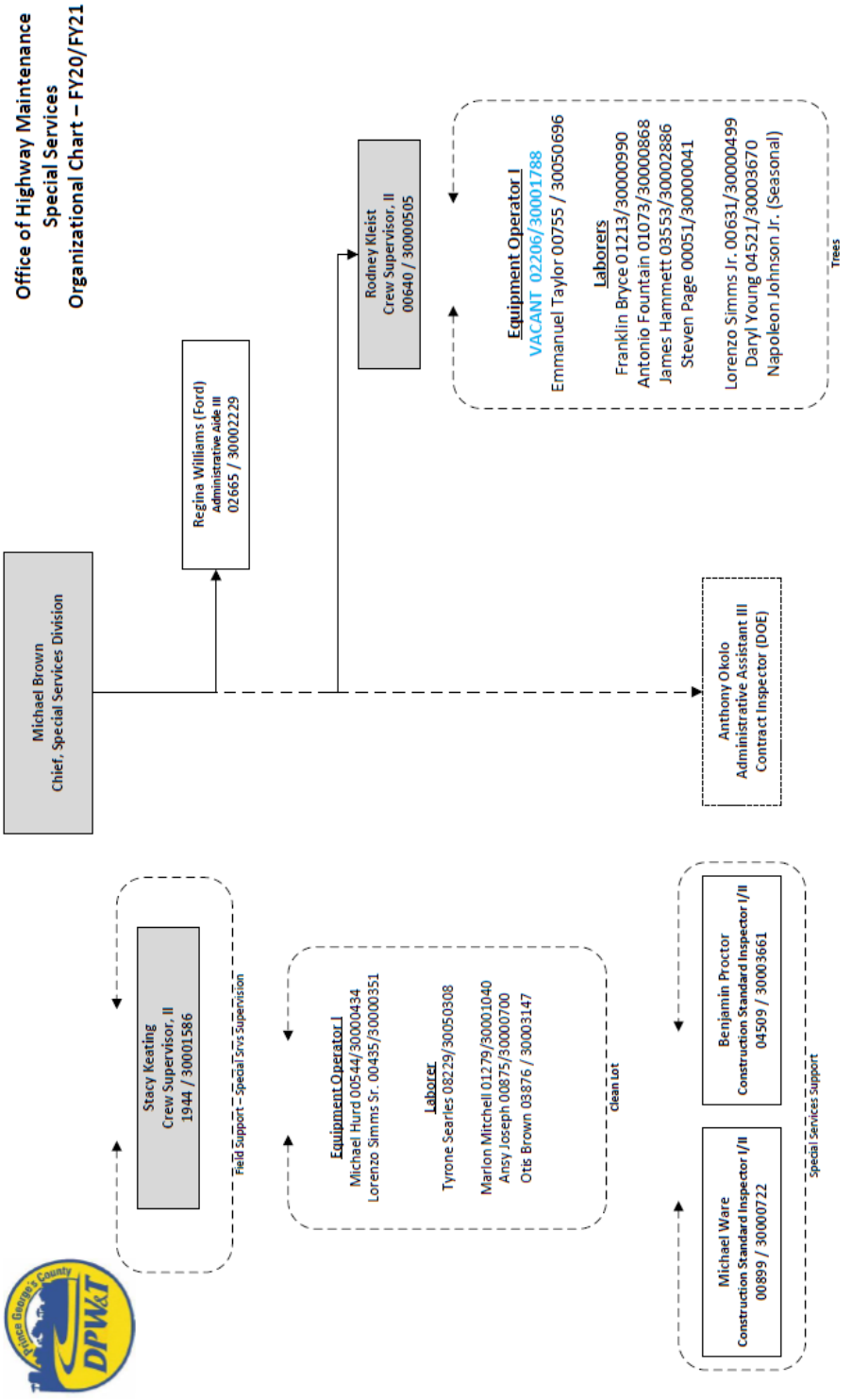

Figure A-7. Department of Public Works and Transportation (OHM) -Special Services Division

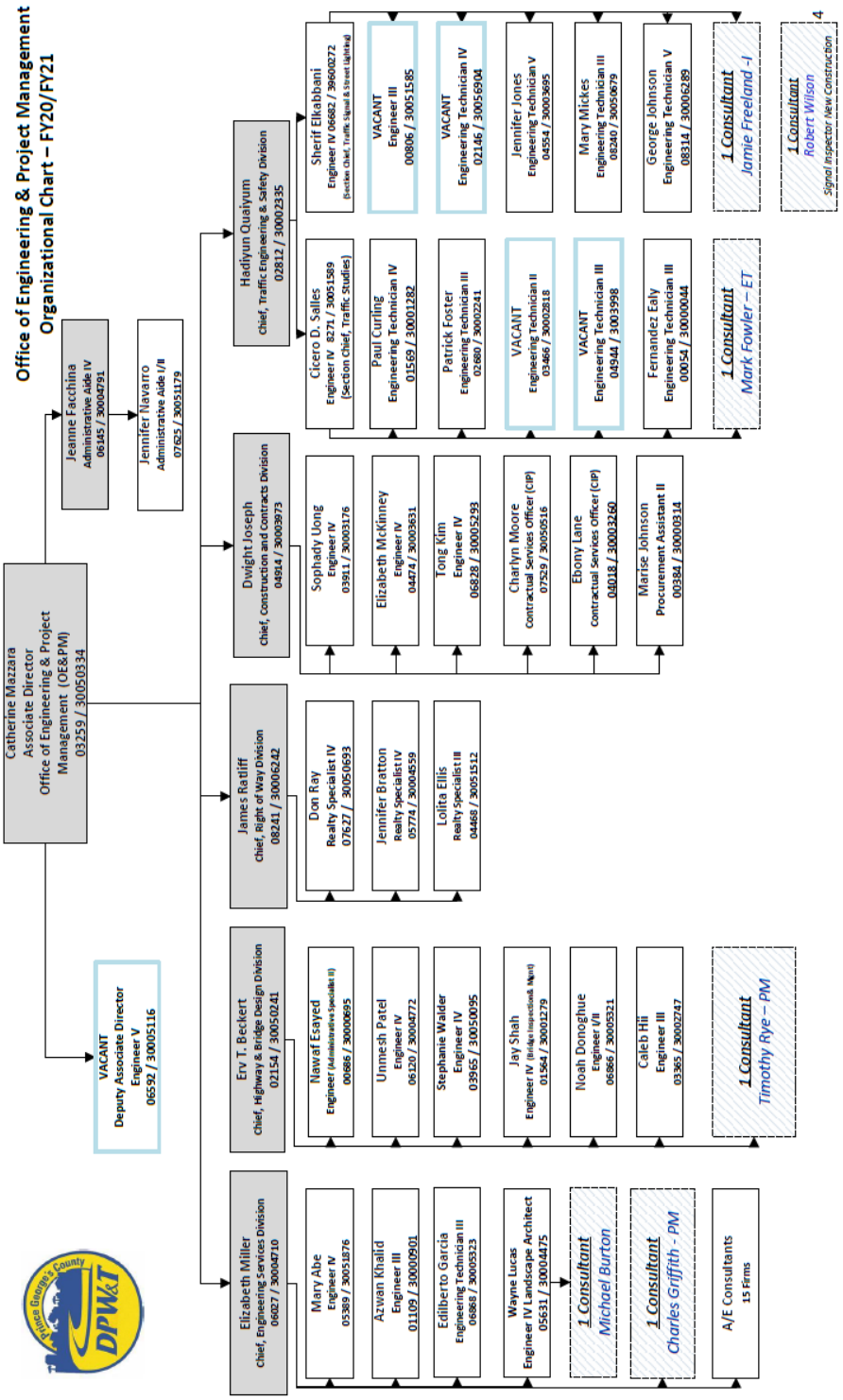

Figure A-8. Department of Public Works and Transportation - Office of Engineering and Project Management Organizational Chart

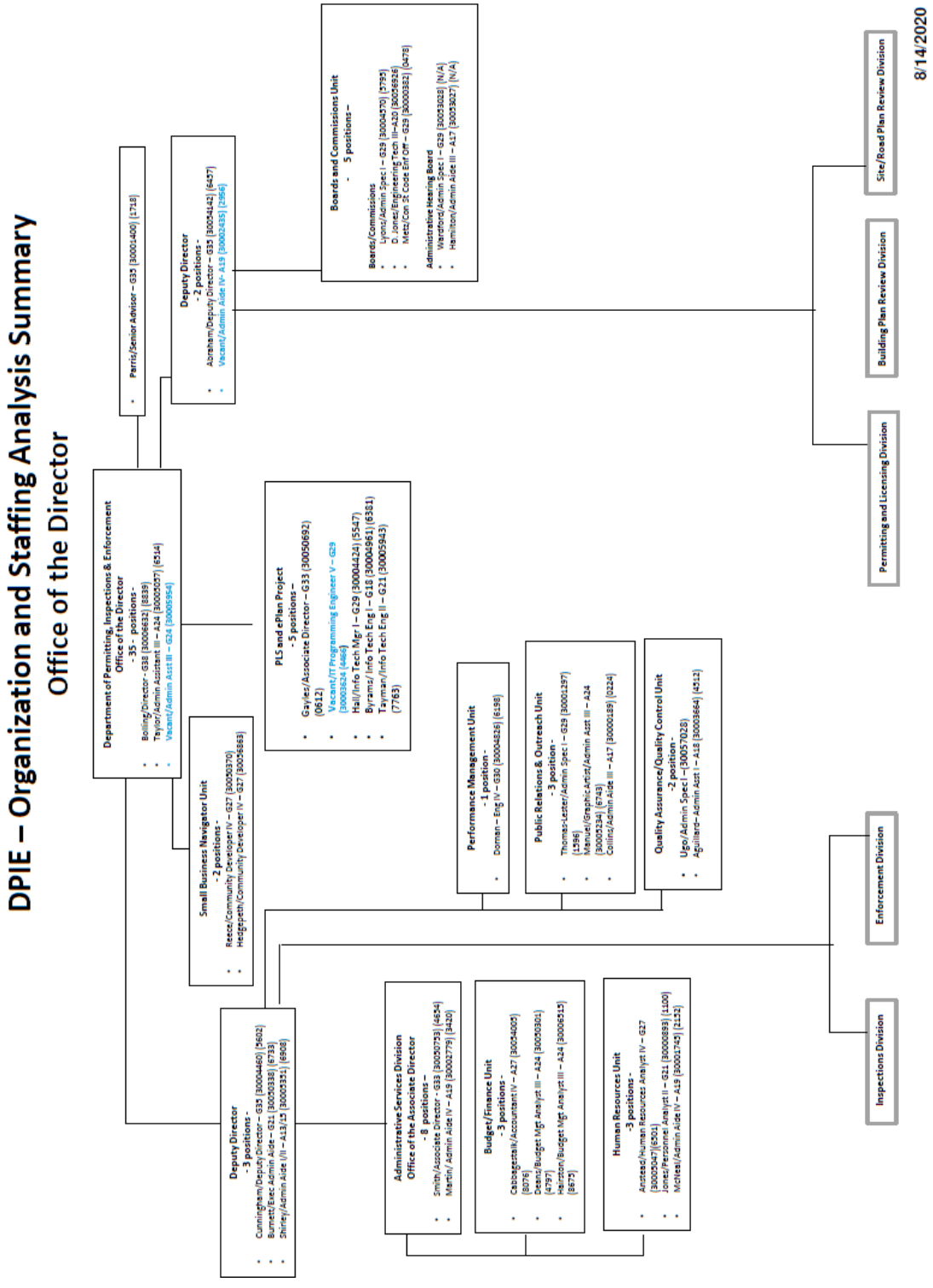

Figure A-9. Department of Permitting, Inspections and Enforcement - Organization and Staffing Analysis Summary, Office of the Director

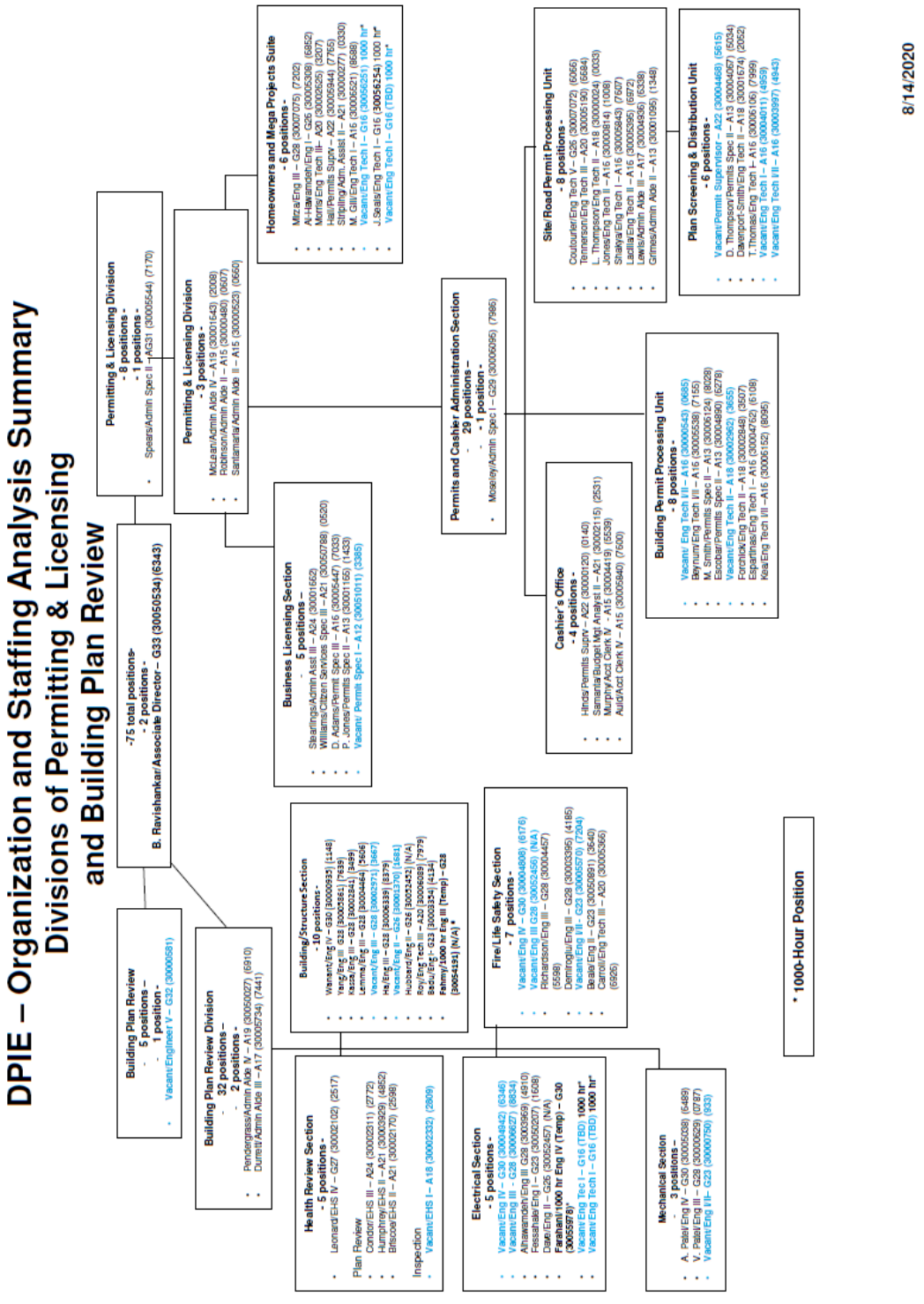

Figure A-10. Department of Permitting, Inspections and Enforcement - Organization and Staffing Analysis Summary, Permitting and Licensing Division and Building Plan Review

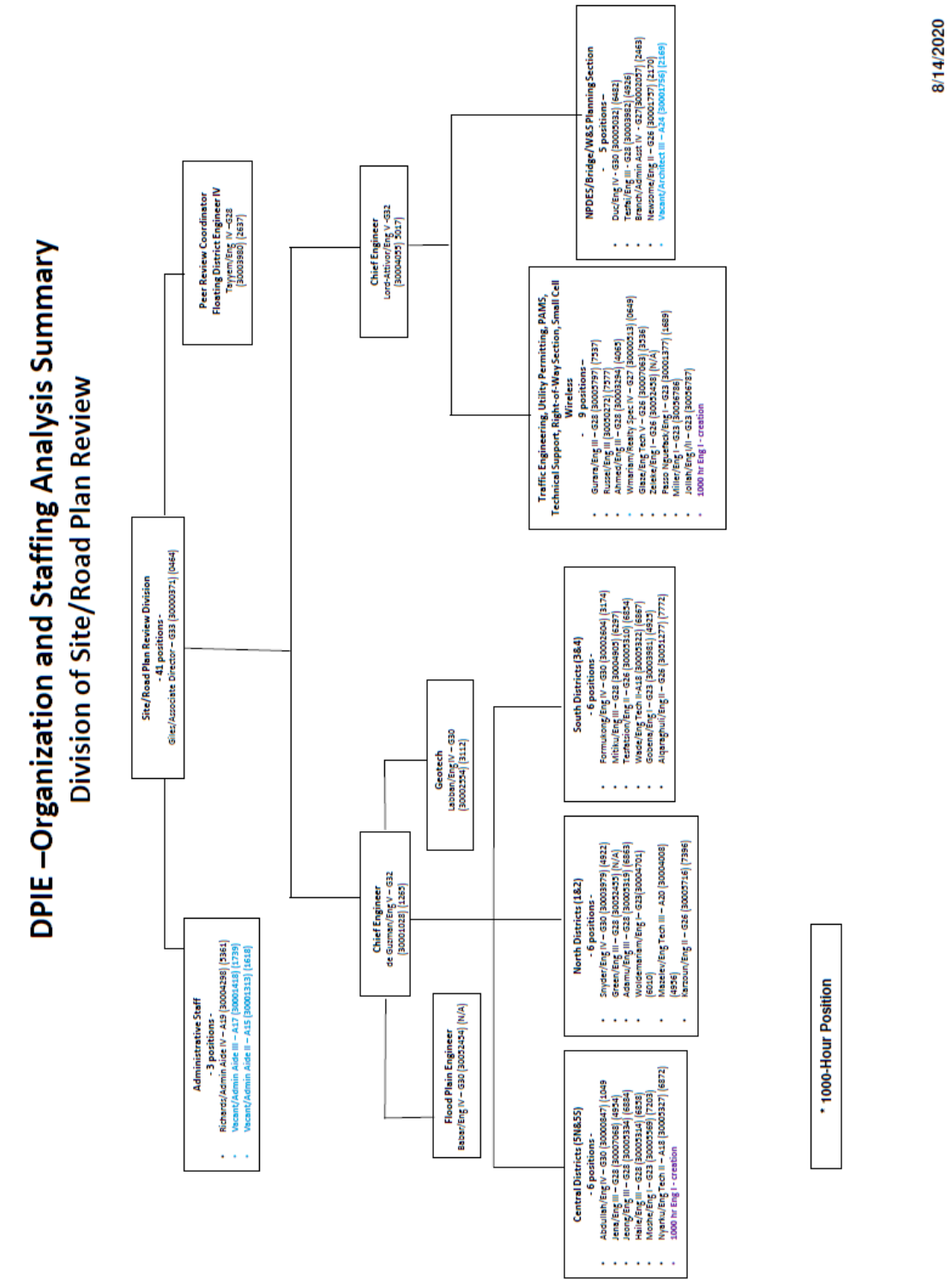

Figure A-11. Department of Permitting, Inspections and Enforcement - Organization and Staffing Analysis Summary, Site/ Road Plan Review Division

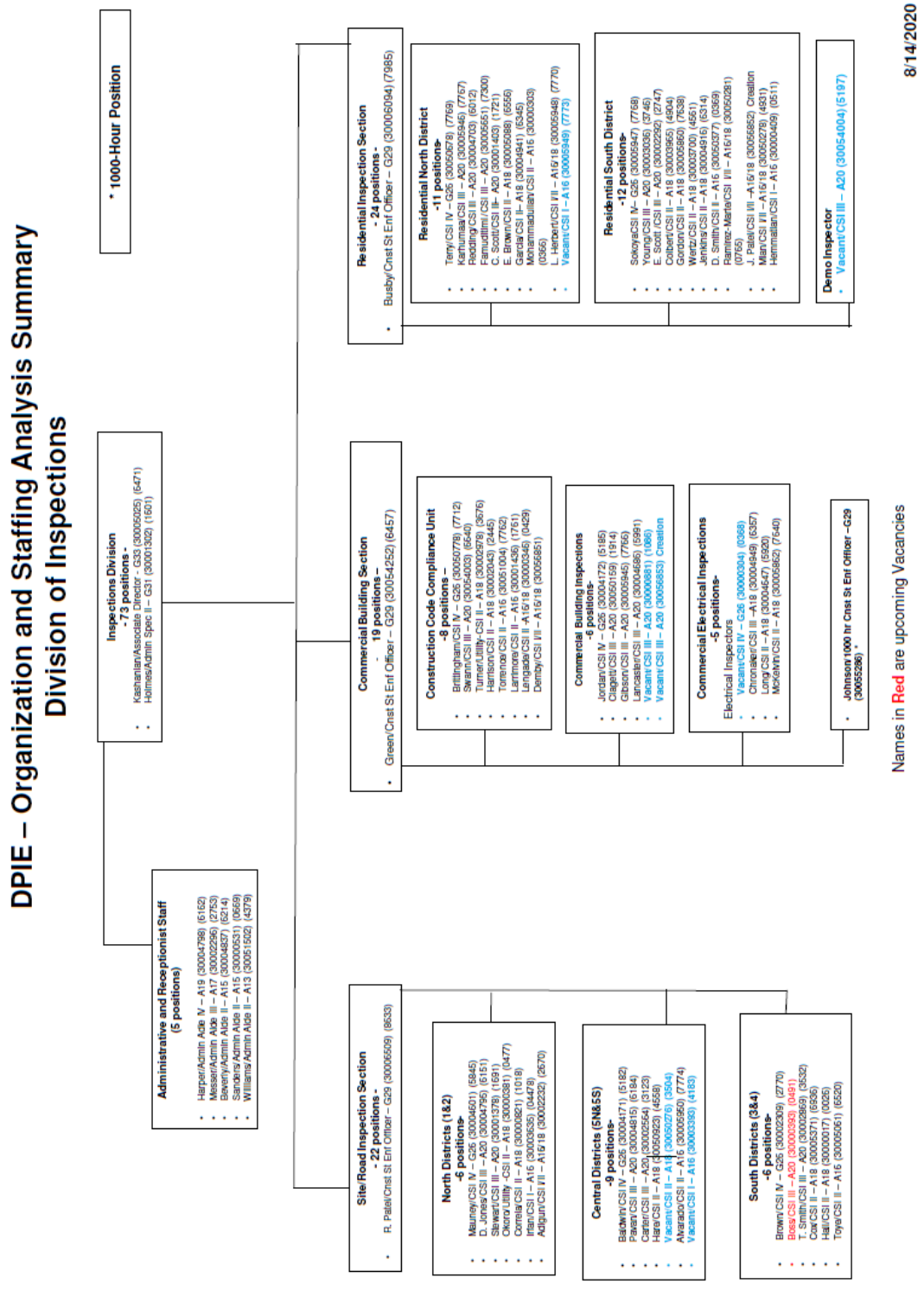

Figure A-12. Department of Permitting, Inspections and Enforcement - Organization and Staffing Analysis Summary, Inspections Division

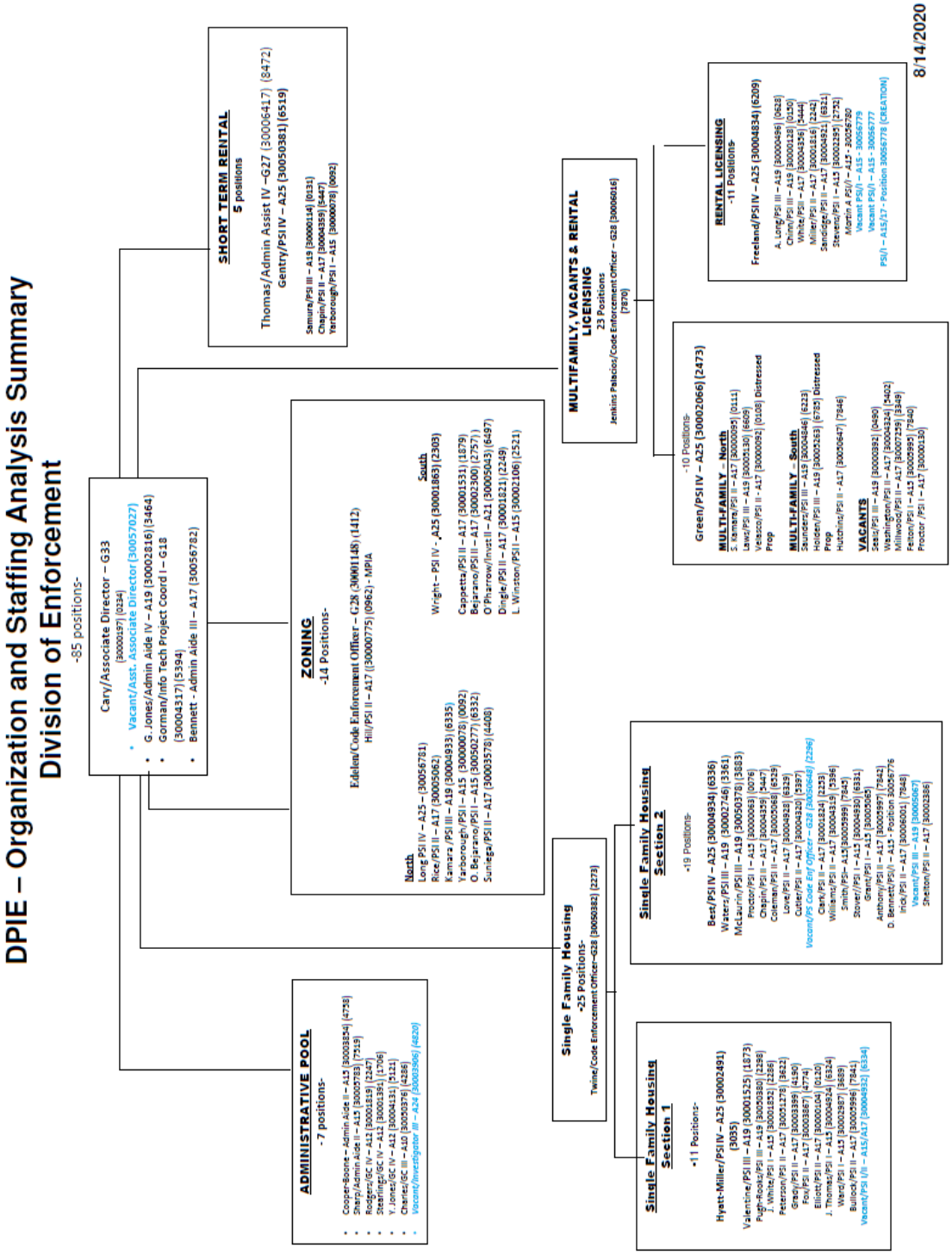

Figure A-13. Department of Permitting, Inspections and enforcement - Organization and Staffing Analysis Summary, Enforcement Division

B. LEGAL AUTHORITY

Permit Condition Part IV. B: Prince George's County shall maintain adequate legal authority 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 2020, the County maintained 74,099 records for infrastructure (manhole, inlet, and outfall) points and 4,982 drainage areas associated with these structures. 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 2020, the inventory includes a total of 6,009 completed urban BMPs. A summary of the records of each BMP types is provided in Table C-1.

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

BMP Inventory	Geodatabase Table	Number of Records
New Development BMPs	BMP	3,785
Restoration BMPs	RestBMP	749
Stream Restoration and Outfall Stabilization	AltBMPLine	106

BMP Inventory	Geodatabase Table	Number of Records
Storm Drain Vacuuming, Street Sweeping, Tree Planting, and Impervious Area Elimination	AltBMPPoly	474
Septic Denitrification or Connection to WWTP	AltBMPPoint	895
TOTAL		**6,009**

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. For FY 2020, an update of the MS4 regulated permit area and associated impervious areas has been 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 2020, the BMP inventory includes 911 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 from collaboration with the Health Department and the Washington Sanitary Service Commission (WSSC), 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 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 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 2020

MDE 8-digit code	Watershed Name	Number of Plans	Disturbed Area (Acres)	Proposed Impervious Area (Acres)
02131103	Western Branch	49	394.98	260.26
02140205	Anacostia River	69	198.33	162.25
02140201	Potomac River U tidal	21	31.79	30.89
02140203	Piscataway Creek	13	80.54	29.60
02140201	Patuxent River upper	18	234.46	94.13
02140111	Mattawoman Creek	4	21.71	13.24
02140204	Oxon Creek	8	15.53	12.82
02131102	Patuxent River middle	3	6.78	0.64
02131101	Patuxent River lower	2	3.01	5.54
TOTAL		***187***	***987.13***	***609.37***

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. Techno-gram 2-2019 – "Revised 100-year Stormwater Management Quantity Control", which informs every one of which areas in the County require 100-year storm control.
2. Techno-gram 3-2020 - "Site Plan Requirement", which establish requirements for a legible site plan to be submitted with all non-residential building and grading permit.
3. Techno-gram 4-2020 - "Floodplain Requirements and Procedures", which clarify the floodplain requirement in County Code and County's Stormwater Management Design Manual.

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. 187 Concept Plans approved
2. 148 Site Development Plans reviewed
3. 111 Final Plans reviewed
4. 43 Redevelopment Projects
5. 65 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 within three districts. The total number of site/road inspectors for FY 2020 was 19. During this reporting period, these inspectors performed a total of 9,701 stormwater inspections and issued 12 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
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.

With this annual report, the inspection records of the completed BMPs that are required to have 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 Inspection Records

Inspection Inventory	Geodatabase Table	Number of Records
New Development BMPs	BMPInspections	3,691
Restoration BMPs	RestBMPInspections	749
Stream Restoration and Outfall Stabilization	AltBMPLineInspections	106
Tree Planting	AltBMPPolyInspections	199
TOTAL		**4,745**

These BMPs are inspected and maintained by three different programs: 1) preventive maintenance inspection of private owned storm water management facilities by Department of Environment (DoE); 2) preventive maintenance inspection of public owned storm water management facilities by 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).

Preventive Maintenance Inspection of Private Owned and Restoration BMP Facilities

Inspections and Compliance Section (ICS) of Stormwater Management Division (SMD), DoE is responsible for preventive maintenance inspections of all privately owned or restoration BMPs. There is a total of 4,011 privately maintained BMPs in 2020 BMP Inventory database (Table D-4).

Table D-4. BMP inventory inspected and/or maintained by DoE

BMP Type	Number of BMPs
New Development	3,394
Restoration/Redevelopment	364
Rain Check Rebate	253
TOTAL	***4,011***

Property owner is responsible for maintenance of the facility unless County has agreed to maintain. Inspection report is forwarded to the property owner for compliance within 30 days. ICS encourages voluntary compliance from the property owner and therefore, depending on case to case basis, extends the compliance date, if found to be valid. Property owner informs the concerned Inspector about compliance action and schedules for re-inspection. Those who fail to bring the facility into compliance are issued with Notice of Violation. It has been observed that most of private property owners agree to bring the facility into compliance. It requires communication between the inspector and the property owner or their representative to bring the facility into compliance.

During the this reporting year, 1,029 privately maintained BMPs were inspected and nine (9) follow-up or re-inspections were conducted. Results of these inspections are included in the geodatabase.

Preventive Maintenance Inspections of Public Facilities

Department of Public Works and Transportation is responsible for the maintenance and operations of all publicly owned BMPs. The DPW&T in-house inspection and maintenance staff inspect ponds at least annually during the mowing season. Routine maintenance work, such as mowing, debris removal from trash racks, and outfall repairs including minor vegetative and structural stabilization, is performed by in house crews.

The need for major pond reconstruction is identified through the triennial inspection process conducted through a contract with McCormick Taylor. Since 2011, the County has rebuilt 128 ponds under the Deficient Pond Program. Additionally, the Office of Highway Maintenance of DPW&T is working in a partnership with the Neighborhood Design Center (NDC) and residential communities in a pilot pond community program. This program addresses the limited functionality and poor aesthetics of the County's older ponds and works to improve water quality and make publicly maintained stormwater management facilities more of a community amenity. To date, the 20 ponds have been completed under the Pilot Pond Program. An historical summary of the ponds that have been rehabilitated under the Deficient Pond and enhanced under the Pilot Pond Program is included in Table D-5.

Table D-5. Rehabilitated Ponds under the Deficient Pond and Pilot Pond Programs

Calendar Year	Deficient Pond Program	Pilot Pond Program	Total
2011	20	2	22
2012	19	4	23
2013	17	3	20
2014	11	0	11
2015	13	3	16
2016	4	0	4
2017	8	2	10
2018	17	3	20
2019	14	2	16
2020	5	1	6
TOTAL	**128**	**20**	**148**

As of August 18, 2020, the triennial inspection program rated 170 ponds as poorly maintained. Out of these 170 ponds, 18 ponds were rated as "NR" (not rated) due to insufficient data available at the time of the inspection and/or they were actively under construction as a Restoration Project under the purview of DoE. DPW&T recently obtained the as-builts for these facilities. These 18 ponds should obtain a better grade once re-inspected and/or once the retrofit has been completed and re-inspected. Of the remaining 152 facilities, 18 of these ponds are scheduled for maintenance by our in-house crews and all major issues should be addressed. This leaves 134 ponds with poorly maintained status, based upon the August 2020 report. DPW&T currently has an active contract for the remediation of 3 ponds and expects the work to be completed within three months. Once completed, these 3 poorly maintained ponds will be re-inspected by McCormick Taylor and should achieve a compliant status.

Currently, there is no Pond Rehabilitation Contract in place, but it is anticipated that one will be ratified by January 2021. Typically, DPW&T is awarded a yearly budget of 1.75 million dollars, with $150,000 per pond the average cost of remediation. Once a contract is awarded, we anticipate being able to upgrade an additional 12 ponds and removing from the poorly maintained list. It is anticipated that there will be a balance of 119 failing ponds in FY 2021, without consideration of any new ponds that are rated as poorly maintained in this year's triennial inspection cycle. To remediate all the ponds receiving a poorly maintained rating, DPW&T estimates that it would cost in excess of 17.5 million dollars, not including the expansion of the staff resources to manage a program of this size.

Clean Water Partnership Maintenance and Stormwater Inspections for functionality

The Clean Water Partnership continued its ongoing maintenance activities in FY 2020 to ensure long-term functionality of installed stormwater BMPs. Regular maintenance at Clean Water Partnership project sites optimizes BMP performance. Clean Water Partnership crews maintained 154 BMP sites during FY 2020. This included both routine and functional maintenance. Prince George's County Department of the Environment transferred many BMPs constructed through its Capital Improvement Program (CIP) to the Clean Water Partnership for long-term maintenance. During FY 2020, the Clean Water Partnership made 381 maintenance visits to CIP BMP facilities (see Table D-6).

Table D-6. Clean Water Partnership Maintenance Activities

Program	Number of Times BMPs Maintained in FY 2020	Number of Stormwater Inspections in FY 2020
CWP BMPs	585	179
CIP Transfer	381	80
TOTAL	966	259

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;

2. EROSION AND SEDIMENT CONTROL

In a letter dated February 25, 2019, MDE delegated erosion and sediment control enforcement authority to the County through June 30, 2020.

Under this authority, inspections are performed within three districts. The total number of site/road inspectors for FY 2020 was 19. During this reporting period, these inspectors performed a total of 11,698 sediment control inspections and issued 132 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. A list of County inspectors who have obtained the certification has been included on the DVD under Management Programs\Erosion and Sediment Control folder.

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 2020 reporting period, Prince George's County reported a total of 107 projects with earth disturbances of an acre or more. The total earth disturbance for these 107 projects was 748.88 acres. Copies of the disturbed area databases were forwarded to MDE throughout the year on a quarterly basis. Overall grading permit information for FY2020 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 2020 inspections, DoE contracted Consultant services to perform field screening of 150 major storm drain outfalls throughout the County. Originally, 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.

An automated field inspection tool developed by the consultant services in 2015 was used to perform the inspections. The field application allows field inspectors to access the County's geographic information system (GIS) inventory of storm drains, best management practices, streets, property ownership, etc., to facilitate the recording of field data and to automatically generate inspection reports.

The outfall screening was conducted from March 2020 through June 2020, with 158 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 tablet-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 4 hours but within 24 hours to verify the results.

It is important to note that a dry-weather flow may not indicate an illicit discharge, groundwater intrusion into storm drains is common; additionally, permitted discharges may be occurring. To determine if an illicit discharge occurred, 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 FY 2020 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 storm drain system upstream attempting to locate the source of the contamination. Additional tests at upstream structures were conducted as needed to track the contamination upstream to the source, especially where two systems converged.

All data collected during the illicit discharge screening was 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 158 inspections, 104 observed dry-weather flow. Of these, 12 sites had minor flow or conditions that did not allow for sampling; 92 chemical tests were performed. Seven sites were found to be generating pollutants higher than the threshold limits on at least one of the two tests. The outfall reports for these sites were forwarded to DoE's Code Enforcement Officer to further investigate and determine the source of the possible illicit discharge. Table D-7 below shows the details of the investigation and corrective actions taken to eliminate the illicit discharge observed at the eight outfalls.

Table D-7. Details of the Corrective Action Taken for the Illicit Discharges

Outfall ID	Corrective Actions
PG20OUT000075	At the time of the consultant's inspection, this outfall was found to be discharging water with high concentrations of detergents, ammonia, and suspended sediment and trash or debris floating on the surface. The water temperature was significantly higher than the air temperature. During the second test, the discharging water no longer had high concentrations of ammonia and suspended sediment. The inspectors determined that the illicit flow originated from Eagle Solutions in Brentwood, MD where employees

Outfall ID	Corrective Actions
	were found washing items outside. The Code Enforcement Officer met with the manager of the business and informed the manager to stop all washing activities being done outside and restricted them to perform the activities inside their facility. The issues have been resolved.
PG20OUT000006	At the time of consultant's inspection, this outfall was found to be discharging water with high concentrations of ammonia and suspended sediment and some cloudiness. The inspectors could not determine the source of the illicit flow since the upstream structures only had trickle flow which did not have high concentrations of ammonia and suspended sediment. The Code Enforcement Officer conducted an inspection of the outfall. From the inspection, it appears the cause of the high concentration of ammonia was due to stagnant water and decaying leaf material within the pipe with the section of pipe near the outfall. No illicit discharge was observed. The County will continue to monitor the outfall at the next scheduled inspection. The issues have been resolved.
PG20OUT000107	At the time of consultant's inspection, this outfall was found to be discharging water with a high concentration of ammonia, cloudiness, and a garbage odor. The inspectors could not determine the source of the illicit flow since the upstream structures did not have flow. 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 garage odor was due to stagnant water and decaying leaf material within the pipe system and in the pond. No illicit discharge was observed. The County will continue to monitor the outfall at the next scheduled inspection. The issues have been resolved.
PG70OUT058179	At the time of consultant's inspection, this outfall was found to be discharging water with high concentrations of detergents and ammonia and sediment deposits. During the second test, the discharging water no longer had high concentrations of detergents and ammonia. The County will continue to monitor the outfall at the next scheduled inspection. The issues have been resolved.
PG13OUT032758	At the time of consultant's inspection, this outfall was found to be discharging water with a high concentration of chlorine and sediment deposits. The inspectors determined that the discharge originated between the seventh and the ninth upstream structure. The eighth upstream structure was inaccessible. The Code Enforcement Officer conducted an inspection of the outfall. From the inspection, it was observed chlorine and sediment deposits was coming from an active permitted construction site. The Code Enforcement Officer informed the project manager of the issues and required the sediment controls be replaced. The project manager complied and the discharge was eliminated. The issues have been resolved.
PG86OUT027184	At the time of consultant's inspection, this outfall as found to be discharging water with a high concentration of ammonia, trash or debris floating on the surface, and cloudiness. The inspectors determined that the discharge originated between the outfall and the first upstream structure which had trash in it. There was no flow observed in the upstream structures. The Code Enforcement Officer conducted an inspection of the outfall. From the inspection, it appears the cause of the high concentration of ammonia was due to stagnant water and decaying leaf material within the pipe system. The County's DPW&T was notified and the trash in the storm drain system and the system was cleaned. No illicit discharge was observed. The County will continue to monitor the outfall at the next scheduled inspection. The issues have been resolved.

Outfall ID	Corrective Actions
PG20OUT000083	At the time of consultant's inspection, this outfall was found to be discharging water with acidic pH and foamy suds floating on the surface. The inspectors could not determine the source of the illicit flow. White sediment was found in the third upstream structure near Olive Garden in Capitol Heights, MD. From the inspection, it was observed acidic pH and foamy suds and sediment deposits was coming from an active permitted construction site. The Code Enforcement Officer informed the project manager of the issues and required the sediment controls be replaced. The project manager complied and the discharge was eliminated. The issues have been resolved.

The County also investigated the problems observed during the FY 2020 illicit discharge screening concerning structural problems, sediment deposits, erosion, floatables, and odors. Below are the details of are 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. 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 drain pipes or through pipe separation of the joints. No cracks or pipe separation were found during their investigation. 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 rip-rap at the end of the outfalls to eliminate the erosion problems. 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 & debris from these outfalls, and from the surround areas. 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. 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 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 52 commercial and industrial complexes were inspected over the course of the inspections. A total of 20 potential water quality concerns was identified and reported to the County for follow-up investigation and/or enforcement. Of these potential water quality concerns, six (6) were improper storage of materials and containers; one (1) was oil staining of the pavement; two (2) were lack of sediment controls on an active construction site; three (3) were pavement staining from a restaurant grease waste container; three (3) were trash & debris around the property; one (1) was staining of the pavement; three (3) were water runoff from vehicle washing; and one (1) was dumpster leaking. 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 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 by placing them under a cover. 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 contactor and DPIE's Code Enforcement Officer with the Site/Road Inspection Section were informed of the lack of sediment controls which could allow sedimentation to leave the site. DPIE issued a violation notice to the contractor and required the contractor to replace or repair any sediment control devices with any deficiencies and install additional controls to make sure the sedimentation is contained within the site. When the site was re-inspected, it was observed that the contractor complied with the request and the sediment control devices were in compliance. 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 around the used oil disposal container 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. The issue has been resolved.
- Dumpster leakage: The property owners were informed of the leakage from the dump which appeared to be motor oil. The Code Enforcement Officer requested the property owners to place a lock on the dumpster to stop people from illegally dumping liquids like motor oil into their dumpster. When the property was re-inspected, it was observed that

the property owners complied with the request by placing a lock on the dumpster. The issue has been resolved.

- Pavement stains: During the inspection of the properties, the County was not able to determine the source of the staining of the pavement. The property owners were informed of the pavement stains and educated them on good housekeeping practices to ensure trash and debris does not enter the County storm drain system and ensure all spills are property cleaned up if they do occur. The issues have 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. 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 are 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 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 a call from a concerned resident about a grease trap at a fast food chain overflowing in the parking lot. A DoE inspector conducted an investigation of the site and observed the grease trap was clogged and it has not been maintained for many years. The inspector notified the owners of the fast food chain and the owners of the property of the overflow. A commercial plumbing contractor was contracted by the owners. The grease trap

was pumped/cleaned out. Also, the grease in the parking lot was cleaned up using a jet vacuum truck and pressure washers. The overflow from the grease trap complaint was resolved.

- DoE received a call from a concerned resident regarding a sewage odor coming from the wood area located beside his property. A DoE inspector met with the property owner and conducted an investigation of the property and wooded area. The inspector flowed the stream channel down through the wood area and discovered a sewer manhole overflowing. The notified WSSC of the sewer overflow and met the WSSC technician to show the location of the overflow. Later that day, the inspector was notified by WSSC the blockage in the sewer line was removed and overflow was addressed by WSSC.
- DoE received a call from a concerned resident regarding a complaint about commercial vehicle maintenance activities be performed on a commercial property. A DoE inspector conducted an investigation of the property and observed repairs on a commercial vehicle being done. The inspector informed the property owner that no vehicle repairs can be done on his property. The inspector required the property owner to either obtain a County permit for his activity on his property or stop all repairs on the property. The inspector re-inspected the property and has not observed any vehicle repair activity on the property.

Environmental Engineering Program

The Prince George's County Health Department responds to complaints concerning 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 112 complaints/notifications to assess threats to local streams and waters of the state**.** A copy of these records can be obtained by contacting County's Health Department.

Illegal Dumping and Spills

DPW&T responds to illegal dumping occurring along the public road right-of-way. During FY 2020, the County received 3,700 litter service requests from citizens through the County's 311 system. DPW&T responded by removing the debris within 5 working days of notification. Additional information on the County's road maintenance litter control is found under "Litter Control" on page 86.

HMD is responsible for handling the initial response to all hazardous material spills within the County. In FY 2020, the Hazardous Materials (HAZMAT) team responded to 238 calls for assistance. The number of responses per month is provided in Table D-8. 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 Fire and EMS Department.

The fuel category indicates that the incident involved a response for a potential release of petroleum material. On calls involving 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 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 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-8. Hazmat Calls in FY 2020

Month	Number of Hazmat Responses	Number of Actions Taken	Response Types				Resolved	Number of Cases Referred to MDE*
			Fuel	CO	Chemical	Other		
Jul-19	34	34	16	7	6	5	34	16
Aug-19	26	26	10	5	2	9	26	10
Sep-19	19	19	6	4	4	5	19	6
Oct-19	23	23	3	10	4	6	23	3
Nov-19	13	13	5	5	3	0	13	5
Dec-19	19	19	11	5	3	0	19	11
Jan-20	28	28	11	8	4	5	28	11
Feb-20	10	10	5	4	0	1	10	5
Mar-20	14	14	8	1	4	1	14	8
Apr-20	19	19	9	0	9	1	19	9
May-20	15	15	5	0	8	2	15	5
Jun-20	18	18	7	1	7	3	18	7
TOTAL	***238***	***238***	***96***	***50***	***54***	***38***	***238***	***96***

**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 2020 with expanded prevention efforts. 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 and capture over this fiscal year. However, for the second half of FY2020, anticipated litter reduction outreach events were suspended due to COVID19 social distancing requirements and school closings.

Even with COVID-19 challenges for the second half of FY2020, litter reduction efforts resulted in the removal of 192,880.19 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 2021 and beyond. Though the County hopes to achieve our target reduction of 170,628 pounds in FY 2021, the impact of COVID-19 restrictions on litter collection and dramatic reduction of volunteer clean-up efforts cannot be overstated. However, by implementing a countywide anti-litter marketing campaign, utilizing trash traps along two Anacostia tributaries, producing grade-specific activity books that focus on litter reduction and environmental health, and partnering with PGCPS to host virtual environmental classes for students, the County hopes to overcome the challenges of COVID-19 social distancing restrictions to deliver as possible on our 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-9 outlines the enacted FY2020 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 .43 factor was applied, trash collected during these events was applied towards the FY2020 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 2020. Contractors removed 206,680 pounds of trash (actual pounds without deductions) and 919 discarded tires These contractors performed cleanups in-stream, within adjacent riparian buffers, and along roadways at various locations within the Anacostia watershed. The contractor cleanups accounted for approximately 146,740 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-9 summarizes the trash reduction resulting from litter reduction activities in the Anacostia watershed during FY2020. Approximately 266,079 pounds were removed from various locations within the watershed which included municipalities. Of the total tonnage collected, 43,200 pounds of litter were recorded in PGCLitterTRAK as collected within municipal jurisdictional boundaries. Within the County jurisdictional boundaries, 222,855 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 189,154.19 pounds for all efforts in FY2020.

Table D-9. Estimated Anacostia Watershed Trash Reduction in FY 2020

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	7	175	112	*Total number of bags X 0.7 X 25 lbs. X 0.917 (accounts for*

Activity Category	Activity/Location	Number of Bags of Trash Collected	Actual Amount (pounds)	Annual Load Reduction Counted (pounds)	Calculation Methodology
Additional Roadside Litter Removal-Contracted	Anacostia River Watershed	3,060	76,500	49,105	*liquid in bottles (glass and plastic) and cans*
Municipal Cleanups	Hyattsville	371	9,275	5,953	*Total number of bags X 0.7 X 25lbs X 0.917 (accounts for liquid in bottles (glass and plastic) and cans*
	Capitol Heights	5	125	80	
	Various locations in Anacostia River Watershed (specific locations recorded in PGCLitterTRAK)	1,352	33,800	21,696	
Corvias BMP Clean Ups	Various locations in Anacostia River Watershed (specific locations recorded in PGCLitterTRAK)	543	13,575	8,714	*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	Lower Beaver Dam (BHM) Northeast Branch (BHM) Lower Beaver Dam (Deltta LLC) Northwest Branch (Deltta LLC) Sligo Creek (Deltta LLC)		26,660 19,880 23,660 55,600 4,380	19,995 14,910 17,745 41,700 3,285	*Total load x 0.75 to account for non-MS4 items (exclusive of tires) which were disposed with bags at landfill*
Bandalongs	Arundel Canal Bandalong Guilford Run Bandalong	13 89	224 2,225	206 1,428	*Total number of bags X 0.7 X 25lbs X 0.917 (accounts for liquid in bottles (glass and plastic) and cans*
Outreach and Education at Schools	Kenmoor Middle School Cherokee Lane Elementary School Dodge Park Elementary Carrollton Elementary			1,172.87 1,868.23 252.14 931.95	*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			***266,079***	***189,154.19***	

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 2020 marks the 6th year of the County's NPDES MS4 permit cycle under this implementation plan. As the County moves into a new permit cycle, the County will continue to conduct community and stream cleanups, promote adoption of additional stream segments under the Adopt-a-Stream Program, install "No Dumping Signage," and add Big Belly trash and recycling stations at bus stops. The County ramped up anti-litter outreach and education efforts in FY 2020 with the kickoff of the County's anti-litter marketing campaign. 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. Permitting and installation of the County's third BandalongTM trash trap is projected by the end of FY 2021. 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 target annual trash load reduction.

The results of instream monitoring performed by the Metropolitan Washington Council of Governments (MWCOG) from 2011 to 2020, are shown in Table D-10 and Table D-11. 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 that are outlined in Table D-9 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-10. 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

(Monitoring data was provided by MWCOG)

Table D-11. 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

Year	Number of Surveys per Year	Total Weight (grams)	Total Plastic Bottle Weight (grams)	Percent Weight Plastic Bottles
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

(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. A list of comprehensive community cleanup achievements during the reporting period is provided in Table D-12.

Table D-12. Comprehensive Community Cleanup Achievements in FY 2020

Community	Zoning Housing Code Enforcement		Bulky Trash		Vehicle Audit	
	Housing Code Violations Issued	Zoning Code Violations Issued	Tires Collected	Trash Collected (Tons)	Violations Issues	Vehicles Towed
Woodlawn	90	0	1	9.23		
Berkshire/Parkland/Sansbury Park	78	2	2	2.96		
Glassmanor	49	7	0	5.22		
Kingswood/Dresden Green	50	0	2	8.14		
West Lanham Hills/ Hanson Oaks	43	0	5	4.00		
Princess Gardens/Hickory Hill (formally Greenwood Hills)			1	5.51	8	2
South Potomac (Phase 1)				5.00	5	4
South Potomac (Phase 2)				5.90	16	4
Windbrook					12	4
Roblee					5	
TOTAL	***310***	***9***	***11***	***45.96***	***46***	***14***

Although the focus of the program is aesthetic improvement of communities, the provided services also benefit water quality by removing potential sources of stormwater pollution, such as trash and debris from private property, heavy metals and toxic substances from abandoned and deteriorating vehicles, and accumulated litter at storm drain inlets. There are 90 active cleanups in the rotation, hence, a community is scheduled for a comprehensive cleanup approximately every four years.

Approximately 46 tons of bulky trash and litter were removed from communities in FY 2020 through this program.

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 2020 was 33 tons or 66,000 pounds of litter removed from communities across Prince George's County.

Roadside Cleanups

The County maintains multiple programs and partnerships to address trash along roadways. The litter pick up is performed by DPW&T and Department of Corrections crews, volunteers and the State Highway Administration (SHA). Roadway collection programs include roadside cleanup on landfill approach roads, removal of litter from the County roadsides, Adopt-a-Road and Adopt-a-Median programs, removal of litter from non-roadside County property by DPW&T and a community service program by Department of Corrections. In addition, the County is responsible for some non-roadside cleanups of trash, debris (including debris resulting from evictions) and abandoned items from properties and right-of-way's other than roadsides. During this reporting period, DPW&T serviced 9,000 miles of roadway and collected and disposed of 1,512 tons or 303,800 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 better estimate load quantities. 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.

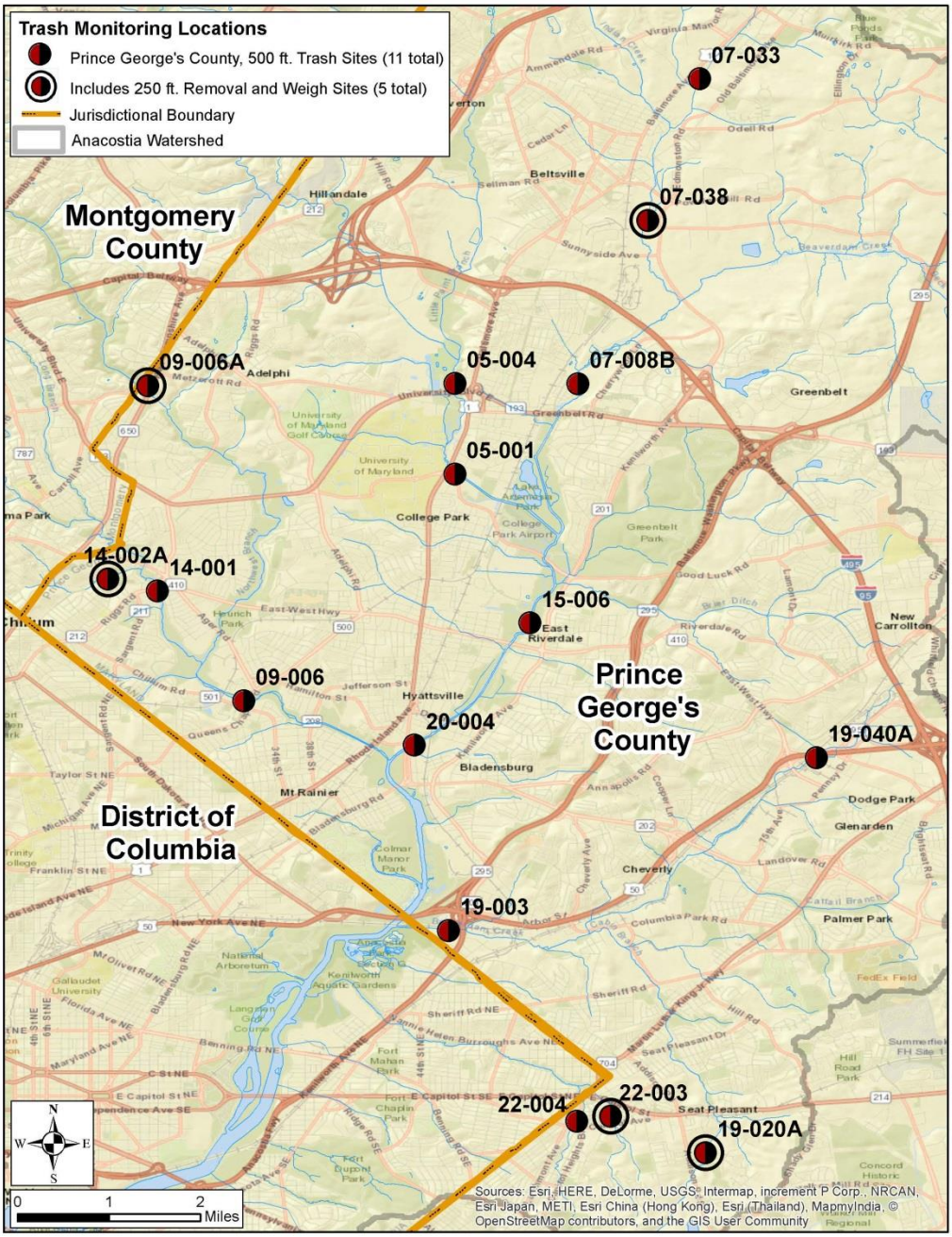


Figure D-1. Anacostia TMDL-Related Trash Monitoring Locations

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.

Storm Drain Stenciling

The Storm Drain Stenciling Program continues to raise community awareness and alert 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 storm drain inlets for new developments, this program focuses on stencils to educate residents of older communities. The County purchases the paint, tools, and stencils used by volunteers to stencil the "Don't Dump – Chesapeake Bay Drainage" message. In some communities, environment-centric murals have been painted on storm drain covers. In FY 2020, due to COVID19 school and government closures, storm drain stenciling efforts were suspended.

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 is currently exploring the future expansion of residential curbside collection service of food scraps. With the completion 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 FY2020, due to COVID-19 restrictions, the County suspended these in-person events. The County is currently working to continue the program virtually as well as to 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 138 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. A list of tours to the Materials Recycling Facility (MRF) in FY 2020 is provided in Table D-13.

Please note that due to COVID-19 restrictions, County facilities remain operational but remain closed to the public. All public tours were suspended as of March 1, 2020, until further notice.

Table D-13. Materials Recycling Facility Tours

Date	Tours
7/2/2019	Summer Youth Group
7/3/2019	My Girlfriend's House
7/9/2019	William Schmidt Center
7/11/2019	Summer Youth Group
7/12/2019	UMD
7/18/2019	Teacher PD - PG
7/17/2019	Resident Tour
7/22/2019	SYEP Students
7/24/2019	SYEP Students
7/24/2019	SYEP Students
7/25/2019	SYEP Students
7/31/2019	SYEP Students - Finance
8/7/2019	PGCC Senior Center
8/13/2019	Anne Arundel County Residents
8/14/2019	William Schmidt Center
10/1/2019	John Bayne ES - PG
11/6/2019	Global Health
11/22/2019	Surrattsville HS
12/4/2019	Adas Israel School - DC
12/16/2019	Resident Tour
12/24/2019	Joseph Freedman
1/7/2020	Largo International HS-PG
1/9/2020	Flinstone ES - PG
1/10/2020	Flinstone ES - PG
1/14/2020	Riderwood Retirement Village

Date	Tours
1/30/2020	Flinstone ES - PG
2/7/2020	Nestle Employees
2/11/2020	Thomson ES - DC
2/13/2020	PG Park & Planning
2/24/2020	Lee PCS -DC
2/25/2020	Lee PCS -DC
3/2/2020	Bowie State Employees
3/3/2020	Hearst Elementary
3/4/2020	Hearst Elementary
3/6/2020	Sierra Club
3/9/2020	Maury Elementary
3/10/2020	Maury Elementary

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 2020, the Division issued 4,662 violation notices and 1,098 citations in response to trash-related complaints. The Division cleaned 162 vacant properties through the Clean Lot Program. Contractors were hired to remove and dispose of the illegally dumped items at these properties.

FY 2021 goals

For FY 2021, under ongoing COVID-19 restrictions, the County as possible will continue to perform stream cleanups, community cleanups, and outreach and education. 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. It should be noted that two (2) additional instream trash capture devices (BandalongTM) were under design in FY 2020. The trash trap at Guilford Run has been installed and installation of the trash trap at Cabin Branch is planned for FY'2021. 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 recently established Environmental Crimes Taskforce will also continue to work to bring illegal dumping to a halt.

During FY2021, 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 2020, the County continued to provide compliance assistance for the County-owned and municipal-owned industrial properties listed in Table D-14. Compliance assistance took the form of ensuring that each facility was moving towards implementing the permit requirements. This reporting year, KCI, 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 2020, 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-14. County-Owned and Municipal-Owned Industrial Properties

Number	Name of Facility
DoE	
1	Abandoned Vehicle Impound Lot
2	Brown Station Road Sanitary Landfill
3	Missouri Avenue Convenience Center
4	Materials Recycling Facility
5	Prince George's County's Yard Waste Composting Facility

Number	Name of Facility
6	Sandy Hill Creative Disposal Project
OCS	
1	Park Central Vehicle Maintenance Facility
DPW&T	
1	Brandywine Facility
2	Ritchie Service Complex
3	Glenn Dale Facility
Municipal	
1	Town of Cheverly
2	City of College Park
3	City of Greenbelt
4	City of Hyattsville
5	City of Laurel
6	City of New Carrollton
7	Town of Riverdale Park
8	City of Seat Pleasant
9	Town of Bladensburg

On the next several pages, each facility and their achievements for FY 2020 are described, along with the status of their stormwater pollution prevention plans (SWPPP). Specifically, Table D-15 through Table D-33 detail the status of the County-owned and municipal-owned facilities during FY 2020. 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.

DoE Facilities

Abandoned Vehicle Impound Lot

In FY 2020, staff at the abandoned vehicle impound lot demonstrated good pollution prevention knowledge and regularly conducted good housekeeping procedures, facility inspections, and staff training. Table D-15 below shows the status of SWPPP implementation for this reporting period.

Table D-15. Abandon Vehicle Impound Lot (Vehicle Audit Unit) Current Status

Permit Number	County Contact
12SW0312	Rhonda Edelen, Abandon Vehicle Section, DoE
FY 2020 Achievements	
Training: Site-specific facility SWPPP training was conducted for facility staff. Good Housekeeping and Pollution Prevention: Inspection and housekeeping records were well documented, including Police Department's auto theft lot. Record Keeping and Inspection: The staff performed regular facility inspections and complete SWPPP records were kept at the facility.	

Long-Term Planning
Stormwater Management: The facility staff assessed the drainage channel and made repairs to the drainage channel in FY2019 to address the channel erosion. The erosion problem has been resolved. Staff continues to routinely monitor the drainage ditch for any erosion issues.

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 to increase monitoring and maintenance of the ponds receiving runoff from the active cells. Table D-16 below shows the status of SWPPP implementation for this reporting period.

Table D-16. Brown Station Road Sanitary Landfill Current Status

Permit Number	County Contact
12SW0401	Eric Jackson, Engineer Resource Recovery Division (RRD), DoE
FY 2020 Achievements	
Training: Site-specific facility SWPPP training was conducted for facility staff. Equipment and Vehicle Wash: The landfill regularly maintained an environmentally compliant wash facility. Discharge Monitoring: The landfill staff conducted visual monitoring at all outfalls. Record Keeping: Complete SWPPP records were 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.	

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-17 below shows the status of SWPPP implementation for this reporting period.

Table D-17. Missouri Avenue Convenience Center Current Status

Permit Number	County Contact
12SW2466	Eric Jackson, Engineer Resource Recovery Division (RRD), DoE
FY 2020 Achievements	
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
BMP Maintenance: The stormwater management facility is routinely maintained.

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 work with the consultant for inspection support and with the Stormwater Management Division to monitor SWPPP implementation. Table D-18 below shows the status of SWPPP implementation for this reporting period.

Table D-18. Materials Recycling Facility Current Status

Permit Number	County Contact
12SW1224	Desmond Gladden, Contract Manager Resource Recovery Division (RRD), DoE
FY 2020 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 kept at the facility. Discharge Monitoring: The staff conducted visual monitoring at all outfalls.	
Long-Term Planning	
Record Keeping: The staff will continue to maintain SWPPP records at 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-19 below shows the status of SWPPP implementation for this reporting period.

Table D-19. Prince George's County Yard Waste Composting Facility Current status

Permit Number	County Contact
12DP2792	Eric Jackson, Engineer Resource Recovery Division (RRD), DoE
FY 2020 Achievements	
BMP Maintenance: The stormwater management facility is routinely maintained. 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.	

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-20 below shows the status of SWPPP implementation for this reporting period.

Table D-20. Sandy Hill Creative Disposal Project Current Status

Permit Number	County Contact
12SW0314A	Eric Jackson, Engineer Resource Recovery Division (RRD), DoE
FY 2020 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.	

Office of Central Services Facility

The Office of Central Services (OCS) is in compliance with the 12-SW Permit. Table D-21 below shows the status of SWPPP implementation for this reporting period for OCS' Central Vehicle Maintenance Facility.

Table D-21. Central Vehicle Maintenance Facility Current Status

Permit Number	County Contact
12SW2173	Richard Hilmer, Fleet Administrator Facilities Operation and Management Division, OCS
FY 2020 Achievements	
Training: Site-specific facility SWPPP training was conducted for facility staff. Discharge Monitoring: The facility conducted quarterly discharge monitoring. Stormwater Management: The oil/grit separator and the dry pond are routinely maintained and are functioning properly.	
Long-Term Planning	
SWPPP Compliance: The facility will continue compliance efforts, 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. 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,

including a redesign of the site in accordance with current stormwater management design criteria, is underway at the Brandywine Facility. Construction completion is expected in 2021. Quarterly visual monitoring was suspended for the 2nd quarter of 2020, due to the COVID 19 pandemic. The County Executive instituted mandatory telework and restricted access to County facilities due to severity of COVID in Prince George's County. During the 2nd quarter of 2020, Prince George's County led the state in the number of coronavirus cases and number of residents dying from coronavirus. Virtual pollution prevention training is currently under development, as face to face training is not permitted under County COVID 19 safety guidelines.

Table D-22. DPW&T Facility Overview

DPW&T Facility Name	Main Function(s)	Usage Duration	Activities
Brandywine Facility	District 4 Snow Event Response Material Storage/Services for South County	Year-Round	The facility is currently being reconstructed. Staff was relocated to Ritchie Facility in spring of 2020.
Ritchie Service Complex	Command Center and Snow Event Response and for Districts 2, 3 and 5 Materials Storage Main Maintenance Depot	Year-Round	Equipment Maintenance, Road Crew Dispatch, Materials Storage, OHM Headquarters
Glenn Dale Facility	District 1 Snow Event Response Material Storage/Services for North County	Year-Round	Crew Dispatch for North County

Table D-23 through Table D-25 show the status of SWPPP implementation for the DPW&T facilities.

Brandywine Facility

Table D-23. Brandywine Facility Current Status

Permit Number	County Contact
12SW1223	Mary Holden, Program Manager Office of Highway Maintenance, DPW&T
FY 2020 Achievements	
Staff Education and Training: The facility conducted annual pollution prevention training in fall of 2019, in conjunction with snow and ice control training. Records are being kept at the Ritchie facility while to facility is under construction. SPCC: The facility maintained good spill records for the fiscal year. Record Keeping: Record keeping is compliant with the permit including a chemical storage inventory and an MSDS catalog.	
Long-Term Planning	
Site Improvements: Major site improvements, including a redesign of the site in accordance with current stormwater management design criteria, is underway at the Brandywine Facility. Construction completion is expected in 2021.	

Ritchie Service Complex

Table D-24. Ritchie Service Complex Current Status

Permit Number	County Contact
12SW0521	Mary Holden, Program Manager Office of Highway Maintenance, DPW&T
2020 Achievements	
Staff Education and Training: The facility conducted pollution prevention training in fall of 2019, in conjunction with snow and ice control training. Records kept on site. Record Keeping: Record keeping is compliant with the permit including a chemical storage inventory and an MSDS catalog.	
Long Term Planning	
Equipment and Vehicle Wash: The bid award for the construction of a compliant vehicle and equipment wash facility was cancelled. The bids received came in at double the project budget.	

Glenn Dale Facility

Table D-25. Glenn Dale Facility Current Status

Permit Number	County Contact
12SW1234	Mary Holden, Program Manager Office of Highway Maintenance, DPW&T
2020 Achievements	
Staff Education and Training: A virtual pollution prevention training module is under development as face to face training is not permitted under County COVID 19 safety guidelines. SPCC: The facility maintained good spill records for the fiscal year. Record Keeping: Record keeping is compliant with the permit including a chemical storage inventory and an MSDS catalog.	
Long Term Planning	
BMP Maintenance: Annual maintenance for the oil and grit separator by DPW&T personnel was performed.	

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 on the next few pages. Table D-26 through Table D-33 show the status of SWPPP implementation for each municipality.

Town of Cheverly

Table D-26. Town of Cheverly DPW Current Status

Permit Number	County Contact
12SW0197	Kristi Gardner, Department of Public Works Director

FY 2020 Achievements
BMP Maintenance: Oil/grit separator is routinely maintained. Record Keeping: Complete SWPPP records were kept at the facility. 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: The facility will improve housekeeping.

City of College Park

Table D-27. City of College Park DPW Current Status

Permit Number	County Contact
12SW2148	Robert Marsili, Assistant Director of Operations and Facilities
FY 2020 Achievements	
Record Keeping: Complete SWPPP records were 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-28. City of Greenbelt DPW Current Status

Permit Number	County Contact
12SW2145	Jim Sterling, Department of Public Works Director
FY 2020 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.	
Long-Term Planning	
SWPPP Compliance: The facility will continue compliance efforts, in accordance with the permit.	

City of Hyattsville

Table D-29. City of Hyattsville DPW Current Status

Permit Number	County Contact
12SW2150	Leslie Riddle, Department of Public Works Director

FY 2020 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 facility is planning to retrofit the DPW facility, pending funding.

City of Laurel

Table D-30. City of Laurel DPW Current Status

Permit Number	County Contact
12SW1841	Courtney Clardy, SWPPP Coordinator
FY 2020 Achievements	
Training: Site-specific facility SWPPP training was conducted for facility staff. Record Keeping: Complete SWPPP records were kept at the facility. BMP Maintenance: StormCeptor and oil/grit separator are routinely maintained.	
Long-Term Planning	
Housekeeping: The City continues to improve housekeeping of the used oil recycling center.	

City of New Carrollton

Table D-31. City of New Carrollton DPW Current Status

Permit Number	County Contact
12SW2144	Andre Triplett, Department of Public Works Director
FY 2020 Achievements	
Housekeeping: Good housekeeping methods were improved for the salt dome and heavy equipment. BMP Maintenance: Oil/grit separator and bioretention facility 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-32. Town of Riverdale Park DPW Current Status

Permit Number	County Contact
12SW2146	Leonard Addison, Department of Public Works Director
FY 2020 Achievements	
BMP Maintenance: Bioretention facility is routinely maintained. Record Keeping: Complete SWPPP records 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 their housekeeping of the facility, in accordance with the permit.

City of Seat Pleasant

Table D-33. City of Seat Pleasant DPW Current Status

Permit Number	County Contact
12SW2143	Markisha Garner, Administrative Assistant
FY 2020 Achievements	
Stormwater Management: Site is currently under construction and under a Sediment and Erosion Control Plan Housekeeping: The staff performed good housekeeping through the facility. Training: Site-specific facility SWPPP training was conducted for facility staff.	
Long-Term Planning	
Record Keeping: The City continues to improve in their record keeping, in accordance with the permit. Currently, the facility is under construction with upgrades to the property and structures.	

Town of Bladensburg

Table D-34. Town of Bladensburg DPW Current Status

Permit Number	County Contact
12SW3437	Purnell Hall, Director of Public Works
FY 2020 Achievements	
Housekeeping: The staff performed good housekeeping through the facility. Training: Site-specific facility SWPPP training was conducted for facility staff.	
Long-Term Planning	
Record Keeping: The Town continues to improve in their housekeeping of the facility, in accordance with the permit.	

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.

Street Sweeping

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. The County did not perform street sweeping between June 2017 and March 2020, due to the lack of a contract for services. We recently re-initiated sweeping operations in March 2020. The contractor performed one cycle in each of our service areas between April 2020 and June 2020, with a summary provided in Table D-35.

Table D-35. Street Sweeping Summary

Route No.	Start date	End date	Miles Swept	Tons for disposal
Spring Arterial Roadways	April 27, 2020	April 29, 2020	100.9	36.37
Spring Arterial Roadways	May 1, 2020	May 19, 2020	353.1	118.18
Fall Arterial Roadways	May 19, 2020	June 5, 2020	401.00	129.79
TOTAL			**855**	**284.34**

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 2,525 service requests from constituents, inspected 3,413 inlets, and cleaned 30,723 linear feet of storm drain 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 26,087 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 2020, 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. In general, major collector and arterial urban roadways are serviced weekly with rural roadsides served at least once per month. Locations of the litter pickup routes are shown in Figure D-2. Over 9,480 miles of roadway were serviced in the litter control program in during this reporting period.

During this reporting period, DPW&T received 3,700 citizen requests for illegal dumping and litter removal through the County's 311 system. Illegal dumping in the right-of-way is removed within 5 working days of notification. Cumulatively, DPW&T litter control programs removed 1,519 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 including; temperature probes, weather forecasts via an Accuweather subscription service, and individuals monitoring the road conditions, to determine when the application of anti-icing and/or de-icing materials is warranted. Temperature probes embedded in the roadways 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. Additionally, the DPW&T command staff prepares operational goals at the onset of every operational shift. Operational goals, which detail the deicing instructions for each shift, are developed in accordance with the storm forecast, actual air and roadway temperature measurements and projected conditions during the shift. Conference calls are conducted with snow district staff to collect updated road conditions from operators four times per shift. Modifications to operational goals are continually adjusted in response to current and project conditions.

During this reporting year, the County mobilized for 3 snow and ice control events. Salt was only applied during the January 7, 2020 storm. County forces were mobilized for the other 2 storms in response to the projected forecast, but the roadway conditions never warranted the application of salt. During the January 7, 2020 storm, salt spreading was limited to icy areas identified by operators in the field, bridges, hills and known cold spots; because the road temperature gauges indicated above freezing conditions. Total salt usage for this winter season was 810 tons at a cost of just over $46,000. This is a 95% decrease from the 2019-2020 snow season. When weather forecasting dictates, pretreatment is utilized to reduce the amount of salting necessary and ensure safety to the traveling public during adverse conditions. During the reporting year, the pretreatment of roadways with brine was not indicted or utilized.

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 implemented the following operational activities to help manage and reduce salt application:
- Replaced older equipment with newer, better functioning spreaders and hoppers.
- Reinitiated a pretreatment deicing program to help reduce salting application on arterial roadways.
- Continued training of equipment operators in the proper application and loading of salt.

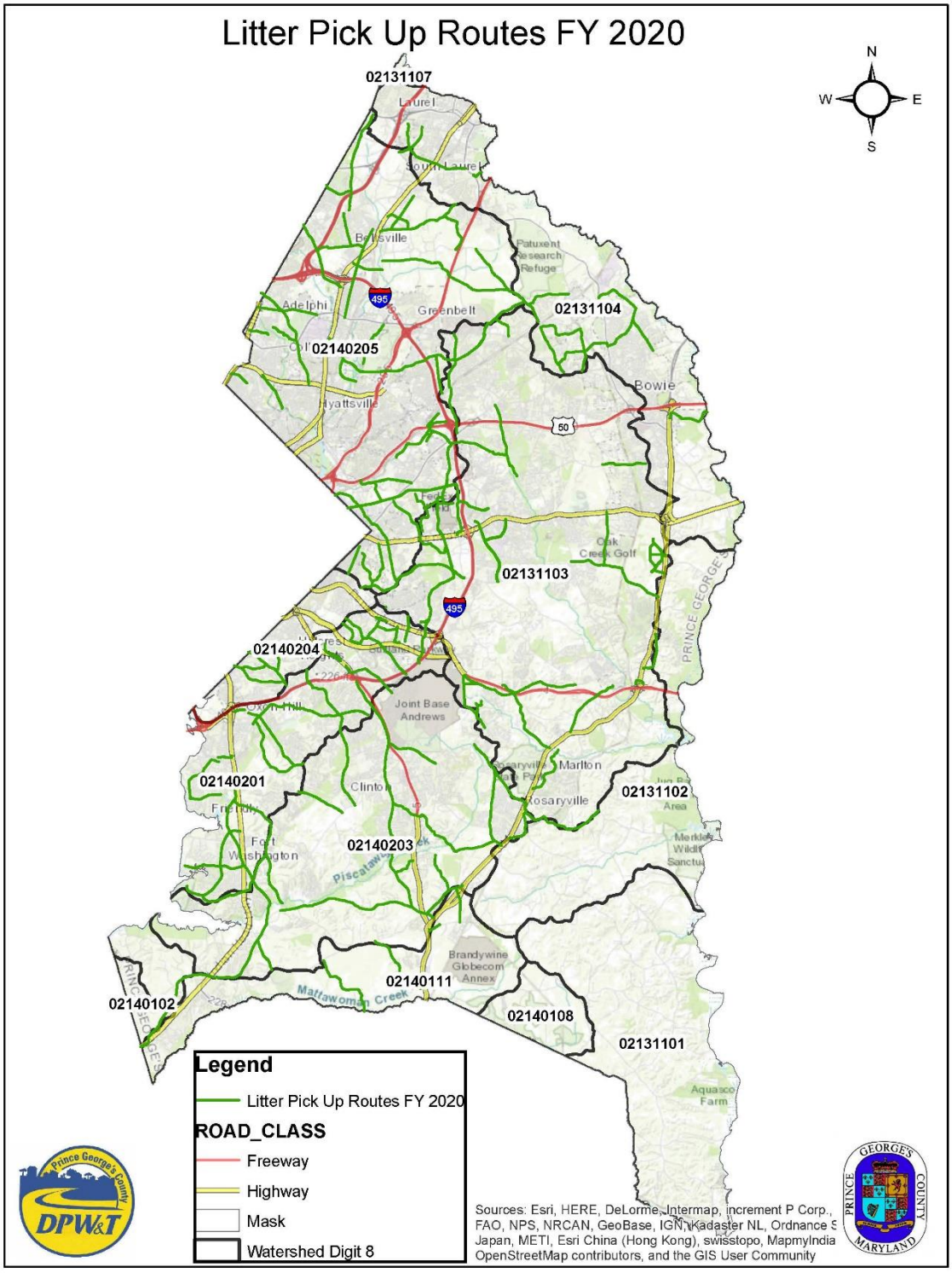


Figure D-2. Litter Pick Up Routes in FY 2020

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 63.

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.

Prior to Covid-19, DoE hosted over 250 environmental events that 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 of the County Boundary (Figure D-3). 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 2020 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.

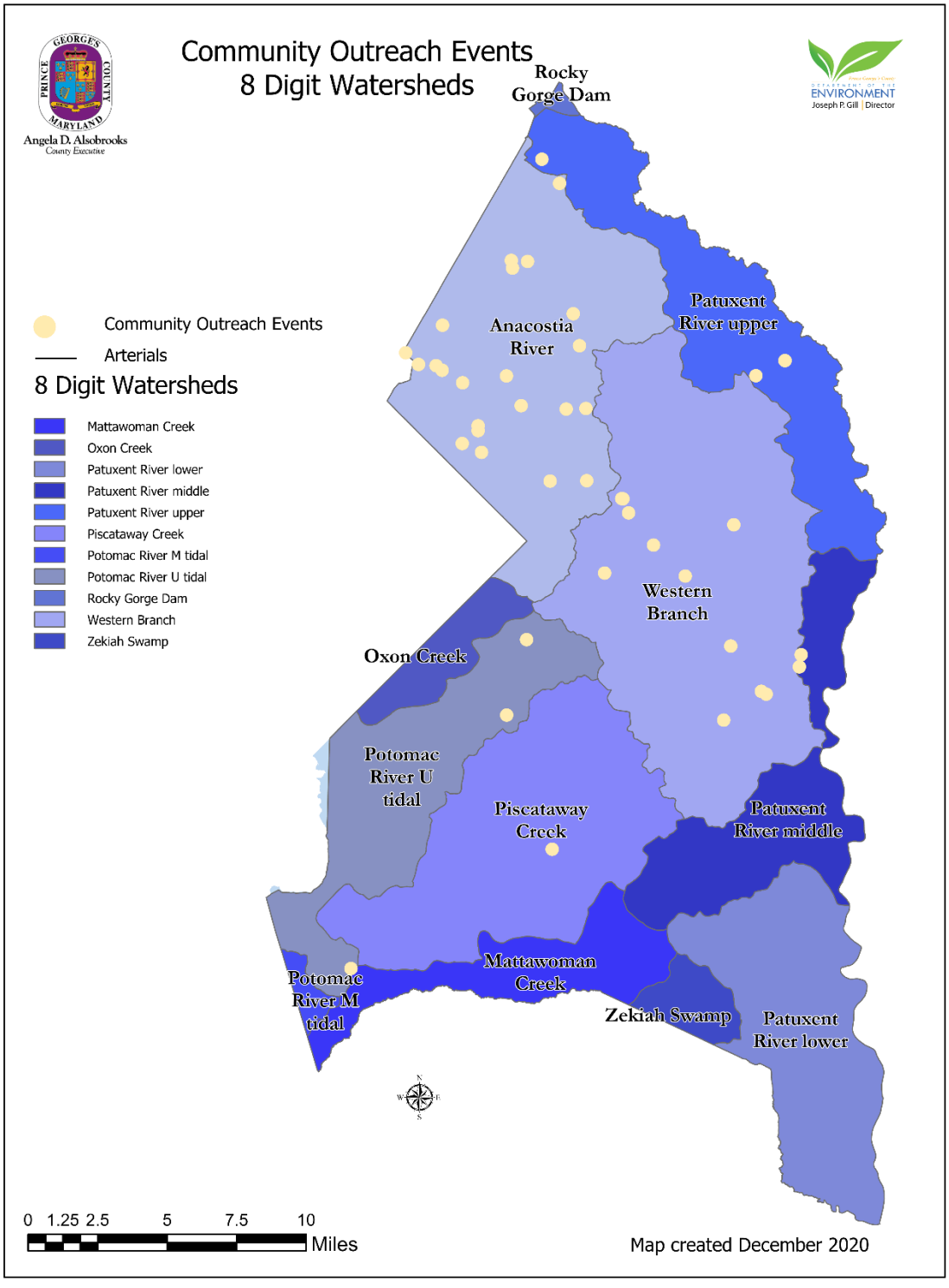
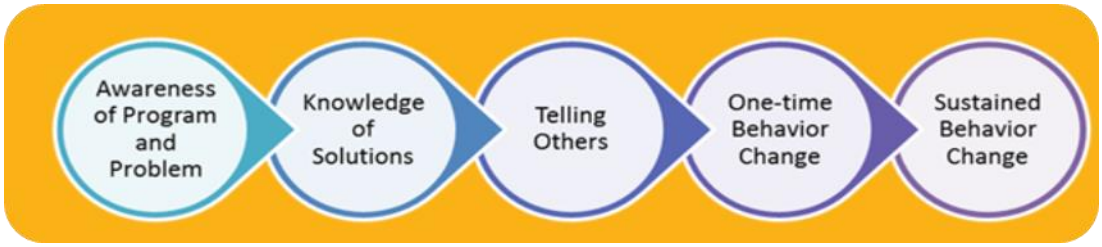


Figure D-3. Public Outreach Events

Community Outreach Promoting Empowerment

Last fiscal year, the Community Outreach Promoting Empowerment (COPE) Section partnered with even more local communities, schools, homeowner associations, watershed groups, civic groups and municipalities to inform and engage residents. These partnerships promote environmental stewardship and long-term behavior change as well as driving participation in DoE programs. Over time, such partnerships become "force multipliers" extending DoE's impact. As part of the DoE's outreach and education effort a variety of 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 90 events reaching almost 2,000 people to engage communities and individuals in restoration, promoting sustainable solutions and leveraging community action.



Outreach numbers for FY2020 are reduced due to Covid-19. Almost all scheduled events (from neighborhood meetings to large signature festivals) were canceled for the latter half of the fiscal year. With schools being closed, DoE did not have access to do teacher trainings, tree plantings, or special events like Arbor Day and Earth Day.

DoE worked to respond and pivot to virtual events and outreach. DoE provided staff with training resources and best practices for using Skype, Microsoft Teams, and Zoom for meetings and events. An internal Virtual Training Committee was established and solicited ideas for a virtual training library. COPE Staff presented to the committee to provide test cases/examples of translating presentations to virtual mode. COPE collected examples of virtual engagement techniques used by organizations around the Country. Sustainability Division staff participated in a virtual book reading as part of Earth Month.

DoE, through the Prince George's County Master Gardener Program, transitioned in-person "Ask a Master Gardener" Plant Clinics to Facebook Live events and Library Talks to Zoom Meetings.

Pet Waste Campaign

In April 2017, DoE launched a pet waste campaign that focuses on education and waste stations installation. The pet waste management campaign is the first pet waste education and waste disposal infrastructure (disposal stations) program in the County. The campaign is a multi-pronged approach which includes building partnerships, participating in community/municipal festivals/events and utilizing the Stormwater Stewardship grants to fund the installation of pet waste disposal stations. 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. Residents learn about the problems caused by pet waste and resources they can employ to help address this issue.

Figure D-4. New pet waste station installed at Morningside (August 2019)

DoE entered into a Memorandum of understanding (MOU) with the University of Maryland Environmental Finance Center to expand the pet waste education and station installation. To date, EFC has worked with over 20 communities in Prince George's County on pet waste management. In FY20, pet waste stations were installed in New Carrollton, Morningside and Cheverly. In FY20, stations were ordered for Mount Rainier, Upper Marlboro and Rosedale Estates and those stations were installed in July 2020.

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 in combination 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.

Stormwater Management Facility Maintenance

Pilot Pond Community Program

DPW&T's Office of Project Management is working in partnership with the Neighborhood Design Center (NDC) and residential communities in a pilot pond community program. DPW&T is responsible for all publicly owned stormwater management facilities (SWMFs) with storm drain maintenance being the DPW&T's largest operational function. The pilot pond community program recognizes the opportunity to leverage limited resources and improve the overall management of County ponds. The program addresses the limited functionality and poor aesthetics of the County's older ponds and works to improve water quality and make publicly maintained SWMFs more of a community amenity. The key points of the program are:

- DPW&T performs a detailed inspection of the existing facility and performs all required functional improvements to bring the facility to design standards and, as part of the program, retain this responsibility.
- DPW&T provides a landscape architect to work with the community to develop an aesthetically pleasing and technically compliant plan to improve the pond and aesthetics of the surrounding area.
- DPW&T both contracts for and pays for these aesthetic improvements.

As part of this program, the community executes a binding agreement or memorandum of understanding with the County to perform all non-functional maintenance on the pond to include grass cutting, trash and litter pick-up, as well as maintenance of all installed landscaping, hardscaping, or street furniture.

This pilot program was started in 2010. In FY 2020, NDC continued to assist DPW&T in resolving common landscaping problems around SWMFs including removing of invasive plants, clearing of outfall debris, and addressing of algal blooms. Cumulative accomplishments since the program's inception are noted in Table D-36.

Table D-36. SWMF Projects Completed for 2011-2020

Calendar Year	SWMF Projects Completed
2011	2
2012	4
2013	3
2014	0
2015	3
2016	0
2017	2
2018	3
2019	2
2020	1
Total	**20**

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 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.

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 (54) Bay-Wise Master Gardeners out of their 160 volunteers. 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 2020

- University of Maryland Extension Master Gardener Volunteers in Prince George's County certified ten (10) Bay-Wise residential yards and one (1) Bay-Wise vegetable garden.

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

Community Events

- Zoom and Facebook presentation on the "Ten Bay-Wise Landscape Management Best Practices."
- "Ask a Master Gardener Plant Clinics" were transitioned to Facebook Live events due to Covid-19 restrictions.
- In-person "Library Talks" were transitioned to virtual Zoom Meetings.

Edible Demonstration Garden at the D'Arcy Road Facility

The edible demonstration garden located at the DPW&T's D'Arcy Road Facility provides County employees and local residents contact with nature. The natural setting of the garden is ideal for environmental education and horticulture programs whose goals are to demonstrate that an edible landscape is sustainable, affordable, and productive.

The edible garden sometimes referred to as a learning landscape, uses Bay-Wise landscaping practices that focus on water quality. Gardeners can contribute to a cleaner local waterway by adhering to the following environmentally-sound landscaping approaches:

- 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

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 FY20, 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 FY20, The NDC completed projects within 27 communities with the following accomplishments reported; approximately 1,339 high risk or dying trees were removed, 814 trees were pruned, and 7,025 trees were planted. Figure D-5 illustrates the communities where projects were conducted in FY 2020. Table D-37 lists the number of trees planted since program inception.

Table D-37. Right Tree, Right Place Program Accomplishments (2011-2020)

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
TOTAL	***47,123***

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

In the spring of 2020 and continuing through the fiscal year, the COVID 19 pandemic largely halted the program itself, except for some monitoring, planning, and data work. Because of COVID-19, the RTRP program has had to cancel all 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. Springtime has generally been the best time for the program staff to meet with communities in preparation for summertime fieldwork. It remains to be seen what impact the pandemic will have on FY21 for RTRP.

Clean Up Green Up

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 Clean Up, Green Up day which is usually held in October. In addition, the volunteers complete weeding, mulching, and general cleaning projects for the outdoor areas.

NDC partners with DPW&T, and other agencies, by providing design and technical assistance to any interested groups. Last year, NDC provided outreach, education and design services to over 125 groups throughout the County through DPWT's Clean Up, Green Up Program. The FY 2020 Clean Up, Green Up event was held on October 19, 2019. The achievement realized through this partnership is detailed in Table D-38.

Table D-38. Clean Up, Green Up Program Achievements in FY 2020

Achievement	Amount
Sites	127
Volunteers	4,074
Trees Installed	390
Shrubs Installed	510
Perennials and Ornamental Grasses Planted	2,050
Spring Flowering Bulbs Planted	10,000
Landscape Designs by NDC	11
Litter and Debris Collected	35 tons

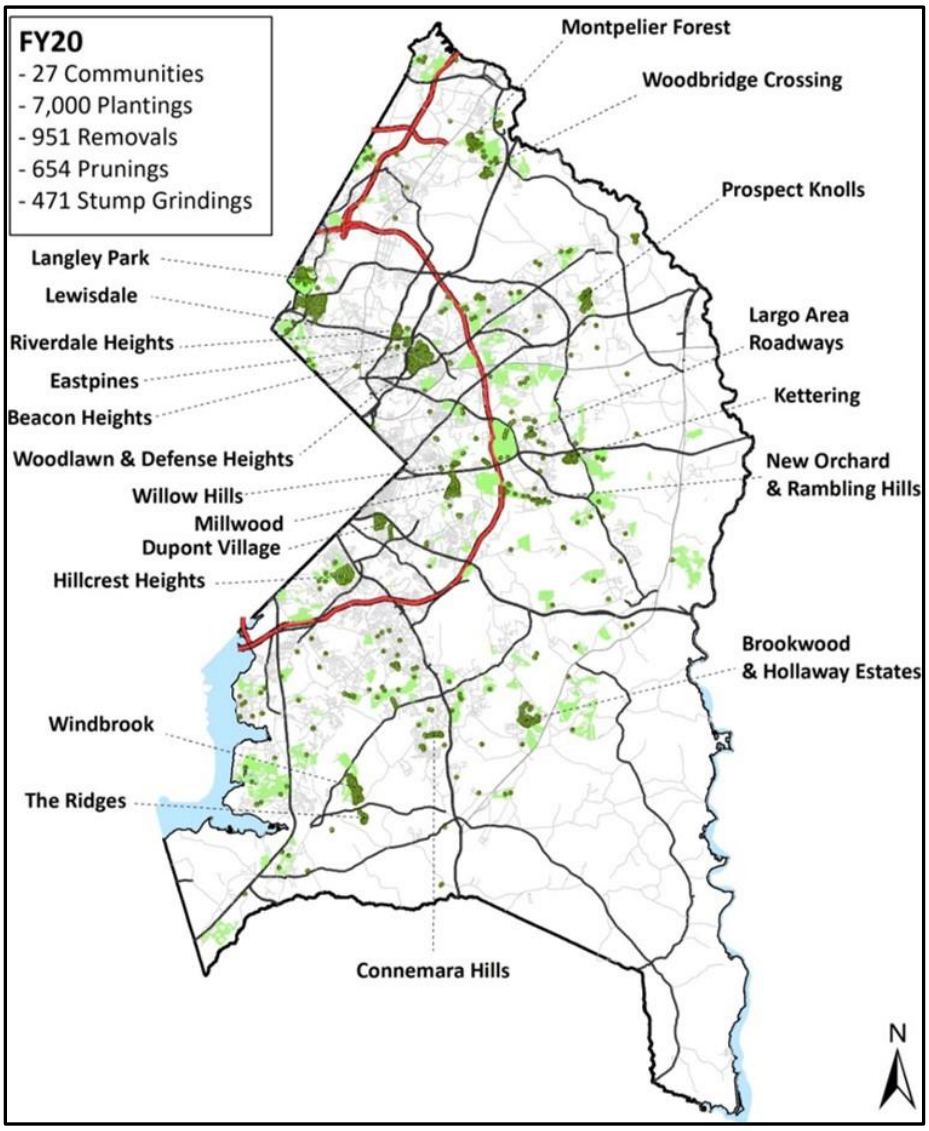


Figure D-5. Right Tree, Right Place Program Project Areas

Arbor Day

Each year, a County school, government agency, or library location is chosen to host the Beautification Committee's Arbor Day Celebration. The 36th consecutive year of Arbor Day Celebration in Prince George's County occurred in 2020. Though Arbor Day 2020 was planned, the public event was canceled due to COVID-19. Moving forward into 2021, we will hopefully celebrate Arbor Day 2021 at The Mattaponi Elementary School, where eighteen (18) native trees and shrubs will be planted to help reduce stormwater runoff.

Prince George's Beautification/Tree Planting Committee

Prince George's County Beautification Committee 50th anniversary in Prince George's County was in 2020. 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 2020, the Beautification Committee recognized over one-hundred (100) landscapes for award. Due to COVID-19, there will be no ceremony this year. Certificates and golden trowels were mailed to 70 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 52% of the County has tree cover, only 8% is in our urban communities.

Tree ReLEAF Grant Program is a countywide program that provides up to $5,000 to civic, neighborhood, community, and homeowner organizations and 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, COPE operated with reduced down staff due to retirements, and COVID-19 restrictions also impacted the program. One (1) Tree ReLeaf project was completed resulting in a planting of (36) native trees and shrubs (see Table D-39). COPE also began work on a list of long-lived, high ecological value, climate-resilient trees. The idea is to encourage communities to plant trees today that will be able to survive changing conditions throughout the tree's lifespan.

Table D-39. Tree ReLeaf Program Achievements in FY 2020

Applicant	Number of Trees and Shrubs	Amount	Watershed
Brooksquare Townhouse Condo	36	$4,833.90	Anacostia

As a first step, COPE surveyed (30) tree professionals (Arborists, Environmental Planners, Foresters, and others) observation of different tree species' survivability in urban settings. Respondents were

asked to name the top five medium- to large-sized (30 feet or more at maturity) native trees they have noted as the most successful in urban settings. The results are shown in Table D-40.

Table D-40. Top Ten Urban Trees from survey

Trees - Top Ten	
Acer rubrum | Red Maple	11
Betula nigra | River Birch	6
Celtis occidentalis | Hackberry	8
Liquidambar styraciflua | Sweetgum	6
Nyssa sylvatica | Black Gum	10
Platanus occidentalis | American Sycamore	9
Quercus bicolor | Swamp White Oak	7
Quercus phellos | Willow Oak	17
Quercus palustris | Pin Oak	6
Cornus | Dogwood	3

Arbor Day Every Day Program

Neighborhoods abundant with trees are healthier places to live and suffer less crime. We all deserve to live in that neighborhood, but some Prince George's County residents do not. Although 52% of the County has tree cover, only 8% of this tree cover is within our urban communities. 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 plan and post-planting maintenance plan. During the last fiscal year, COPE was down staff due to retirement and medical issues, and of course, COVID19 closed the schools and made volunteer school plantings impossible. Through the Arbor Day Every Day Program, (19) native trees and shrubs were planted in the spring of 2020, as detailed in Table D-41. FY2020 numbers were reduced due to COVID-19 restrictions, which prevent in-person events for tree plantings.

Table D-41. Arbor Day Every Day Program Achievements in FY 2020

School	Number of Trees
Glenridge Elementary School	11
Eleanor Roosevelt High School	8
TOTAL	***19***

COPE also continued working with the Treating & Teaching Program. Treating & 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 managements projects installed, as educational tools to support their curriculum. COPE also provides trees for outdoor classrooms for Treating and Teaching through the Arbor Day Every Day program. COPE presented at a stormwater training for teachers in March of 2020.

As the COVID-19 restrictions continue, COPE has initiated collecting best practices for safe field trainings and volunteer plantings from a variety of organizations. When COVID-19 restrictions lift, COPE plans to be ready with workable approaches for safe volunteer plantings.

Tree Planting Demonstration Program

One tree planting demonstration occurred at Dodge Park Elementary, with five trees installed as part of the event. Due to COVID-19, no Tree Planting Demonstrations occurred with HOAs during the reporting period.

Stormwater Stewardship Grants for Trees

In FY20, 2 previous Stewardship Grant recipients planted 90 trees. See table D-39. Also, Central Kenilworth Avenue Revitalization Community Development Corporation, Global Health and Education Projects, and the City of Hyattsville began new Stormwater Stewardship Tree Canopy Grants in FY20. Plantings and installation events for these grants have not yet occurred with the grant timelines adjusted due to Covid-19. These projects will support DoE's effort to increase urban tree canopy with an emphasis on underserved areas and assist in improving water and air quality. The City of Hyattsville Stormwater Stewardship grant will plant trees on public and private land and sponsor a series of educational events. By partnering with the City on Tree ReLEAF grants for the public land plantings, COPE will double the number of residential trees planted through the grant for a public-private total installation of (150) trees.

Residents who receive trees will be invited to participate in COPE's new Citizen Science Phenology project on the free iNaturalist platform. Data such as when an installed tree's leaves emerge, flowers, or forms fruit will be available to researchers studying climate change impacts on native tree species. Data will be captured in our Tree App, giving us a better picture of tree performance under different conditions. Tree recipients can communicate with other project participants to share and discuss observations. They can also learn more about their tree's ecology by using iNaturalist for crowdsource identifications of any birds, insects, or weeds they observe around their tree. By engaging residents in citizen science and social networking around trees, we hope to reinforce their commitment to care for their new tree and improve survivability.

Table D-42. Stormwater Stewardship Grant Achievements in FY 2020

Location	Grantee	Number of Trees and Shrubs
North Brentwood Park	Alliance for the Chesapeake Bay	12
46th ,47th, 48th and 49th Avenue	Town of Edmonston	78
TOTAL		***90***

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-6. The guidebook provides information on 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

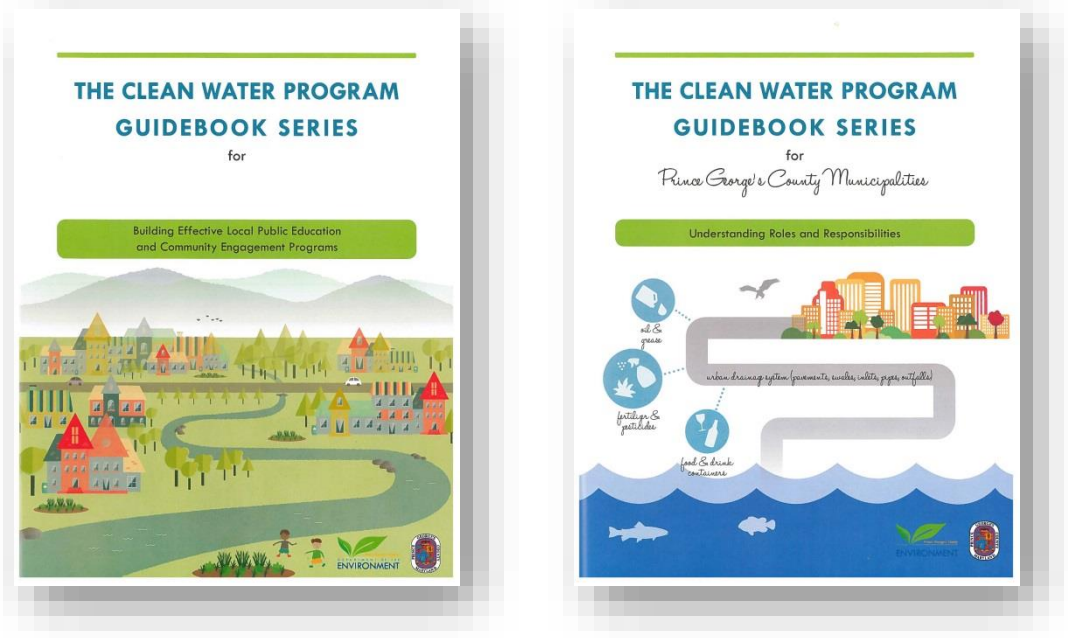


Figure D-6. The Clean Water Program Guidebook Series

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 72.

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 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 69.

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-43 , 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.

Table D-43. FY 2020 Countywide Waste Reduction Participation Events

Name of Event (Participant)	Date of Event	No. of Participants
MRF Tour	July 2, 2019	
MRF Tour	July 3, 2019	
MRF Tour	July 11, 2019	
MRF Tour	July 12, 2019	
MRF Tour	July 17, 2019	
MRF Tour	July 18, 2019	
MRF Tour	July 22, 2019	
MRF Tour	July 24, 2019	
MRF Tour	July 24, 2019	
MRF Tour	July 25, 2019	

Name of Event (Participant)	Date of Event	No. of Participants
Tour of Western Branch	July 26, 2019	20
Tour of Western Branch	July 31, 2019	14
Tour of Western Branch	July 31, 2019	
Tour of Western Branch	August 6, 2019	6
MRF Tour	August 7, 2019	
MRF Tour	August 13, 2019	
MRF Tour	August 14, 2019	
Tour of Western Branch	August 20, 2019	6
Tour of Western Branch	September 26, 2019	26
MRF Tour	October 1, 2019	
Tour of Western Branch	October 2, 2019	20
Tour of Western Branch	October 4, 2019	15
Tour of Western Branch	October 12, 2019	12
Tour of Western Branch	October 17, 2019	2
Tour of Western Branch	October 25, 2019	3
Tour of Western Branch	November 6, 2019	30
MRF Tour	November 6, 2019	
Tour of Western Branch	November 7, 2019	20
MRF Tour	November 22, 2019	
Tour of Western Branch	December 3, 2019	20
Tour of Western Branch	December 4, 2019	20
MRF Tour	December 4, 2019	
Tour of Western Branch	December 6, 2019	15
Tour of Western Branch	December 9, 2019	1
Tour of Western Branch	December 10, 2019	25
Tour of Western Branch	December 13, 2019	45
MRF Tour	December 16, 2019	
MRF Tour	December 24, 2019	
MRF Tour	January 7, 2020	
MRF Tour	January 9, 2020	
MRF Tour	January 10, 2020	
MRF Tour	January 14, 2020	
Tour of Western Branch	January 27, 2020	1

Name of Event (Participant)	Date of Event	No. of Participants
MRF Tour	January 30, 2020	
MRF Tour	February 7, 2020	
Tour of Western Branch	February 9, 2020	10
MRF Tour	February 11, 2020	
MRF Tour	February 13, 2020	
MRF Tour	February 24, 2020	
Tour of Western Branch	February 24, 2020	2
Tour of Western Branch	February 24, 2020	1
MRF Tour	February 25, 2020	
Tour of Western Branch	February 26, 2020	1
Tour of Western Branch	February 28, 2020	72
MRF Tour	March 2, 2020	
MRF Tour	March 3, 2020	
MRF Tour	March 4, 2020	
MRF Tour	March 6, 2020	
MRF Tour	March 9, 2020	
MRF Tour	March 10, 2020	

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. Tours of the MRF are open to the public, schools, and recycling coordinators, educating over 2,709 individuals this reporting.

County Office Recycling Program

On October 1, 2011, the 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.

On average 18.72 tons of recyclables are collected monthly with 10 locations also recycling toner cartridges. Nearly 1 ton of toner cartridges are recycled annually through a contract with Recycling Ink.

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.

RS staff assists in the development and implementation of 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 is recently hired three Recycling inspectors to enforce CB-87-2012 recycling mandates.

Composting

Food Scraps

During this reporting period, the County has been aggressively pursuing a potential expansion program for food scrap composting utilizing GORE® Cover System technology. In FY20 the Prince George's County Organics Compost Facility diverted 18,243.3 tons of food scraps from the landfill into 100% organic compost. However, tours of Western Branch have been suspended since March due to the recent COVID-19 outbreak. Approximately 384 individuals visited the facility during the fiscal year before restrictions were implemented.

Yard Waste

The Prince George's County Organics Compost Facility (aka Western Branch), operated by the Maryland Environmental Service (MES), accepts yard waste from approximately 177,806 households in the County. The yard waste composting program, including Christmas tree recycling, diverts a significant amount of materials from our solid waste stream, as shown in Figure D-7.

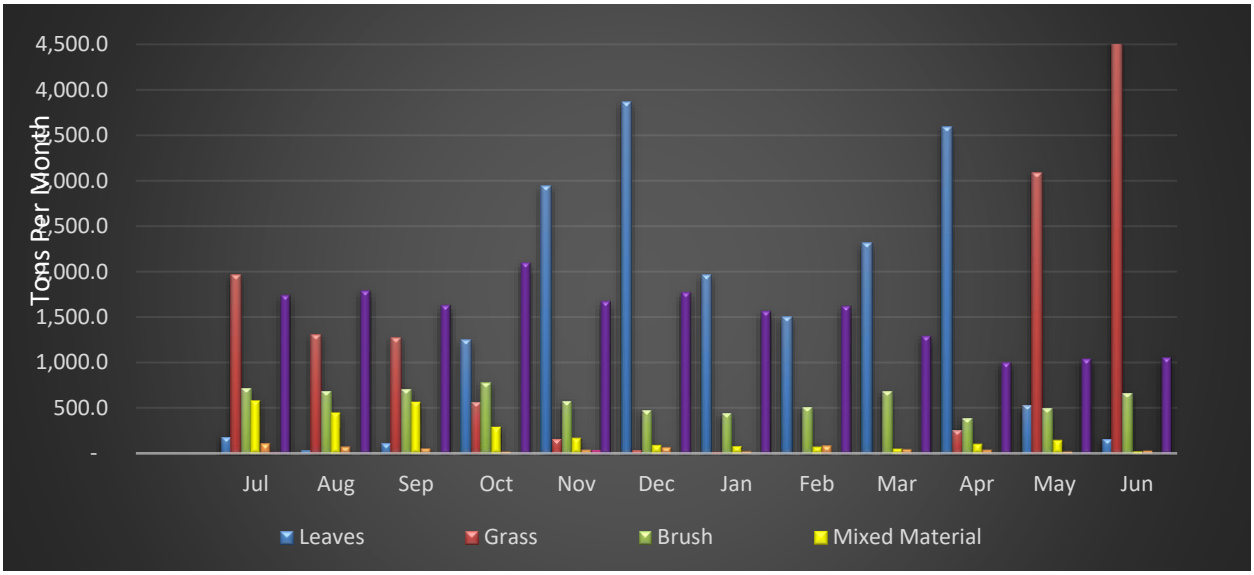


Figure D-7. Yard Waste Composting – FY 2020

Leafgro® is sold to the nursery trade, with the revenue generated from the sale returned to the County to offset the cost of the composting operation. A new product derived from food and yard waste has been trademarked and is sold as LeafGro Gold.

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.

Ride Smart

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 & Transportation in partnership with Prince George's Community College was scheduled to co-host a Pit Stop for 2020 Bike to Work Day on Friday, May 15, 2020. The event was to be held at Prince George's Community College. However, due to the COVID 19 pandemic, Bike to Work Day was cancelled in the Washington, DC Metropolitan Region for 2020.

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 24 bikeshare stations within Prince George's County and over 550 bikeshare stations throughout the Capital Bikeshare System in Maryland, Washington DC and Virginia. In December 2019, a new 15 dock Capital Bikeshare Station was installed at the National Harbor Carousel making this station the newest of the 24 bike share stations installed within the County. 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. Ridership for the 28 fixed-routes of transit service provided by TheBus for FY 20 is approximately 2.2 million passengers. Ridership is lower in FY 20, due to reduced operations under COVID and stay at home orders directives by the Maryland Governor and the County Executive. The Department is developing initiatives to increase ridership and provide alternative service delivery models for our residents.

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.

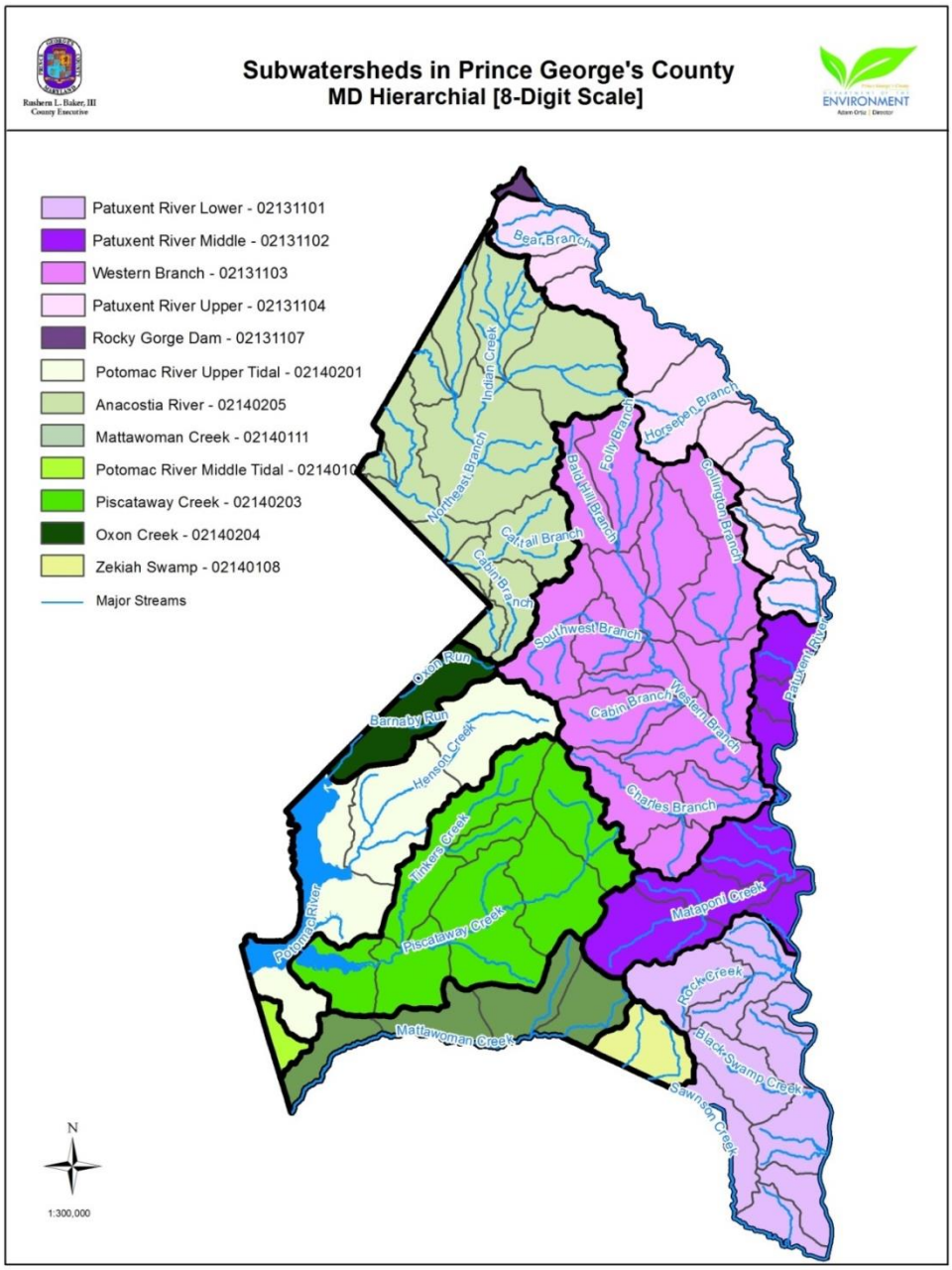


Figure E-1. Major Watersheds

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 2020, the County has already restored 2,656 acres towards this goal. Approximately 3,778 impervious acres of restoration is either in active planning (concept plan), design or construction.

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 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 2020 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 3,778 acres of impervious area. Table E-1 through Table E-5 show the pollutant load reductions for the local TMDLs from all completed projects.

Table E-1. Anacostia River – Current Achieved Reductions

Pollutant	Total Nitrogen (lbs./year) [4]	Total Phosphorus (lbs./year) [4]	Total Suspended Solids (lbs./year) [4]	Biochemical Oxygen Demand * (lbs./year) [4]	Bacteria* (MPN B/year)[5]
TMDL	Local	Local	Local	Local	Local
Baseline Year	1997	1997	1997	1997	2003
Target Load Reduction[1]	219,305	30,087	46,058,000	644,470	1,730,100
BMP Reduction - Up to 2013[2]	497	351	230,103	12,423	6,293
4th Generation Permit					
BMP Reduction - FY 2014[3]	54.26	6.46	3,356.29	269.47	971.70
BMP Reduction - FY 2015	15.79	1.75	734.19	48.11	177.99
BMP Reduction - FY 2016	350.43	160.71	521,067.32	704.81	2,662.02
BMP Reduction - FY 2017	3,462.80	488.78	708,056.00	14,151.12	41,779.74
BMP Reduction - FY 2018	7,622.47	906.86	917,594.09	29,587.97	81,341.36
BMP Reduction - FY 2019	6,663.75	728.47	390,652.18	28,295.35	77,755.60
BMP Reduction - FY 2020	2,133.18	457.21	253,984.94	6,010.48	26,441.97
Total BMP Reduction	20,302.68	2,750.24	2,795,445.01	79,067.31	231,130.38
Percent Reduction of Target	9%	9%	6%	12%	13%

**Bacteria and BOD calculation does not include reduction through alternative BMPs*
1 TMDL required load reduction for MS4 areas
2 Reductions achieved for 2009 through 2013 (permit term started in January 2014)
3 Only covers half of FY 2014 (January to June)
4 lbs. = pounds
5 MPN B = Most probable number of Bacteria per 100 milliliters

Table E-2. Mattawoman Creek – Current Achieved Reductions

Pollutant	Total Nitrogen (lbs./year) [4]	Total Phosphorus (lbs./year) [4]
TMDL	Local	Local
Baseline Year	2000	2000
Target Load Reduction[1]	11,206	948
BMP Reduction - Up to 2013[2]	0	0
4th Generation Permit		
BMP Reduction - 2014[3]	0	0
BMP Reduction - 2015	3.14	0.16
BMP Reduction - 2016	0	0
BMP Reduction - FY 2017	0	0
BMP Reduction - FY 2018	1,230.28	110.04
BMP Reduction - FY 2019	0	0
BMP Reduction - FY 2020	218.18	20.13
Total BMP Reduction	1,451.60	130.33

Pollutant	Total Nitrogen (lbs./year) [4]	Total Phosphorus (lbs./year) [4]
Percent Reduction of Target	13%	14%

1 TMDL required load reduction for MS4 areas
2 Reductions achieved for 2009 through 2013 (permit term started in January 2014)
3 Only covers half of FY 2014 (January to June)
4 Lbs. = pounds

Table E-3. Patuxent River Upper – Current Achieved Reductions

Pollutant	Total Suspended Solids (lbs./year) [4]	Bacteria* (MPN B/year) [5]
TMDL	Local	Local
Baseline Year	2005	2009
Target Load Reduction[1]	384,000	59,397
BMP Reduction - Up to 2013[2]	176,869	642
4th Generation Permit		
BMP Reduction - 2014[3]	27.39	0.00
BMP Reduction – 2015**	0	16.15
BMP Reduction - 2016	167.85	22.70
BMP Reduction - FY 2017**	0	0
BMP Reduction - FY 2018	64,163.89	11,362.81
BMP Reduction - FY 2019	12,967.19	2,476.91
BMP Reduction - FY 2020	558,811.29	4,254.24
Total BMP Reduction	636,137.61	18,132.81
Percent Reduction of Target	166%	31%

**Bacteria and BOD calculation does not include reduction through alternative BMPs*
***County had reported reduction numbers in previous reports, however the County is re-evaluating the project benefits.*
1 TMDL required load reduction for MS4 areas
2 Reductions achieved for 2009 through 2013 (permit term started in January 2014)
3 Only covers half of FY 2014 (January to June)
4 lbs. = pounds
5 MPN B = Most probable number of Bacteria per 100 milliliters

Table E-4. Piscataway Creek – Current Achieved Reductions

Pollutant	Bacteria* (MPN B/year)[4]
TMDL	Local
Baseline Year	2003
Target Load Reduction[1]	22,265.00
BMP Reduction - Up to 2013[2]	0
4th Generation Permit	
BMP Reduction - 2014[3]	2.68
BMP Reduction - 2015	3.27

Pollutant	Bacteria* (MPN B/year)[4]
BMP Reduction - 2016	607.67
BMP Reduction - 2017	2,844.76
BMP Reduction - FY 2018	28,683.95
BMP Reduction - FY 2019	9,390.94
BMP Reduction - FY 2020	2,118.73
Total BMP Reduction	43,652.00
Percent Reduction of Target	196%

**Bacteria and BOD calculation does not include reduction through alternative BMPs*
1 TMDL required load reduction for MS4 areas
2 Reductions achieved for 2009 through 2013 (permit term started in January 2014)
3 Only covers half of FY 2014 (January to June)
4 MPN B = Most probable number of Bacteria per 100 milliliters

Table E-5.Rocky Gorge Reservoir – Current Achieved Reductions

Pollutant	Total Phosphorus (lbs./year) [4]
TMDL	Local
Baseline Year	2000
Target Load Reduction[1]	27
BMP Reduction - Up to 2013[2]	0
4th Generation Permit	
BMP Reduction - 2014[3]	0
BMP Reduction - 2015	0
BMP Reduction - 2016	0
BMP Reduction - FY 2017	0
BMP Reduction - FY 2017	0
BMP Reduction - FY 2018	0.22
BMP Reduction - FY 2019	0.26
BMP Reduction - FY 2020	0
Total BMP Reduction	0,000.48
Percent Reduction of Target	1%

1 TMDL-required load reduction for MS4 areas
2 Reductions achieved for 2009 through 2013 (permit term started in January 2014)
3 Only covers half of FY 2014 (January to June)
4 Lbs. = pounds

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;

Table E-6 through Table E-9 show County's revised annual restoration targets to meet local TMDLs. These new targets replace the original time estimates developed in the County's restoration plans and are based on the County's progress up to the current reporting year.

Table E-6. Revised Annual Load Reduction Targets for Anacostia Watershed TMDLs

Fiscal Year	Total Nitrogen (lbs./year) 1	Total Phosphorus (lbs./year) 1	Total Suspended Solids (ton/year)	Biochemical Oxygen Demand (lbs./year) 1	Fecal Coliform Bacteria* (MPN B/year) 2	Status
2016 (Actual)	350.43	160.71	260.53	704.81	2,662.02	Reduced
2017 (Actual)	3,462.80	488.78	354.03	14,151.12	41,779.74	Reduced
2018 (Actual)	7,622.47	906.86	458.80	29,587.97	81,341.36	Reduced
2019 (Actual)	6,663.47	728.47	195.33	28,295.35	77,755.60	Reduced
2020 (Actual)	2,133.18	457.21	126.99	6,010.48	26,441.97	Reduced
2021	11,282.90	2302.7	1345.8	63,101.00	223,127.20	Projected
2022	11,282.90	2,302.70	1,345.80	63,101.00	223,127.20	Projected
2023	11,282.90	2,302.70	1,345.80	63,101.00	223,127.20	Projected
2024	11,282.90	2,302.70	1,345.80	63,101.00	223,127.20	Projected
2025	11,282.90	2,302.70	1,345.80	63,101.00	223,127.20	Projected
2026	11,282.90	2,302.70	1,345.80	63,101.00	223,127.20	Projected
2027	11,282.90	2,302.70	1,345.80	63,101.00	223,127.20	Projected
2028	11,282.90	2,302.70	1,345.80	63,101.00	223,127.20	Projected
2029	11,282.90	2,302.70	1,345.80	63,101.00	223,127.20	Projected
2030	11,026.00	2,302.70	1,345.80	63,101.00	189,835.70	Projected
2031	8,252.57	1,594.99	871.96	52,714.64	178,511.70	Projected
2032	6,287	1501.02	915.31	40,377.18	178,501.70	Projected
2032	4,619.43	1,574.23	1,150.47	34,805.65	145,371.60	Projected
2033	2,956	1177.7315	687.5775294	28,746.81	135,948.83	Projected
TOTAL	***154,919***	***31,617***	***18,479***	***866,404***	***3,066,295***	***Projected***

**Bacteria and BOD calculation does not include reduction through alternative BMPs*
1 lbs. = pounds
2 MPN B = Most probable number of Bacteria per 100 milliliters;

Table E-7. Revised Annual Load Reduction Targets for Mattawoman Watershed TMDLs

Fiscal Year	Total Nitrogen (lbs./year) 1	Total Phosphorus (lbs./year) 1	Status
2016 (Actual)	0	0	Reduced
2017 (Actual)	0	0	Reduced
2018 (Actual)	1,230	110	Reduced
2019 (Actual)	0	0	Reduced
2020 (Actual)	218.18	20.13	Reduced
2021	446	83	Projected

Fiscal Year	Total Nitrogen (lbs./year) 1	Total Phosphorus (lbs./year) 1	Status
2022	446	83	Projected
2023	446	83	Projected
2024	446	83	Projected
2025	446	83	Projected
2026	446	83	Projected
2027	446	83	Projected
2028	424	83	Projected
2029	357	83	Projected
2030	357	83	Projected
2031	357	83	Projected
2032	59	83	Projected
TOTAL	***6,124***	***1,126***	**Projected**

[1] *lbs. = pounds*

Table E-8. Revised Annual Load Reduction Targets for the Patuxent Upper and Rocky Gorge Watershed TMDLs

Fiscal Year	Total Phosphorus (lbs./year) [1] Rocky Gorge	Status Rocky Gorge	Total Suspended Solids (ton/year) Upper Patuxent	Fecal Coliform Bacteria* (MPN B/year) [2] Upper Patuxent	Status Upper Patuxent
2016 (Actual)	*0*	*Reduced*	0.083925	22.7	*Reduced*
2017 (Actual)	*0*	*Reduced*	245.40	0	*Reduced*
2018 (Actual)	*0.22*	*Reduced*	*32.08*	*11,362.81*	*Reduced*
2019 (Actual)	*0.26*	*Reduced*	*6.48*	*2,476.91*	*Reduced*
2020 (Actual)	0	Reduced	283.7	4,254.24	*Reduced*
2021	1.1	Projected	0	1,521	Projected
2022	1.1	Projected	0	1,241	Projected
2023	1.1	Projected	0	0	Projected
2024	1.02	Projected	0	0	Projected
2025	1	Projected	0	0	Projected
2026	1	Projected	0	0	Projected
2027	1	Projected	0	0	Projected
2028	1	Projected	0	0	Projected
2029	1	Projected	0	0	Projected
2030	1	Projected	0	0	Projected
2031	1	Projected	0	0	Projected
2032	1	Projected	0	0	Projected
2033	1	Projected	0	0	Projected

Fiscal Year	Total Phosphorus (lbs./year) [1] Rocky Gorge	Status Rocky Gorge	Total Suspended Solids (ton/year) Upper Patuxent	Fecal Coliform Bacteria* (MPN B/year) [2] Upper Patuxent	Status Upper Patuxent
2034					Projected
TOTAL	***13.80***	***Projected***	***568***	***20,879***	***Reduced***

**Bacteria and BOD calculation does not include reduction through alternative BMPs*
[1] lbs. = pounds
[2] MPN B = Most probable number of Bacteria per 100 milliliters;

Table E-9. Revised Annual Load Reduction Targets for Piscataway Watershed TMDL

Fiscal Year	Fecal Coliform Bacteria (MPN B/year) [1]	Status
2016 (Actual)	*608*	*Reduced*
2017 (Actual)	*2,845*	*Reduced*
2018 (Actual)	*28,684*	*Reduced*
2019 (Actual)	*9,390.94*	*Reduced*
2020 (Actual)	2,119	*Reduced*
2021	18,819	Projected
2022	18,819	Projected
2023	18,819	Projected
2024	18,819	Projected
2025	18,819	Projected
2026	18,819	Projected
2027	18,819	Projected
2028	18,819	Projected
2029	18,819	Projected
2030	15,654	Projected
2031	13,956	Projected
2032	9,450	Projected
2033	6,316	Projected
TOTAL	***258,394***	***Projected***

**Bacteria and BOD calculation does not include reduction through alternative BMPs*
[1] MPN B = Most probable number of Bacteria per 100 milliliters;

County progress towards the Bay TMDL

Table E-10 through Table E-17 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 8-digit MDE watersheds in the County.

Table E-10. Anacostia River Watershed Bay TMDL Progress

Pollutant	Total Nitrogen (lbs./year) [4]	Total Phosphorus (lbs./year) [4]	Total Suspended Solids (lbs./year) [4]
TMDL	Bay	Bay	Bay
Baseline Year	2009	2009	2009
Target Load Reduction[1]	50,177	9,118	1,752,709
BMP Reduction - up to 2013[2]	497	351	230,103
4th Generation Permit			
BMP Reduction - FY 2014[3]	54.26	6.46	3,356.29
BMP Reduction - FY 2015	15.79	1.75	734.19
BMP Reduction - FY 2016	350.43	160.71	521,067.32
BMP Reduction - FY 2017	3,462.80	488.78	708,056.00
BMP Reduction - FY 2018	7,622.47	906.86	917,594.09
BMP Reduction - FY 2019	6,663.47	728.47	390,652.18
BMP Reduction - FY 2020	2,133.18	457.21	253,984.94
Total BMP Reduction	20,302.40	2,750.24	2,795,445.01
Percent Reduction of Target	40%	30%	159%

[1] TMDL-required load reduction for MS4 areas
[2] Reductions achieved for the baseline year through 2013 (permit term started in January 2014)
[3] Only covers half of FY 2014 (January to June)
[4] lbs. = pounds

Table E-11. Mattawoman Creek Watershed Bay TMDL Progress

Pollutant	Total Nitrogen (lbs./year) [4]	Total Phosphorus (lbs./year) [4]	Total Suspended Solids (lbs./year) [4]
TMDL	Bay	Bay	Bay
Baseline Year	2009	2009	2009
Target Load Reduction[1]	1,294	397	125,187
BMP Reduction – Up to 2013[2]	0	0	0
4th Generation Permit			
BMP Reduction - 2014[3]	0	0	0
BMP Reduction - 2015	3.14	0.16	63.48
BMP Reduction - 2016	0	0	0
BMP Reduction - FY 2017	0	0	0
BMP Reduction - FY 2018	1,230.28	110.04	57,918.29
BMP Reduction - FY 2019	0	0	0
BMP Reduction - FY 2020	218.18	20.13	10,872.96
Total BMP Reduction	1,451.60	130.33	68,854.73
Percent Reduction of Target	112%	33%	55%

[1] TMDL-required load reduction for MS4 areas
[2] Reductions achieved for the baseline year through 2013 (permit term started in January 2014)
[3] Only covers half of FY 2014 (January to June)
[4] lbs. = pounds

Table E-12. Patuxent River Lower Watershed Bay TMDL Progress

Pollutant	Total Nitrogen (lbs./year) [4]	Total Phosphorus (lbs./year) [4]	Total Suspended Solids (lbs./year) [4]
TMDL	Bay	Bay	Bay
Baseline Year	2009	2009	2009
Target Load Reduction[1]	548	88	11,495
BMP Reduction – Up to 2013[2]	0	0	0
4th Generation Permit			
BMP Reduction - 2014[3]	0.16	0.02	11.69
BMP Reduction - 2015	0.10	0.01	7.17
BMP Reduction - 2016	0	0	0
BMP Reduction - FY 2017	140.22	9.89	1,797.89
BMP Reduction - FY 2018	13.38	1.24	598.00
BMP Reduction - FY 2019	0	0	0
BMP Reduction - FY 2020	0	0	0
Total BMP Reduction	153.86	11.16	2,414.75
Percent Reduction of Target	0%	0%	0%

1 TMDL-required load reduction for MS4 areas
2 Reductions achieved for the baseline year through 2013 (permit term started in January 2014)
3 Only covers half of FY 2014 (January to June)
4 lbs. = pounds

Table E-13. Patuxent River Middle Watershed Bay TMDL Progress

Pollutant	Total Nitrogen (lbs./year) [4]	Total Phosphorus (lbs./year) [4]	Total Suspended Solids (lbs./year) [4]
TMDL	Bay	Bay	Bay
Baseline Year	2009	2009	2009
Target Load Reduction[1]	2,315	344	64,273
BMP Reduction – Up to 2013[2]	0	0	0
4th Generation Permit			
BMP Reduction - 2014[3]	0.00	0.00	0.05
BMP Reduction - 2015	0.00	0.00	0.07
BMP Reduction - 2016	0.24	0.03	16.95
BMP Reduction - FY 2017	72.72	5.36	1,061.22
BMP Reduction - FY 2018	28.71	3.72	1,073.17
BMP Reduction - FY 2019	2.93	1.68	502.95

Pollutant	Total Nitrogen (lbs./year) [4]	Total Phosphorus (lbs./year) [4]	Total Suspended Solids (lbs./year) [4]
BMP Reduction - FY 2020	0	0	0
Total BMP Reduction	104.60	10.79	2,654.41
Percent Reduction of Target	0%	0%	0%

1 TMDL-required load reduction for MS4 areas
2 Reductions achieved for the baseline year through 2013 (permit term started in January 2014)
3 Only covers half of FY 2014 (January to June)
4 lbs. = pounds

Table E-14. Patuxent River Upper Watershed Bay TMDL Progress

Pollutant	Total Nitrogen (lbs./year) [4]	Total Phosphorus (lbs./year) [4]	Total Suspended Solids (lbs./year) [4]
TMDL	Bay	Bay	Bay
Baseline Year	2009	2009	2009
Target Load Reduction[1]	24,817	3,472	977,670
BMP Reduction – Up to 2013[2]	333	269	176,869
BMP Reduction - 2014[3]	1.73	0.14	27.39
4th Generation Permit			
BMP Reduction - 2015	197.01	177.24	0*
BMP Reduction - 2016	2.12	0.35	167.85
BMP Reduction - FY 2017	5,987.65	646.06	0*
BMP Reduction - FY 2018	1,392.84	134.02	64,163.89
BMP Reduction - FY 2019	196.66	23.64	12,967.19
BMP Reduction - FY 2020	7,336.36	783.30	558,811.29
Total BMP Reduction	15,112.64	1,764.61	635,942.37
Percent Reduction of Target	61%	51%	65%

[1] TMDL-required load reduction for MS4 areas
[2] Reductions achieved for the baseline year through 2013 (permit term started in January 2014)
[3] Only covers half of FY 2014 (January to June)
[4] lbs. = pounds
**County had reported reduction numbers in previous reports, however the County is re-evaluating the project benefits.*

Table E-15. Piscataway Creek Watershed Bay TMDL Progress

Pollutant	Total Nitrogen (lbs./year) [4]	Total Phosphorus (lbs./year) [4]	Total Suspended Solids (lbs./year) [4]
TMDL	Bay	Bay	Bay
Baseline Year	2009	2009	2009
Target Load Reduction[1]	18,606	3,329	640,225
BMP Reduction – Up to 2013[2]	199	180	119,062
4th Generation Permit			
BMP Reduction - 2014[3]	0.16	0.04	15.43
BMP Reduction - 2015	17.74	14.17	50,961.29

Pollutant	Total Nitrogen (lbs./year) [4]	Total Phosphorus (lbs./year) [4]	Total Suspended Solids (lbs./year) [4]
BMP Reduction - 2016	36.37	4.31	2,341.89
BMP Reduction - FY 2017	289.12	124.93	387,400.63
BMP Reduction - FY 2018	2,958.86	456.69	842,322.06
BMP Reduction - FY 2019	794.23	78.88	41,867.66
BMP Reduction - FY 2020	152.19	63.73	201,596.69
Total BMP Reduction	4,248.67	742.75	1,526,505.65
Percent Reduction of Target	23%	22%	238%

[1] TMDL-required load reduction for MS4 areas
[2] Reductions achieved for the baseline year through 2013 (permit term started in January 2014)
[3] Only covers half of FY 2014 (January to June)
[4] lbs. = pounds

Table E-16. Potomac River Watershed (Includes Multiple Sub-watersheds[4]) Bay TMDL Progress

Pollutant	Total Nitrogen (lbs./year) [7]	Total Phosphorus (lbs./year) [7]	Total Suspended Solids (lbs./year) [7]
TMDL	Bay	Bay	Bay
Baseline Year	2009	2009	2009
Target Load Reduction[1]	30,793	5,038	1,307,785
BMP Reduction – Up to 2013[2]	3	2	1,910
4th Generation Permit			
BMP Reduction - 2014[3]	46.58	35.20	125,251.00
BMP Reduction - 2015[5]	29.03	24.89	89,867.72
BMP Reduction - 2016[5]	90.71	54.89	187,863.29
BMP Reduction - FY 2017[5]	196.97	97.53	320,185.39
BMP Reduction - FY 2018[6]	2,646.84	289.17	154,068.97
BMP Reduction - FY 2019[5]	579.81	112.95	41,212.91
BMP Reduction - FY 2020[6]	1,031.31	198.37	278,676.73
Total BMP Reduction	4,621.25	813.00	1,197,126.01
Percent Reduction of Target	15%	16%	92%

1 TMDL-required load reduction for MS4 areas
2 Reductions achieved for the baseline year through 2013 (permit term started in January 2014)
3 Only covers half of FY 2014 (January to June)
4 Includes Oxon Creek, Potomac River U Tidal, Potomac River M Tidal, and Zekiah Swamp
5 Includes Oxon Creek and Potomac River U tidal only
6 Includes Oxon Creek, Potomac River U Tidal, and Potomac River M Tidal
7 lbs. = pounds

Table E-17. Western Branch Watershed Bay TMDL Progress

Pollutant	Total Nitrogen (lbs./year) [4]	Total Phosphorus (lbs./year) [4]	Total Suspended Solids (lbs./year) [4]
TMDL	Bay	Bay	Bay

Pollutant	Total Nitrogen (lbs./year) [4]	Total Phosphorus (lbs./year) [4]	Total Suspended Solids (lbs./year) [4]
Baseline Year	2009	2009	2009
Target Load Reduction[1]	34,656	5,978	1,362,322
BMP Reduction – Up to 2013[2]	57	42	27,715
4th Generation Permit			
BMP Reduction - 2014[3]	18.16	14.92	53,637.85
BMP Reduction - 2015	103.34	90.41	327,821.22
BMP Reduction - 2016	10.19	1.37	642.42
BMP Reduction - FY 2017	752.23	121.47	136,240.64
BMP Reduction - FY 2018	11,332.57	1,078.47	575,886.50
BMP Reduction - FY 2019	7,477.16	823.65	435,381.75
BMP Reduction - FY 2020	3,093.81	423.06	827,848.25
Total BMP Reduction	22,787.46	2,553.35	2,357,458.63
Percent Reduction of Target	66%	43%	173%

1 TMDL-required load reduction for MS4 areas
2 Reductions achieved for the baseline year through 2013 (permit term started in January 2014)
3 Only covers half of FY 2014 (January to June)
4 lbs. = pounds

Permit Condition Part IV. E. 4:
c. Itemized costs for completed projects, programs, and initiatives to meet established pollutant reduction benchmarks and deadlines;

A completed projects, programs, and initiatives to meet the established pollutant reduction goals is provided in FAP 2020 on DVD. 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. Through FY 2020, the County has restored 2,656 acres under the NPDES MS4 permit. This restoration progress was accomplished through over 900 projects costing over $160 million.

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

A summary of the implementation cost for completing all projects in planning, design, or under construction is provided in FAP 2020 on DVD. Around 3,778 acres are projected to completed by CY 2024 for a total implementation cost around $240 M. The County's current planned project list includes CIP, CWP, and redevelopment projects. Retrofitting ponds that currently have minimal or no water quality is a significant part of the County's planned restoration activities. In addition, the County is implementing environmental site design BMPs (best management practices), stream restoration, shoreline stabilization, and various other BMP types to satisfy restoration goals.

The County has also made it a requirement for all failing septic systems to connect to the closest feasible sewer line. In addition, as new development and redevelopment continues to occur within the County's sewer envelope, septic systems are being removed as part of the County regulatory requirements. The County will continue to report the removal of septic systems and actively encourage the removal of septic systems within the sewer envelope.

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 include 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 both retrofits of older stormwater management facilities for better removal of pollutants and installation of new facilities. Various programs in the County are utilized to install structural BMPs on both 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

The Clean Water Partnership regularly conducts outreach events and activities to educate community members about stormwater management and involve stakeholders in the BMP process. During FY 2020, outreach staff participated in 113 outreach events involving approximately 1,600 participants and distributed 4,400 outreach materials such as flyers, brochures and door knockers

(numbers are approximated). Current Clean Water Partnership social-economic development programs inclusive of public outreach and community involvement are described in more detail below.

Mentor-Protégé Program

In FY 2020, the Clean Water Partnership continued its Mentor-Protégé Program (MPP) as part of its social and economic development efforts. The program is designed to support the growth of local, small companies and increase their capacity to perform high-quality work. Each of the Protégés received customized business development supportive services to strengthen their businesses and improve their ability to successfully bid on and complete stormwater project work for the Clean Water Partnership, Prince George's County and neighboring regions. The contract requirement is to mentor two businesses each year, but the Clean Water Partnership has again exceeded this goal. Seven businesses completed the fourth cohort year of the Clean Water Partnership Mentor-Protégé Program. The Protégé firms graduating in December are C&M Construction, Cleckley Development, CWI Solutions, Insight Engineering, Millenium Concepts, Minority Environmental Solutions & Services, and Sterling Enterprises.

The Clean Water Partnership also added a new developmental program to build capacity for maintenance contractors in FY 2020. This new program – called the Emerging Landscapers Program - began in January 2020. The Emerging Landscapers and Mentor-Protégé programs are timed to run parallel, with both cohorts ending in December 2020. The Clean Water Partnership maintenance portfolio currently includes over 400 BMPs requiring maintenance for the next 30 years, confirming the need for qualified maintenance contractors. The first cohort of Emerging Landscapers Program firms are 1st Choice Facilities Management, AC Reliable, Cavalla Construction, C&M Construction Services, Community Bridge, Daylily Landscaping, Faulkner Lawncare, Maroon Gardens, Millenium Concepts, Minority Environmental Solutions & Services, Sterling Enterprises, T&G Services, TCG Property Care, and Georgetown Landscaping.

Four of the firms in the current Mentor-Protégé Program are simultaneously participating in the Emerging Landscapers Program. In addition, three of the firms participating in this first cohort of the Emerging Landscapers Program previously successful completed the Mentor-Protégé Program (Faulkner Landscaping, Community Bridge, and TCG Property Care). Both programs are designed to support the growth of local, small, and minority companies and increase their capacity to perform Green Infrastructure Construction and Maintenance. During this cohort, 1st Choice Facilities Maintenance partnered with Cavalla Construction to bid on the Anacostia Watershed Society's Outdoor Classrooms and were selected to construct the project at Walden Woods Elementary School. While TCG Property Care was the awarded landscape subcontractor on the Dora Kennedy Project.

Many the participants are target class business entities. The programs work closely with Prince George's County Supplier Development & Diversity Division to increase the number of certified County-based firms. These businesses represent a diverse mix of capabilities, expertise, and qualifications to maximize the impact of local capacity growth in the County. Training and supportive services provided included the following: estimating, a path to bonding, cost accounting, leadership, best management practice (BMP) overview, and strategic planning.

Post-graduation, the current cohorts will participate in a pilot project that is identified by the Clean Water Partnership team and bid solely by the Mentor Protégé/Emerging Landscapers participants. The pilot has been a flagship of the Clean Water Partnership. It allows County-Based businesses a unique

opportunity to win a project with limited competition and direct support from the entire Clean Water Partnership team. Past winners include M&G Services, of Capitol Heights, L.E. Blue of Beltsville, and Clinton Sewer of Clinton.

Clean Water Partnership Schools Program

The Clean Water Partnership Schools Program began in FY 2016 and continued through FY 2020. The program is designed to assist Prince George's County Public Schools (PGCPS) treat stormwater runoff by constructing BMPs on school property. The Clean Water Partnership Schools Program 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.

A total of 26 Clean Water Partnership Projects at Prince George's County schools were completed during FY 2020. 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. The selected schools included a combination of elementary, middle and high schools across Prince George's County. 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 2020. 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 students learned about the importance of stormwater management. Fifty-five students from Bladensburg High, Parkdale High, Duval High, and Elizabeth Seton High Schools participated in this six-week program in July – August 2019. These students were placed in internships at 29 businesses and organizations throughout Prince George's County. Students learned about the work process of stormwater management and how the environment impacts community health. Students improved their environmental literacy through hands-on experiential learning and were able to effectively communicate how to manage stormwater runoff.

Alternative Compliance Program Support

The Clean Water Partnership engages with nonprofit and faith-based communities through the Alternative Compliance Program (ACP). The ACP is an elective partnership between Prince George's County and qualified 501(c)3 nonprofit organizations and tax-exempt faith-based organizations to reduce and treat stormwater runoff and improve County water quality. The Clean Water Partnership team meets with each institution to address their stormwater concerns and create a concept that is both cost effective and functional to their specific needs. The Clean Water Partnership Community Outreach team works with the organizations from design through construction certification, ensuring

they are properly informed of the devices installed and schedule of work. Clean Water Partnership outreach staff participated in 23 ACP meetings involving approximately 80 participants.

Municipal Engagement

Numerous Clean Water Partnership restoration projects were conducted within municipal boundaries during FY 2020. Various school, ACP, pond and other restoration projects that were in the planning, design, construction or completion phase in FY 2020 were located within the county's 26 municipalities that are covered by this permit. As of June 2020, 11 retrofit projects were either completed or in process within municipal boundaries. A map showing the location of Clean Water Partnership projects within municipal boundaries is provided in Figure E-2.

Maintenance and Litter Reduction

Clean Water Partnership maintenance activities are already discussed on page 56. An important and measurable aspect of maintenance is trash collection. In addition to structural and landscape maintenance, Clean Water Partnership crews regularly remove trash from Clean Water Partnership project sites to support BMP performance and appearance. Between July 1, 2019 and June 30, 2020, trash was collected at 136 sites, totaling 1,233 bags or roughly 51,786 gallons of litter.

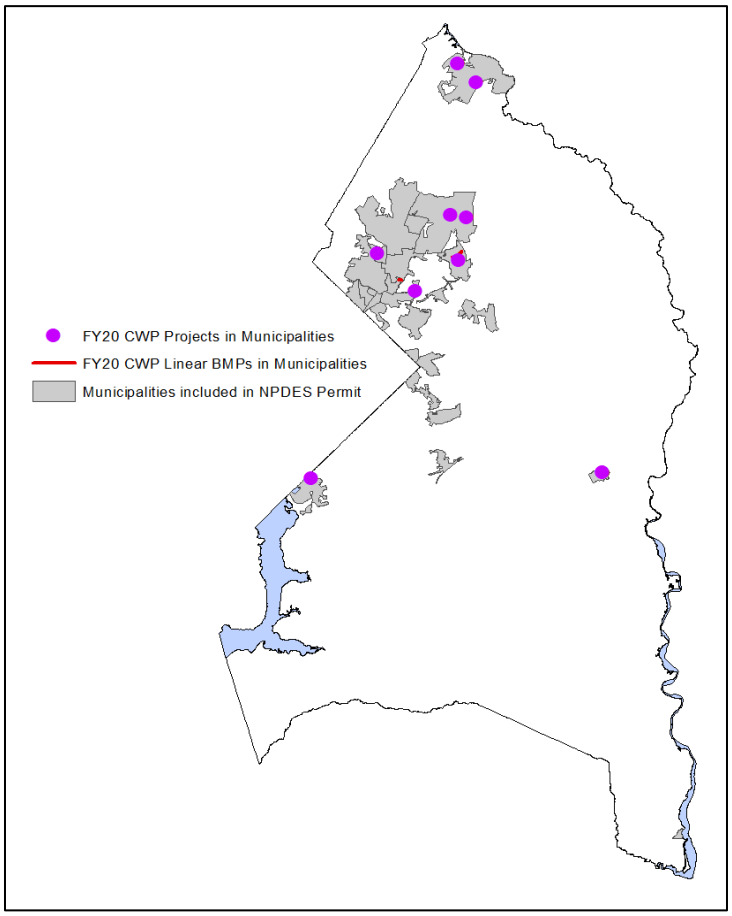


Figure E-2. CWP Projects within Municipal Boundaries in FY 2020

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 (including housing cooperatives and faith-based institutions) 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-18 identifies the overall performance of the Rain Check Rebate Program in FY 2020.

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, industrial, municipal, and nonprofit property owners.

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 2020, a total of 416 BMPs were installed using this program treating 2.27 impervious acres. A report detailing Rain Check Rebate Program performance in FY 2020 is provided in the DVD, under Restoration Plans and TMDL\Rain Check Rebate.

Table E-18. Rain Check Rebate Program Performance in FY 2020

Projects	Total Applications		Applications Processed in FY 2020		Applications In Process	Actual Number of BMPs Installed	Impervious Area Treated (square feet)	Total Amount of Rebate Approved
	Received in FY 2020	Pending from FY 2019	Denied	Approved				
Cisterns	5	5	2	3	5	5	2,204	$2,423
Pavement Removal	42	41	4	27	52	27	9,877	$36,236
Permeable Pavement	36	36	5	19	48	19	6,586	$45,612
Rain Barrels	81	100	41	65	75	130	38,154	$13,012
Rain Gardens	40	53	14	19	60	24	7,159	$35,662
Urban Tree Canopy	34	24	11	21	26	211	34,948	$28,932
Green Roof	2	0	0	0	2	0	0	$0
TOTAL	**240**	**259**	**77**	**154**	**268**	**416**	**98,928**	**$161,877**

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 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. NTP was given in 11/2018 and completion is anticipated by spring 2021.
- 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. Construction began in 4/2017 and was completed in 5/2019.
- 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. NTP was given in 7/2020 with anticipated completion in 7/2021.
- 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. The project has been temporarily suspended due to budget impacts from COVID 19 and to allow for ongoing coordination with Largo area developers, most notably the University of Maryland Capital Region Medical Center.
- 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. The project has been temporarily delayed but will resume design in late 2021.

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. It is our 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 will start construction in the summer of 2020 and 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 which will inform both budget and opportunity for future ecosystem restorations in lieu of gray infrastructure replacements.

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 June 30, 2020, there are 84,773 structures in the inventory. Since January 2020, the consultants have spent over 5,500 hours in the field and have inventoried 29,805 structures. Of the inventoried structures, 11,674 were new to the inventory. New to the inventory may indicate existing infrastructure that was not mapped. DPWT is continuing this field verification effort through FY21.

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 on November 2019. Construction at 6911 Groveton was started in October 2019 and completed January 2020. Construction at West Indian Headway will start August 2020. Construction at Clear Creek will start August 2020.

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 property owner to provide 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 50% fee reduction.
- Option 2 requires 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 25% fee reduction.
- Option 3 requires property owners to use certified lawn management companies by the County in the proper use and application of fertilizers and agree to green care and good housekeeping. This option enables property owners to receive 25% fee reduction.

As of June 30, 2020, DoE has received and processed 189 applications from qualified faith-based organizations. To date that are completed are treating 12.91 acres of impervious. 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 to keep monitoring and accessing the impact these activities on the environment and to keep engaging and educating the community about clean water issues.

Prince George's County Stormwater Stewardship Grant Program

The Department of the Environment (DoE) and the Chesapeake Bay Trust (CBT) held a sixth successful year for the Prince George's Stormwater Stewardship grant program. The goal of this Prince George's Stormwater Stewardship grant program is to improve communities, improve water quality in the County's waterways, and engage citizens in stormwater solutions. To do this, the County and the CBT work in partnership to compile the top priority project types for the grant program each year, develop the Request for Proposals (RFP) to facilitate applications that meet the County priority project types, and advertise the RFP throughout the County.

In addition, from the projects implemented in FY 2020 that were granted in previous fiscal years, the Prince George's Stormwater Stewardship grant program produced the following NPDES metrics:

- 191 trees planted
- 2,122 hours of volunteer engagement in water quality efforts
- 691 people engaged in water quality efforts
- 7 events aimed at engagement and water improvement efforts
- The grantees completed implementation projects at three sites:
    1) Six rain gardens, permeable gutter, and tree planter in the Town of Edmonston treating 5.75 impervious acres;

2) Infiltration trench at Union Bethel AME treating 0.95 impervious acres; and
3) A microbioretention for the City of District Heights (District Heights Parkway and Rochelle Avenue) treating 0.42 impervious acres.

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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 reports of monitoring 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 thirteenth (13th) full year of chemical and physical monitoring and its fourteenth (14th) 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.

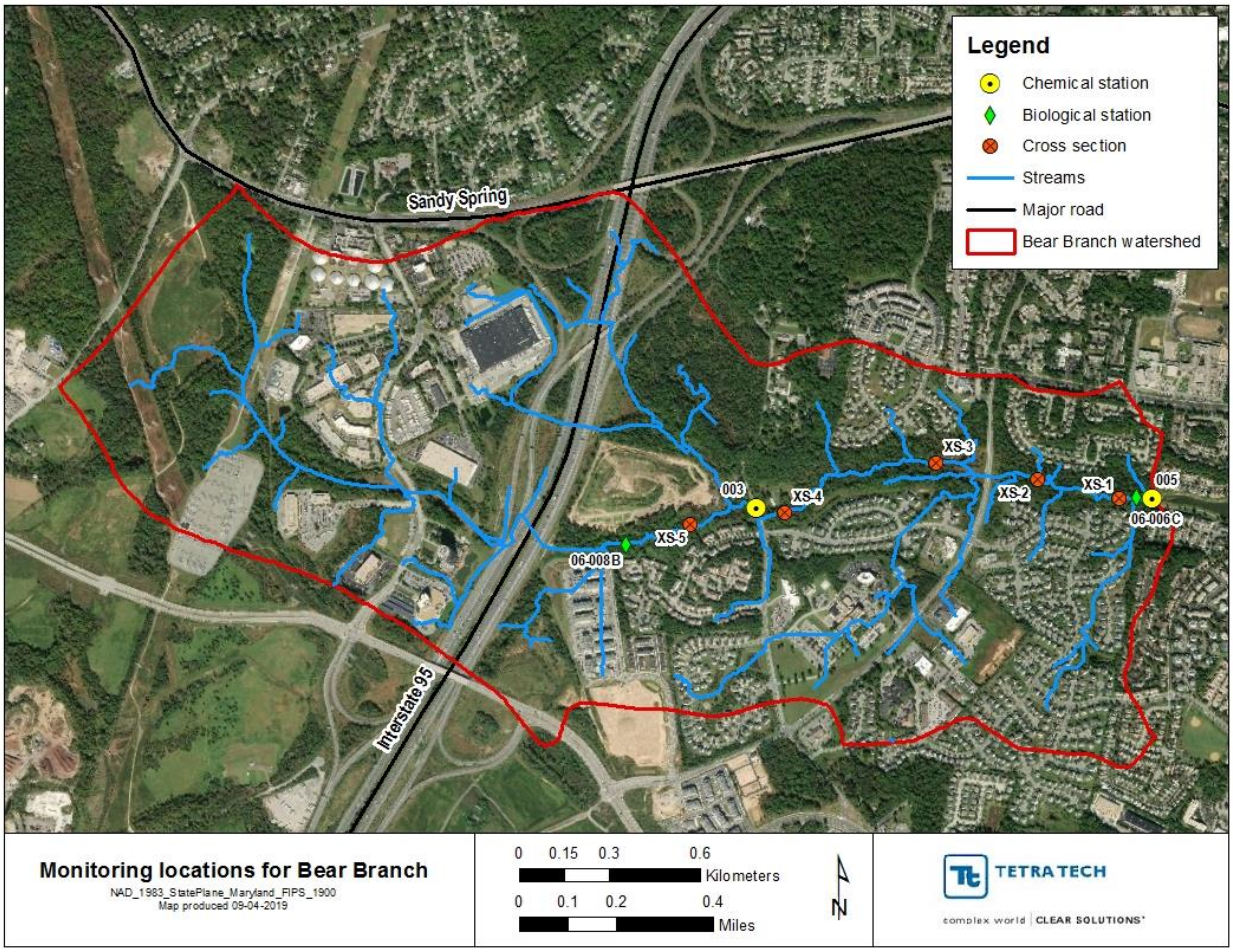

Figure F-1. Bear Branch Monitoring Locations

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 2020, automatic storm samples were collected in eight (8) months. Weather constraints and malfunctioning of the autosampler prevented sample collection in August, September, January, and February. Weather and timing constraints were also responsible for missing four manual storm samples. Baseflows samples were collected on a quarterly basis at both stations. In addition, four (4) baseflow samples were taken in lieu of a storm sample for the automatic sampling parameters and two (2) baseflow samples were taken in lieu of storm samples for the manual sampling parameters.

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	In Lieu of Storm Samples	Baseflow Sample	Parameter Set 1	Parameter Set 2	In Lieu of Storm Samples	Baseflow Sample
July	X				X			
August								
September			B1, B2	Q			B1, B2	Q
October	X, X	X			X, X	X		
November	X			Q	X			Q
December	X	X			X	X		
January								
February			B1, B2	Q			B1, B2	Q
March	X				X			
April	X, X	X		Q	X, X	X		Q
May	X	X			X	X		
June	X				X			

Notes: ***X*** *= sample collected;* ***Param. set 1*** *= parameters typically collected through automatic sampling: TKN, NO_3/NO_2, TSS, Cu, Zn, Pb, TP, BOD_5, hardness, total phenols;* ***Param. set 2*** *= parameters typically collected through manual sampling:* E. coli*, TPH;* ***B1*** *= manual baseflow sample collected in lieu of storm samples for Param. set 1;* ***B2*** *= manual baseflow sample collected in lieu of storm samples for Param. set 2;* ***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
BOD5	SM (20) 5210B	48 hours	2–5	mg/L
NO3/NO2	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

Parameter	EPA method	Holding time at 4 °C	Project reporting limit	Units
E. coli	SM (20) 9221F	6 hours	2	MPN/100 mL
TPH	EPA 1664A	28 days	5	mg/L
Hardness	SM (20) 2340 C	28 days	1.0	mg CaCO3/L
pH	EPA 150.1	In-stream measurement	--	
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, 68 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 eighteen (18) measurements have been taken since the ponding has receded. 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 2020 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. August 2019 was the thirteenth year that the County has performed a geomorphologic assessment in the Bear Branch watershed. The next assessment is planned for August 2020.

A longitudinal profile was measured from just downstream of station 005 to 6,847 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	53	14.774	W	39	5	23.021	N
XS-2	76	53	1.609	W	39	5	24.333	N
XS-3a	76	52	40.440	W	39	5	29.820	N
XS-4	76	52	26.601	W	39	5	27.835	N
XS-5	76	52	15.293	W	39	5	25.806	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 2020,* 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 2020)*

Monitoring Activity	Report Section	Page
1(a)(i) Storm Event Sampling Frequency	3.1.2	3-2
1(a)(ii) Storm Event Sampling Procedure	3.1.2	3-2
1(a)(iii) Parameters Requiring EMC Calculations	3.1.3	3-2
1(a)(iv) Continuous Flow Monitoring	3.1.4	3-4
1(b)(i) Biological Sampling Locations	3.2.1	3-8
1(b)(ii) Biological Sampling Method	3.2.1	3-8
1(c)(i) Geomorphological Stream Assessment Location and Methods	3.3.2	3-9
1(c)(ii) Stream Habitat Assessment	3.2.2	3-9
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 the chemical monitoring program along Tributary 1 in March 2008. Biological monitoring, just below the confluence of Tributary 1 and Black Branch, was discontinued after 2007. For this reporting year, the County continued with its physical monitoring of the Black Branch watershed and Tributary 1, which are conducted between August and October each year.

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. The entire Black Branch mainstem was surveyed from its confluence with Collington Branch for approximately 2.2 miles upstream to slightly beyond the uppermost cross sections. The overall channel slope of the Black Branch mainstem was 0.30 percent and has not changed over the past year. Tributary 1 was surveyed from its confluence with Black Branch for approximately 2,190 feet upstream to slightly beyond the uppermost cross sections. The channel slope of Tributary 1 in 2019 was 0.0055 (0.55 percent) and has increased slightly in the past year.

The predominant channel type of the cross sections in the mainstem and the tributary was found to be type G (ten cross sections). Type G channels are relatively narrow entrenched channels (i.e., entrenchment ratio less than 1.4 and width-to-depth ratio less than 12). It should be noted that cross section MS1 has been scoured so much that it cannot be used for the classification.

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 2020 report, the mainstem and Tributary 1 in the Black Branch watershed were evaluated in 2019 to determine whether any significant changes to the physical conditions of the BBW had occurred since they were last evaluated in 2018. The results are presented in the FY 2020 *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 2019 and 2020 was submitted with last year's report.

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APPENDIX A

AA. RESPONSE TO MDE'S COMMENTS

On May 4, 2020, MDE provided its comments on County's 2019 NPDES MS4 annual report and requested that the County provide response with the 2020 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 May 4, 2020 Comments

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
Part V.A Annual Reporting	•The Prince George's County FY 2019 annual report was submitted to the Maryland Department of Environment (Department) on January 16, 2020. This was two weeks late from the permit reporting deadline (January 2). In addition, the County was nearly 10 months late submitting the Financial Assurance Plan in 2019. The County must meet reporting deliverables or risk non-compliance with permit conditions.	Comment Noted. County is required to submit an approved FAP through County Council Legislation; this is a public process that takes time. During the interim time, the County forwarded to MDE a County Council Draft FAP.
	•The County is commended for efforts to respond to each of the Department's comments from prior annual report reviews.	Comment Noted.
	•The next annual report must be submitted by January 2, 2021.	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 distributed the MS4 geodatabase on March 15, 2015 and has requested that the County begin submitting data in this format. In May of 2017 the Department provided an updated schema to the County, which should be used in the future. The County is commended for the substantial progress made in the past year and should continue the update process and address the following in the next report:	Comment Noted. The County has incorporated updated schema for the future geodatabase submittals.
	○Continue data entry and updates for the Outfall feature class for mandatory fields such as OUT_HT, OUT_WIDTH, TYPE_MATL, AND OUT_YEAR. This information is missing for a great	As recommended, the County is continuing its data updates for the Outfall feature class for the mandatory fields. The County has populated Outfall Height, Outfall Width, and Type

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	majority of the 72,516 structures identified in the database.	Material for all records where Outfall Type is Endsection, Endwall, or Projecting Pipe, where records were available. Currently the County is revising its entire storm drain infrastructure database through field verification. The County will continue to refine and update this information as it becomes available.
	○The MDE_OUT_ID uses incorrect nomenclature for numerous fields in the outfall and outfall drainage area feature class. In addition, the MDE_OUT_ID is missing for all fields in the IDDE table. This information needs to be updated and all outfalls need to be linked to the corresponding drainage area. Please provide updates on how this information will be completed.	This ID information has been corrected in the current submittal. Currently, the County is revising its database through field verification. Link to outfall drainage area is a working progress and will be completed as more information becomes available after the field verification.
	○Numerous outfall structures are not linked to a drainage area. The County needs to update this information.	Comment Noted. Existing outfalls are in the process of being field verified by DPW&T and once the verification is completed, existing outfall structures will be linked to a drainage area.
	○BMPPOI:	
	▪ The proper nomenclature using the 13-digit unique ID needs to be used for all BMPPOI_IDs.	Per recent MDE geodatabase changes and correspondence received, our understanding is that POI information is no longer necessary. Therefore, POI information is excluded in this submittal.
	▪ Most of the fields for the PE_ADDR have been populated, however, based on the data for best management practices (BMPs) within numerous points of investigation (POIs), there are still zero entry values where water quality BMPs are located within a given POI. When POIs are created significantly downstream of a new development project that provides water quality, a composite PE must be manually calculated for the entire drainage area linked to that POI. It appears that the process of using one POI for a large watershed with numerous structural practices is leading to erroneous PE values for the entire POI. This issue will become	This information has been included in the BMP Feature Class since the POI information is no longer needed. A supporting document related to geodatabase changes is provided on the DVD.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	more problematic when new BMPs are installed above established POIs. The Department recommends that the County create a POI below a Chapter 3 water quality practice to address these errors and establish a more efficient process for future BMP reporting.	
	▪ The May 2017 version of the schema eliminated fields for the built date and approval date in the POI feature class. This information is required in the BMP table.	This information has been included in the BMP Feature Class in current submittal.
	○BMP:	
	▪ Complete approval dates for all BMPs in accordance with the May 2017 revised schema.	Most of the information is populated per May 2017 schema. The County is reviewing its inventory records and updating the data as more information becomes available.
	▪ Please use the correct 13-digit unique ID code for all BMP_IDs.	This information has been corrected in the current submittal.
	▪ Use the May 2017 revised schema for the correct codes for the CON_PURPOSE field. The County's current database indicates all BMPs are "new restoration" BMPs. This shall be corrected by using the updated schema which provides the correct codes for new development, redevelopment, and restoration.	This information has been corrected in the current submittal.
	▪ 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.	This information has been corrected in the current submittal. BMP Feature Class only has ESD or Structural BMPs. All records are being submitted with appropriate BMP Class and BMP Type domains.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	▪ There is one restoration BMP in the BMP table that needs to be moved to the RESTBMP feature class (see PG19BMP1982).	This information has been corrected in the current submittal.
	▪ Please add the required fields for northing and easting, as these fields were added in the May 2017 schema revisions. These fields must be filled out to determine the location of BMP inspections. The address field indicates that most BMPs do not have an address. While that is recognized, the County must have a location identified for each BMP in order to perform inspections.	This information has been corrected in the current submittal. BMP Feature Class is being submitted, therefore, all BMPs can be identified geographically. The Address field was populated from the SDAT Polygon Data. There are 560 records in Address that begin with a 0. These are from SDAT. The County will continue to update the data as it becomes available, but many BMPs do not fall directly on a property parcel with a street address. The County does not use Address to navigate to BMPs. The County uses it's BMP Inspection Web Mapping application to navigate to and inspect BMPs.
	▪ The LOCAL_BMP_ID must use the proper unique ID format.	There is no local ID format recommended by MDE. Different agencies in the County use their own local ID. County is working towards ensuring that they are unique.
	○BMP Drainage Area: There are 2 BMPs with a drainage area entry of 0.0 acres. This data needs to be updated.	This information has been corrected in the current submittal.
	▪ There are 1,410 out of 4,630 records where the BMP_DA_ID does not have proper unique ID nomenclature. In addition, these drainage areas are not linked to a BMP. This information must be updated.	Most of the information has been corrected in the current submittal. The County continues to digitize and relate BMPs to Drainage Areas.
	▪ There are 144 records with a drainage area entry of '0'.	All drainage area values have a value greater than zero. Please make sure this was not a result of rounding error during the data export process in another format.
	○RestBMP:	

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	▪ The project description is a required field and needs to be completed.	This information has been corrected in the current submittal.
	▪ The IMPLY_COMP_YR shall be provided for all projects. There are numerous completed BMPs that are missing this information.	This information has been provided for all projects that are complete.
	○AltBMPLine:	
	▪ Completion dates have been provided for completed projects as previously requested by the Department.	Comment noted.
	▪ The PERCENT_IMPERVIOUSNESS field needs to be filled out for projects using protocol 3.	Comment noted. This information has been filled out.
	○AltBMPPoint: Inspection data for BMPs such as septic upgrades should verify the date that the connections to the waste water treatment plant was completed. This information was requested in the 2018 review and has not been corrected to date.	The County used WSSC Plumbing Hookup Inspection Records to verify Installation date and to populate the records.
	○AltBMPPoly: All street sweeping projects shall include the ACRES_SWEPT (in acres).	Per geodatabase schema, this is a conditional field based on the methodology used (e.g. weight basis or miles lane basis) for calculating the equivalent impervious acres credits. We used weight basis for calculating the credits, therefore Acres swept was not populated.
	○Countywide Stormwater and Watershed Assessments: Please include data for mandatory fields for the baseline load, target load, permit load, and target year.	This information has been included in the current submittal. The County has provided total reduction within the permit term for all pollutants and watersheds. This is consistent with the TMDL section of NPDES report.
	○Local Stormwater Watershed Assessments: The County needs to complete the mandatory fields in this table.	This information has been included in the current submittal. The County has provided total reduction within the permit term for all pollutants and watersheds. This is consistent with the TMDL section of NPDES report.
	○Impervious Surface: The IMP_ACRES and BASELINE_ACRES fields need to be populated in this table.	This information has been included in the current submittal.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	○Erosion and Sediment Control: All mandatory fields in this table need to be completed.	Comment noted. All mandatory fields in this table has been filled out.
	○SWM: All mandatory fields in this table need to be completed.	Comment noted. All mandatory fields in this table has been filled out.
	•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 if requested.	Comment noted.
Part IV.D.1 Stormwater Management	•The County adequately maintains stormwater program data to show compliance with the three-step review process for implementing environmental site design (ESD) to the maximum extent practicable (MEP).	Comment noted.
	•The Department 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. The County should be prepared for the next round of triennial inspections in the summer of 2020.	Comment noted.
	•The County reported a total of 9,527 stormwater inspections performed in FY 2019 and issued 19 violations. The County addressed the Department's questions pertaining to the low number of violations by noting the total citations issued from notices of violation, stop work orders, and correction orders. Please continue to update this information as shown in Table D-2 in future annual reports.	Comment noted.
	•The County has reported an increase of BMPs from 4,138 to 4,360 in the past reporting year. These numbers are slightly different than that reported in the geodatabase. Please check numbers in the report and ensure they are consistent with the geodatabase.	Comment noted. The reported numbers were tallied with geodatabase in this submittal.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	•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 474 BMP records either have failed inspections or missing inspection records. The County needs to submit a plan to bring these BMPs into compliance and include a summary of actions taken to date and the status of repairs.	MDE counted 4 BMPs as failed that were reported as pass in re-inspection column of the geodatabase table. Therefore, actual failed BMPs reported in the geodatabase were 470. As more BMPs added in 2020 inspection inventory, we have updated the BMP inspection section on page 54 to include a description of County's inspection process and a schedule for bringing all BMPs in compliance.
	•The geodatabase in the FY 2018 report had numerous notes that BMP inspectors needed to make "assumptions" regarding how runoff was intended to convey to a given BMP during field inspections. The Department recommended that the County utilize their enforcement authority and require private BMP owners to submit as built plans to verify the proper function of these BMPs. The Department requested a status and update on this issue in future annual reports. Please include the requested information in the FY 2020 annual report.	County is developing a task order to reconstruct as-built plan or construction completion document using MDE's guidance, this project could take up to two years to complete in phases.
	•The County submitted stormwater approval data to justify stormwater exemptions granted during FY 2019 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 five technical memos to developers regarding new stormwater management procedures. These memos detail requirements for redevelopment projects, 100 year flood control, soil boring and groundwater table testing for stormwater management, materials for residential infill, and development of as-built plans. The Department commends the County for the efforts in improving stormwater implementation through technical outreach.	Comment noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
Part IV.D.2 Erosion and Sediment Control	•The Department performed an erosion and sediment control delegation review in the fall of 2018. The Department provided a summary of the review to the County in the February 25, 2019 correspondence and has granted continued delegation of erosion and sediment control enforcement authority through June 30, 2021.	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 annual report specifies that 158 dry weather screenings were performed at 150 outfalls. However, the geodatabase includes only 144 unique outfalls. Fourteen Local Outfall IDs are either duplicative records or rescreenings. The County shall address these data discrepancies in the next annual report and provide documentation verifying that screenings are performed at 150 different outfalls.	The data discrepancies have been addressed in the current submittal.
	•The County performed 82 chemical tests of dry weather discharges at 77 outfalls. However, as noted above, the duplicative records for a given Local Outfall ID must be addressed to verify the data submitted.	The data discrepancies have been addressed in the current submittal.
	•The geodatabase comment field notes that some outfall screenings were re-inspections. However, the corresponding Local Outfall ID numbers were only recorded in the database once, suggesting that a different Local Outfall ID number was used when rescreening the same outfall. In addition, the values for TEST_NUM are "0" for all records and therefore the number of re-inspections remains in question. The Outfall IDs and TEST_NUM must be updated and corrected to verify the data submitted.	The data discrepancies have been addressed.
	•Table D-4 in the report provides a description of outfall investigations. Some are identified by the Local Outfall ID and some are identified by an MDE Outfall ID. The County must complete the fields for Local Outfall ID and MDE Outfall ID in the geodatabase for each record so the outfall	The data discrepancies have been addressed in the current submittal.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	locations referenced in the report can be cross referenced in the database.	
	•The County conducted 37 visual surveys of commercial and industrial areas, identified 14 potential water quality concerns, and resolved all violations. The County must continue to report the status of water quality violations and resolutions.	Comment noted.
	•The number of visual surveys has decreased each year since 2016. On average, the County has conducted 65 surveys per year over the past four years. The Department advises the County to maintain a consistent level of effort.	Comment noted.
	•The County provided a summary of actions taken to address structural problems, sediment deposits, erosion, floatables, and odors as requested by the Department. This information should be included in future annual reports.	Comment noted.
	•The County maintains a program to address and respond to illegal discharges, dumping, and spills. Citizen complaints are handled by the Inspection and Compliance Section and the Health Department investigates sanitary sewer overflows, septic system failures, and solid and hazardous waste problems.	Comment noted.
	•The County performed eight investigations as a result of outfall screenings, determined that five were illicit discharges, and demonstrated appropriate enforcement measures to resolve all violations.	Comment noted.
	•The County has improved data reporting from the previous reporting year by providing DISCHARGE_SOURCE for observed flows and recording ILLICIT_Q (i.e., illicit discharge found - Y/N), ILLICIT_ELIM, and YEAR_ELIM. If chemical tests were not conducted, the County can leave that field blank instead of recording "0". PERMIT_NUM needs to be populated with the NPDES permit number.	Comment noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	•The County's success at identifying illicit discharges and resolving pollution violations is demonstrated by the reported activities.	Comment noted.
	•On November 20, 2017, the Department conducted a field audit of the County's IDDE program. The Department has requested inspection procedures for the commercial and industrial area surveys. The County shall provide this information in the next annual report.	The County is developing a task order with our consultant to develop a comprehensive SOP. In the interim, a preliminary SOP for IDDE procedure is included in the DVD\Management Programs\IDDE folder.
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 now uses a conservative factor developed by Metropolitan Washington COG and agreed upon by all jurisdictions (DC, MoCo, PG). The report details plans to increase their future efforts in order to meet their goal using the factor. In future annual reports, please report the trash reduction efforts before and after the WCOG factors, so that the Department can better evaluate the County's progress in reducing trash.	Comment noted. Table D-9 presents trash reduction efforts before and after the MWCOG factors are applied. Data provided under the column labeled Actual Amount (pounds) reflects reduction efforts before application of MWCOG factors. Data provided under the column labeled Annual Load Reduction Counted (pounds) reflects reduction efforts after application of these factors.
	•Overall the County's program remains comprehensive due to proactive (education/outreach) and reactive approaches (clean-ups), as well as implementation of structural (Bandalongs) practices.	Comment noted.
	•The County has developed an innovative process for utilizing mobile apps not used by other jurisdictions. Trash monitoring and ongoing collaboration with watershed partners continuously evaluate plans for program enhancements.	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.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	•The County has responded to all Department recommendations pertaining to the Anacostia Trash TMDL implementation plan.	Comment noted.
Part IV.D.5 Property Management and Maintenance	•The County reported that 368 staff were trained at 9 facilities in FY 2019. A summary of good housekeeping activities at industrial facilities was provided. The County is commended for continued efforts to train staff and implement pollution prevention activities.	Comment noted.
	•The County did not sweep public streets during the reporting year and was in the process of renewing its street sweeping contract. Sweeping was done within the jurisdictions of several municipal co-permittees. When sweeping efforts are used for restoration, this practice must be continued annually in order to maintain the credit.	Comment noted. County intends to replace credits achieved by operational programs with permanent BMPs. A list of completed BMPs that would help maintaining this credit was provided with County's Restoration Projects Portfolio submittal.
	•The County responded to 2,525 service requests, inspected 3,413 inlets, cleaned 54,544 linear feet of pipes, and removed 50 tons of debris. Storm drain channels continued to be inspected and cleaned on a triennial basis, and 6,300 linear feet of channel were maintained during the reporting year. These efforts are comparable to previous reporting years and demonstrate a continued commitment toward maintaining County infrastructure.	Comment noted.
	•The County applied 10,980 tons of sodium chloride, 4,325 pounds of calcium chloride, and 2,825 gallons of liquid magnesium as deicers. Application of 80,109 gallons of salt brine represented an expanded effort toward pretreatment on arterial roadways during the reporting year. In addition, an updated comprehensive salt management plan was developed to reduce salt application. The County is commended for taking proactive steps to reduce salts in local waterways.	Comment noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	•The County continued to provide annual winter weather management training for all staff and contractors.	Comment noted.
	•Herbicide, pesticide, and fertilizer use increased from the previous reporting year. The County continued to employ licensed contractors for application. Mechanical control was used to maintain roadside vegetation.	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.	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.
	•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 2,529 acres have been restored since the beginning of the permit term. The County is 3,718 acres of restoration short of the restoration requirement.	Comment noted. The County has received draft consent decree order and we plan to achieve 3,718 remaining acres by December 31, 2024.
	•A supplemental gap analysis was submitted to the Department on March 18, 2020 and reports that 2,462 acres of restoration has been completed under the permit. However, the County did not provide a database to verify the information reported in the gap analysis. Therefore, the Department will utilize the data submitted in the	Comment noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	FY 2020 report to verify the level of restoration completed.	
	•The FY 2018 annual report review indicated that the County overestimated the treated areas due to rural roadway and rural residential disconnections in the original impervious area baseline. The County has agreed to add a total of 105 impervious acres to the above noted restoration requirement due to this error.	County agreed that the Rural Road disconnection credit was limited to the number identified in the County's study; Impervious adjustments are continuously evaluated by the County, In the next few years the County will voluntarily revisit the baseline.
	•The County's geodatabase indicates that 38 restoration BMPs have failed inspections. The Department has calculated that this corresponds to 741 acres of credit (approximately 400 acres are due to the Muirkirk Industrial Park retention pond that has a failed inspection). The County shall provide a schedule to develop the requisite data to verify that these BMPs are functioning as designed, or risk reducing the total restoration achieved by 741 acres.	The County has revised its database, and these BMPs are functioning as designed.
	•Recent inspection information was missing for 61 of 83 stream restoration projects included in the database. These projects constitute 395 acres of restoration credit that could be deducted from the total restoration achieved unless documentation is submitted to the Department to verify proper maintenance and performance of these practices. Additionally, the County must include an inspection date in the geodatabase when projects are completed to verify restoration credit at project completion.	The missing inspections were for sixty (60) WSSC Projects that fall under the category co-benefits environmental uplift. As previous discussions took place between the County and Brian Cooper from MDE, the only remaining item is County WSSC MOU, which will be provided to MDE as soon as it is signed. The 60 WSSC Projects are considered co-benefits with IAT calculated using 0.02 per liner feet. Rest stream restoration BMPs have an inspection record.
	•One BMP, PG17ALN000032, used an equivalent impervious acre (EIA) of 0.04. Protocol information was missing for this BMP. The County should provide calculations to show how the EIA was determined when the interim rate was not used. If protocols were not used, the maximum EIA for stream restoration projects in Prince George's County is 0.02. This information should be updated in the next annual report.	The geodatabase was updated to reflect the protocol for the BMP.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	• Based on the Chesapeake Bay Program's Expert Panel on Stream Restoration report, qualifying credit for stream restoration requires a minimum project length of 100 linear feet. If a project is less than 100 linear feet, the County should use the EIA for outfall stabilization of 0.01. This applies to 15 projects and will change the impervious acre credit from 18 acres to 9 acres for these projects. Please make this corrections to the total restoration tabulation.	The EIA was corrected to reflect EIA credit of 0.01 acres per liner feet for all the stream restoration projects that have length restored less than 100 feet.
	• The County shall include procedures to address ongoing maintenance of stream restoration projects, specifically after large storm events in future reports. This includes information on contractual arrangement, the period the contractor is retained for maintenance, and what type of maintenance is addressed, and how the County identifies and performs maintenance needs in between the 5 year inspections.	The County has a 30 years' contractual maintenance agreement with Clean Water Partnership (CWP) for the aesthetic and structural maintenance of all BMPs.
	• The County has correctly indicated that the stream restoration protocols will be used for new projects as the interim rate should be discontinued in accordance with the 2014 MS4 Guidance. Please begin to perform the pre-restoration monitoring consistent with the expert panel report.	Comment noted.
	• The geodatabase for restoration BMPs shows that 95 rainwater harvesting BMPs do not have inspections more recent than 2015. While these BMPs do not add up to a substantial credit (less than 3 acres), the County should develop a process to work with homeowners related to rain barrel maintenance and reporting.	Comment noted.
	• 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 was valuable to verify the County numbers. Please include this information in future reports.	Comment noted. Yes, we have included back in this year's submittal.

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	•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.	Comment noted. The first year inspection data are included in the geodatabase.
	•The County has recommended adding a field to the geodatabase to indicate that certain practices are undergoing repairs so that these practices are not removed and then re-entered for restoration credit. The Department acknowledges that some maintenance will take time, yet a practice can continue to function while certain repairs are active. If the County provides further information verifying a BMP is maintaining water quality function, the Department will consider on case by case basis.	Comment noted.
	•The Department has requested additional information to verify reductions associated with pet waste campaigns. The County has reported that this information will be available in the next annual report. The County should forward this information as soon as it is available.	Comment noted. Information to verify reductions associated with pet waste management is not available at the time of this report preparation. The County will forward this information as soon as it becomes available.
	•Restoration credit associated with major pond retrofit projects (such as Greenbelt Lake) will be re-evaluated by the Department based on field review of these projects.	Comment noted.
	The following comments pertain to the TMDL Restoration Plans:	
	•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.	The County will continue with its restoration program aimed at reducing TMDL load allocations.
	•The Anacostia, Upper Patuxent, and Piscataway River plans do not provide a schedule and final date to achieve the required reductions. The County must develop implementation schedules with a final date for achieving the stormwater waste load allocation (WLA) reductions for all EPA approved TMDLs. This information was requested	County has a current task order for updating the watershed implementation plans for these watersheds, the expected completion will be by the end of 2021 calendar year.

<table>
<tr><th>MS4 Permit Condition</th><th>The Department's Assessment and Recommendations</th><th>County Response</th></tr>
<tr><td></td><td>in both the FY 2017 and FY 2018 annual reports and has not been addressed to date.</td><td></td></tr>
<tr><td></td><td>•The County should document source tracking efforts for the Anacostia PCB TMDL and include any collaborative efforts with the Department.</td><td>County is presently coordinating with MDE on the Source tracking for the Anacostia watershed. Presently, the County and MDE are actively investigating the Lower Beaverdam Creek Watershed.</td></tr>
<tr><td></td><td>•Include pollutant load reductions and progress for meeting the PCB TMDL.</td><td>The County is presently evaluating the possibility of using BMPs that can address non-point sources. Similarly, the County and MDE are presently assessing stream samples for locating point sources. Progress in these areas will be included in subsequent reports.</td></tr>
<tr><td></td><td>•The County must increase the pace of implementation to address target reductions toward TMDLs. The following summary shows current progress toward applicable TMDL target reductions:</td><td>Comment noted.</td></tr>
<tr><td></td><td>
<table>
<tr><th rowspan="2">Watershed</th><th colspan="2">Nitrogen</th><th colspan="2">Phosphorus</th><th colspan="2">Total Suspended Solids</th></tr>
<tr><th>Target (lb/yr)</th><th>% Reduction</th><th>Target (lb/yr)</th><th>% Reduction</th><th>TSS (lb/yr)</th><th>% Reduction</th></tr>
<tr><td>Anacostia River</td><td>219,305</td><td>8%</td><td>30,087</td><td>8%</td><td>46,058,000</td><td>6%</td></tr>
<tr><td>Mattawoman Creek</td><td>11,206</td><td>11%</td><td>948</td><td>12%</td><td>n/a</td><td>-</td></tr>
<tr><td>Patuxent River, Upper</td><td>n/a</td><td>-</td><td>n/a</td><td>-</td><td>384,000</td><td>20%</td></tr>
<tr><td>Rocky Gorge Reservior</td><td>n/a</td><td>-</td><td>27</td><td>1%</td><td>n/a</td><td>-</td></tr>
</table>
<table>
<tr><th rowspan="2">Watershed</th><th colspan="2">Biological Oxygen Demand</th><th colspan="2">Bacteria</th></tr>
<tr><th>Target (lb/yr)</th><th>% Reduction</th><th>Target (MPN B/yr)</th><th>% Reduction</th></tr>
<tr><td>Anacostia River</td><td>644,470</td><td>11%</td><td>1,730,1000</td><td>12%</td></tr>
<tr><td>Patuxent River, Upper</td><td>n/a</td><td>-</td><td>59,397</td><td>23%</td></tr>
<tr><td>Piscataway Creek</td><td>n/a</td><td>-</td><td>22,265,000</td><td>187%</td></tr>
</table>
</td><td></td></tr>
<tr><td>Part IV.F Assessment of Controls</td><td>•The County monitored 11 storm events in FY 2019 at the two stations in the Bear Branch watershed. In addition, the County took 7 baseflow samples at each station. The County cited "weather and timing constraints" as issues during storm sampling. The County's approach to use baseflow samples in lieu of storm samples is acceptable under the circumstances noted in the report.</td><td>Comment noted.</td></tr>
</table>

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	•The County submitted its Assessment of Controls data via the MS4 Geodatabase. The Department offers the following comments:	Comment noted.
	○Chemical Monitoring	
	▪ Nutrients and metals data were missing for the August 21, 2018 storm (County cites autosampler malfunction/data not available).	The County makes every effort to maintain, repair, and upgrade automated samples in the field. In some cases, data collection may not be possible due to the length of the repairs.
	▪ Total Petrochemical Hydrocarbons (TPH) and E.Coli records were missing for 7 storms (however, these parameters were captured for the baseflow substitutes)	The County makes every effort to maintain, repair, and upgrade automated sensitive sampler equipment in the field. In some cases, data collection may not be possible due to the length of the repairs.
	▪ All other required fields have been completed.	Comment noted.
	▪ The County must continue to exercise all efforts to sample 12 storms and all required parameters every reporting year.	The county will make every effort to perform un interrupted sampling collection, analysis and reporting.
	○MonitoringSite and MonitoringDrainageArea	Comment noted.
	▪ There were 69 records dating back to 2017. All required fields have been completed	Comment noted.
	○BiologicalMonitoring	Comment noted.
	▪ All required fields except Embeddedness have been completed for the current reporting year; the County notes that because the monitoring is being conducted in a coastal plain stream, the Embeddedness metric is not applicable.	Comment noted.
	•The FY 2019 Bear Branch Annual Report included a summary of the 12-13 years of data available at both monitoring stations: "The biological and physical habitat scores for each station vary but do not exhibit any discernable trend over the data collection period."	The County agrees with the comment; it is possible that small discernible trend is exhibited due to the small land use changes in the watershed. The County will continue to track changes.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	•The FY 2019 Bear Branch Annual Report included results of the physical monitoring, fulfilling the requirements of Part IV.F.1.c of the permit. The County notes that four of the cross-sections show an increase in entrenchment ratio and two show an increase in channel area. The County continued its Stormwater Management Assessment at Black Branch.	Comment noted.
	•On November 28, 2018, the Department, accompanied County officials and consultants for a field visit of the County's chemical monitoring sites and the restoration BMPs in the watershed. The County acknowledged that restoration implementation has not taken place at the pace anticipated in order to assess the effectiveness of restoration BMPs in this watershed. The Department has advised that because restoration has not been implemented to meet the intent of monitoring requirements, the County needs to find a suitable monitoring location to meet the intent of the permit.	The County will follow up in the near future with a plan for relocating the monitoring stations from the Bear Branch / Black branch to a new approved location.
	•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.
	○A description of the length of time pre-restoration monitoring will take place;	Comment noted.
	○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.
	○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.
	○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 2019 as required. This information was submitted after the reporting deadline. 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.
	•The County's next FAP should be submitted as narrative files in the geodatabase by January 1, 2021, unless advised otherwise.	Comment noted.
	•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.
	•The County is commended for coordinating training and promoting pollution prevention for	Comment Noted.

MS4 Permit Condition	The Department's Assessment and Recommendations	County Response
	MS4 program activities with the County municipal partners.	