2017

Annual NPDES MS4 Report

Prepared for:

Maryland Department of the Environment

Water Management Administration

1800 Washington Boulevard

Baltimore, Maryland 21230

Prince George's County,
Department of the Environment

1801 McCormick Drive, Suite 500,
Largo, MD 20774

Phone: (301) 883-5943

Fax: (301) 883-9218

6/30/2017

This page is intentionally left blank.

National Pollutant Discharge Elimination System
Municipal Separate Storm Sewer Systems

2017 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

This page is intentionally left blank.

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) 2017, the period of July 2016 through June 2017. This year's report is a continuation of the major revisions initiated in last year's report.

On April 27, 2017, the Maryland Department of the Environment (MDE) provided comments on the County's 2016 NPDES MS4 annual report. In that transmittal, MDE requested that the responses be provided with the 2017 NPDES MS4 annual report submittal. Accordingly, the County has prepared a list of responses which can be found in Table 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 2017 report.

In FY 2017, the County vigorously continued its efforts to reduce pollutants entering its waterways as targeted by the MS4 permit. These efforts cut across a wide swath of agencies and programs. In FY2017, the County's notable accomplishments toward meeting the MS4 goals included:

Restoration Accomplishments

- To date, 936.52 acres of impervious area has been restored and another 3,906.62 acres were in active planning, design, or construction in FY 2017, for a total of 4,843 acres.
- The County saw a 65-percent increase in water quality improvement projects in either the planning phase, under construction, or completed (from 299 in FY 2016 to 492 in FY 2017).
- Through its Rain Check Rebate Program, 299 BMPs were installed in FY 2017 on private properties, treating 2.1 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 tool for the neighborhood residents.
- Under its Stormwater Stewardship Grant Program, the County funded a total of 23 projects at a total cost of $2,051,010. The projects in the FY 2017 grant program included on-the-ground efforts such as rain gardens and bio-retention practices, as well as outreach campaigns to engage citizens in schools, faith-based organizations, and their neighborhoods.

Illicit Discharge Detection and Elimination Inspections (MS4 Regulated Land)

- County inspectors evaluated 151 outfalls in spring 2017 to ascertain the presence of illicit discharges. Of these outfalls, 69 received chemical testing with 7 sites recording parameters above pollutant thresholds. Property owners took action to resolve these discharge problems such that all issues were resolved satisfactorily by the end of the reporting period.
- Regular inspection of 69 commercial and industrial sources identified 18 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 1,000 bags and an estimated 43 tons of trash collected. The overall Anacostia trash reduction program was estimated to reduce the annual trash load by more than 32 tons.
- The County awarded a new contract for additional roadside litter removal services, which will exceed the level of services in effect prior to 2010 and align the County toward meeting its MS4 permit goal.
- The County continued to conduct a number of countywide trash reduction, litter reduction, and recycling programs. Specifically, the County undertook several new measures, including development of an Adopt-A-Stream program, launching 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 kicking off the County's first trash trap project.
- The County's litter control efforts through the street sweeping, litter control, and Clean Up, Green Up programs removed more than 4,000 tons of trash and debris.

Outreach and Education

- The County hosted more than 350 environmental education and outreach events with the help of approximately 5,000 volunteers to promote environmental awareness, green initiatives, and community involvement in reducing pollutants to its waterways during which over 15,000 participants took part.
- The County's Tree Planting Program removed 1,900 high-risk or dying trees and planted 4,700 new trees, under its Right Tree, Right Place Program. This provides a net increase of 2,800 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 2017,* included on the DVD.
- The County continued in FY2017 its physical monitoring of the Black Branch watershed to determine the effectiveness of stormwater management practices for stream channel protection.

Land Development and SWM Controls

- In FY 2017, 224 concept plans for stormwater control were approved.

Land Development Inspection Enforcement

- The County staff performed 7,350 stormwater construction inspections and 11,183 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.

This page is intentionally left blank.

TABLE OF CONTENTS

List of Figures

List of Tables

This page is intentionally left blank.

ABBREVIATIONS

ACP	Alternative Compliance Program
ADA	American with Disabilities Act
ARP	Anacostia Restoration Plan
ASD	Animal Services Division, DoE
B-IBI	Benthic-index of biotic integrity
BMP	Best management practices
BOD_5	5-day biochemical oxygen demand
C	Celsius
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
EPIC	Empowering People with Intellectual Challenges
ESD	Environmental site design
ESS	Engineering Services Section, DoE
ETHM	End Time Harvest Ministries

FD	Fire Department
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
KPGCB	Keep Prince George's County Beautiful
LED	Light-emitting diode
LID	Low impact development
LLC	Limited Liability Corporation
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
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
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
PFCC	People for Change Coalition
PGCLitterTRAK	Prince George's County litter reporting smartphone application
PG Green	Prince George's Green
pH	A measure of acidity or alkalinity of a solution (comes from potential of hydrogen)
POI	Point of investigation

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
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
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

This page is intentionally left blank.

ACKNOWLEDGEMENTS

The Prince George's County Department of the Environment, Stormwater Management Division, has prepared this 2017 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 water quality programs and accomplishments achieved in partnership with State and Federal agencies and non-profit organizations. Primary administrative and technical personnel responsible for compliance with the NPDES MS4 Permit are referenced in the "Permit Administration" section, beginning on page 7 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

This page is intentionally left blank.

INTRODUCTION

This report summarizes the activities carried out by various departments and agencies within Prince George's County in accordance with the NPDESMS4 permit during fiscal year (FY) 2017, the period of July 2016 through June 2017. This year's report is a continuation of the major revisions initiated in last year's report.

The next chapter details the County's responses to the April 2017 comments from the MDE on the FY 2016 report. Where important, the reader is directed to follow-up information in this report or on the accompanying DVD of the MS4 geodatabase.

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 2017. 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 County's compliance activities related to numerous permit conditions are described extensively.

This page is intentionally left blank.

RESPONSE TO MDE COMMENTS

On April 27, 2017, MDE provided its comments on County's 2016 NPDES MS4 annual report and requested that the response shall be provided with the 2017 NPDES MS4 annual report submittal. Table 1 below provides response to MDE's comments.

Table 1. County Response to MDE's April 2017 Comments

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
Part V.A Annual Reporting	The Prince George's County FY 2016 annual report was received on January 11, 2017. The County shall submit complete annual reports to MDE no later than January 2 each calendar year.	Comment noted.
	MDE appreciates the County's efforts to respond to each of MDE's comments from prior annual report reviews. Please continue to provide a response to each comment outlined below.	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.	The County agrees.
Part IV.C Source Identification	MDE distributed the new MS4 geodatabase on March 15, 2015 and has requested that the County begin submitting data in this format. The County has begun populating the database, and MDE acknowledges that the transition to this new format is a significant undertaking. MDE will continue to provide assistance during this process and will provide a more comprehensive review of the database after completion. The comments below identify areas of the geodatabase that need to be corrected or updated as the County continues to transition to this new format.	Comment noted.
	The County provided a supplemental Access database to aid in the review of the data. This information proved helpful. Please continue to provide when available in future annual reports.	Comment noted.

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
Part IV.C Source Identification	The Con_Purpose field needs to be adjusted to accurately account for new development versus restoration. For example, the domain, NEWD, should apply to new development and a new domain of REST should apply to restoration. The County should note this correction where appropriate in the geodatabase.	No action needed from the County. The geodatabase code automatically converts code NEWD to new restoration projects instead of new development. MDE needs to update their domain in the geodatabase so that the coded value is reflective of the code description. In the current submittal, all records in RestBMP are either new restoration, redevelopment, or conversion of existing BMP. All records in the BMP associated table are new development.
	The unique ID field needs to be provided for each table and feature class in the format described on page 14 of the *Geodatabase Design and User's Guide*. The only identifying codes that were completed correctly were Mon_Station_ID (i.e. PGMSI000012) and the Chem_Mon_ID (i.e. PG16CHE000001). All other tables and feature classes need to use the appropriate identifying code and format.	This issue has been addressed. In current submittal, all records have values in accordance with their respective schema and identifying codes.
	The permit number is missing from all tables. This information is necessary to link all of the data.	This issue has been addressed. All records have the County MS4 permit number in the current submittal.
	Outfall feature class: Mandatory fields that need data entry include watershed12DGT, Out_Ht, Out_width, and Out_Year.	All mandatory fields have been populated based on available data. County agencies (DPIE and DPW&T) are working diligently to update and rectify the storm drain inventory datasets. Continuing production will be reflected in subsequent reports.
	Type_Outfl: Numerous fields were left blank.	
	Type_Matl: All of these fields are labeled "concrete." It is not likely that all 68,256 structures in the database are composed of concrete. The County's storm drain system likely includes metal and plastic pipes. The County should verify this information.	All post-1980 pipes installed in the County, equal or larger than 15 inches in diameter and serving more than one property, are made of concrete. Prior to 1980, corrugated metal pipes may have been used for open drainage residential driveways, or rural roads. DPW&T will be undertaking a pipe inventory countywide that will include field verification. This inventory will be available when completed in a few years.

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
Part IV.C Source Identification	There are very few outfall data points in the eastern, southeastern, and southwestern portions of the County. Please verify and report progress toward completing the outfall inventory in future annual reports.	County agencies (DPIE and DPW&T) are working diligently to update and rectify issues in the storm drain inventory datasets. Continuing production will be reflected in subsequent reports.
	Outfall Drainage Area feature class: The annual report states that 5,021outfall drainage areas were mapped and provided in the DVD. It is not clear where this information is located as this feature class has not been populated with any data.	The County realized that an error was observed in the drainage data upload process in the previous version of the geodatabase. In this submittal, the County successfully uploaded the data in the new version of the geodatabase.
	BMPPOI: Population of data correlating BMPs, drainage areas, and POIs is incomplete. The fields for Pe_Req and Pe_Adr all have data entry of zero. This information will be needed to update the County's impervious area baseline in the fourth year annual report. All POIs need to have a drainage area delineated. This is the case even when a POI is assigned downstream of a series of ESD practices (i.e., when a POI is not a BMP discharge point).	The County has made substantial progress in digitizing and associating POIs (points of investigation), BMP drainage areas, the BMP associated table, and BMP inspections. The County will continue to update and refine the current and legacy data in subsequent years.
	BMP: All BMPs need to be linked to a POI. This is integral information as the POI will specify the Pe treated. By not linking BMPs to a POI, these BMPs do not provide the required information to show how much water quality is provided. The BMP_Drain_Area will represent the acreage to an individual BMP, or the total acreage to a POI when a system of BMPs are located within a POI. On_Off_Site is a mandatory field that needs to be populated.	The County agrees. The new geodatabase has all the mandatory fields populated, and BMPs are linked to the POI.
	BMP Drainage Area: All BMP_Drain_ID records need to be linked to a BMPPOI_ID. The drainage area (in acres) will be the area of the POI. The POI can represent an individual BMP or a system of BMPs.	

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
Part IV.C Source Identification	The Monitoring Drainage Area feature class and Local Concern tables were not populated in the geodatabase, however, the required information was provided in the Assessment of Controls folder within the DVD submitted by the County. Please update the geodatabase with this information in future annual reports.	This issue has been addressed. In this submittal, the County successfully uploaded the data in the new version of the geodatabase.
	AltBMPLine: Mandatory fields with missing data include Max_Dur_Credit (should be 5 years after the install data or after the most recent inspection). The projected implementation year should be populated for all projects that have been completed.	This has been addressed. The mandatory fields are populated as appropriate. The projected implementation year is a conditional field. Only the planning or under construction projects will have a projected implementation year.
	RestBMP: Mandatory fields: Rest_BMP_Type, BMP_Class; Projected_Impl_Yr , and Impl_Cost need to be populated; Num_BMPs needs to be greater than zero; Imp_Acres should be greater than zero; Load reductions need to be populated;	The County agrees. All fields have been populated with non-zero values in the current submittal of the geodatabase except for projects which are in planning (these may have zero values for drainage areas if they are in the initial phase of planning) or redevelopment (these have a zero cost as they are not a cost to the County). Also, the "Projected_Impl_Yr" has been populated for those projects in planning or under construction. However, completed projects do not have a projected implementation year since they have actual implementation dates. Please note that load reductions are optional not mandatory according to the NPDES Schema V1.2 May 2017.
	Stream Restoration Protocols: This table needs to be populated for any stream restoration project where nutrient and sediment load reductions were reported in the AltBMPline feature class.	The County agrees. All required fields are populated in the current submittal, where applicable.
	Shoreline Management Practices table: These projects are in the planning phase. When these projects are complete, the load reductions and associated protocols need to be populated.	

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
Part IV.C Source Identification	AltBMPPoint feature class: Mandatory fields need to be populated including Project_Desc and Projected_Impl_Yr (use project completion data).	The County agrees. All required fields are populated in the current submittal, where applicable.
	AltBMPPoly: Mandatory fields need to be populated for: BMP_Class, Project_Desc, Project_City, State, Zip, pounds removed for tree planting and street sweeping (when implemented). It is unclear why the AltBMPPolygon encompasses the entire County when turned on.	The County agrees. All mandatory fields are populated. Please note that per NPDES Schema V1.2 May 2017, the field "LBS_Removed" needs to be populated for street sweeping and inlet cleaning and does not apply to tree planting. Because the data type for the field "Acres_Planted" is "short integer," it does not allow for tree planting to be reported with decimal places. The County's tree planting occurs in increments above and below whole numbers; therefore, tree planting acres are being reported in the field "Acres." The County advises MDE to change the data type of the field "Acres_Planted" to "double," so that decimals may be used for reporting. AltBMPPolygon encompasses the entire County when turned on because in FY 2016, tree planting was reported by 8-digit watershed, which is allowed according to Appendix C to MDE's *Geodatabase User Guide: Alternative BMP Geodatabase Guidance*. In this FY 2017 submittal, the County has refined the tree planting data so that the polygon represents the actual area planted.
	SWM: Mandatory fields for Reporting_Year and Mod_Admin need to be populated. Fields for Main_Init, Main_Flw, Main_Enf, and Main_Vio should all be greater than zero.	The County agrees. The current submittal has all the mandatory fields populated in the geodatabase.

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
Part IV.C Source Identification	BMPInspections, RestBMPInspections, AltBMPLineInspections, AltBMPPolyInspections, and AltBMPPointInspections: Mandatory fields for Main_Date, Reinsp_Status, Reinsp_Date, and Reporting_Year need to be populated.	In MDE Geodatabase Schema V1.2, these fields are conditional or optional, and the County has populated them, where relevant.
	Erosion and Sediment Control and Quarterly Grading Pmt Info feature classes: Include all mandatory fields for contact information and 8 digit watershed codes.	The County agrees. The current submittal has all the mandatory fields populated in the geodatabase.
	IDDE: Mandatory fields for IDDE_ID, MDE_Outfall_ID, Test_Num, Reporting_Yr, and Algaegrow need to be complete. The dBoolean domain is 'y' or 'n'. Please use the correct code for Observ_Flow, Chem_Test, Algaegrow, Compla_Num, and Illicit_Q fields in place of a '1' or '2'. The domain dIDDEStatus must be used for Illicit_Elim when an illicit discharge is recorded. All fields for color and clarity need to be populated when observed flow is 'yes'. Consecutive test numbers must be used when screening the same outfall as part of a continuing investigation. Discharge_Source is a required field flow is observed.	The County agrees., The current submittal has all the mandatory fields populated in the geodatabase.
	Municipal Facilities: Mandatory fields such as Mun_Facilities_ID, NOI_Num, and Annual_Review, need to be completed.	The County agrees. The current submittal has all the mandatory fields populated in the geodatabase.
	Fiscal Analysis: Include Fiscal_ID and provide fiscal information for watershed assessment and watershed restoration.	The issue has been addressed. All mandatory fields are populated in the current submittal. Please note that watershed assessment and watershed restoration are optional fields.
	Narrative Files: All files uploaded to MDE should be included in this table.	Comment noted.
	In 2016, Prince George's County continued to provide significant updates to the storm drain inventory and resolve previous data deficiencies. The County reported over 68,000 storm drain features including inlets, manholes, and outfalls. The County reported that over 7,000 outfalls have been included in the inventory. However, this number cannot be confirmed because many of the outfall types reported in the geodatabase were left blank. When the geodatabase is updated, these numbers should be verified.	The County agrees. The current submittal has all the mandatory fields populated in the geodatabase.

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
Part IV.C Source Identification	The County is required to submit a storm drain system map as part of permit requirements. Although the geodatabase currently lacks dedicated fields for input of this information, the County should maintain the map and make available to MDE if requested.	The County agrees. A shape file of the storm drain inventory is included in the current submittal.
	The County will be using the commercial and industrial data layer to prioritize outfalls screening in future annual reports as requested by MDE during the FY 2015 annual report review.	The County intends to use the newly developed commercial-industrial GIS data layer as part of the County's outfall screening inspection program.
	The annual report states that the County made progress in completing drainage area information for all BMPs. However, this information could not be confirmed because of the incomplete data reported in the geodatabase. The FY 2017 annual report shall provide updated information on the BMP drainage area data.	The current submittal has all the mandatory fields populated where available in the geodatabase.
	In accordance with MDE's July 17, 2015 letter the County shall verify the water quality treatment provided for BMPs constructed during 1985 to 2002 through the BMP inspection catch up process. The County expects to complete this verification by the next annual report along with an updated impervious area baseline.	The County's BMP inspection program is continuing verification of the BMPs; the County forecasts verification completion within this permit term.
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).	The County agrees.
	MDE performed a triennial review of the County's stormwater management program on May 19, July 7, and July 8, 2016. Results of this review were provided in MDE's September 14, 2017 correspondence. MDE requested that the County review its policies and revise where necessary to ensure that ESD to the maximum extent practicable is implemented for all new development and redevelopment. In addition, the County should report on the status and resolution of violations and any enforcement actions taken during the year.	Response on this issue is provided on the DVD. See the memorandum from DPIE, dated November 14, 2017.

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
Part IV.D.1 Stormwater Management	The County has reported a total of 3,330 BMPs which include privately owned BMPs, restoration BMPs, and stream restoration projects. The County has performed 2,905 inspections in the last 3 years on the 3,113 privately owned BMPs, 89 of 189 restoration BMPs, and 21 of 28 stream restoration projects. Each year the County has made substantial progress in catching up with triennial inspections and is on pace to catch up with all inspections by the end of the permit term. MDE commends the County for these efforts.	Comment noted.
	While the County has made significant strides toward meeting triennial inspection requirements over this permit term, the geodatabase notes a substantial number of BMPs that did not pass inspections and records are not provided to show how these BMPs are brought into compliance. For example, BMP inspection data in the geodatabase show that 938 BMPs have failed, and a total of 205 BMPs have been re-inspected and maintained. This indicates that out of 3,330 total BMPs County-wide, 733 are not in compliance. In addition, the inspection status needs to be updated for all BMPs in the database. The County needs to develop a long term plan to address these deficiencies and provide this information in the fourth year annual report.	The County acknowledges that around 733 BMPs were not in compliance as of June 30, 2016. The County continues to re-inspect BMPs until they are brought into the compliance. As of June 30, 2017, the updated geodatabase indicates that 698 BMPs were initially out of compliance (125 are the new inspections conducted in FY 2017). A total of 345 of these BMPs were re-inspected; of the re-inspected BMPs, 216 BMPs were brought into compliance. The County staff is on schedule to re-inspect the remaining BMPs which were not in compliance.
	The County Department of Public Works and Transportation staff is in charge of maintenance of public BMPs. The County is working to track maintenance work in the new geodatabase format. This information should be updated in the FY 2017 annual report.	The County agrees. The inspection table in the geodatabase includes any relevant maintenance work in the maintenance date column and a description in the comments.
Part IV.D.2 Erosion and Sediment Control	MDE conducted the County's 2016 delegation review for erosion and sediment control inspection authority on November 16 and 17, 2016. Results of this review were provided in MDE's March 24, 2017, letter to Prince George's County. Based on the findings of MDE's review, the County was granted continued delegation authority effective through June 30, 2019. MDE noted some program improvements needed to address inconsistent proper installation of erosion and sediment control practices, installation of unapproved practices, and deficiencies in enforcement of stabilization.	Response on this issue is provided on the DVD. See the memorandum from DPIE, dated November 14, 2017.

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
Part IV.D.2 Erosion and Sediment Control	In accordance with MDE comments, the County has submitted quarterly reports to MDE regarding earth disturbances exceeding one acre or more. The County has reported a total of 97 projects. In accordance with MDE comments, the County has submitted quarterly reports to MDE regarding earth disturbances exceeding one acre or more. The County has reported a total of 97 projects with earth disturbances of one acre or more.	Comment noted.
Part IV.D.3 Illicit Discharge Detection and Elimination (IDDE)	The County conducted dry weather screenings of 151 outfalls and performed chemical tests of dry weather discharges in accordance with Part IV.D.3.a of the permit. The County detected 74 dry weather flows and conducted 45 chemical tests. Chemical tests were not conducted at 29 outfalls. The County indicated that several dry weather flows were too small to sample. MDE requests clarification on whether this was the case for all 29 outfalls.	Please see the County's response on page 38 of this report.
	Five outfalls required further investigation. Per MDE's request, the County reported actions to eliminate the illicit discharges. Actions included eliminating a water leak on Washington Suburban Sanitary Sewer Commission property, issuing a notice to repair sediment controls on an active construction site, and identifying ground water and organic matter decay as the source of a dry weather flow.	Comment noted.
	The Outfall IDs of illicit discharges noted in D-4 do not correspond with the Outfall IDs in the County's MS4 geodatabase. MDE requests clarification on how the narrative and data reporting coincide.	Please see the County's response on page 38 of this report.
	In accordance with MDE comments in the FY 2015 annual report review, the County offered corrective actions and resolution of illicit discharges observed in the previous year.	Comment noted.
	In MDE's 2015 annual report review, MDE requested additional information on how the County plans to address structural problems, sediment deposits, erosion, floatables, and odors. The County provided a summary of actions taken to correct these problems observed in 2015. MDE requests that the County provide updates on these efforts, including addressing the outfalls with severe erosion.	Please see the County's response on page 38 of this report.

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
Part IV.D.3 Illicit Discharge Detection and Elimination (IDDE)	The County conducted visual surveys of commercial and industrial areas in accordance with Part IV.D.3.b. A total of 80 inspections were conducted with 26 potential water quality concerns identified for follow up inspection. The majority of these (24) required educating local restaurant owners on good housekeeping practices related to proper grease disposal. The County will continue to monitor these sites. Future inspections should continue to target these hot spot areas.	Comment noted.
	In response to MDE comments in the FY 2015 annual report review, the County provided a summary of actions taken to eliminate the 55 potential water quality violations observed in the previous reporting year. The County has improved its investigation, reporting, and follow up to these water quality problems.	Comment noted.
	The County complied with requirements under Part IV.D.3.c to maintain a program to address and respond to illegal discharges, dumping, and spills. Citizens report complaints through the 311 system; complaints are handled through the Inspection and Compliance Section. In FY 2016, the County received 2,283 citizen requests for illegal dumping, and HAZMAT responded to 288 calls for assistance. The County should continue to report the status of water quality violations and resolutions of reported problems.	Comment noted.
	The County complied with requirements under Part IV.D.3.d to maintain appropriate enforcement procedures. The County included a detailed summary of investigations, resolutions, and fines when applicable. The Health Department has begun using a database to track and report water quality violations from failed septic systems and public sewer overflows. The Health Department investigated 24 sites to assess water quality threats.	Comment noted.
	MDE acknowledges the County's improved efforts in tracking problems. Future annual reports shall continue to provide information on the status and resolution of any violation.	Comment noted.
Part IV.D.4 Trash and Litter	The County provided the status of trash reduction efforts and an evaluation of the effectiveness of programs for meeting goals outlined in the trash total maximum daily load (TMDL) work plan in accordance with permit requirements.	Comment noted.

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
Part IV.D.4 Trash and Litter	The County reported that additional programs have been implemented to enhance trash removal efforts. The County has reported that a total of 119,330 pounds of trash were removed from the watershed. However, table D-9 in the County's annual report states that 109,638 pounds of trash were removed. Please explain this difference.	A total of 133,988 pounds of trash were removed from the watershed or prevented via cleanup and anti-litter outreach and education activities. This number reflects the actual weight before the application of reduction factors for partially full bottles and possible inclusion of load allocation items in the trash/litter mix. The total of 109,630 pounds reflects the weight of litter that may be credited to wasteload allocation after all reduction factors have been applied. The reported value of 119,330 pounds was an error.
	The County has additional programs such as the Comprehensive Community Cleanup, the Clean Up/Green Up, Roadside Cleanup, Education and Outreach, Storm Drain Stenciling, and Recycling Programs that work with volunteers to remove trash in communities, roadways, medians, and selected locations.	Comment noted.
	The County addressed MDE comments in FY 2015 annual report review regarding actual pounds of trash removed in relation to the year 2 milestone. The milestone was set at 62,000 pounds of trash and the County actually collected 142,675 pounds of trash. The County exceeded the milestone for FY 2015 and is exploring additional programs and partnerships to achieve the trash reduction goals by the end of the permit term.	Comment noted.
	The County is working with watershed partners to monitor trash at 15 locations throughout the Anacostia River watershed. New programs and partnerships are developed each year to reach the goal of 170,628 pounds of trash reduced in the watershed. The monitoring efforts will continue to inform future trash reduction efforts as well as incorporate adaptive management strategies in order to achieve trash removal targets outlined in the permit.	The County agrees.

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
Part IV.D.4 Trash and Litter	The County is required to continue to evaluate the success of ongoing trash reduction programs and incorporate adaptive management strategies in order to achieve the annual trash removal targets by the fifth year of the permit. For FY 2017, the County projects meeting the 2017 benchmark of 125,000 lb/yr for litter reduction. The County is also evaluating installation of trash capture devices along tributaries of the Anacostia and will report results of these efforts in the next annual report.	An additional program (Adopt-A-Stream) was developed in FY 2017 and communities are signing up for it. The County will report this new program's accomplishments in the FY 2018 annual report. The County awarded a grant project for the installation of a Bandalong along the Arundel Canal located in the Anacostia watershed. This project is in the design phase and installation is expected to occur in FY 2018. Also, in FY 2017, the National Oceanic and Atmospheric Administration (NOAA) awarded the County a grant for the purchase, installation, and maintenance of two additional trash capture devices in the Anacostia watershed.
	The following comments on the County's trash TMDL plan are provided by MDE's Science Service Administration (SSA):	Noted.
	MDE applauds the progress the County is making on the trash TMDL implementation. MDE does have some concern that some of the programs being counted towards progress have been in place prior to TMDL approval, and are therefore already counted in the baseline load. For example, the Comprehensive Community Cleanup Program website states that it was established in 1986. If these programs have been significantly enhanced since the approval of the TMDL, this should be clearly stated in the annual report.	The tonnage of trash collected through the Comprehensive Community Cleanup Program is not counted toward reducing the trash wasteload on the Anacostia River. The types of litter which are collected via this program are mostly large items which fall under the category of load allocation items. The County's NPDES MS4 permit indicates that the County is expected to work toward reducing the wasteload in accordance with its "work plan that is consistent with the assumptions of the Anacostia Trash TMDL, which estimates that 170,628 pounds of trash will need to be removed annually."

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
Part IV.D.4 Trash and Litter		The total tonnage of 109,630 pounds which is shown in Table D-9 of the FY 2016 annual report reflects the cumulative wasteload weight for litter collection in the Anacostia River watershed; this value does not reflect tonnage from comprehensive community cleanups.
	Further information should be provided for the contractor stream cleaning services as this is the largest contributor to the County's trash reductions. It is unclear whether the value of 34.39 bags collected as reported in Table D-9 for this service is correct.	Contractors disposed of the litter which they collected via roll-off containers. The value of 34.39 was inadvertently entered in the wrong column of Table D-9 of the 2016 NPDES MS4 annual report and incorrectly represented as the number of bags of litter collected by contractors. This value reflects the tonnage of litter that was collected by the contractor services for the removal of instream litter and litter in the stream overbank areas.
	Table D-9 states "Add stream names here." It appears this information should have been updated prior to the annual report submittal.	The stream names and cleanup locations were inadvertently omitted. The names and locations are listed below. • Northwest Branch: 20th Avenue and Merrimac • Beaverdam Creek: 2500 block of Brightseat Road • Beaverdam Creek: Mueserbush Court and Frost Pond • Northwest Branch: 3200 block of Toledo Place • Quincy Run: 3500 block of 52nd Avenue • Northeast Branch: 5000 block of Edmonston Road • Sligo Creek: Ray Road and (6700 block of) New Hampshire Avenue • Paint Branch: 8700 block of

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
		Adelphi Road • Lower Beaverdam Creek: Flagstaff Street and Columbia Pike • Northwest Branch: Queens Chapel Road at Ager Road • Lower Beaverdam Creek: Quincy Street and 55th Avenue
Part IV.D.4 Trash and Litter	Table D-9 reference Table D.12.2, however, it does not appear that this table exists.	There was a typo in the reference. It should have been Table D-14.
	The first sentence in "Tours of Facilities" is repeated on page 60.	The first sentence in "Tours of Facilities" did include repeated text. This duplication of text was an error. With correction, the sentence should read "Public education opportunities also include publications issued to residents and tours of County facilities including the Brown Station Road Landfill and Materials Recycling Facility."
Part IV.D.5 Property Management and Maintenance	Annual site specific training was conducted at all County and municipal facilities except the City of Hyattsville. MDE commends the County for emphasizing staff training as an essential component of its program and encourages continued training at all facilities. However, the geodatabase did not provide information on personnel trained at five stations: Greenbelt, Fleet Maintenance, Abandoned Vehicle Impound Lot, Seat Pleasant, and New Carrollton. The County shall specify all training dates in the geodatabase in future annual reports.	Other than New Carrollton, all of the other mentioned facilities (Greenbelt, Fleet Maintenance, Abandoned Vehicle Impound Lot, and Seat Pleasant) had stormwater pollution prevention plan (SWPPP) training for facility staff in FY 2017. According to this year's report, 6 of 19 County facilities did not conduct personnel training due to scheduling conflicts which pushed the SWPPP training into the next fiscal year. Also, the County has contracted with the Low Impact Development Center to develop site-specific SWPPP training materials for each facility and to assist the facilities with scheduling and conducting training classes.

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
Part IV.D.5 Property Management and Maintenance	Copies of quarterly and annual facility inspection forms were provided with the annual report and showed that important issues were flagged during inspections, such as ensuring the availability of spill kits, eliminating erosive discharge, and confirming that training was being conducted at each facility. In future annual report submittals these forms are not required to be submitted unless specifically requested; forms should be maintained on site for MDE review.	Comment noted.
	The County continued street sweeping of prioritized areas supplemented with a roadside litter hotline. The County plans to enhance the street sweeping program for future restoration credit.	Comment noted.
	The County performed cleaning of 6,232 storm drain structures and 623,762 linear feet of pipes in all 23 incorporated municipalities, and removed 60 tons of debris. In addition, storm drain channels continued to be inspected and cleaned on a triennial basis, and 18,679 linear feet of channel were maintained in the last year.	Comment noted
	The County decreased the use of salt by half, while brine application for pretreatment was more than doubled from the previous year. The County indicated that a salt application management plan was developed. The County is commended for these efforts.	Comment noted.
	Per MDE's request in the 2015 annual report, the County indicated that deicing material application training is conducted annually and is mandatory for all staff and contractors.	Comment noted.
	Fertilizers and pesticides were not discussed in the latest report, while the 2015 annual report indicated that these chemicals were not applied. If this changes, the County is requested to report any quantifiable amounts in future reports.	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. This meets the intent of the County's permit. Some examples are noted below.	Comment noted.

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
	The County sponsored 317 environmental public participation programs during the reporting year with a total of 31,860 attendees at these events. Education topics included trash clean ups, tree plantings, shredding and recycling events, town meetings and speaking at local schools.	Comment noted.
	The County is commended for its broad and comprehensive outreach activities.	Comment noted.
Part IV.E Restoration Plans and TMDLs	MDE approved the County's impervious area baseline which requires 6,105 acres of impervious area restoration by the end of the permit term. The County has reported 225 acres have been restored since the beginning of the permit term. However, MDE was not able to confirm this number with the information reported in the geodatabase. MDE evaluated restoration projects completed since January 2, 2014 and reported in the geodatabase as follows: Rest_BMP (22.5 acres), AltBMPline (41.8 acres), AltBMPPoly (95 acres), AltBMPPoint (61 acres) for a total of 220 acres. While the difference is not significant, the County should provide additional information to confirm these numbers. The total acres in the geodatabase should coincide with the totals in the annual report.	The County agrees that there was some discrepancy between the data provided in the geodatabase and the numbers in the report. The current report presents the numbers by each file type similar to MDE's analysis methodology to avoid any discrepancy.
	The County has increased its pace of implementation over recent years; however, this increased effort does not put the County on target to meet restoration requirements established in the permit. While the County has described alternative strategies in the annual report to meet these requirements, the County remains in jeopardy of permit non-compliance. Substantial efforts will be needed for increased implementation in the last two years of the permit.	In FY 2017, the County has completed restoration of 936.52 impervious acres. In addition, another 3,906.62 acres are in the active planning phase or under construction. This is significant progress compared to FY 2016.
	The County has submitted an analysis to support the exclusion of rural residential and roadway impervious areas in the County's baseline. Additional verification is needed by the fourth year annual report. Specifically, the following information needs to be clarified:	Comment noted.

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
Part IV.E Restoration Plans and TMDLs	The impervious area deducted from the County's baseline for rural roadways was 350 acres, however, only 271.7 acres were included in the analysis. If the County cannot account for the 78.3 acre difference, then this acreage will be added to the County's baseline after the fourth year annual report. This will add 16 acres to the County's restoration requirement.	The County agrees and acknowledges this.
	The impervious area deducted from the County's baseline for rural residential areas was 1,437 acres. However, the analysis provided by the County only included 726 acres that qualify for the disconnections. Further information is needed to verify the remaining 711 acres of impervious area disconnections. If this information is not provided, the County will need to show how 20% of this number (142 acres) will be treated by the end of the permit term.	The County has completed a new rural residential disconnection analysis using a finer grid scale of 1 meter (an improvement on the 10-meter resolution on which the previous analysis was based). The new analysis is provided on the DVD with the 2017 NPDES annual report. The new analysis has identified 991 acres as eligible for impervious disconnection. This still leaves a balance of 446 acres that are assumed to be eligible. The County will therefore add 20 percent of the difference (89 acres) to its impervious restoration requirement.
	The County only field verified 8.6 of 726 acres included in the analysis of rural residential areas. A field verification of a representative sample of rural impervious acres deducted for both residential areas and roadways needs to be submitted to MDE. If it is not provided, the County will risk adding 158 acres (142 + 16) to the total impervious acre restoration requirement.	The 2014 accounting for stormwater wasteload allocations and impervious acres treated indicates that a field evaluation is required, but it does not include specific requirements as to the amount needed. The County performed an automated analysis followed by a desktop quality assurance and field evaluation. As part of the desktop quality assurance, staff reviewed aerial photos and street views of properties, providing insight into the field conditions. The aerial photos were able to show some field conditions, such as where downspouts were located, and if they were directed toward grass or impervious areas, such as pathways and driveways. Street views aided this review in that staff were able to visualize flow from driveways. The

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
Part IV.E Restoration Plans and TMDLs		field investigation factored in different conditions to represent the larger dataset.
	The assumptions in the rural residential analysis do not consider curbs due to lack of data. The County should overlay the rural area disconnection analysis with storm drain infrastructure data to ensure that disconnections do not drain to an inlet. MDE will need more information to ensure that any disconnected areas do not drain toward roadways with curbs.	The automated analysis did consider the County's storm drain network and removed impervious area from consideration if flow potentially could enter a storm drain, ditch, or stream. In addition, flow that was intercepted by another impervious area (e.g., roof runoff flowing onto driveway) was not included, as this would not be considered disconnected due to the possibility that it would flow to the road and a stormwater network. During the subsequent desktop quality assurance, staff used aerial photos and street views to check for curbs. In addition, the rural residential analysis focused on rural residential impervious areas, such as roofs, walkways, and driveways, which typically do not contain curbs.
	The County's original baseline calculation did not account for septic systems that were connected to public waste water treatment between 2000 and 2016. The County has requested that these acres be deducted from their baseline. MDE will not allow the County to use this information in the revised baseline analysis.	From a practical accounting perspective, the conversion of residential hookups from septic fields to wastewater treatment plants addresses load reductions from the land within a watershed to the wastewater sector under the State's Phase II watershed implementation plan (WIP II). In the County's opinion, as equivalent credit for septic disconnection from residential properties is allowed per the guidance document, progress is being made and the County will continue to count septic disconnections for meeting the urban side of the WIP II loads.

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
Part IV.E Restoration Plans and TMDLs	The revised impervious area baseline analysis shall provide specific information related to restoration BMP performance and verification. For example, the geodatabase for ALTLINE BMPs shows that 7 stream restoration projects have failed. The County's baseline analysis shall show how any failed BMPs for water quality treatment or for restoration have been incorporated into the updated analysis. In addition, any BMP that provides water quality treatment which was brought into compliance during the permit term can be used to deduct from the impervious area baseline.	The County agrees that BMPs installed need to be in operation and inspected regularly. In the County's opinion, there will be times when certain BMPs will be not operable during times of repair or maintenance. For large BMPs such as ponds or stream restoration, due to regulatory permitting, repairs may take a longer time to achieve. As long as the County is actively pursuing these repairs, the BMP assets should remain in the impervious baseline accounting. The County recommends adding an additional field in the geodatabase to capture penalized credit due to the repair of existing BMPs. This will help to avoid any issues of removing and re-entering into database once the BMP is back in compliance.
Part IV.E Restoration Plans and TMDLs	MDE has advised the County that BMPs with missing drainage areas cannot be used for calculating current year baseline loads. However, the County has made progress in updating this information. When these data deficiencies are rectified the County should improve the baseline load calculations with more accurate data. MDE also recommends that the revised impervious area analysis can incorporate this updated information in order to reduce the County's baseline.	The County is pleased to report that significant progress has been made in bringing BMPs reported in the baseline that were not in compliance, to now be in compliance. Also, BMPs reported in the 2015 impervious baseline assessment without drainage area polygons now have drainage area polygons, and those without inspection records now have inspection records. In addition, the County has identified legacy BMPs that existed when the baseline was established, but were not reported because the County did not have the data. The County has inspected and added these legacy BMPs into the FY 2017 geodatabase. The County will continue to work to bring legacy BMPs into the inventory and into compliance. The County will re-evaluate the impervious baseline with all the relevant data submitted in the FY 2018 report.

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
	The County anticipates that new regulations for redevelopment that require treatment for 75% of impervious area will play a significant role in achieving additional impervious area credit and pollutant load reductions.	Comment noted.
	In FY 2017, the County anticipates that a total of 204 projects will be implemented at a cost of $195,000 in order to achieve a restoration credit of 2,806 impervious acres (according to Table E-20 in the report). The County is commended for utilizing alternative options such as septic connections to waste water treatment plants and inlet cleaning for restoration in order to keep costs low.	Please note that the table's figures need to be multiplied by a thousand, as is currently stated in the table.
	In FY 2015 annual report review, MDE requested that the County provide a TMDL assessment in accordance with Part IV.E.4 of the permit. The assessment shall tabulate pollutant load reductions achieved during the reporting period. This information was provided in the June 10, 2016 submittal, however, MDE requested that the County provide a comparison with established benchmarks outlined in each proposed TMDL plan. This information has been provided in this annual report in accordance with permit conditions. The County should continue to provide this information in future annual report.	The County will continue to provide the information requested.
	The County's TMDL assessment has included a list of new programs to be implemented as part of the adaptive management process to keep target waste load allocation on track to meet local TMDLs by 2031. MDE commends the County for developing alternative strategies for BMP implementation in order to stay on track with long term TMDL goals.	The County will continue to coordinate TMDL challenges and timelines with MDE.
Part IV.E Restoration Plans and TMDLs	MDE's 2014 annual report review requested that TMDL plans should include an overall summary of countywide load reductions for meeting the Chesapeake Bay TMDLs. This information was provided in the June 10, 2016 submittal and the FY 2016 annual report and broken down based on watershed. This shall be updated annually.	The County will continue to provide the information requested.

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
Part IV.E Restoration Plans and TMDLs	In previous annual report reviews, MDE requested that the County revise TMDL plans with a more conservative estimate of pollutant reductions under the pet waste campaign. This will allow the County to incorporate adaptive management strategies to meet the proposed reduction targets. MDE will provide further review after receipt of the revised plans.	The County will make the necessary adjustments to the TMDL implementation plans after the County has had enough time to implement the pet waste campaign and measure its effectiveness.
	The County has agreed to evaluate public outreach and education success using the pet waste campaign. By the fourth year annual report, the County should provide estimates and further documentation to verify the assumptions related to bacteria reductions achieved using this program.	Please see the memorandum dated June 23, 2016, provided on the DVD.
	Page 134 of the County's annual report specifies that the Greenbelt Lake dredging project will provide treatment for 330 acres. Dredging is not an acceptable water quality treatment practice and may not be used for restoration. The County was advised of MDE's position on dredging in the FY 2014 annual report review. MDE's correspondence on February 20, 2015 related to the County's impervious area assessment stated that the dredging of Laurel Lakes could not be counted as restoration. The County appropriately did not account for the Laurel Lakes dredging and should do the same for other dredging projects.	The County's Clean Water Partnership had consulted with MDE staff prior to the Greenbelt Lake retrofit, and the restoration work included improvements to the forebay by regrading and providing increased treatment capacity.
	In FY 2014 and 2015 annual report reviews, MDE requested that the County update the TSS load reductions for stream restoration using the sediment delivery factor. For example, as noted in MDE's response, to the County's June 10, 2016 submittal, MDE computed revised load reductions of 1,688 tons/year using the sediment delivery factory for TSS (assumes 5,000 linear feet of restoration per year over the next 15 years or a total of 75,000 linear feet of restoration). The County claims to have made this correction, however, it is not clear where this information is available in the annual report. Please clarify where this information is verified in future annual reports.	The County used the sediment delivery factor when computing the TSS load reductions from stream restoration projects. In this FY 2017 annual report, the County applied the 0.181 sediment delivery factor to all stream restoration projects when computing the TSS load reductions. The County will edit the 2015 restoration plans to reflect this fact when the plans undergo revisions at the end of the permit term (see also response to next comment). Using the sediment delivery factor will reduce the anticipated TSS reductions from stream restoration projects but given the excess reductions that are

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
		projected over the restoration timeline, it is expected that TMDL targets will still be achieved.
	The County should provide red-line revisions to the TMDL plans and highlight any new information related to baseline loads and implementation schedules in the fourth year annual report. This should also include additional strategies to make up for the nitrogen gap in the Anacostia watershed TMDL. It appears that some of the septic connections to waste water treatment plans described above can be incorporated into revised plans.	The County concurs with the benefits of making red-line revisions to the TMDL implementation plans due to implementation efforts. However, the County believes this request is premature due to the scale of the implementation programs and the short duration from inception. The County prefers to develop red-line revisions about the success or shortcomings of these programs at the end of the permit term or beyond.
	The County has awarded $1.35 million in FY 2016 to applicants under the Stormwater Stewardship Grant Program. MDE recognizes the significant effort required to develop these innovative programs. These will assist the County toward implementation of local water quality projects in order to meet the long term goals outlined in the restoration plans. The County is commended for these partnerships and should continue to work with community groups to ensure proper maintenance of BMPs.	The County agrees.
	The County has satisfied the public participation requirements in the TMDL process through public meetings and response to public comments. The County shall report on continued outreach efforts to engage the public and develop partnerships with local stakeholders in future annual reports.	The County agrees.
Part IV.E Restoration Plans and TMDLs	The following comments on the County's TMDL restoration plans are provided by MDE's SSA:	Noted.

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
Part IV.E Restoration Plans and TMDLs	Tables E-2 through E-6 in the annual report present current progress toward Local, State TMDL SW-WLAs. Tables E-7 through E-10 present planned progress towards Local, State TMDL SW-WLAs. Tables E-11 through E-18 present current progress towards Phase II WIP allocations per 8-digit watershed. All of these tables only present aggregate BMP load reductions. It would be beneficial if BMP reductions were reported by BMP type. This would allow SSA to make a more accurate assessment of the county's demonstration of progress. For instance, in most local TMDL watersheds, current progress is less than 5% of the total required target reductions; however, the county indicates it has already achieved 48% of the required load reduction for the Patuxent River Upper TSS TMDL. Providing information by BMP type would allow SSA to assess why implementation towards the Patuxent River Upper local TSS TMDL has progressed at a more rapid pace than other local TMDLs.	This information is available in the geodatabase that was submitted. Further providing tables showing specific BMP types utilized will clutter the report with an excessive number of tables. Querying the geodatabase, it can be seen that a significant stream restoration project (Bear Branch) was built in the Patuxent River upper watershed in 2012 that restored 3,620 feet of stream length. This provided a TSS reduction of almost 163,000 lbs/year. Since the local TSS TMDL requires the County to lower TSS from urban areas by only 384,000 lbs/year, approximately 43 percent of the required reduction is met solely by the Bear Branch project.
	The County does not provide any progress information related to PCB TMDL implementation. For instance, the county's PCB SW-WLA implementation plans indicate that the county is planning to 1) do a desktop analysis (GIS/existing data) to identify areas where PCB sources are documented or likely to exist, 2) target BMPs and waterways in these areas, 3) sample sediments at these BMPs/waterways, 4) determine BMPs/waterways where PCB sediment concentrations exceed mitigation levels, and 5) identify upland PCB sources and remediate contamination. The County should provide a status of this plan, the desktop analysis, and clarify whether any sampling has been initiated. In addition, the County should clarify the level of monitored PCB concentrations that will prompt remediation activity (i.e., soil clean-up standards based on human health exposure pathways).	The County has not begun addressing PCB sources at this point. The County is waiting for the upcoming MDE release of the Patuxent sediment TMDL, which is expected according to the State to also contain PCB traces from nonpoint sources. The County will address sediment transport through BMP restoration, stream restoration, and outfall repairs, in an effort to arrest the migration of sediment from moving downstream. At the time this occurs, the County will work with MDE to develop the methodology for measuring the projects' benefits. As an example, the District of Columbia and the National Park Service have initiated a CERCLA request asking Prince George's County to identify potential PCB sources from County-owned and maintained industrial facilities in the Anacostia watershed. The CERCLA request also requires the District of Columbia to monitor PCB concentrations in the tidal areas

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
		of the Anacostia River within the County. Once the study is completed, the County along with the State will work to identify potential nonpoint sources. This process will take a few years.
	The County is not taking credit for septic system hook-ups, pumping, and retrofits towards TMDL SW-WLAs. For the Chesapeake Bay TMDL and Phase II WIP, MDE agrees with this approach. However, for local nitrogen TMDLs, the TMDLs do not explicitly account for septic system loadings. Therefore, these loadings are implicitly captured in the urban stormwater component of the TMDLs due to non point source attribution and model calibration. Because of this, the county can credit septic system BMPs towards SW-WLA reductions, if these septic system enhancements or hookups occurred following TMDL baseline conditions.	There are two TN TMDLs for local waterbodies; • Anacostia River – 1997 • Mattawoman Creek – 2000 Therefore, septic retrofits since the noted years will be applicable toward the load reduction calculations for TN.
	The County states that biological sampling will be performed to characterize watersheds without local TMDL restoration plans. SSA supports this effort. The County should clarify whether this sampling has begun and provide more information on the sampling design. In addition, the County should specify whether fixed or random site selection is proposed in these watersheds. Biological sampling can be a means of demonstrating progress towards local TMDLs, sediment TMDLs in particular. The County may want to consider extending this program to watersheds with local sediment TMDLs as well.	The County conducts countywide biological monitoring in 3-year cycles, with the 2015–2017 cycle being the most recent. The County has completed the third year of monitoring and is in the process of analyzing the data. There have been two previous 3-year cycles. The sites for all cycles were determined through random site selection.
Part IV.E Restoration Plans and TMDLs	The County appears to have addressed most of SSA's comments on their initial restoration plans, either through updates to its plans or responses to comments. One item of concern is that the proposed stream restoration TN and TP reductions in the Anacostia watershed still do not match the proposed linear feet of stream restoration in the watershed. The county says in its response to comments that they are planning on restoring 5,000 linear feet of stream in the watershed, which using the default stream restoration TN reduction rate would equate to 375 lbs TN. However, the county indicates in its revised plan it expects a 5,625 lb TN reduction, which would equate to 75,000 linear feet of stream restored. Has the	The County plan is to restore 5,000 linear feet per year for 15 years, as MDE mentioned in an earlier comment regarding TSS loads. This would result in the reported 5,625 lbs of nitrogen reduction. Section 6.1.2 of the *Anacostia River Watershed Restoration Plan* (dated December 2015), indicates that 75,000 linear feet would be restored, with 5,000 linear feet being restored per year. This project is associated with U.S. Army Corps of Engineers' stream restoration

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
Part IV.E Restoration Plans and TMDLs	county explicitly measured the load reductions from the planned 5,000 feet of stream using the new stream restoration expert panel protocols? Is that why the proposed linear feet and load reductions don't match up?	project.
	The County indicated in its response to one of SSA's original comments on the Anacostia sediment TMDL restoration plan that the 21% achievement of target reductions would likely change; however, the updated restoration plan still indicates 21% achievement. Further, the 2016 annual report only indicates 0.69% achievement of the loading reduction targets.	Since the restoration plan's development, the County's BMP data has been revised based on new information. Therefore, it is likely that the plan's reported 21-percent reduction will change. The County will revise this value when the plans are edited at the end of the permit term. As stated in prior responses, the County intends to revisit the restoration plans and make changes to reflect any new information. Currently, the annual reports only count the BMPs installed since 2009 toward restoration.
	The County indicated in its response to one of SSA's original comments on its bacteria TMDL restoration plans that estimates on bacteria reductions from pet waste programs would be provided in the next several years. It is unclear whether the County is conducting pre and post pet waste campaign monitoring downstream of where these programs are being implemented to allow for a quantification of load reductions.	Please see the memorandum dated June 23, 2016, provided on the DVD.
Part IV.F Assessment of Controls	Prince George's County sampled 7 storms at its PG003 monitoring station and 6 storms at its PG005 monitoring station. The County cited "weather and timing constraints" as the main reason for not sampling 12 storms at each station. In addition, the County took 4 base flow samples at PG003 and 5 base flow samples at PG005 in lieu of the missing storm samples. The County acknowledged that it will work toward increasing manual storm sample collection.	The County agrees.

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
Part IV.F Assessment of Controls	The County submitted its chemical and biological monitoring data in a Microsoft Access database file (following the MS4 geodatabase format), separate from its submission of other MS4 reporting data required under its permit. Future submissions should include all data in the comprehensive geodatabase to avoid confusion.	The current submittal includes this data within the geodatabase.
	The "ChemicalMonitoring" table has been filled; however, there is some missing data. Four storm samples are missing data for nutrients and metals and three storm samples are missing total petrochemical hydrocarbons (TPH) data. While MDE recognizes the challenges in capturing data, MDE requests the County collect these data for as many storms as possible.	There was an error in the database. There were additional storms for nutrient and metals. Due to their need for manual sampling, TPH and *E. coli* are challenging parameters to collect. For safety reasons, field staffs are limited to daylight hours for collecting manual samples.
	There is a minor inconsistency in the data set; two different placeholders are being used to indicate "no data". In the FY 2015 review, MDE requested all MS4 jurisdictions to enter "999" in instances where there is no data; while the County did enter that in some instances, the County also entered "-1" in other cells. MDE requests that the County be consistent across all cells and tables in entering "999" to indicate no data.	This issue has been addressed in the current submittal.
	The "BiologicalMonitoring" table is mostly complete, however, a few embeddedness values are missing. The County noted that embeddedness values are "not collected for low-gradient (coastal plain) streams".	The County agrees.
	The County reported Phenol concentrations under the "LocalConcern" table.	The County agrees.
	The "MonitoringSite" and "MonitoringDrainageArea" tables are complete.	The County agrees.
	The County continued its physical monitoring at five cross sections in the Bear Branch. Results were reported in the document "Bear Branch Annual Report FY 2016" which was an attachment to the County's annual report. The County reported that three of the five cross sections showed an increase in entrenchment ratio and one showed an increase in channel area.	The County agrees.

MS4 Permit Condition	MDE Assessment and Recommendations	County's Action
	The County continued its Stormwater Management Assessment in the Black Branch. Results were reported in the document "2016 Black Branch Geomorphic Report." The report indicates that there has not been significant change observed in the past year.	The County agrees.
Part IV.G Program Funding	The County's expenditures for capital and operating budgets for implementing NPDES stormwater permit requirements in FY 2016 were $54,426,296 and $14,427,784 respectively. This represents a reduction of funding from FY 2015 that was reported as $96,460,000 and $66,921,000 for capital and operating budgets. However, the geodatabase did not provide fiscal information for watershed assessment or watershed restoration. The County should clarify whether the information in the geodatabase was not complete and include this information in the future.	The FY 2015 reporting included total budget for all operations including flood control activities. The FY 2016 numbers were specific to the water quality restoration activities. Since the watershed assessment or restoration field is an optional field, this field was not populated.
	The Watershed Protection and Restoration Program (WPRP) Annual Report should be submitted in accordance with the template provided by MDE as a narrative file in the MS4 geodatabase by January 2, 2018.	The County agrees.
	As per MDE's letter dated October 17, 2016, MDE requested additional clarification on the County's Financial Assurance Plan (FAP). MDE requests that this clarification and the County's next FAP be submitted as narrative files in the MS4 geodatabase by January 2, 2019.	The County agrees.

This page is intentionally left blank.

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.

This page is intentionally left blank.

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.

This page is intentionally left blank.

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

.

This page is intentionally left blank.

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 technical personnel in FY 2017. Table A-2 provides addresses of the coordinating agencies and Figure A-1 through Figure A-15 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	N/A
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	Technical staff listed below
Storm Drain System	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	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	Consultant Services
Urban Best Management Practices (BMP)	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	Consultant Services
Impervious Surfaces	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us	Consultant Services

Permit Condition	Department/ Division	Manager, Title/ E-mail Address, Telephone	Technical Personnel, Title/ E-mail Address, Telephone
		301-883-5943	
Monitoring Locations	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	Consultant Services
Water Quality Improvement Projects	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	Consultant Services
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	Mary Rea, Planner Site/Road Plan Review Division marea@co.pg.md.us 301-883-5921
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	Michael Reahl, Code Enforcement Officer, Inspections Division mreahl@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/OHMD	Vernon Stinnett, Associate Director Office of Highway Maintenance vlstinnett@co.pg.md.us 301-499-8522	See program manager
Erosion and Sediment Control			
Erosion and Sediment Control	DPIE/ID	Michael Reahl, Code Enforcement Officer, Inspections Division mreahl@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	Mary Rea, Planner Site/Road Plan Review Division marea@co.pg.md.us

Permit Condition	Department/ Division	Manager, Title/ E-mail Address, Telephone	Technical Personnel, Title/ E-mail Address, Telephone
		301-636-2060	301-883-5921
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	Manfred Reichwein, Program Chief Environmental Engineering mreichwein@co.pg.md.us 301-883-7632	See program manager
	FD/EMS	Craig Walker Black Hazardous Materials Coordinator, Fire/EMS Department cwblack@co.pg.md.us 301-262-6325	See program manager
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 301-883-6067	See program manager
Street Sweeping	DPW&T/OHMD	Gwen Clerkley, Associate Director Office of Highway Maintenance gtclerkley@co.pg.md.us 301-499-8522	Michael Brown, Division Chief Special Service Division mobrown@co.pg.md.us 301-499-8520
Recycling, Trash and Garbage	DoE/RRD	Marilyn Rybak, Acting Associate Director	See program manager

Permit Condition	Department/ Division	Manager, Title/ E-mail Address, Telephone	Technical Personnel, Title/ E-mail Address, Telephone
Collection, Public Education		Resource Recovery Division merybak@co.pg.md.us 301-780-6315	
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 301-499-8520	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 301-499-8520	See program manager
Vegetation Management	DPW&T/OHMD	Vernon Stinnett, Associate Director Office of Highway Maintenance vlstinnett@co.pg.md.us 301-499-8520	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 301-499-8520	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 301-499-8520	See program manager
Public Education			
Community Outreach and Education	DoE/SD	Deborah Weller, Planner IV Community Outreach Promoting Empowerment dmweller1@co.pg.md.us 301-883-7161	See program manager
	DoE/Director Office	Linda Lowe, Public Information Specialist Communications and Community Engagement Section lmlowe@co.pg.md.us 301-883-5952	See program manager

Permit Condition	Department/ Division	Manager, Title/ E-mail Address, Telephone	Technical Personnel, Title/ E-mail Address, Telephone
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	Nawaf Esayed, Section Head Capital Projects Construction Section neesayed@co.pg.md.us 301-883-5980	See program manager
Program Evaluation	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	See program manager
Assessment of Controls			
Watershed Restoration Assessment	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	Consultant Services
Stormwater Management Assessment	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	Consultant Services
Program Funding			
	DoE/SSD	Michelle Russell, Associate Director Strategic Services Division mwrussell@co.pg.md.us 301-952-3954	Rushane M Jones, Budget Analyst Budget and Procurement Section kchernet@co.pg.md.us 301-883-5808

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/I&CS:	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 300, Largo, MD 20774
DPW&T/OHMD:	Department of Public Works and Transportation, Office of Highway Maintenance Division (OHMD) 8400 D'Arcy Road, Forestville, MD 20747
DPIE:	Department of Permitting, Inspections and Enforcement (DPIE) 9400 Peppercorn Place, First Floor, Largo, MD 20774
HD/EHDC:	Health Department, Environmental Health/Disease Control Division 9201 Basil Court, Suite 318, Largo, MD 20774

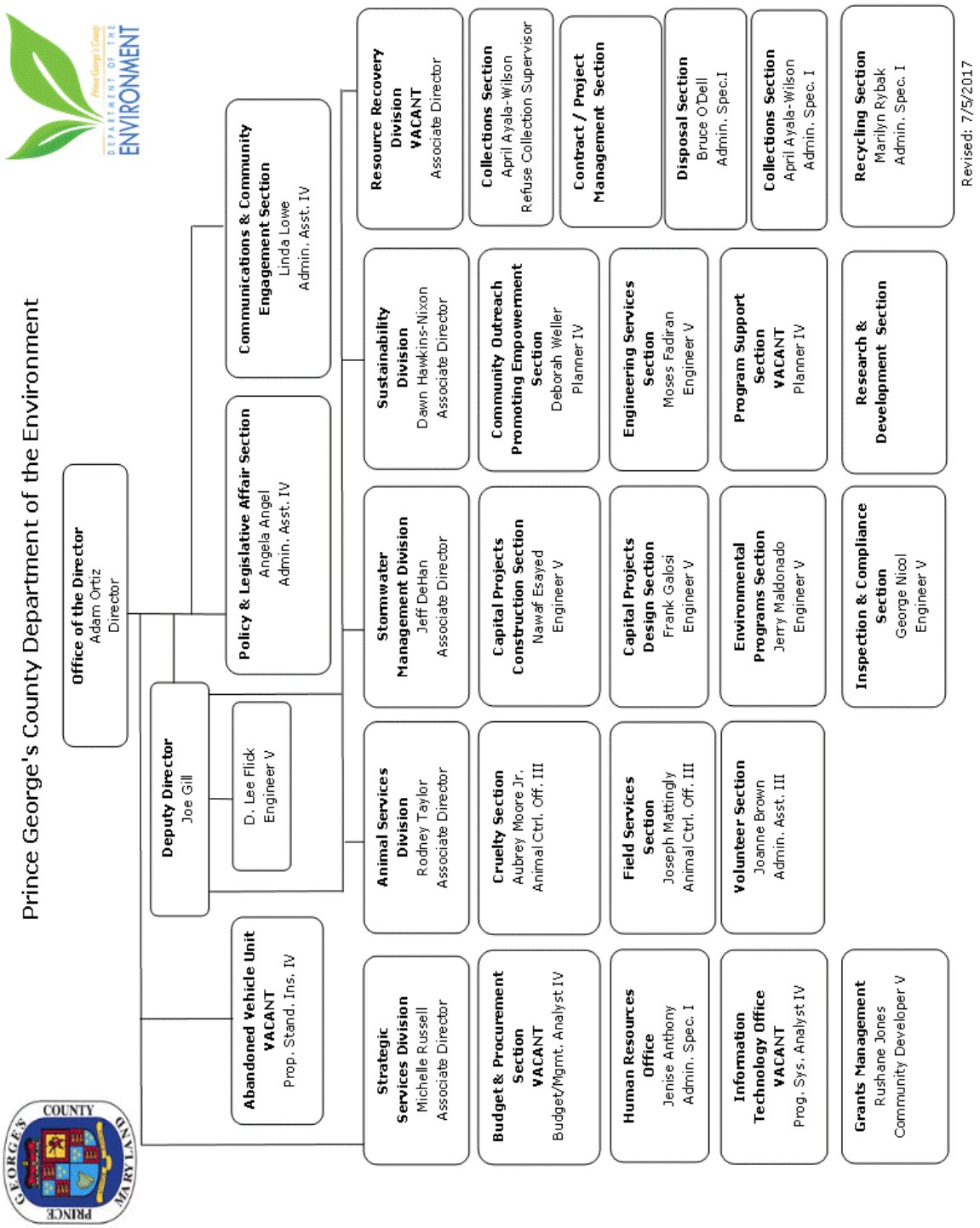


Figure A-1. Department of the Environment - Office of the Director Organizational Chart

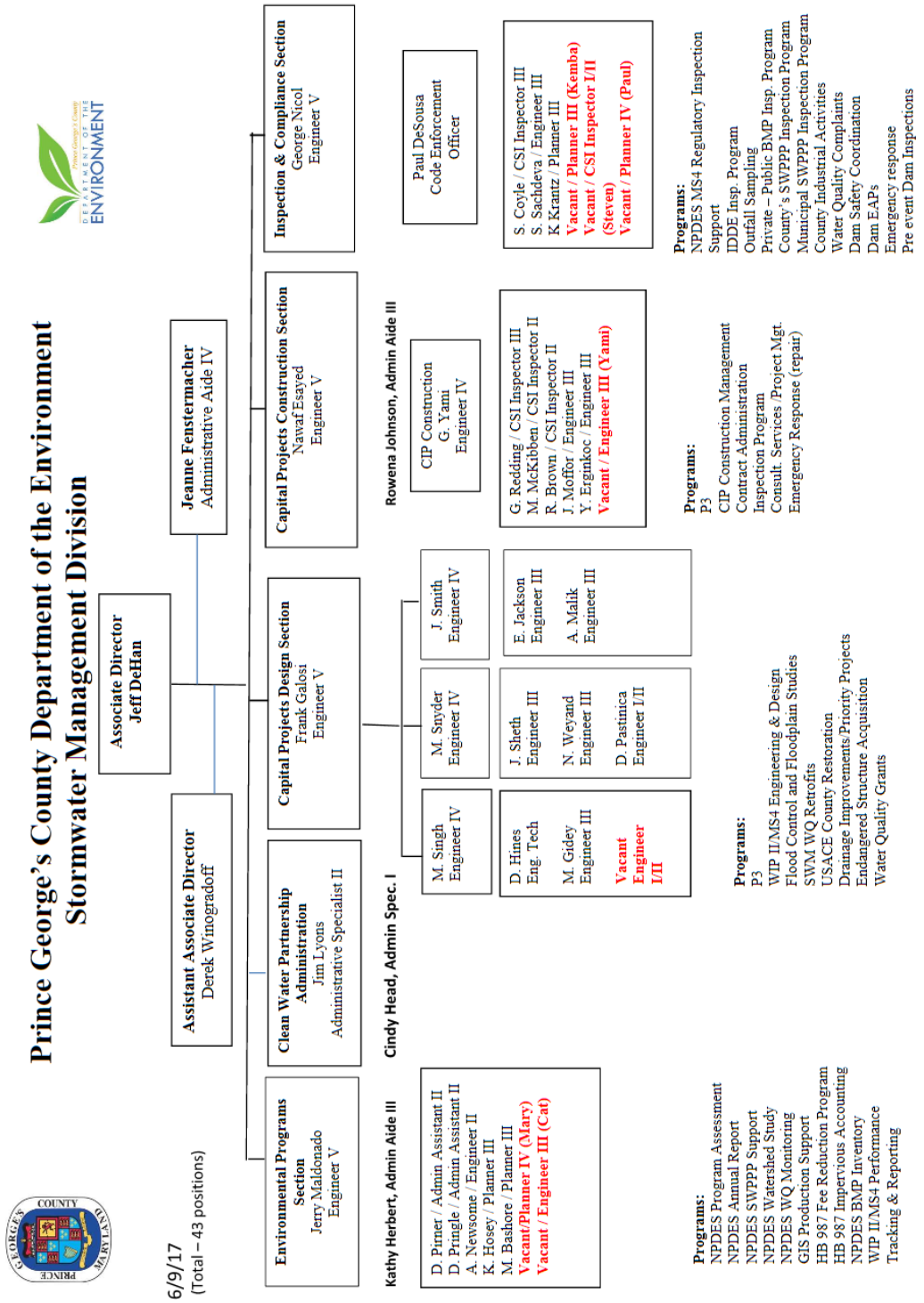


Figure A-2. Department of the Environment - Stormwater Management Division Organizational Chart

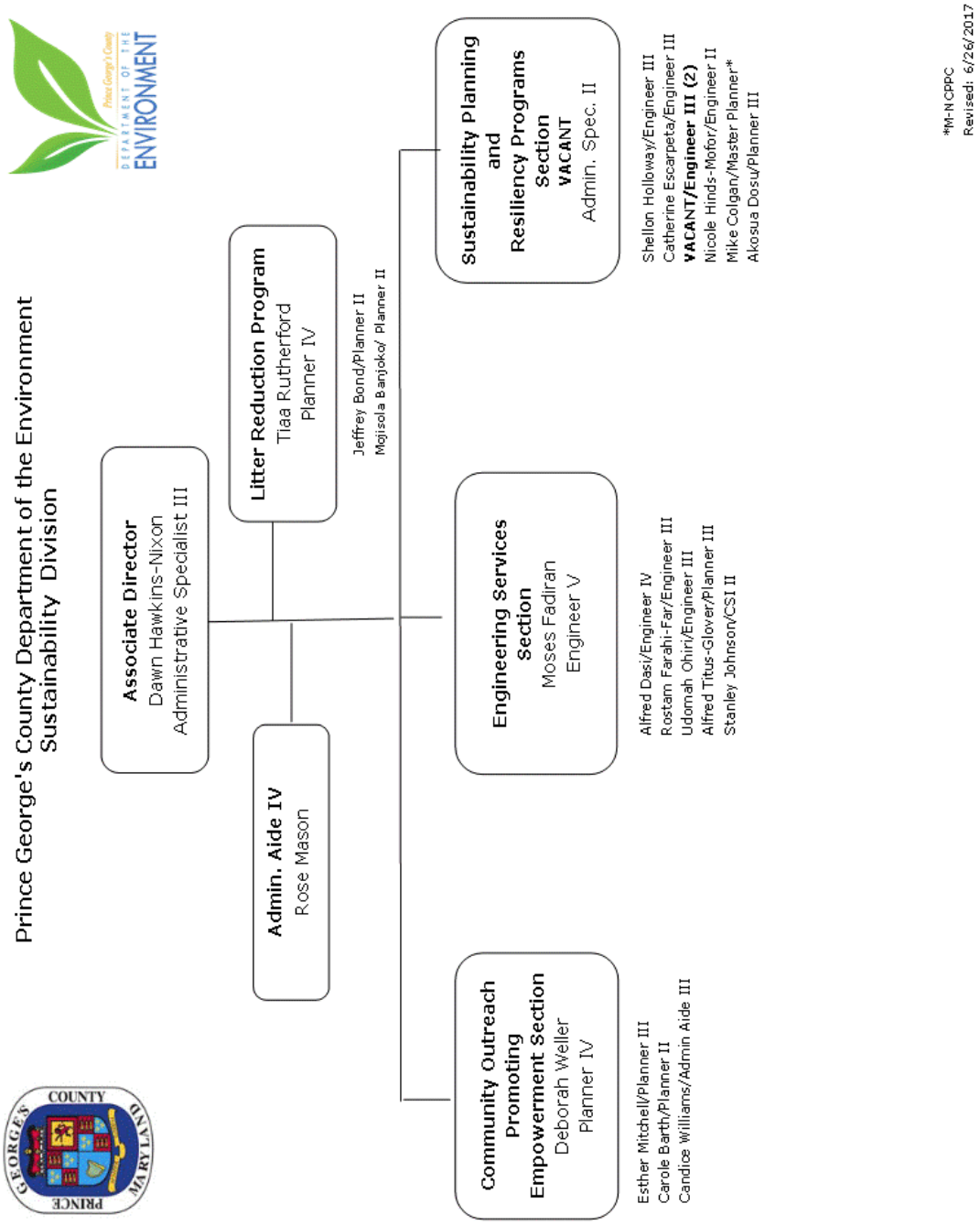


Figure A-3. Department of the Environment - Sustainability Division Organizational Chart

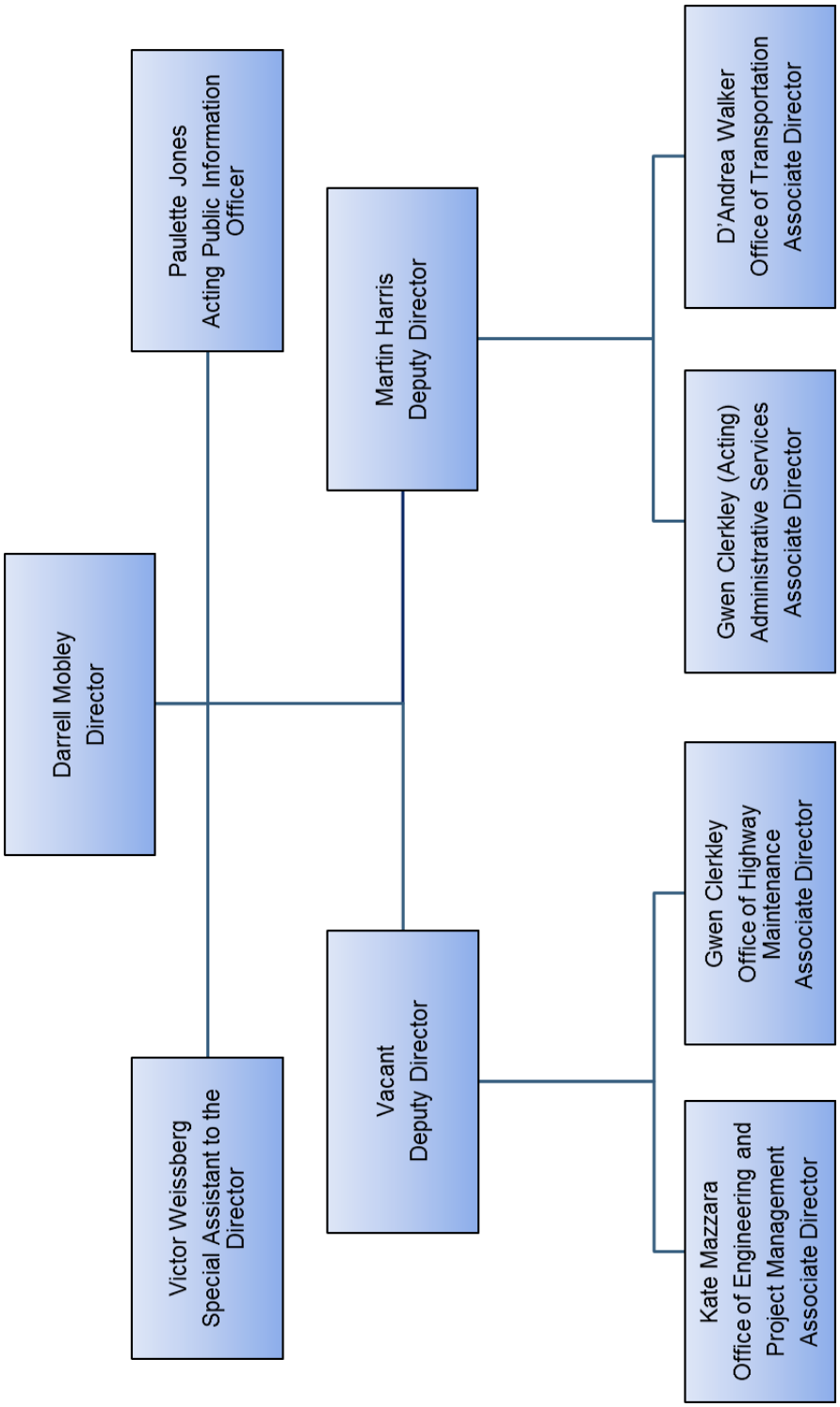


Figure A-4. Department of Public Works and Transportation - Office of the Director Organizational Chart

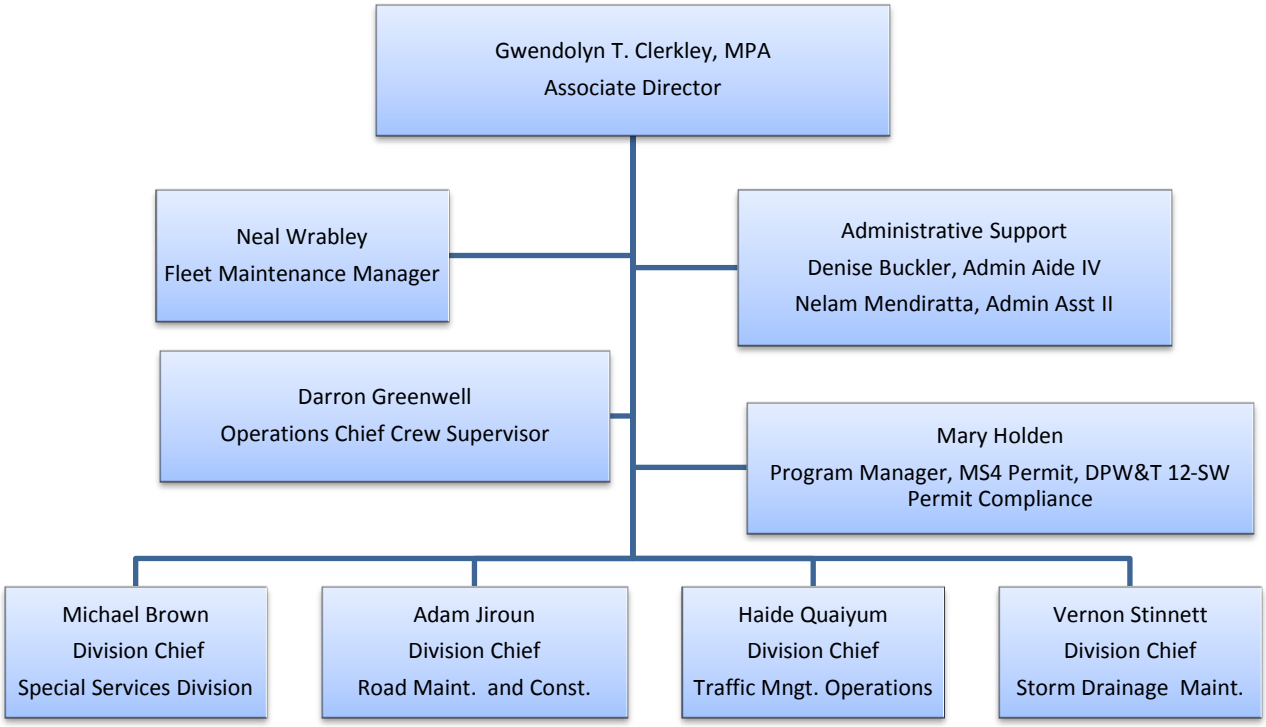


Figure A-5. Department of Public Works and Transportation - Office of Highway Maintenance (OHM) Organizational Chart

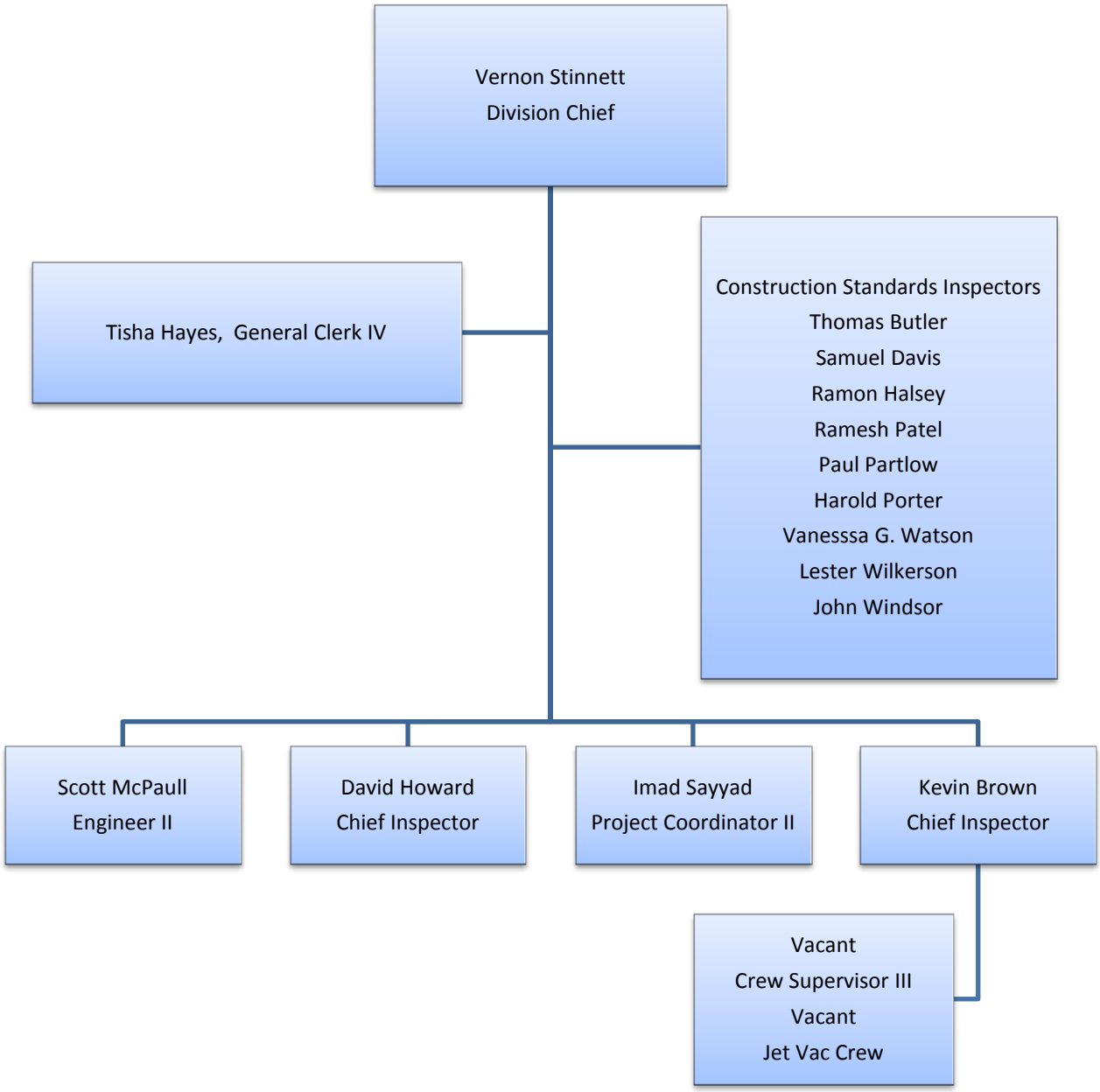


Figure A-6. Department of Public Works and Transportation, OHM - Storm Drain Maintenance Division Organizational Chart

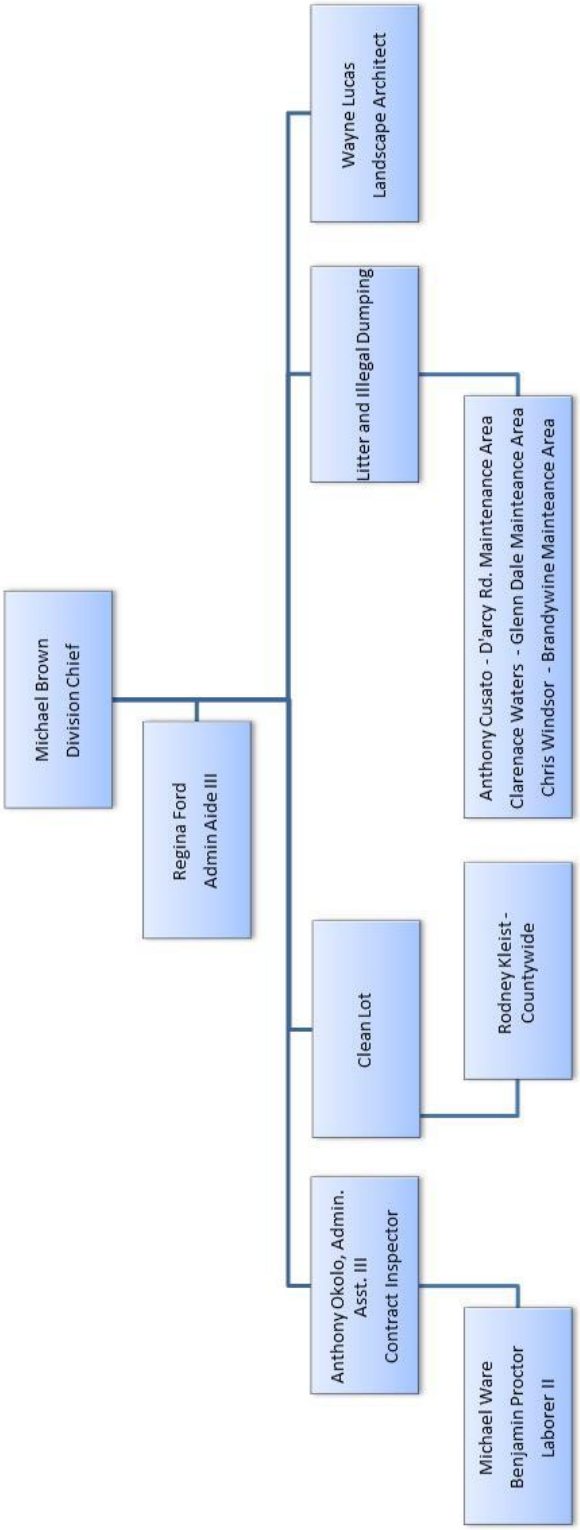


Figure A-7. OHM-Special Services Division

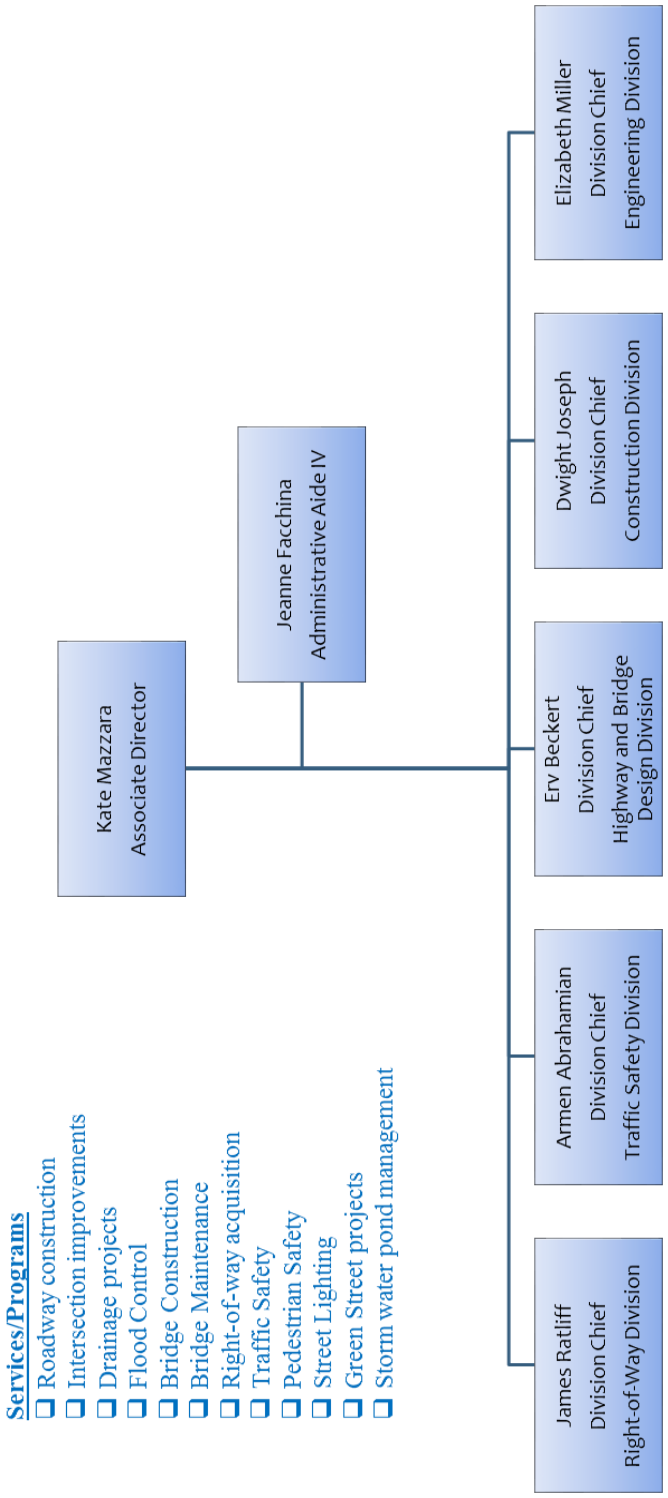


Figure A-8. Department of Public Works and Transportation - Office of Engineering and Project Management Organizational Chart

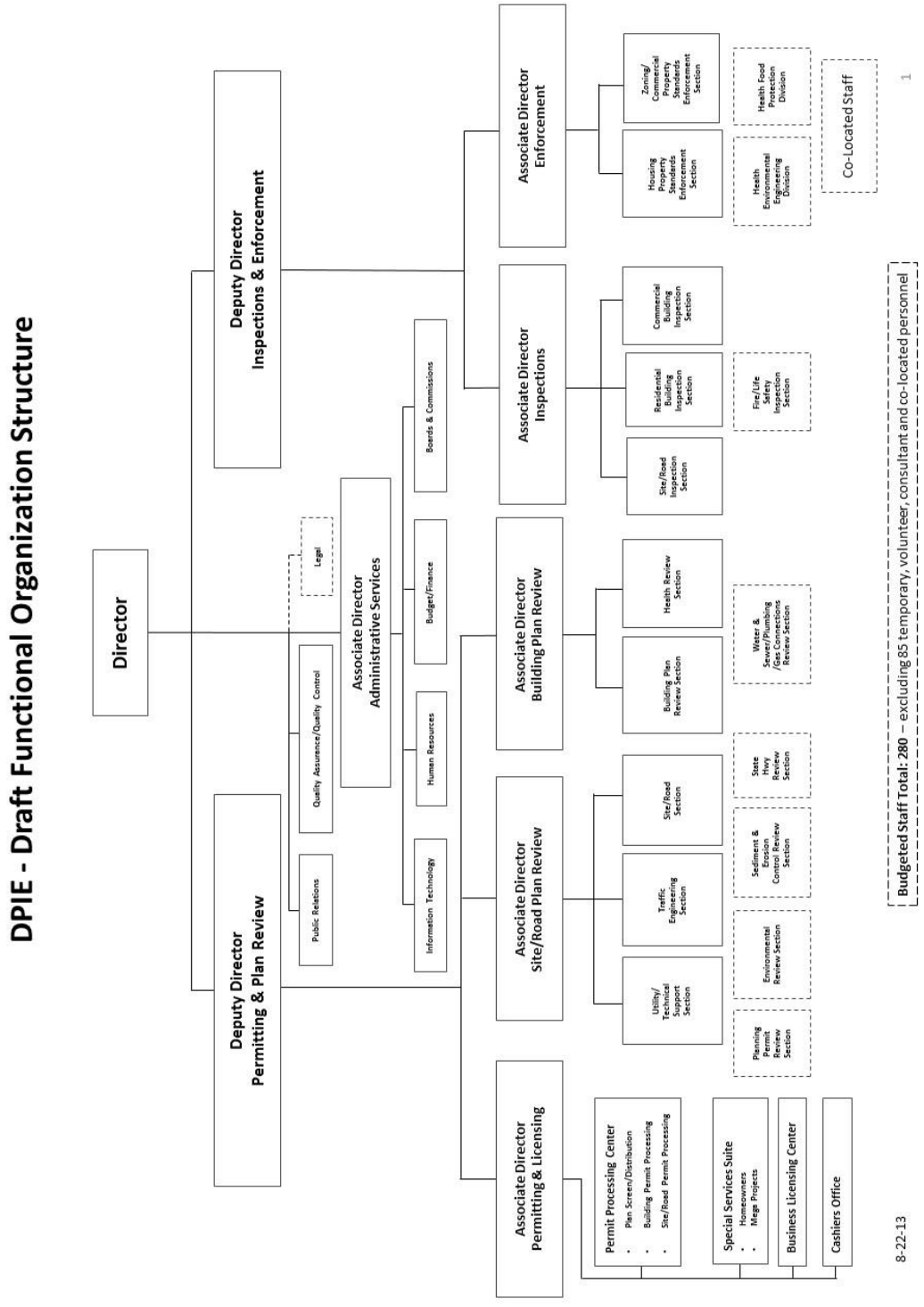


Figure A-9. Department of Permitting, Inspections and Enforcement Draft Functional Organization Structure

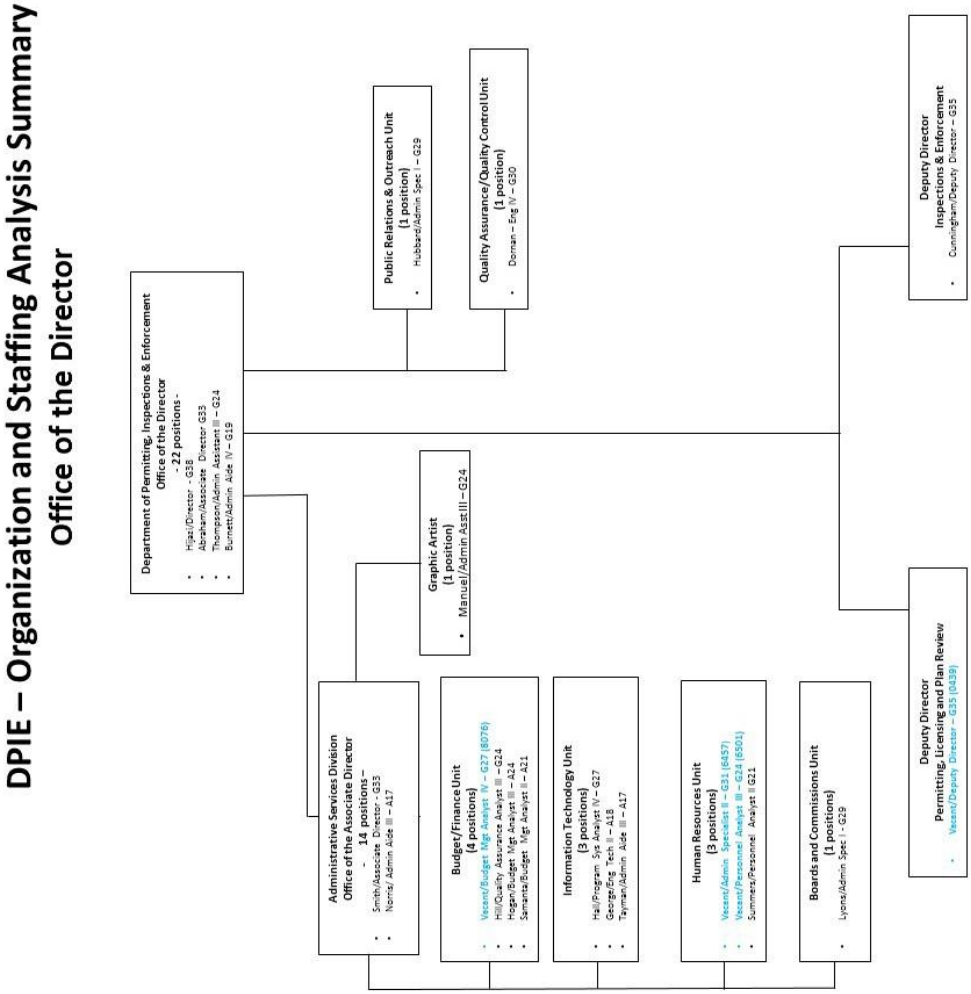


Figure A-10. Department of Permitting, Inspections and Enforcement - Organization and Staffing Analysis Summary, Office of the Director

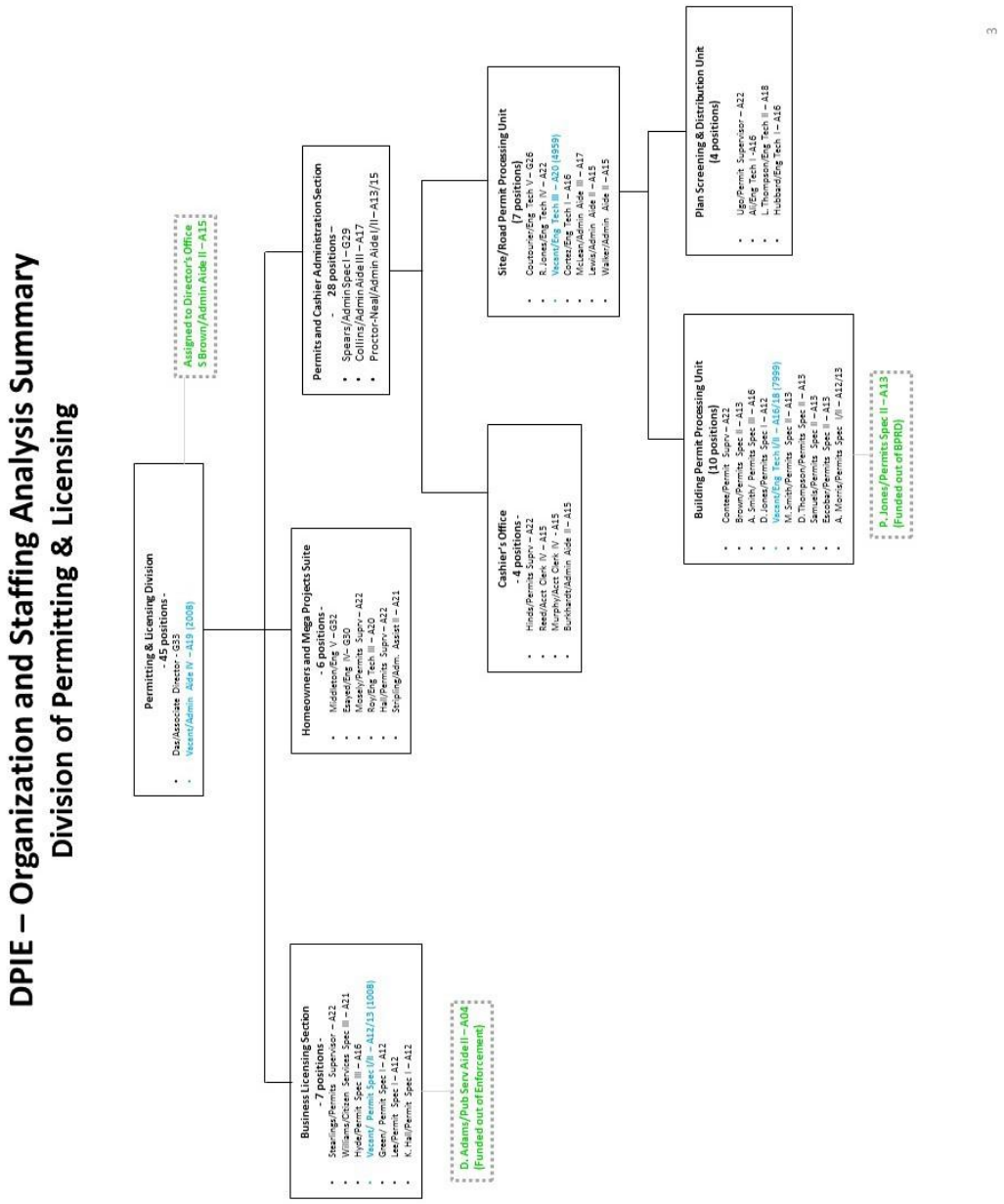


Figure A-11. Department of Permitting, Inspections and Enforcement - Organization and Staffing Analysis Summary, Permitting and Licensing Division

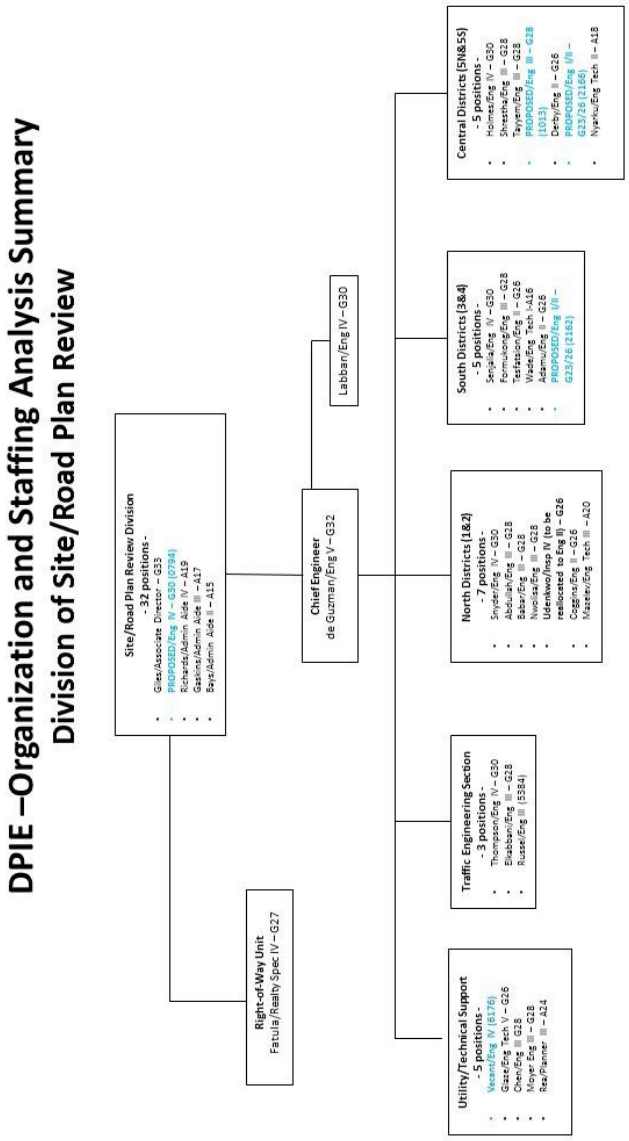


Figure A-12. Department of Permitting, Inspections and Enforcement - Organization and Staffing Analysis Summary, Site/ Road Plan Review Division

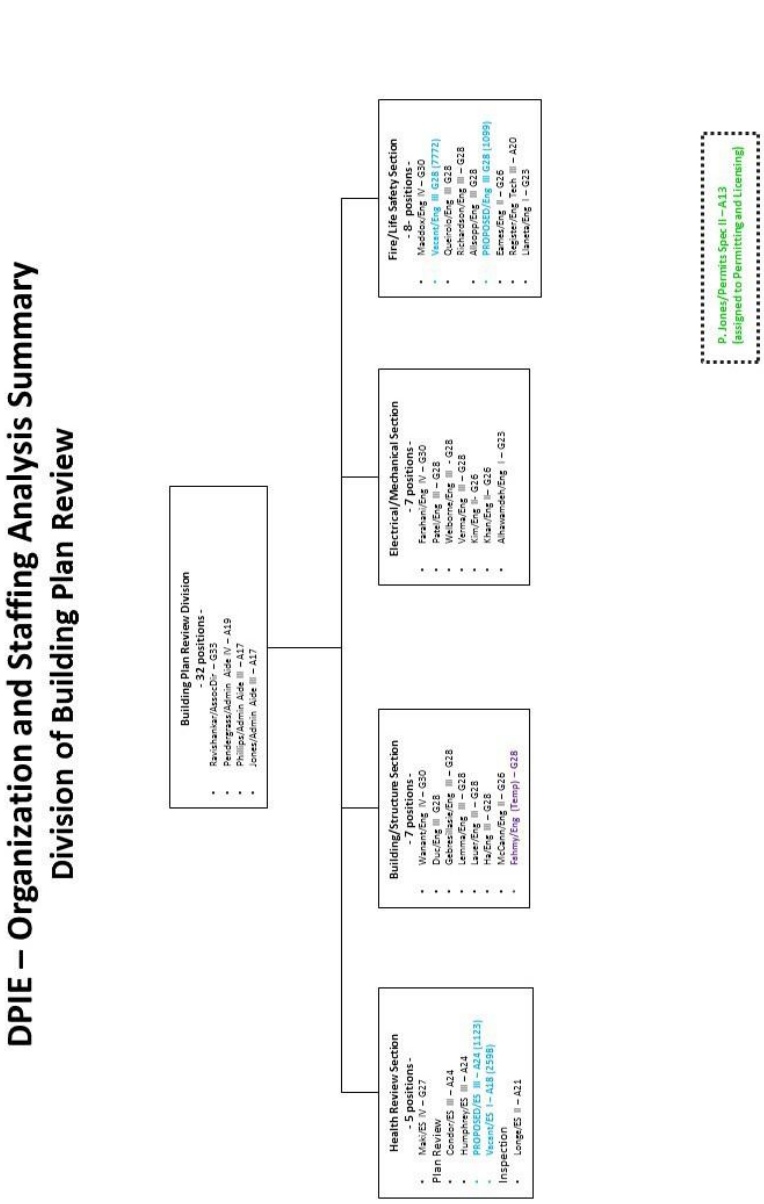


Figure A-13. Organization and Staffing Analysis Summary, Building Plan Review Division

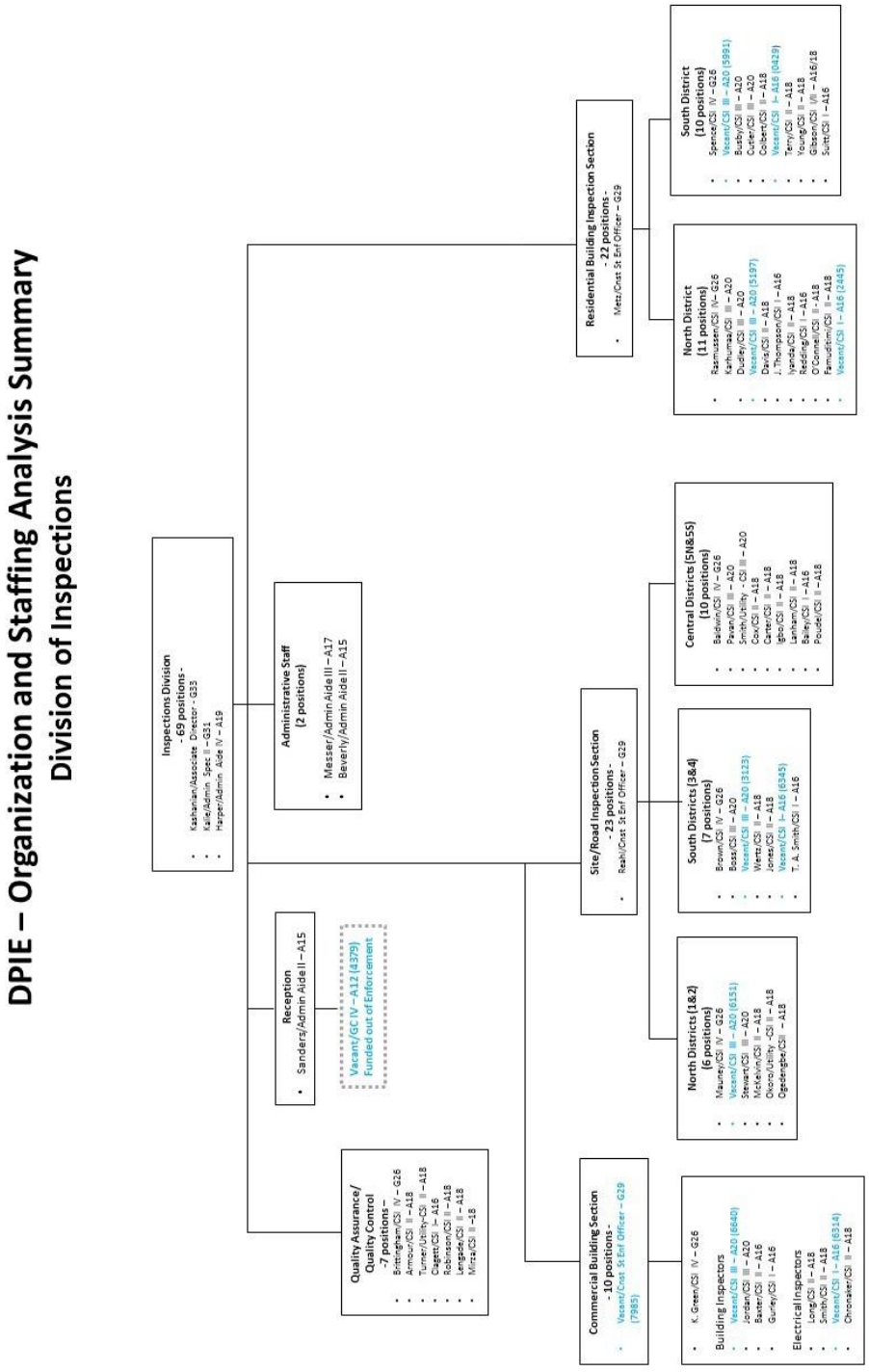


Figure A-14. Department of Permitting, Inspections and Enforcement - Organization and Staffing Analysis Summary, Inspections Division

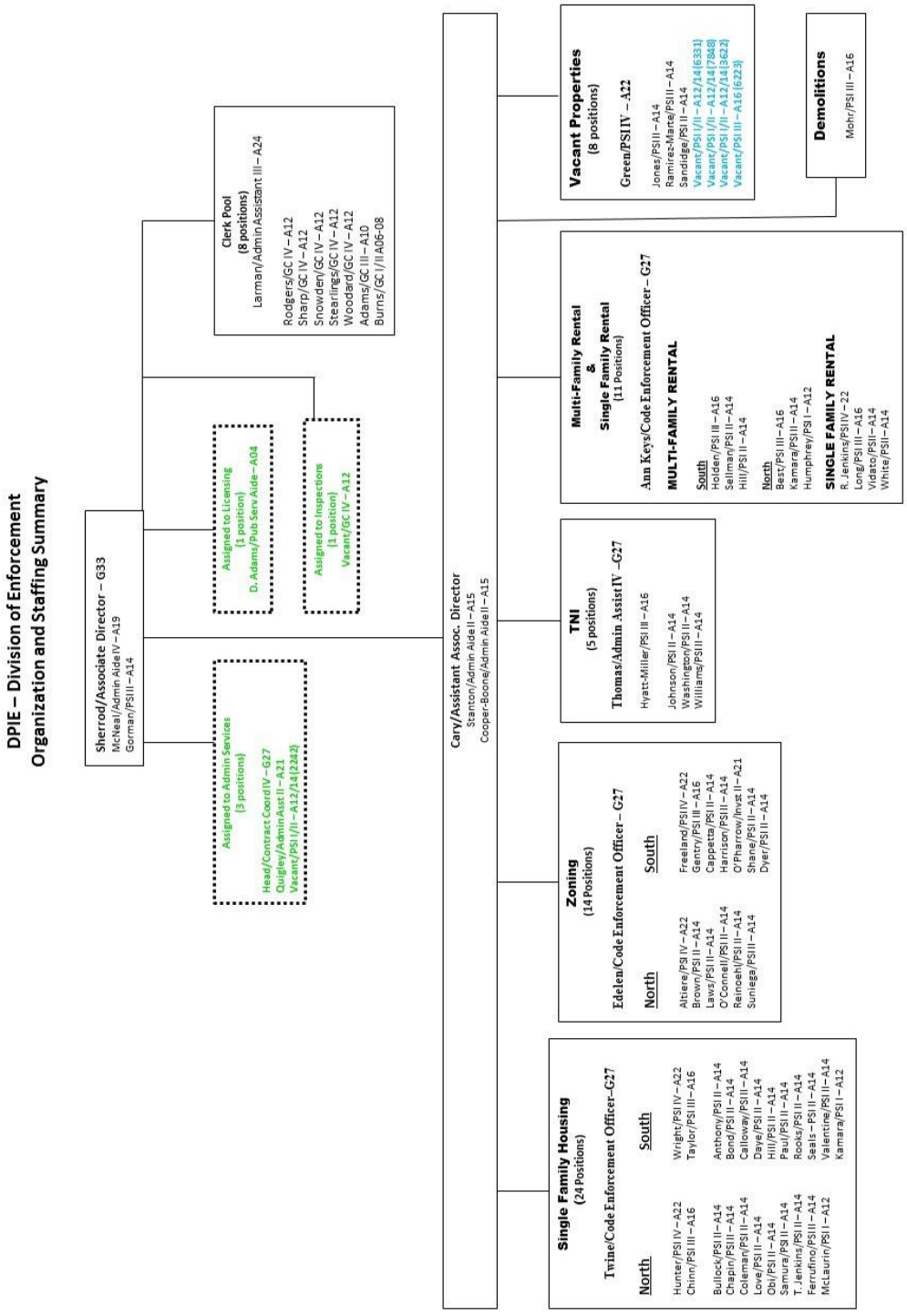


Figure A-15. Department of Permitting, Inspections and enforcement - Organization and Staffing Analysis Summary, Enforcement Division

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.

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 this reporting period, the County maintained 63,543 records for infrastructure (manhole, inlet, and outfall) points. In addition, The County identified 4,982 drainage areas associated with these structures. A total of 4,715 infrastructure and 39 drainage area records were removed from the FY2016 infrastructure inventory due to these records being outside of the County's regulated lands (e.g. State Highway Administration, City of Bowie). In addition, about two infrastructure records were added in FY 2017 infrastructure inventory.

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.

A total of 3,302 urban BMPs (3,113 new developments plus redevelopment and 189 restorations) and 913 alternative BMPs (28 stream restoration and 885 septic disconnections/ improvements) was reported to MDE as part of the FY2016 BMP inventory. For FY2017, this inventory has grown to 3,363 urban BMPs (3,094 New Development BMPs, and 269 Structural Restoration BMPs including redevelopment) and 978 alternative BMPs (79 Stream Restoration Projects and 899 septic disconnections/ improvements). In addition, this year's inventory also includes inlet cleaning, tree planting, and impervious area elimination. These BMPs along with their outfall locations and associated drainage areas have been provided on DVD in the new MS4 geodatabase.

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 FY2017, an update of the MS4 regulated permit area and associated impervious areas has been provided on DVD in the new 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 new MS4 geodatabase.

6. WATER QUALITY IMPROVEMENT PROJECTS

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.

In FY 2016, the County reported 299 projects in various phases of planning, under construction, or completed. For FY 2017, the updated list includes 492 projects. These projects were 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. Information regarding these BMPs at the various stages of implementation (proposed, under construction, and completed), including their drainage areas, are provided in the new MS4 geodatabase format under the feature classes RestBMP, AltBMP Line, AltBMP Point, AltBMP Polygon, and Impervious Surface Associated Tables on the DVD.

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 development 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 2017

MDE 8-digit code	Watershed Name	Number of Plans	Disturbed Area (Acres)	Proposed Impervious Area (Acres)
02131103	Western Branch	61	1,238.66	594.02
02140205	Anacostia River	76	158.41	170.49
02140201	Potomac River U tidal	26	123,72	106.21
02140203	Piscataway Creek	27	279.00	100.73
02140201	Patuxent River upper	10	39.6	29.71
02140111	Mattawoman Creek	14	658.19	312.64
02140204	Oxon Creek	0	0	0
02131102	Patuxent River middle	2	1.26	0.36
02131107	Rocky Gorge Dam	1	0.108	0.08
02131101	Patuxent River lower	7	12.48	58.81
02140108	Zekiah Swamp	0	0	0

MDE 8-digit code	Watershed Name	Number of Plans	Disturbed Area (Acres)	Proposed Impervious Area (Acres)
Total		**224**	**2,388**	1,373

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.

The *Prince George's County Stormwater Management Design Manual,* dated September 30, 2014*,* was introduced on October 14, 2014, to the County Council under Resolution CR-96-2014. This manual was subsequently adopted on November 12, 2014. Currently, the County is in the process of revising *Specifications and Standards for Highways and Bridges* and *Standard Details for Stormwater Management Construction* into a single document. The purpose of the revision is to compile all drainage details and standards into one document, update current standards, and to remove design impediments to green street design and ESD to the maximum extent possible. DPW&T is working closely with DPIE, DoE, Prince George's Soil Conservation District, and the Maryland-National Capital Park and Planning Commission (M-NCPPC) to ensure completeness of the project. The process will also entail legislative review and County Code adjustments.

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 approved during the concept plan approval phase in FY 2017 is provided below:

- 224 Concept Plans approved
- 158 Site Development Plans reviewed
- 123 Final Plans reviewed
- 51 Redevelopment Projects
- 75 Stormwater Exemptions granted
- 7 waivers request received for qualitative control
- 4 waivers request received for quantitative control
- 26 waivers request received for qualitative and quantitative control
- 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.

As shown in Figure D-1, the mapping capabilities of the geodatabase also provide staff with an excellent tool for the required annual stormwater program reporting to the County Council.

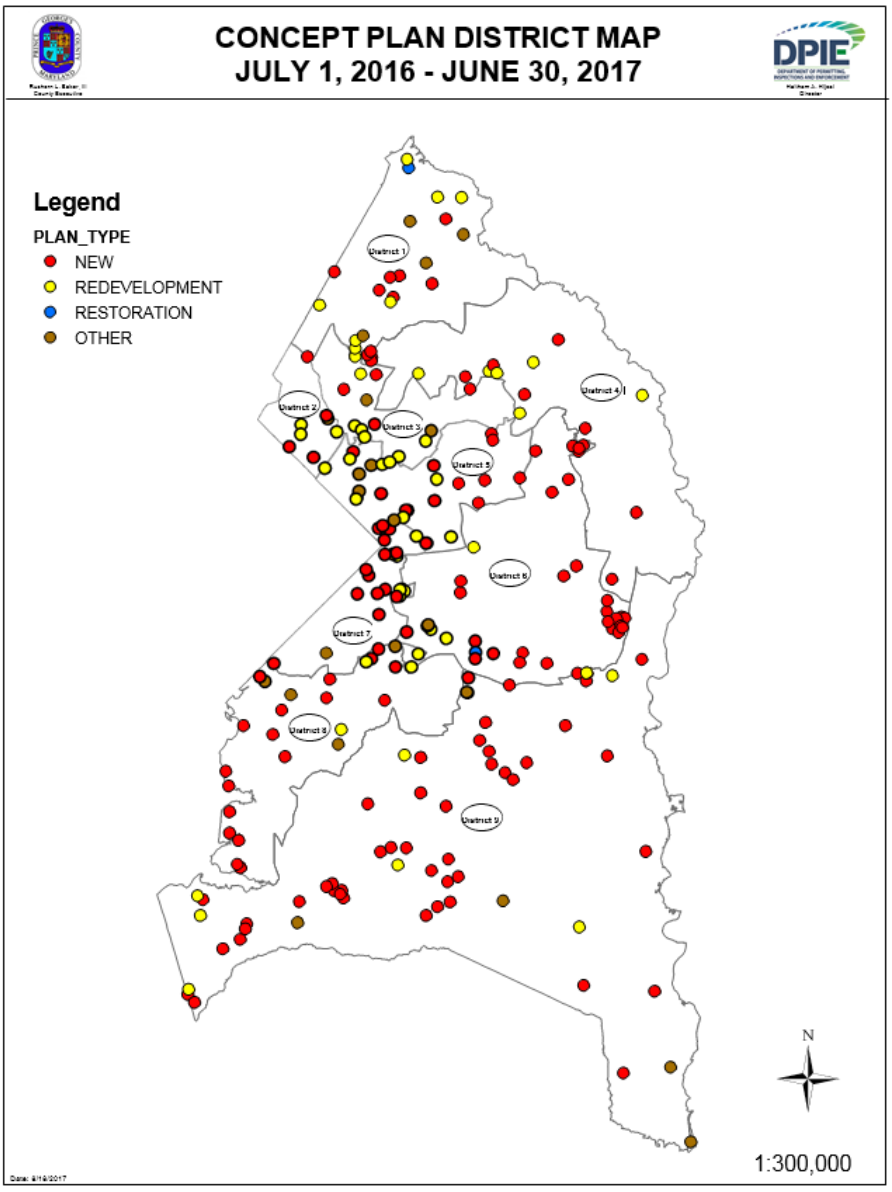


Figure D-1. Stormwater Management Concept Plan Approvals in FY 2017

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 2017 was 21. During this reporting period, these inspectors performed a total of 7,350 stormwater inspections and issued 13 violations. 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.

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.

As required in the "Source Identification" section, the County has concluded its analysis of the BMP inventory, with the total number of BMPs in the County increasing from 3,330 to 3,442 between FY 2016 and FY 2017. This BMP inventory consists of private developer BMPs for new development, restoration and redevelopment BMPs, and stream restoration or outfall stabilization BMPs.

There are 3,102 privately owned BMPs for new development; of these, 2,933 BMPs had recent inspection records in FY 2017. The restoration and redevelopment BMP inventory includes 271 BMPs of which 119 BMPs had recent inspection records. The stream restoration and outfall stabilization BMP inventory includes 79 records. Twenty-four of these BMPs had recent inspection records in FY 2017. BMPs that were added in this year's inventory may not have had their first triennial inspection performed in FY 2017. The triennial inspections of these BMPs will be performed within the project's first three years after completion.

With this report, inspection records of the BMPs are provided in the new geodatabase under the inspections table of BMPInspections, AltBMPLineInspections, AltBMPPointInspection, AltBMPPolyInspections, and RestBMPInspections on DVD.

Preventive Maintenance Inspections of Public Facilities

Department of Public Works and Transportation is responsible for maintenance and operations of all publicly owned BMPs. 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, outfall repair including minor vegetative and structural stabilization, is performed by in house crews.

Additionally, DPW&T utilizes consultant services to inspect publicly owned BMPs. In FY 2017, consultant services performed 198 inspections. Major repair work is scheduled and performed through under the Deficient Pond Program for ponds having moderate or severe problems.

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. Additional information on the Pilot Pond Program is included on page 91. An annual summary of the ponds that have been rehabilitated under the Deficient Pond and Pilot Pond Programs is included in Table D-2.

Table D-2. 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
Total	**92**	**14**	**106**

2. EROSION AND SEDIMENT CONTROL

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

In a letter dated March 24, 2017, MDE delegated erosion and sediment control enforcement authority to the County through June 30, 2019.

Under this authority, inspections are performed within three districts. The total number of site/road inspectors for FY 2017 was 18. During this reporting period, these inspectors performed a total of 11,183 sediment control inspections and issued 125 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.

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 2017 reporting period, Prince George's County reported a total of 153 projects with earth disturbances of an acre or more. The total earth disturbance for these 153 projects was 1,451.56 acres. Copies of the disturbed area databases were forwarded to MDE throughout the year on a quarterly basis. Overall grading permit information for FY2017 is provided on the DVD in the MS4 geodatabase.

3. ILLICIT DISCHARGE DETECTION AND ELIMINATION

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.*

For the FY 2017 inspections, DoE contracted with KCI Technologies, Inc. (KCI) and AB Consultants, Inc. (AB) to perform field screening of 151 major storm drain outfalls throughout the County. Originally, this effort started in 2015, and was focused primarily on the Anacostia watershed, but during 2016 and 2017 the target area was expanded to include the entire County.

AB used the automated field inspection tool developed by KCI in 2015 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 May 2017 through June 2017, 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 was present, the results of the chemical tests performed were compared with the accepted statewide averages described in *Dry Weather Flow and Illicit Discharges in Maryland Storm Drain Systems* (MDE, 1997). Using the statewide averages, the 1997 study provides a threshold for each constituent, based on watershed land use. The results from the chemical tests performed during FY 2017 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 new MS4 geodatabase.

The results show that, of the 158 inspections, 91 observed dry-weather flow. Of these, 21 sites had minor flow or conditions that did not allow for sampling; 69 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. For three of these sites, the return inspection yielded a concentration less than the threshold limit, indicating an illicit connection is unlikely. During these inspections, it was observed that four outfalls had some type of possible illicit discharge. The four outfall reports were forwarded to DoE's Code Enforcement Officer to further investigate and determine the source of the possible illicit discharge. Table D-3 below shows the details of the investigation and corrective actions taken to eliminate the illicit discharge observed at the four outfalls.

Table D-3. Details of the corrective action taken for the illicit discharges

Outfall ID	Corrective Actions
0406	At the time of KCI's inspection, this outfall was discharging high concentrations of ammonia, detergents, and *E. coli*. It had a sewage odor and orange or red deposits, and was cloudy. During the

Outfall ID	Corrective Actions
	inspection of the outfall, WSSC signage was found on the site indicating a sewage overflow had occurred and they had treated the area for the sewage overflow. The Code Enforcement Officer contacted WSSC who informed the Code Enforcement Officer that the blockage in the sewer line was removed and the contaminated area had been treated. The issues have been resolved.
3283	At the time of KCI's inspection, this outfall was discharging at a low pH but had no other visible or detectable issues. The Code Enforcement Officer investigated the outfall and the upstream storm drainage system, but no clear possible source of the cause for the low pH flow was found. The County will continue to monitor the pH at the next scheduled inspection. The issues have been resolved.
3316	At the time of KCI's inspection, this outfall was discharging high concentrations of ammonia, detergents, and *E. coli*. It had a sewage odor and was cloudy. Sewage intrusion was suspected. The Code Enforcement Officer investigated the outfall and the upstream storm drainage system and found no sewage discharge. However, he observed trash and debris in the inlet structures of the shopping center's parking lot. It appears the sewage odor and the other contaminants in the discharge are possibly from the decay of the trash and debris in the inlet structure. The Code Enforcement Officer ordered the property owner to clean the inlet structures. The inlets were cleaned by the property owner as confirmed by the Code Enforcement Officer's re-inspection. The County will continue to monitor the storm drainage system of the shopping center's parking lot at the next scheduled inspection. The issues have been resolved.
3335	At the time of KCI's inspection, this outfall was discharging high concentrations of ammonia and had gray deposits. The outfall flow originates from a PVC pipe discharging into a curb inlet from the Upper Marlboro Concrete Plant – Chaney Enterprises. This site is operating under the NPDES permit number MDG499873. The Code Enforcement Officer investigated the site and ordered the property owner to stop the discharge. The Code Enforcement Officer's re-inspection confirmed the discharge was stopped. The Code Enforcement Officer also contacted MDE to further investigate the site to ensure the property owner is following their NPDES permit requirements. The County will continue to monitor the site at the next scheduled inspection. The issues have been resolved.

Response to MDE's comments

In the FY 2016 reporting year, the reason that all 29 outfalls that had no chemical tests conducted was that the dry weather flows were too small to sample.

To observe how the illicit discharges noted in Table D-4 of the 2016 NDPES annual report for outfall ID# 1549, 2671, 2672, 3164, and 3195 correspond with the outfall IDs in the County's MS4 geodatabase, one should use the relationship class "rOutfall_IDDE" to verify the relationship between outfall feature class and the IDDE associated table in the County's MS4 geodatabase 2017 or 2016 submittals.

In the 2016 NPDES annual report, the County provided a list of actions taken to correct the problems observed in the 2015 inspections. As requested, below are the updates on the efforts that were taken to correct these problems, including the outfalls with severe erosion problems.

- Structural problems: DPW&T investigated the outfalls and repaired the structural problems. Cracks on the endwall or in the pipe were patched. The structural issues have been resolved.
- Sediment Deposits: DPW&T investigated the outfalls with sediment deposition and had the sedimentation removed from the outfall pipe. Cases with sedimentation coming from an active permitted construction site, DPIE's Code Enforcement Officer with the Site/Road

Inspection Section investigated the sites and issued violation notices to the permittee to repair the sediment controls. The sediment controls were repaired by the permittee. The issues have been resolved.

- Erosion: The County's DPW&T investigated the outfall with minor erosion issues. The erosion problem around was repaired. DPW&T then backfilled around the outfall and placed additional rip-rap at the end of the outfalls to eliminate the erosion problem. The outfalls with the more severe erosion problems required additional planning and work to address. DPW&T regraded the area around the outfalls, placed larger rip-rap, and extended the rip-rap outfall channel further to decrease the water runoff velocity and the shear stresses at the outfall, reducing the erosion of the stream bed and banks. The issues have been resolved.
- Floatables: The County's Volunteer Cleanup Program coordinated with community organizations to perform litter pickup at these outfalls. The community organizations have removed the trash and debris from these outfalls. The issues have been resolved.
- Odors: No odors were detected during the investigation of the outfalls. The issues have been resolved.

Commercial and Industrial Visual Surveys

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

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

A total of 69 commercial and industrial complexes were inspected over the course of the inspections. A total of 18 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 were pavement staining from dumpsters; five were pipe discharges; two were pavement staining from a restaurant grease waste container; one was staining of the pavement; one was equipment washing; two were staining of the pavement from salt piles; and one was a water leak. 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:

- Dumpsters: The issue was observed staining in the area around the dumpsters. At the time of the inspection, no discharge was observed coming from the dumpsters. The pavement staining appeared to be an orange-reddish color caused by the oxidation of the rusty dumpsters. However, the property owners were required to make sure the lids on the dumpsters are closed at all times. The issues have been resolved.

- Equipment washing: The property owner was required to halt all future washing of equipment on the property. The property owner complied with the request. 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 that it poses. The County worked with the property owners to educate them on good housekeeping practices and to eliminate any grease spills when disposing the grease waste. The issues have been resolved.
- Water leak: The water main repair was completed by WSSC and no discharge was observed. The issue has been resolved.
- Pipe discharges: Three of the five pipe discharge cases were condensation discharge pipes from adjacent buildings. The other two pipe discharges were from private drainage systems located on the property and discharging into the roadway through the curb. The County worked with the property owners to relocate the discharge pipes back onto their property. The issues have been resolved.
- Stained pavement: The discoloration of the pavement is caused by the oxidation of the building's exterior painted walls and the air conditioning unit. No potential water quality concerns were observed. The issue has been resolved.
- Salt Piles: The property owners were requested to either remove the salt stockpiles or cover them. The property owners agreed to cover the salt piles. The issues have 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 one 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.

The one illicit discharge complaint in FY 2017 was received by e-mail from Rebecca Crane with EPA Region III about an anonymous complaint concerning an illicit discharge to the storm sewer system. The complaint was assigned to DoE's consultant, KCI, to mobilize to the site and perform an inspection. The inspection revealed a sump pump system located in the rear of the building, discharging onto the sidewalk. DoE's Code Enforcement Officer also inspected the property and concluded that there was no illicit discharge coming from the property. The property owner was requested to redirect the sump pump discharge pipe away from the sidewalk. The discharge pipe was redirected away from the sidewalk by the property owner and the issue was resolved. Details of the complaint including the location of the sites are provided on the DVD under Management Programs\IDDE.

Environmental Engineering Program

The Health Department's Environmental Engineering/Policy Program (EEP) responds to complaints about sanitary sewer overflows, failing septic systems, and solid waste and hazardous materials spills or dumping that may impact the waters of the State. During this reporting period, the Health Department investigated 36 sites to assess threats to local streams and waters of the State from failing septic systems, public sewer overflows, and miscellaneous spills and dumping to the environment.

Understanding the need for more comprehensive reporting, and in response to MDE's IDDE program comments of the County's 2012 report, the Health Department began to capture and report mandated data to meet the permit conditions for the IDDE program. During FY 2017, a Microsoft Access database called NPDES DATA1 continued to be maintained to catalog pertinent information, including the nature of the complaint, the response to the complaint, and any remedial action that was required. The database also identifies the latitude and longitude of the locations of the sewage overflows, spills, and dumping to aid in GIS mapping capabilities in the future.

Illegal Dumping and Spills

DPW&T responds to illegal dumping occurring along the public road right-of-way. During FY 2017, the County received 2,136 citizen requests for removal of illegally dumped materials 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 programs is found under "Litter Control" on see page 68.

HMD is responsible for handling the initial response to all hazardous material spills within the County. In FY 2017, the Hazardous Materials (HAZMAT) team responded to 344 calls for assistance. The number of responses per month is provided in Table D-4. Within each month, the HAZMAT responses have been subdivided into four categories: fuel, carbon monoxide (CO), chemical, and other.

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 these 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-4. Hazmat Calls in FY 2017

Month	Number of Hazmat Responses	Number of Actions Taken	Response Types				Resolved	Number of Cases Referred to MDE*
			Fuel	CO	Chemical	Other		
July 2016	25	25	12	9	4	0	25	12
August 2016	24	24	13	2	9	0	24	13
September 2016	32	32	12	12	8	0	32	12
October 2016	42	42	22	11	9	0	42	22
November 2016	32	32	18	8	6	0	32	18
December 2016	30	30	12	14	4	0	30	12
January 2017	17	17	7	5	5	0	17	7
February 2017	24	24	11	9	4	0	24	11
March 2017	25	25	6	8	10	1	25	6
April 2017	34	34	14	8	11	1	34	14
May 2017	28	28	14	4	10	0	28	14
June 2017	31	31	11	6	13	1	31	11
Total	**344**	**344**	**152**	**96**	**93**	**3**	**344**	**152**

**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.

In FY 2017, the County increased efforts to reduce the amount of litter in the Anacostia River. Investments in litter removal projects, policy changes, and a strategic plan for advancing an effective litter reduction campaign demonstrate the County's commitment to reducing the river's trash load. The most significant trash reduction projects in FY 2017 involved community cleanups and stream cleanups in the Anacostia watershed, as well as a litter source reduction study for the County. Load reductions associated with these projects are described in more detail later in this report. The Prince George's County ban on the use and sale of expanded polystyrene (Council Bill CB-5-2015) was fully enacted on July 1, 2016. This bill supports efforts to reduce litter in the Anacostia watershed and countywide.

The Maryland-National Capital Park and Planning Commission (M-NCPPC) has installed additional outside receptacles at ball fields and other recreation areas to intercept the type of floatable items that show up as litter in County waterways. In the Anacostia watershed, M-NCPPC personnel has reported the installation of 20 95-gallon and 7 40-gallon outside recycling bins at ball fields and waterfront walks at park facilities which include Fletcher's Park, Colmar Manor Park, Heurich Park, Fairland Regional Park, and Bladensburg Waterfront Park. The methodology for quantifying the litter load reduction resulting from use of these bins to intercept trash is under development. The load reduction resulting from this trash capture practice is not reflected in the litter load reduction rate for FY 2017.

The County continues to conduct a number of countywide trash reduction, litter reduction and recycling programs. The purpose of such programs is to raise awareness for the adverse impact of litter on the environment, encourage environmental stewardship through coordination of clean-up events and provide residents with services which encourage recycling and proper disposal of trash. Summaries of several programs and respective accomplishments are included in this reporting.

During FY 2017, the County undertook new and additional measures to help meet the MS4 permit goal to remove 170,682 pounds of trash per year. Such measures include developing an Adopt-A-Stream program, launching 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 kicking off the County's first trash trap project.

Cleanup Activities

Table D-5 outlines the enacted 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 be submitted to MDE.

For some cleanup events that occurred in the Anacostia watershed, volunteers collected both point source trash conveyed through the MS4 and nonpoint source trash. A discount factor of 0.43 was applied to the total amount of trash collected for each such event to estimate the amount of trash that could be credited toward the MS4 permit requirement of reducing 170,628 pounds per year of litter

conveyed through the MS4. 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. To account for the possibility that the total weight of 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 stream cleanups in FY 2017. Contractors removed 36,160 pounds of trash and an additional 9,280 pounds of discarded tires. These contractors performed cleanups within the banks of streams and in surrounding park areas at various locations in the Anacostia watershed. Both point source and non-point source trash were collected. However, the contractors segregated these two types of trash and provided the County with accounts of the point source trash collected at each project site. County staff inspected the contractors' collections and work sites. No reductions were applied to the reported point source trash as collected by the contractors because such contractors were found to have abided by the staff's guidance on types of trash that are considered point source items, and the collected bottles and cans were observed to be empty. The weight of tires has not been included in the load reduction computation.

Table D-5 summarizes the waste load reduction resulting from litter reductions activities in the Anacostia watershed. A total of 86,375 pounds was removed from the watershed at various locations within the County and local municipalities. Of the total tonnage collected, 11,750 pounds of litter were collected within municipal jurisdictional boundaries while 74,625 pounds of litter were collected within County jurisdictional boundaries. Factoring in reductions for the potential of non-point source items and partially full beverage bottles and cans having been collected by volunteers, the County claims a load reduction of 64,320 pounds.

Table D-5. Estimated Anacostia Watershed Trash Reduction in FY 2017

Activity Category	Activity/Location	Number of Bags of Trash Collected	Amount Collected in Roll-Off Container (pounds)	Actual Amount (pounds)	Annual Load Reduction Counted (pounds)	Calculation Methodology
Community Cleanups	Lower Beaverdam		17,980	17,980	7,731	Total tonnage X 0.43
	Bladensburg Waterfront (2)		4,840	4,840	2,081	
	Riverdale and William Wirt		2,220	2,220	955	
	Radiant Valley	18		450	289	Total number of bags 0.7 X 25 lbs. X 0.917
	Millwood/Waterford	3		75	48	
	Takoma Park	14		350	225	

Activity Category	Activity/Location	Number of Bags of Trash Collected	Amount Collected in Roll-Off Container (pounds)	Actual Amount (pounds)	Annual Load Reduction Counted (pounds)	Calculation Methodology
	Good Neighbor Day	88		2,200	1,412	(accounts for liquid in bottles (glass and plastic) and cans
	Carole Highlands	10		250	160	
Parks and Roadside Litter Pickup during Clean Sweeps	MNCPPC + DPW&T	403		10,100	6,467	
Municipal Clean Ups	Town of Cheverly (Beaverdam Stream)					Total number of bags 0.7 X 25lbs X 0.917 (accounts for liquid in bottles (glass and plastic) and cans
	Hyattsville	293		7,325	4,702	
	Greenbelt	32		800	514	
	Landover Hills	88		2,200	1,412	
	Capital Heights	57		1,425	915	
Stream Cleaning Services	• Quincy Run • Lower Beaverdam Creek • Indian Creek • Northwest Branch • Northeast Branch			36,160 (18.1 tons)		
Outreach and Education at Schools	See Table D-10				1,250	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)]
27 New Outside Recycling Bins	M-NCPPC sports fields and river walk at Fletcher's Park, Colmar Manor Park, Heurich Park, Fairland Regional Park and Bladensburg Waterfront Park	TBD		TBD	**TBD**	As of FY 2017, M-NCPPC installed 27 exterior receptacles at 5 facilities in the Anacostia watershed

Activity Category	Activity/Location	Number of Bags of Trash Collected	Amount Collected in Roll-Off Container (pounds)	Actual Amount (pounds)	Annual Load Reduction Counted (pounds)	Calculation Methodology
						after 2010. Methodology for load reduction for these installations remains to be developed.
	Total	**1,006**	**25,040**	**86,375**	**64,320**	

[1] *The coefficient of 0.43 represents the percentage of MS4 trash that makes up total trash and is computed as the ratio of the TMDL's MS4 WLA to the total trash load. The coefficient of 0.43 represents the proportion of total trash that may be attributed to litter coming from MS4 [i.e. 0.43 = (WLA)/(WLA+LA)].*

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 125,000 pounds per year for 2017. The introduction of a new reduction factor of 0.7 which is applied to the weight of bags collected by volunteers and a decline in the amount of accumulated litter in tributaries of the Anacostia River resulted in a lower than anticipated litter reduction rate at the end of FY 2017. However, in an effort to achieve the benchmark milestone by the end of calendar year, the County will conduct additional community and stream cleanups, promote adoption of additional stream segments under the new Adopt-a-Stream Program, install "No Dumping Signage," pursue recommendations identified in the source reduction study, and continue the expanded roadside litter collection service through Community Bridge. The County has also initiated the design of a trash capture device which is planned for installation in fall 2017. With the successful implementation of these activities, the County anticipates achieving the 125,000-pounds-per-year milestone.

The results of instream monitoring performed by the Metropolitan Washington Council of Governments (MWCOG) from 2011 to 2017, are shown in Table D-6 and Table D-7. MWCOG monitors 15 instream stations for the County twice a year and conducts a bottle count. The table below illustrates the amount of partially full bottles surveyed and various locations within the Anacostia watershed.

Table D-6. 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

(Monitoring data was provided by MWCOG)

Table D-7. Stream Monitoring Data – Plastic Bottle Composition by Weight of Trash Mix

Year	Number of Surveys per Year	Total Weight (grams)	Total Plastic Bottle Weight (grams)	Percent Weight Plastic Bottles
2011	2	292,713	15,731	5.4
2012	1	19,037	4,320	22.7
2013	2	93,158	8,300	8.9
2014	2	73,758	7,410	10.0
2015	2	73,448	8,480	11.5
2016	2	158,153	15,065	9.5
2017	2	182,950	20,550	11.2

(Monitoring data was provided by MWCOG)

While the activities that are outlined in Table D-5 are specific to the Anacostia watershed, the County and volunteers performed litter removal and prevention activities 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-8 shows the amount of litter collected through these activities.

Table D-8. Litter Removal and Prevention Outside of the Anacostia Watershed

Activity	Watershed	Weight of Collected Trash (pounds)
Hard Bargain Farm	Piscataway Creek	5880
Oxon Hill Farm	Potomac River	2,400
Fort Washington Mariner	Potomac River	560

In an effort to reduce incidents of illegal dumping, it is worthwhile to note that the County makes roll-off containers available to communities upon request for many cleanup activities. A dumpster may be provided for individuals to dispose of trash that would not be picked-up as a part of regular trash pick-up service, thus reducing the likelihood of illegal dumping and trash stockpiling.

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-9.

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 4 years. Approximately 150 tons of bulky trash and litter were removed from communities in FY 2017 through this program.

Table D-9. Comprehensive Community Cleanup Achievements in FY 2017

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
Templeton Knolls	36	1	12	10.83	0	0
Forest Knolls/Fort Washington Forest	44	0	3	7.91	0	0
Hillandale/Knollwood	38	0	12	18.85	0	0
West Laurel (Phase 1)	54	1	48	12.14	0	0
West Laurel (Phase 2)	22	2	8	17.64	0	0
Radiant Valley	41	1	14	9.77	9	3
Tantallon North	47	0	4	4.57	0	0
Carole Highlands	172	3	6	4.48	4	2
Chapel Oaks/Deanwood Park/Beaver Heights	64	2	1	3.03	12	8
Kastle Estates	78	1	4	5.46	6	3
Wilburn Estates		1	12	6.27	10	4
Fort Washington Estates	44	0	6	9.39	0	0
Little Washington/Westphalia Estates	40	1	2	5.26	2	1
Maplewood	79	2	5	6.49	0	0
Marlton (Phase 1)	59	0	0	0.00	0	0
Marlton (Phase 2)	48	1	0	0.00	0	0
Marlton (Phase 3)	80	0	0	0.00	0	0
Kettering (Phase 1)	67	2	4	7.97	0	0
Kettering (Phase 2)	17	0	2	6.38	0	0
Kettering (Phase 3)	25	1	7	8.78	0	0
Kettering (Phase 4)	28	0	0	1.00	0	0
Total	**1,083**	**19**	**150**	**146.22**	**43**	**21**

Clean Up, Green Up Program

The Clean Up, Green Up 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 activities in FY 2017 was 28.24 tons.

Roadside Cleanups

The County maintains multiple programs and partnerships to address trash along roadways. In addition to street sweeping, 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-ways other than roadsides.

During this reporting period, approximately 3,826 tons of trash and debris was reported as collected through the street sweeping, litter control, and Clean Up, Green Up programs. Most of this tonnage is a result of street sweeping and roadside litter removal activities at the same frequency that was in effect before the 2010 trash TMDL. However, towards the end of FY 2017, the County awarded a contract to Community Bridge for additional roadside litter removal services. Because this contract provides for litter removal services which exceed the level of services which were in effect prior to 2010, the County will count the tonnage collected by the vendor in the Anacostia watershed towards the trash waste load reduction.

The County continues to explore opportunities to integrate street sweeping into its suite of litter control measures. By increasing the number of street miles swept beyond the pre-trash TMDL value, the County could remove more litter from roadsides and reduce the amount of litter entering the stormwater system. The County staff continues to work with members of MWCOG's trash work group to define a metric for litter load reduction for street sweeping.

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. In order to accomplish this challenging task, it is critical that the County implement cost-effective trash reduction measures and annually monitor both stream and land-based trash levels so as to better estimate load quantities. MWCOG assists the County in determining stream and land-based trash levels, as well as identifying existing major trash hot spots. This monitoring data helps the County to identify areas for litter removal, capture, and prevention activities. In addition, 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 on Figure D-2. Instream 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 catalogued according to 20 general types. In addition, 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 levels can be mapped using GIS software.

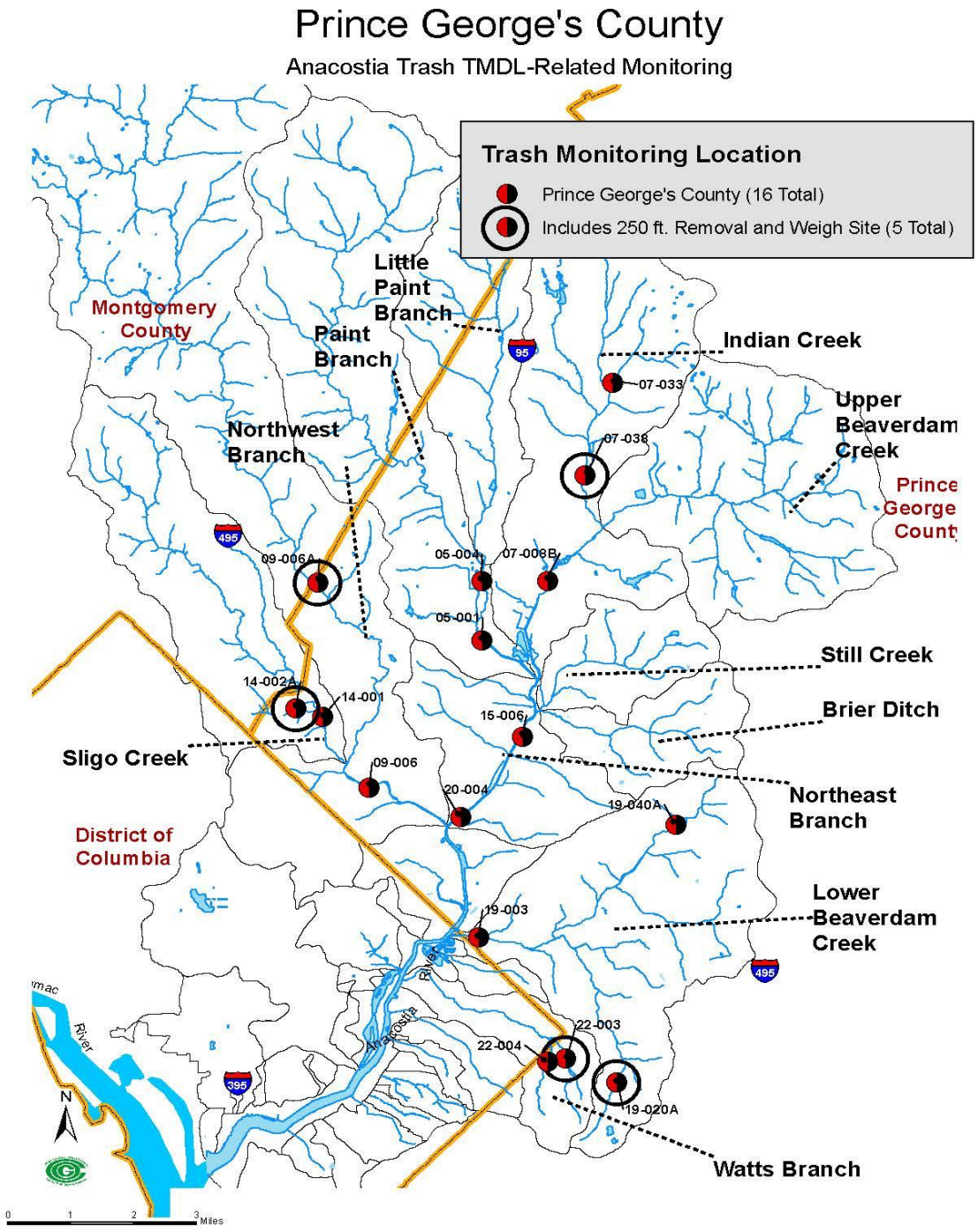


Figure D-2. Anacostia TMDL-Related Trash Monitoring Locations

Education and Outreach on Litter

The County engaged in many education and outreach events aimed at schools and the general public. These events included activities for preventing litter at the source. Such activities sought to generally inspire good environmental stewardship while others stimulated understanding of the impacts of litter and through this understanding sought to foster better litter control. Informational topics include how to manage litter, how long littered items remain in streams and on land and information about upcoming recycling and cleanup events. Other outlets for information included printed flyers, brochures, promotions and newsletters.

In FY 2017, the County drafted outreach strategies for the seven focus areas required by the County's NPDES-MS4 permit. As part of the development of the draft strategies, expanded educational outreach took place at local schools within the Anacostia River Watershed.

Table D-10. Litter reduction per school-based outreach event.

School Name	Trash Load Reduction (pounds) Based on School Boundary Area*
Carole Highlands Elementary	155
Gladys Noone Spellman Elementary	148
Bladensburg High School	944
Total	**1,247**

**The following equation was used to determine the litter reduction rate per school based outreach event. (= 0.12 x (School boundary area) x [(Low Density Res%) (1.19) + (Medium Density Res%)(19.26) + (High Density Res%)(7.88)]*

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 as a means of educating residents of older communities. The County purchases the paint, tools, and stencils which are 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 2017, DoE worked with volunteers to stencil storm drains in 14 areas throughout the County. Table D-11 provides a summary of the volunteer projects completed in FY 2017.

Table D-11. Storm Drain Stenciling Summary

Date	Group	Number of Volunteers	Number of Inlets Stenciled
July, 2016	DoE Summer Youth	23	24
October 7, 2016	Green School Development- Bonnie Johns Professional Center	50	2
October 15, 2016	Boy Scout Troop 450 Eagle Project	18	140
October 19, 2016	Maya Angelou French Immersion School	20	4
November 2, 2016	Oxon Hill Middle School	20	3
March 1, 2017	Elementary School Teachers at Thomas Claggett Teacher	70	4

Date	Group	Number of Volunteers	Number of Inlets Stenciled
	Leadership Center		
March 7, 2017	Elementary School Teachers at High Point High School	55	2
April 13, 2017	Gladys Noon Spellman Elementary School	180	5
May 6, 2017	The Preserves at Mount Airy, Clinton MD	25	18
May 25, 2017	Montpelier Elementary School	12	3
May 31, 2017	International High School at Largo	14	5
June 1, 2017	Northwestern High School	15	6
June 2, 2017	High Point High School	30	15
June 10, 2017	Marwood Development	12	18
Total		**544**	**249**

Recycling

Recycling campaigns provide information regarding recycling efforts and the benefits of recycling, as well as collection dates and the campaigns' contribution to the County's Zero Waste Initiative. A2013 survey showed that Berwyn Heights, College Park, City of Greenbelt, M-NCPPC, the Alice Ferguson Foundation, Keep Prince George's County Beautiful (KPGCB), and DoE have established or assisted with recycling campaigns. These efforts include distribution of information via flyers or other media, on upcoming events and the benefits of recycling. Efforts also include hosting collection days, disseminating information, and educating patrons. Some agencies and groups display information at these events.

DoE's Recycling Section and KPGCB continue to work with various environmental groups including MWCOG, DoE's Environmental Action, and the Environmental Literacy Committee (ELC). The ELC was organized by the William S. Schmidt Outdoor Education Center, a County public school facility which educates students, and supports schools and teachers by promoting Green School certification. In addition, DoE's Recycling Section and KPGCB also make presentations, as well as coordinate with others to do the same, on litter management, recycling, and source reduction.

KPGCB, in partnership with Prince George's County Public Schools, continues to hold Green Team sessions to support and offer resources for schools to become certified or re-certified as a Maryland Green School. The Maryland Association of Environmental and Outdoor Education sets the guidelines and standards, and governs the certification process. At these sessions, litter reduction is covered through verbal presentations and hands-on activities that address good waste management practices. This ongoing program is offered semi-annually in the spring and fall. In addition, speakers from various environmental groups provide a forum to promote programs and grant opportunities to assist schools in achieving their environmental goals. Currently, 92 schools are green certified in Prince George's County.

During FY 2017, the County had an estimated residential recycling amount of 42,070 tons and commercial recycling amount of 29,744 tons. However, the commercial recycling tonnage is not inclusive of all commercial recycling within the County. It is reflective of what has been received at the Materials Recycling Facility (MRF), and it also includes recyclables from out of State and out of County.

Tours of Facilities

Public education opportunities also include publications issued to residents and tours of County facilities including the Brown Station Road Landfill and the Materials Recycling Facility. The intent of the tours and publications 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. A list of tours to the recycling facility in FY 2017 is provided in Table D-12; over 60 tours were conducted.

Table D-12. Materials Recycling Facility Tours

Name of Participant	Date of Tour
Prince George's County School Teachers	July 2016
DC Public Works	July 2016
Accokeek Foundation	July 2016
Tour - 18 students	August 2016
Scientist's Cliff	August 2016
Sierra Club	August 2016
Tour - Melwood	September 2016
Tour -	October 2016
University of Maryland	October 2016
Piney Point Robotics	October 2016
City of College Park	October 2016
EPIC Group	November 2016
SWANA	November 2016
Janney Elementary School	November 2016
Home School Group	November 2016
Keep America Beautiful	December 2016
Chinese Delegation Shandong Province	December 2016
Audubon Naturalist Society	December 2016
Emily Frankl - Anacostia River Keepers - Emily Frankl and Adam Ortiz	December 2016
Central High Developmental Group	January 2017
Chris Langreo - University of Maryland, College Park	January 2017
Patuxent River Park	January 2017
Greenbelt Elementary School	January 2017
Perrywood Elementary School	February 2017
Eaton Group (Green Team)	February 2017
DUS Home School Group	February 2017
Kenmoor Middle School Environmental Club	February 2017
Marlton Elementary Developmental Group	February 2017
Surrattsville High School Developmental Group	February 2017
Latin Public Charter School (DC)	February 2017

Name of Participant	Date of Tour
Washington Latin School, DC	March 2017
Sierra Club	March 2017
Ardmore Elementary School	March 2017
Northwestern High School Engineering	March 2017
MOM'S Organic Grocery	March 2017
Duval High School Engineering	March 2017
Thomas Pullen Elementary School	March 2017
La Plata High School	March 2017
Bucklodge Middle School - CRI Group	April 2017
Ingenuity Prep (DC)	April 2017
Jean Arnao	April 2017
Home School Group	April 2017
DuVal High School	April 2017
Home School Group	April 2017
Department of Environment Tour	April 2017
Patrick Henry Elementary School	April 2017
Prince George's County Parks and Recreation - Conservation Department	April 2017
Carollton Elementary School	April 2017
Carollton Elementary School	April 2017
Port Towns Elementary School	April 2017
Washington Yu-Ying School	May 2017
EPIC Group	May 2017
George E. Peters School (DC)	May 2017
Prince George's Committee Commissioners	May 2017
Maury Elementary School (DC)	May 2017
Tyler Elementary School (DC)	May 2017
Chesapeake Charter School	May 2017
Ludlow-Taylor Elementary School (DC)	May 2017
Patrick Henry Elementary School	May 2017
Kimball Elementary School (DC)	May 2017
Maryland Environmental Service Facilities Tour	May 2017
Marie Reed Elementary School	June 2017
NACA	June 2017

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 2015, the number of inspections/re-inspections was about 190,000. In FY 2016, the number of inspections/re-inspections decreased to 133,200. In FY 2017, the number of inspections/re-inspections decreased even further to 97,400. DPIE issued 21,600 violation notices which included trash-related complaints. The division cleaned 1,051 vacant properties through the Clean Lot Program. The tons of trash from these vacant properties were disposed by contractors. The division issued a total of 483 citations.

FY 2018 goals

For FY 2018, the County will continue to perform stream cleanups, community cleanups, and outreach and education, as well as expand programming with new initiatives like Adopt-A-Stream and Adopt-A-Can. The expansion of the Clean Sweep Initiative and the use of PGCLitterTRAK will continue. The County will explore updating (or improving) the trash reduction database with enhanced GIS mapping and data management tools to better track anti-litter activities and accomplishments, and continue working with regional partners to standardize metrics which will be used to quantify load reduction. Existing programs will continue to be assessed and adapted, as needed, in FY 2018 to position the County to achieve the FY 2019 annual litter reduction rate of 170,628 pounds per year.

Projects entailing the design and construction of three instream trash capture devices will be in progress in FY 2018. Project sites are located along Arundel Canal, Guilford Run, and Cabin Branch which are tributaries to the Anacostia River.

The County purchased “No Dumping” signs in FY 2017 for installation at litter hot spots as identified in the *2010 Anacostia River Watershed Restoration Plan and Report,* determined by staff, or reported by residents. The County is planning to install signs at 15 locations.

The University of Maryland Environmental Finance Center (EFC) conducted a litter source reduction study for the County in FY 2017. EFC’s charge was to assess the County’s litter reduction efforts to date, investigate community opinions on the litter challenge, do a literature review on litter abatement, and recommend strategies for advancing an effective litter reduction campaign. The County will use the findings of this study to inform its anti-litter campaign in FY 2018.

The County will continue to make progress towards meeting the FY 2019 target rate of 170,628 pounds per year for litter load reduction.

Response to MDE Comments on 2016 Annual Report

In a letter dated April 27, 2017, MDE provided a review of the Prince George's County FY 2016 annual NPDES MS4 report. Point-by-point responses to MDE's questions and comments are provided in Table 1 of this report. The County has provided a description of the status of trash reduction efforts for meeting goals outlined in the trash total maximum daily load (TMDL) work plan. The County will continue to report on progress toward meeting established milestones in each subsequent annual report.

For clarity, the County does not credit the litter reduction activities that are performed under the Comprehensive Community Cleanup Program towards achievement of the MS-4 required wasteload reduction for the Anacostia River. The tonnage of trash collected through this program is not counted towards reducing the trash wasteload on the Anacostia River. The type of litter which is collected via this program consists mostly of large items which fall under the category of non-point source items. The County's NPDES MS4 permit indicates that the County is expected to work towards reducing the waste load from point sources in accordance with the "work plan that is consistent with the assumptions of the Anacostia trash TMDL, which estimates that 170,628 pounds of trash will need to be removed annually." The total tonnage of 109,630 pounds which was shown in Table D-9 of the FY 2016 annual report reflected the cumulative wasteload weight for litter collection in the Anacostia watershed; this value does not reflect tonnage from the comprehensive community cleanups.

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 2017, the County continued to provide compliance assistance for the County-owned and municipal-owned industrial properties listed in Table D-13. 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 2017, the County continued to meet with the facilities to discuss mechanisms to improve the rate at which corrective actions are resolved. Challenges to the facilities range from difficulty accessing the visual monitoring sites to the time needed for repair of drainage channels. In their annual meeting at the time of the comprehensive inspection, the facility manager and the County set timelines for completing each corrective action.

Table D-13. 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
6	Sandy Hill Creative Disposal Project
Office of Central Services (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 District Heights
4	City of Greenbelt
5	City of Hyattsville
6	City of Laurel
7	City of New Carrollton
8	Town of Riverdale Park
9	City of Seat Pleasant

On the next several pages, each facility and their achievements for FY 2017 are described, along with the status of their stormwater pollution prevention plans (SWPPP). Specifically, Table D-14 through Table D-33 detail the status of the County-owned and municipal-owned facilities during FY 2017. These achievements and the compliance control measures are discussed at the quarterly inspections with each facility manager. At the same time, areas for long-term planning are highlighted, and the facility managers and DoE discuss any problems, structural or procedural, that are preventing the facility from meeting the control measures. Specific reporting items for the SWPPPs for FY 2017 are also provided in the updated MS4 geodatabase on DVD.

DoE Facilities

Abandoned Vehicle Impound Lot

In FY 2017, staff at the abandoned vehicle impound lot demonstrated good pollution prevention knowledge and regularly conducted good housekeeping procedures, facility inspections, and staff training. A highlight of the year was the lot's initiation of the process to repair the drainage channel. Table D-14 below shows the status of SWPPP implementation for this reporting period.

Table D-14. Abandon Vehicle Impound Lot - FY2017 Status

Permit Number	County Contact
12SW0312	Rhonda Edelen, Abandon Vehicle Section, DoE
FY 2017 Achievements	
Training: Site-specific facility SWPPP training was conducted. The Low Impact Development (LID) Center was also contracted to develop training material and begin conducting training classes for the facility staff. Good Housekeeping and Pollution Prevention: Inspection and housekeeping records were well documented, including Police Department's auto theft lot.	
Long-Term Planning	
Stormwater Management: The facility staff assessed the drainage channel, and made temporary repairs to the channel until a channel stabilization project could be implemented.	

Brown Station Road Sanitary Landfill

The Brown Station Road Sanitary Landfill has accepted municipal waste since 1968. This year 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-15 below shows the status of SWPPP implementation for this reporting period.

Table D-15. Brown Station Road Sanitary Landfill – FY 2017 Status

Permit Number	County Contact
12SW0401	Rick Thompson, Engineer Resource Recovery Division (RRD), DoE
FY 2017 Achievements	
Training: The LID Center was contracted to develop training material and begin conducting training classes for the 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: Good SWPPP records were kept at the facility.	
Long-Term Planning	
BMP Maintenance: Regular maintenance is planned. The landfill staff is pursuing contractors to perform maintenance on the ponds and perimeter ditches.	

Missouri Avenue Convenience Center

The Missouri Avenue Convenience Center is one of the two convenience centers for residence 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-16 below shows the status of SWPPP implementation for this reporting period.

Table D-16. Missouri Avenue Convenience Center – FY 2017 Status

Permit Number	County Contact
12SW2466	Rick Thompson, Engineer Resource Recovery Division (RRD), DoE
FY 2017 Achievements	
Oil and Antifreeze Recycling: The staff conducted regular maintenance of spill pallets in the collection area. Training: The LID Center was contracted to develop training material and begin conducting training classes for the facility staff. BMP Maintenance: The stormwater management facility was maintained regularly.	
Long-Term Planning	
Record Keeping: The staff will continue to update SWPPP records at the facility.	

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 KCI for inspection support and with the Stormwater Management Division to monitor SWPPP implementation. Table D-17 below shows the status of SWPPP implementation for this reporting period.

Table D-17. Materials Recycling Facility (DoE Facility) – FY 2017 Status

Permit Number	County Contact
12SW1224	Desmond Gladden, Contract Manager Resource Recovery Division (RRD), DoE
FY 2017 Achievements	
Training: Site-specific facility SWPPP training was conducted. The LID Center was also contracted to develop training material and begin conducting training classes for the facility staff. BMP Maintenance: The facility conducted and documented regular maintenance of oil grit separators. Record Keeping: Good 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 update 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-18 below shows the status of SWPPP implementation for this reporting period.

Table D-18. Prince George's County Yard Waste Composting Facility – FY 2017 status

Permit Number	County Contact
12DP2792	Rick Thompson, Engineer Resource Recovery Division (RRD), DoE
FY 2017 Achievements	
BMP Maintenance: The stormwater management facility was maintained regularly. Record Keeping and Inspection: The staff performed regular facility inspections. Discharge Monitoring: The facility continued monitoring under the parameters of the individual permit. Training: Site-specific facility SWPPP training was conducted. The LID Center was also contracted to develop training material and begin conducting training classes for the 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, KCI assists in monitoring the facilities' progress in 12-SW. The following table presents the fiscal year's status. Table D-19 below shows the status of SWPPP implementation for this reporting period.

Table D-19. Sandy Hill Creative Disposal Project (DoE Facility) - FY 2017 Status

Permit Number	County Contact
12SW0314A	Rick Thompson, Engineer Resource Recovery Division (RRD), DoE
FY 2017 Achievements	
Stormwater Management: The facility continued improvements in pond maintenance for all four stormwater management ponds. Training: The LID Center was contracted to develop training material and begin conducting training classes for the facility staff.	
Long-Term Planning	
Record Keeping: The staff will continue to update SWPPP records at the facility and keep records on site. Discharge Monitoring: The staff will regularly conduct visual monitoring at all outfalls.	

Office of Central Services Facility

The Office of Central Services (OCS) is working towards compliance with the 12-SW Permit. Table D-20 below shows the status of SWPPP implementation for this reporting period for OCS' Park Central Vehicle Maintenance Facility.

Table D-20. Park Central Vehicle Maintenance Facility – FY 2017 Status

Permit Number	County Contact
12SW2173	Richard Hilmer, Fleet Administrator Facilities Operation and Management Division, OCS
FY 2017 Achievements	
Training: The staff conducted site-specific facility SWPPP training. The LID Center was also contracted to develop training material and begin conducting training classes for the facility staff. Discharge Monitoring: The facility conducted quarterly discharge monitoring. Stormwater Management: The staff performed maintenance of the oil grit separator. The dry pond was routinely maintained and was 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. In FY 2017, DPW&T staff performed quarterly visual monitoring at each DPW&T facility. Non-structural BMPs, such as a spill prevention and response and good housekeeping programs, are well developed and carried out by a team at each facility. The need for structural BMPs has been identified and plans are moving forward to meet the needs. The design for a new vehicle wash facility is in design. Appropriated funding will dictate facility construction.

Table D-21. 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 North County	Year-Round	Crew Dispatch for South County
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-22 through Table D-24 show the status of SWPPP implementation for the DPW&T facilities.

Brandywine Facility

Table D-22. Brandywine Facility (DPW&T) – FY 2017 Status

Permit Number	County Contact
12SW1223	Mary Holden, Program Manager Office of Highway Maintenance, DPW&T
FY 2017 Achievements	
Staff Education and Training: The facility conducted annual pollution prevention training on February 28, 2017. Records were kept on site. Discharge Monitoring: The staff conducted quarterly discharge monitoring, with effective use of the findings to determine the impacts of control measures. SPCC: The facility maintained good spill records for the fiscal year. Record Keeping: A chemical storage inventory and an MSDS catalog were completed and kept on site.	
Long-Term Planning	
Site Improvements: Major facility improvements for the building and the shop are in design.	

Ritchie Service Complex

Table D-23. Ritchie Service Complex (DPW&T) – FY 2017 Status

Permit Number	County Contact
12SW0521	Mary Holden, Program Manager Office of Highway Maintenance, DPW&T
2017 Achievements	
Staff Education and Training: Conducted five pollution prevention training sessions in February 2017, (2/14, 2/15,2/17, 2/21 and 2/22) Records kept on site. Discharge Monitoring: Conducting quarterly discharge monitoring with effective use of findings to determine impact of control measures SPCC: Good Spill Records for Fiscal Year Record Keeping: Chemical storage inventory and MSDS Catalog completed and kept onsite.	
Long Term Planning	
Equipment and Vehicle Wash: Project for compliant vehicle and equipment wash at neighboring site in design.	

Glenn Dale Facility

Table D-24. Glenn Dale Facility (DPW&T) – FY 2017 Status

Permit Number	County Contact
12SW1234	Mary Holden, Program Manager Office of Highway Maintenance, DPW&T
2017 Achievements	
Staff Education and Training: Conducted annual pollution prevention training on 3/7/17. Records kept on site. Discharge Monitoring: Conducting quarterly discharge monitoring with effective use of findings to determine impact of control measures SPCC: Good Spill Records for Fiscal Year Record Keeping: Chemical storage inventory and MSDS Catalog completed and kept onsite.	
Long Term Planning	
BMP Maintenance: Annual maintenance for Oil and Grit Separator by DPW&T Personnel commenced.	

Municipal NPDES General Industrial Discharge Permit Status

The permit status of the nine Prince George's County municipalities with 12-SW industrial permit coverage are described on the next few pages. Table D-25 through Table D-33 show the status of SWPPP implementation for each municipality.

Town of Cheverly

Table D-25. Town of Cheverly DPW – FY 2017 Status

Permit Number	County Contact
12SW0197	Juan Lois Torres, Department of Public Works Director
FY 2017 Achievements	
BMP Maintenance: The staff performed regular maintenance of the oil and grit separator. Fueling Area: A canopy was constructed over the vehicle fueling pumps. Record Keeping: Records were kept of the inspections and maintenance activities. Training: The LID Center was contracted to develop training material and begin conducting training classes for the facility staff. Stormwater Management: The bioretention/rain garden was constructed to reduce off-site runoff onto the Department of Public Works (DPW) yard.	
Long-Term Planning	
Housekeeping: The facility will improve housekeeping.	

City of College Park

Table D-26. City of College Park DPW – FY 2017 Status

Permit Number	County Contact
12SW2148	Robert Marsili, Assistant Director of Operations and Facilities
FY 2017 Achievements	
Record Keeping: Records were kept of the routine facility inspections and maintenance activities. BMP Maintenance: The staff maintained the stormwater management facility that treated runoff from the composting site. Training: The LID Center was contracted to develop training material and begin conducting training classes for the facility staff.	
Long-Term Planning	
Discharge Monitoring: The facility will conduct quarterly discharge monitoring.	

City of District Heights

Table D-27. City of District Heights DPW – FY 2017 Status

Permit Number	County Contact
12NE3240	Brian Edwards, Department of Public Works Director
FY 2017 Achievements	
• MDE received the "No Exposure Certification" (12NE3240) for the District Heights DPW.	

City of Greenbelt

Table D-28. City of Greenbelt DPW – FY 2017 Status

Permit Number	County Contact
12SW2145	Jim Sterling, Department of Public Works Director
FY 2017 Achievements	
Record Keeping: Records were kept of the routine facility inspections. Discharge Monitoring: Discharge monitoring from outfall #1 resulted in no visible forms of pollution. Training: Site-specific facility SWPPP training was conducted. The LID Center was also contracted to develop training material and begin conducting training classes for the facility staff. SPCC: The staff updated the SPCC plan. BMP Maintenance: The staff maintained the bioretention facilities regularly.	

City of Hyattsville

Table D-29. City of Hyattsville DPW – FY 2017 Status

Permit Number	County Contact
12SW2150	Leslie Riddle, Department of Public Works Director
FY 2017 Achievements	
SWPPP Compliance: The facility maintained SWPPP compliance without any corrective actions. BMP Maintenance: Regular maintenance of the oil and grit separator and rain garden was conducted. Training: Site-specific facility SWPPP training was conducted. The LID Center was also contracted to develop training material and begin conducting training classes for the 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 – FY 2017 Status

Permit Number	County Contact
12SW1841	Tommy Helms, SWPPP Coordinator
FY 2017 Achievements	
Training: Site-specific facility SWPPP training was conducted. The LID Center was also contracted to develop training material and begin conducting training classes for the facility staff. Record Keeping: Records were kept of the routine facility inspections. Housekeeping: The facility improved housekeeping for the used oil recycling center, including the spill kit.	

Long-Term Planning
BMP Maintenance: The facility will conduct regular maintenance of the Stormceptor and oil and grit separator.

City of New Carrollton

Table D-31. City of New Carrollton DPW – FY 2017 Status

Permit Number	County Contact
12SW2144	Bernard Cochran, Department of Public Works Director
FY 2017 Achievements	
Housekeeping: Good housekeeping methods were employed for the salt dome and heavy equipment. BMP Maintenance: The facility maintained the oil and grit separator. Training: The LID Center was contracted to develop training material and begin conducting training classes for the facility staff.	
Long-Term Planning	
BMP Maintenance: Regular maintenance of the oil and grit separator will be conducted. Housekeeping: The staff will improve housekeeping throughout DPW facility. Record Keeping: The staff will improve record keeping.	

Town of Riverdale Park

Table D-32. Town of Riverdale Park DPW – FY 2017 Status

Permit Number	County Contact
12SW2146	Leonard Addison, Department of Public Works Director
FY 2017 Achievements	
BMP Maintenance: The facility continued the maintenance and functionality of the rain garden. Record Keeping: Records were kept of the routine facility inspections. Training: Site-specific facility SWPPP training was conducted. The LID Center was also contracted to develop training material and begin conducting training classes for the facility staff.	

City of Seat Pleasant

Table D-33. City of Seat Pleasant DPW – FY 2017 Status

Permit Number	County Contact
12SW2143	Markisha Garner, Administrative Assistant
FY 2017 Achievements	
Record Keeping: Records were kept of the routine facility inspections. Housekeeping: The staff disposed of unwanted material and organized both the maintenance building and the yard. Training: Site-specific facility SWPPP training was conducted. The LID Center was also contracted to develop training material and begin conducting training classes for the facility staff.	
Long-Term Planning	
Stormwater Management: Installation of a BMP facility in the corner of the yard to replace the inlet in disrepair is in the planning stage.	

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. During the reporting period, 1,491.3 curb miles were swept removing 2,239.85 tons of debris from the roadway. Details of the street sweeping accomplishments for FY 2017 are provided in Table D-34 and Figure D-3.

Table D-34. Street Sweeping Accomplishments for FY 2017

Route Number	Start Date	End Date	Miles Swept	Tons Disposed
Arterial Route 1	6/9/16	7/7/16	115.10	159.00
Arterial Route 1	9/13/16	9/28/16	115.10	130.00
Arterial Route 1	3/27/17	4/13/17	115.10	172.14
Arterial Route 2	7/07/16	08/01/16	194.30	361.60
Arterial Route 2	10/03/16	11/01/16	194.30	279.86
Arterial Route 2	04/14/17	05/15/17	194.30	381.00
Arterial Route 3	08/01/16	08/23/16	155.60	201.25
Arterial Route 3	11/10/16	12/14/16	155.60	245.00
Arterial Route 3	5/16/17	6/19/17	155.60	245.00
Industrials	08/23/16	09/07/16	96.30	65.00
Total			**1,491.30**	**2,239.85**

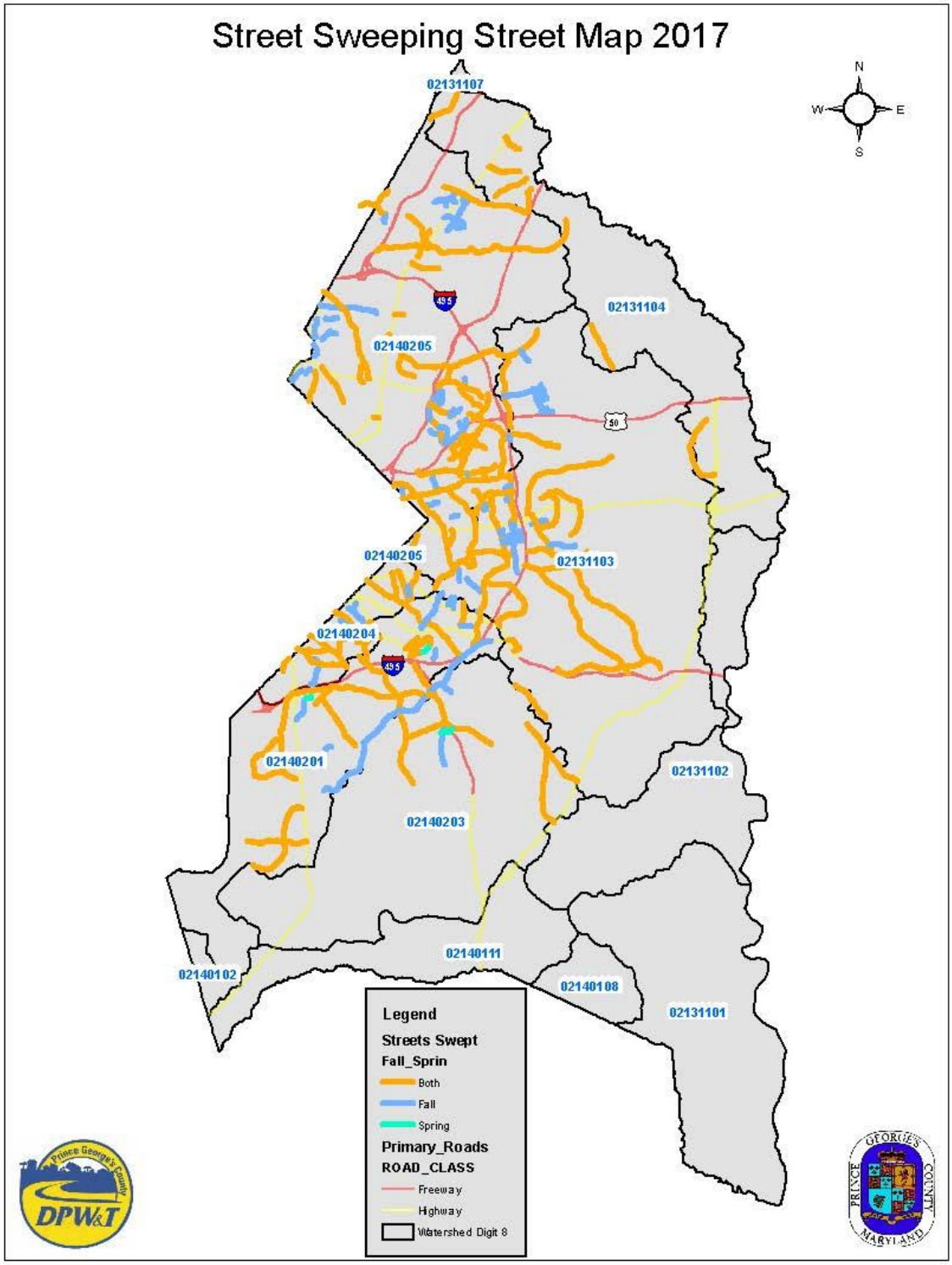


Figure D-3. Roadways Served in FY 2017 - Countywide Street Sweeping Program

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

Storm drain maintenance is targeted is typically targeted in three focus areas: municipalities, the 21 communities annually served by the Comprehensive Community Cleanup Program, and in response to citizen complaints for clogged and malfunctioning systems. During this reporting year, the County received 1,771 service requests from constituents, inspected 10,344 inlets, and cleaned 6,924 linear feet of storm drain pipe. A total of 231 tons of debris was removed through this process.

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 31,244 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 2017, 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-4. Over 13,000 miles of roadway were serviced in the litter control program in FY 2017.

During this reporting period, DPW&T received 2,136 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 2,074 tons of debris and solid waste from County roadways during this reporting period.

Snow and Ice Control Program

To determine when the application of deicing materials is warranted, including pre-treatment applications, the Snow and Ice Removal Program depends heavily upon information from temperature probes, weather forecasts via an Accuweather subscription service, and individuals monitoring the road conditions. Temperature probes embedded in the roadways gauge pavement temperatures and provide key information used to determine an appropriate treatment for snow and ice control. 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 four times per shift to discuss operational goals and challenges, and to modify, if necessary operational goals. A map of the deicing routes is shown in Figure D-5.

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. 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.

During this reporting year, the County mobilized for 10 snow and ice control events. Salt usage for this winter season was 18,451 tons at a cost of $588,876. When conditions are appropriate, pretreatment is utilized to reduce the amount of salting necessary and ensure safety to the traveling public during adverse conditions. During the reporting year, brine was used as a pretreatment in 5 of the 10 snow events.

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.

The County continues to re-evaluate its salt management plan to reduce unnecessary salt application and spillage, and to support this effort, the County developed a *Prince Georges County Salt Application Management Plan* last year. Patterned after the Maryland State Highway Administration guidelines, this plan takes into consideration all aspects of salt management. A copy of the salt management plan is included with the County's on-site SWPPP documentation.

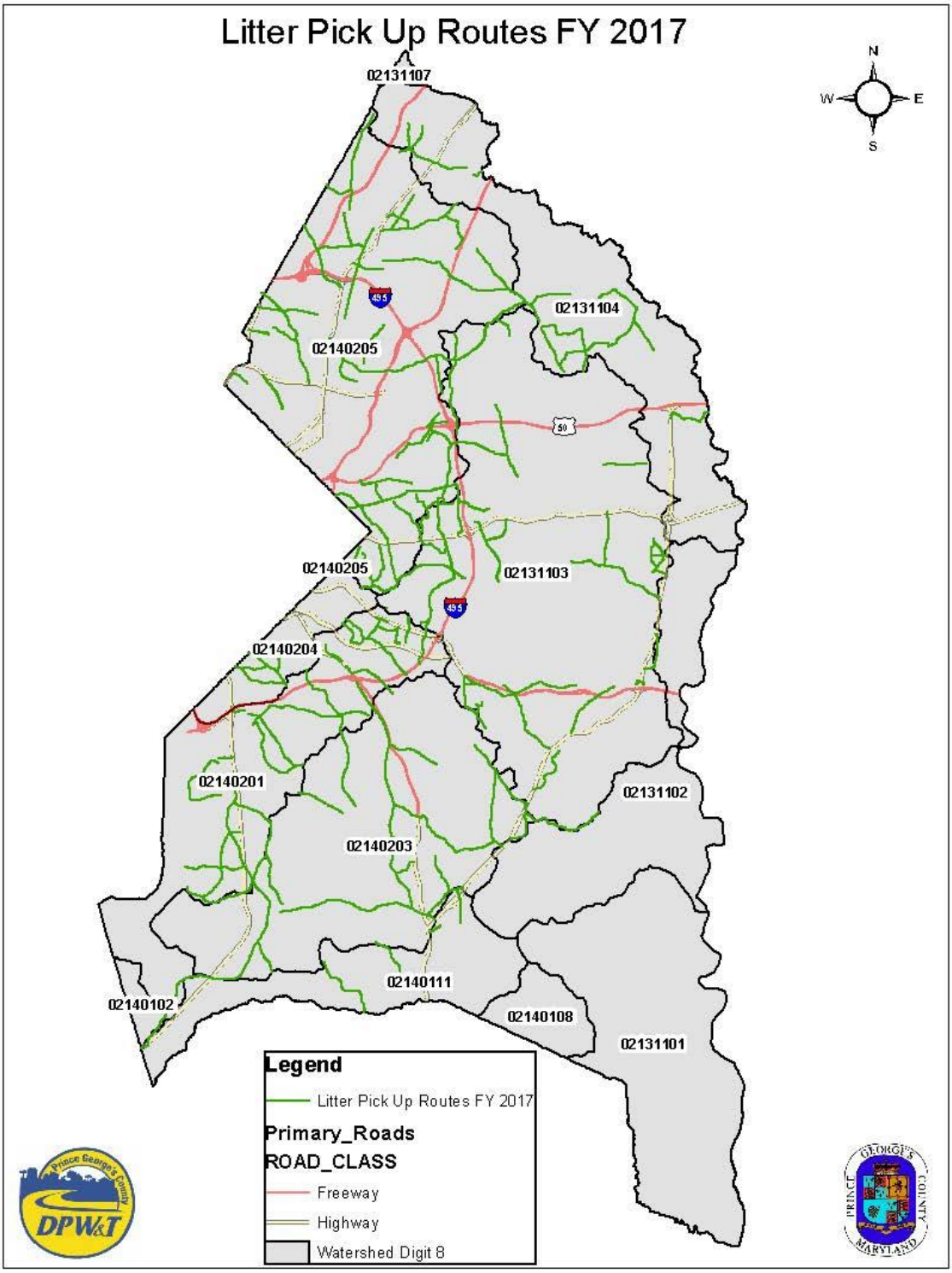


Figure D-4. Litter Pick Up Routes in FY 2017

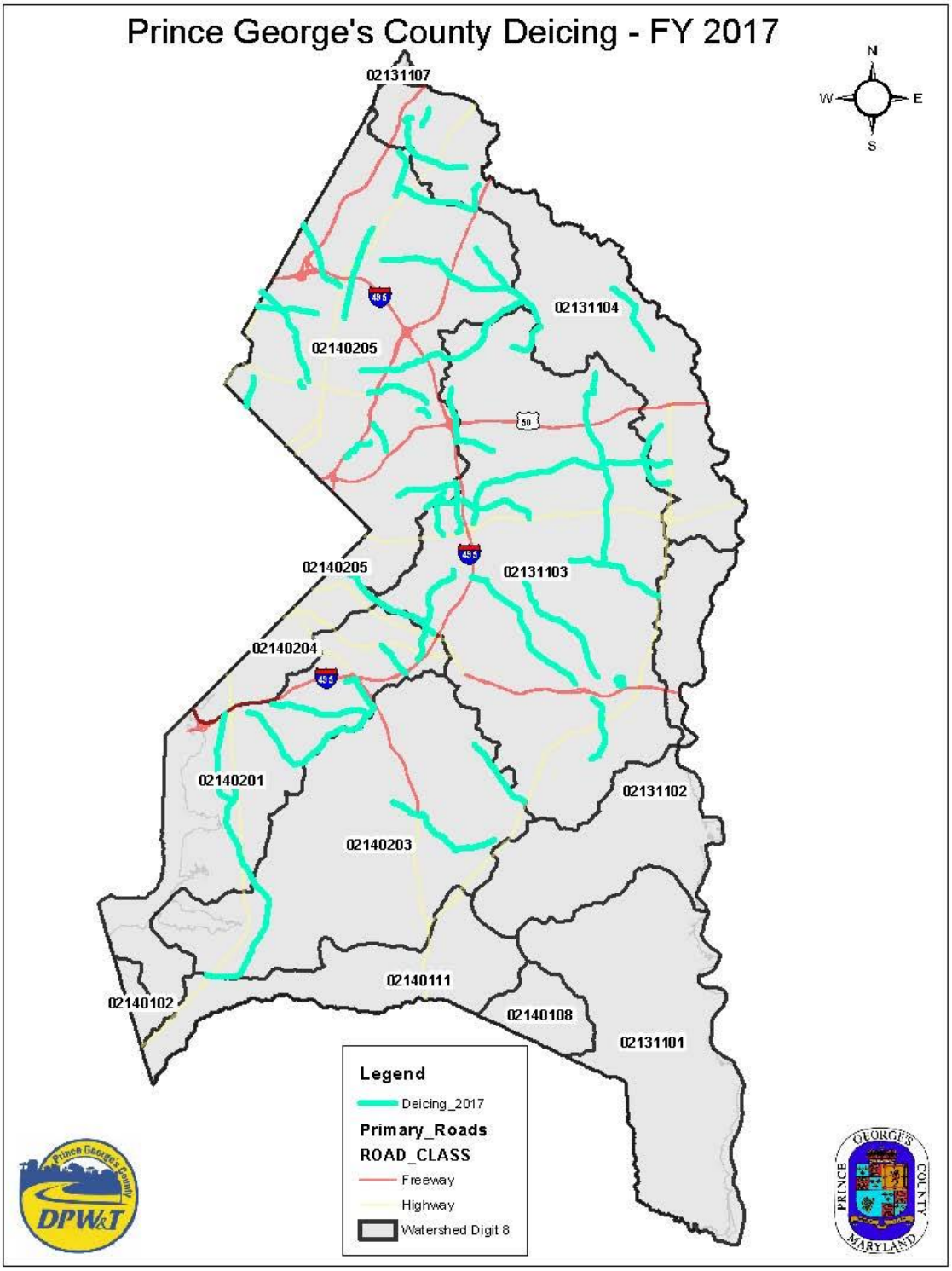


Figure D-5. Snow and Ice Control Program - De-Icing Application Map for FY 2017

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 call. More information regarding the investigation and enforcement actions taken to resolve water quality complaints is provided under Environmental Engineering program on page 41.

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.

During the reporting year, DoE hosted over 350 environmental events that provided information or discussed benefits of one or more categories described in the bulleted items of the permit condition (e.g. A, B, C…) above. 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. An overview of the FY 2017 DoE outreach events and participants is provided in Table D-35.

Table D-35. 2017 DoE Outreach Activities

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
CAB Hearing	A, B, C, D, E, F, G	7/5/2016	DIR	40	40
Adoption	B, G	7/6/2016	ASD	2	100+
Adoption	B, G	7/6/2016	ASD	1	100+
Capitol Heights	B	7/6/2016	DIR	1	1

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
DoE	A, B, C, D, E, F, G	7/7/2016	DIR	1	1
DoE	B	7/8/2016	DIR	1	1
Volunteer Orientation	B, G	7/9/2016	ASD	1	2
Teacher Training	B, C, E	7/11/2016	SD	1	25
Brown Station Sanitary Landfill	B, D, E	7/12/2016	ASD	1	15
Facility Tour	B, D, E	7/12/2016	RRD	15	20
Facility Tour	B	7/12/2016	RRD	20	20
Facility Tour	B, D, E	7/12/2016	RRD	15	15
Adoption	B, G	7/13/2016	ASD	1	100
Humane Education	B, G	7/13/2016	ASD	1	9
Western Branch	B, D	7/13/2016	ASD	2	20
Brown Station Sanitary Landfill	B, D, E	7/13/2016	ASD	2	17
Corporal Smith/Police	B	7/13/2016	DIR	30	30
Corporal Smith/Police	B	7/13/2016	DIR	30	30
Facility Tour	B, D	7/13/2016	RRD	20	35
Facility Tour	B, D, E	7/13/2016	RRD	17	25
Facility Tour	B, D	7/13/2016	RRD	20	20
Facility Tour	B, D, E	7/13/2016	RRD	17	17
Humane Education	B, G	7/14/2016	ASD	1	34
Humane Education	B, G	7/14/2016	ASD	1	7
Western Branch	B, D	7/14/2016	ASD	1	4
Summer Intern	A, B, C, D, E, F, G	7/14/2016	SD	2	15
DoE	A, B, C, D, E, F, G	7/14/2016	DIR	1	1
Facility Tour	B, D	7/14/2016	RRD	4	15
Facility Tour	B, D	7/14/2016	RRD	46	46
Facility Tour	B, D	7/14/2016	RRD	4	4
Facility Tour	B, D	7/15/2016	RRD	23	23
Environmental Engagement – Unity in the Community	A, B, C, D, E, F, G	7/16/2016	SD	2	300
Adoption	B, G	7/18/2016	ASD	1	100
Bladensburg	A, B, C, D, E, F, G	7/19/2016	DIR	30	30
Facility Tour	B, D	7/19/2016	RRD	25	25
Adoption	B, G	7/20/2016	ASD	1	12
DoE	A, B, C, D, E, F, G	7/20/2016	DIR	25	25
DoE	A, B, C, D, E, F, G	7/20/2016	DIR	25	25
DoE	A, B, C, D, E, F, G	7/20/2016	DIR	25	25
Western Branch	B, C, E	7/21/2016	ASD	2	13
Facility Tour	B, C, E	7/21/2016	RRD	13	15

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Facility Tour	B, C, E	7/21/2016	RRD	13	13
Brown Station Sanitary Landfill	B, D, E	7/22/2016	ASD	3	14
Facility Tour	B, D, E	7/22/2016	RRD	14	20
Facility Tour	B, D, E	7/22/2016	RRD	14	14
Adoption	B, G	7/23/2016	ASD	26	200
Volunteer Orientation	B, G	7/26/2016	ASD	1	7
Humane Education	B, G	7/27/2016	ASD	1	42
Adoption	B, G	7/27/2016	ASD	1	100
Western Branch	B, C, E	7/27/2016	ASD	1	1
Brown Station Sanitary Landfill	B, D, E	7/27/2016	ASD	2	21
Speaker's Bureau - School- Score 4 Teacher Training	B	7/27/2016	SD	1	15
Chesapeake Bay Program Office Fish Shack	B	7/27/2016	DIR	35	35
Facility Tour	B, C, E	7/27/2016	RRD	1	2
Facility Tour	B, C, E	7/27/2016	RRD	21	25
Facility Tour	B, C, E	7/27/2016	RRD	1	1
Facility Tour	B, C, E	7/27/2016	RRD	21	21
Brown Station Sanitary Landfill	B, C, E	7/28/2016	ASD	1	1
Environmental Engagement – YMCA Thingamajig: Creating the Best Future	B	7/28/2016	SD	2	600
Environmental Engagement – YMCA Thingamajig: Creating the Best Future	A, B, C, D, E, F, G	7/28/2016	SD	1	350
Environmental Engagement – Riverdale Farmers Market	A, B, C, D, E, F, G	7/28/2016	SD	1	47
DoE	B	7/28/2016	DIR	1	1
Facility Tour	B, C, E	7/28/2016	RRD	1	1
Facility Tour	B, C, E	7/28/2016	RRD	1	1
ECO City Bladensburg	A, B, C, D, E, F, G	8/2/2016	DIR	25	25
District Heights	A, B, C, D, E, F, G	8/2/2016	DIR	100	100
Facility Tour	B	8/2/2016	RRD	21	21
Accokeek (Colonial Farm)	A, B, C, D, E, F, G	8/3/2016	DIR	15	15
DoE	B	8/4/2016	DIR	1	1
DoE	B	8/4/2016	DIR	35	35
DoE	B	8/5/2016	DIR	2	2
Facility Tour	B, C, E	8/5/2016	RRD	18	18
Facility Tour	B, C, E	8/8/2016	RRD	14	14
DoE	A, B, C, D, E, F, G	8/10/2016	DIR	60	60

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Facility Tour	B, C, E	8/10/2016	RRD	6	6
County Administration Building	A, B, C, D, E, F, G	8/16/2016	DIR	20	20
Facility Tour	B	8/24/2016	RRD	4	4
Facility Tour	B	8/26/2016	RRD	25	25
Facility Tour	B, C, E	8/30/2016	RRD	13	13
School Garden lesson	A, C, E	9/1/2016	SD	1	26
Oxon Hill United Methodist Church	A, B, C, D, E, F, G	9/8/2016	DIR	25	25
Back2School Night	A, B, C, D, E, F, G	9/8/2016	SD	1	85
County Fair	A, B, C, D, E, F, G	9/8/2016	SD	1	35
County Fair	A, B, C, D, E, F, G	9/9/2016	SD	2	38
County Fair	A, B, C, D, E, F, G	9/10/2016	SD	1	0
Environmental Engagement	A, B, C, D, E, F, G	9/10/2016	SD	1	35
Environmental Engagement – Stormwater	A, B, C, D, E, F, G	9/10/2016	SD	1	0
County Fair	A, B, C, D, E, F, G	9/11/2016	SD	1	60
County Fair	A, B, C, D, E, F, G	9/11/2016	SD	1	75
Brooke Road Community Center	A, B, C, D, E, F, G	9/12/2016	DIR	11	11
DoE	A, B, C, D, E, F, G	9/13/2016	DIR	9	9
Bowie State University	A, B, C, D, E, F, G	9/13/2016	DIR	20	20
Environmental Engagement – School	A, B, C, D, E, F, G	9/13/2016	SD	1	20
Clean Sweep	A, B, C, D, E, F, G	9/16/2016	SD	1	50
Environmental Engagement - Hyattsville Grass Roots Green Expo	A, B, C, D, E, F, G	9/17/2016	SD	1	185
Environmental Engagement - Green School Certification Project	A, B, C, D, E, F, G	9/17/2016	SD	1	20
Gwynn Park High School	A, B, C, D, E, F, G	9/19/2016	DIR	25	25
Increasing Tree Canopy	A, C, E	9/20/2016	SD	1	9
Jason's Deli	A, B, C, D, E, F, G	9/21/2016	DIR	15	15
DoE	A, B, C, D, E, F, G	9/21/2016	DIR	25	25
Environmental Engagement - Stormwater	A, B, C, D, E, F, G	9/22/2016	SD	1	43
Environmental Engagement - Community Garden - Stormwater	A, C, E	9/22/2016	SD	1	5
Clean Sweep Orientation	A, B, C, D, E, F, G	9/22/2016	SD	1	6
DoE	A, B, C, D, E, F, G	9/23/2016	DIR	1	1
Facility Tour	B, C, E	9/23/2016	RRD	13	13
Litter Free Takoma Park Planning Meeting	A, B, C, D, E, F, G	9/23/2016	SD	1	16
Environmental Engagement -	A, B, C, D, E, F, G	9/24/2016	SD	1	7

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Stormwater					
Environmental Engagement - Stormwater	A, B, C, D, E, F, G	9/24/2016	SD	1	10
Saint Margaret's Church	A, B, C, D, E, F, G	9/26/2016	DIR	120	120
DoE	A, B, C, D, E, F, G	9/26/2016	DIR	5	5
Jason's Deli	A, B, C, D, E, F, G	9/27/2016	DIR	15	15
Environmental Engagement – Trees and Stormwater	A, B, C, D, E, F, G	9/27/2016	SD	1	30
Beatification Award Dinner - Key note speaker - How Green Can Your Garden Grow? County Greening	A, B,C, E	9/28/2016	SD	1	125
DoE	A, B, C, D, E, F, G	9/29/2016	DIR	1	1
Tracking Trash: PGC Litter Track	A, B, C, D, E, F, G	9/29/2016	SD	1	30
Environmental Engagement - Stormwater	A, B, C, D, E, F, G	9/29/2016	SD	1	47
Wegmans	B	9/30/2016	DIR	1	1
Facility Tour	B, C, E	9/30/2016	RRD	2	2
Environmental Engagement – School anti-litter	A, B, C, D, E, F, G	9/30/2016	SD	1	47
Branch Avenue	A, B, C, D, E, F, G	10/1/2016	DIR	35	35
Environmental Engagement - trash/recycle School Clean up	A, B, C, D, E, F, G	10/1/2016	SD	2	35
Environmental Engagement - Community Transformation Event	A, B, C, D, E, F, G	10/1/2016	SD	2	50
Environmental Engagement – Library Series - Trees	A, C, E	10/1/2016	SD	1	10
Facility Tour	B, C, E	10/4/2016	RRD	1	1
Environmental Engagement – School engagement	A, B, C, D, E, F, G	10/4/2016	SD	1	15
Environmental Engagement – School engagement	A, B, C, D, E, F, G	10/4/2016	SD	1	8
Environmental Engagement – Trees	A, C, E	10/4/2016	SD	22	35
Facility Tour	A, B, D, E	10/5/2016	RRD	50	50
PGCPS Green School Professional Development	A, B, C, D, E, F, G	10/7/2016	SD	1	43
Environmental Engagement – Library Series - Trees	A, C, E	10/8/2016	SD	1	7
Facility Tour	B	10/11/2016	RRD	3	3
Colony South Hotel	A, B, C, D, E, F, G	10/12/2016	DIR	60	60

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Facility Tour	B	10/12/2016	RRD	3	3
College Park	B	10/13/2016	DIR	1	25
Anacostia Park	A, B, C, D, E, F, G	10/13/2016	DIR	40	40
Facility Tour	B	10/13/2016	RRD	15	15
Environmental Engagement	A, B, C, D, E, F, G	10/13/2016	SD	1	30
Environmental Engagement – Storm Drain Stenciling Program talk and demonstration	A, B, C, D, E, F, G	10/15/2016	SD	1	8
Environmental Engagement – Trees and Stormwater Hispanic Anacostia River Festival	A, B, C, D, E, F, G	10/15/2016	SD	1	17
Environmental Engagement – Library Series - Trees	A, C, E	10/15/2016	SD	1	10
Greenbelt Lake	A, B, C, D, E, F, G	10/17/2016	DIR	7	7
Environmental Engagement - Trees - Forest Conservation Advisory Council	A, B, C, D, E, F, G	10/17/2016	SD	1	45
DoE	A, B, C, D, E, F, G	10/19/2016	DIR	8	8
Bowie Comfort Inn	A, B, C, D, E, F, G	10/20/2016	DIR	20	20
Environmental Engagement: Master Gardner Training – Green Gardening	A, B, C, D, E, F, G	10/20/2016	SD	2	67
Environmental Engagement: Master Gardner Training – Air Quality	A, B, C, D, E, F, G	10/22/2016	SD	2	10
Environmental Engagement – Library Series - Trees	A, B, C, D, E, F, G	10/22/2016	SD	2	50
Seat Pleasant Rain Barrel Workshop	A, B	10/23/2016	SD	1	10
Prince George's Ballroom	A, B, C, D, E, F, G	10/25/2016	DIR	30	30
Colony South Hotel	A, B, C, D, E, F, G	10/26/2016	DIR	60	60
Oxon Hill High School	A, B, C, D, E, F, G	10/26/2016	DIR	10	10
Community Meeting	B	10/26/2016	RRD	150	150
Chesapeake Bay Landscaping Professional - Stormwater maintenance practicum	A, C, E,	10/26/2016	SD	1	12
Finance Park	A, B, C, D, E, F, G	10/27/2016	DIR	30	30
Community Meeting	B	10/27/2016	RRD	16	16
Rain Barrel Pick for the Great Rain Barrel Event in Hyattsville	B	10/29/2016	SD	1	15
DoE	A, B, C, D, E, F, G	10/31/2016	DIR	10	10
Charles Herbert Flowers High School	A, B, C, D, E, F, G	11/1/2016	DIR	60	60
Wegmans	A, B, C, D, E, F, G	11/2/2016	DIR	40	40

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Environmental Engagement – Anti-litter	A, B, C, D, E, F, G	11/2/2016	SD	1	8
Oxon Hill Middle School Green School Stenciling Project – Anti -litter	A, B, C, D, E, F, G	11/2/2016	SD	2	17
Food Equity Council – Urban Ag and EJ	A ,E	11/2/2016	SD	1	45
Environmental Engagement – Schools (Tall Oaks Environmental Science Class)	A, B, C, D, E, F, G	11/4/2016	SD	1	20
Birchwood City	A, B, E	11/7/2016	DIR	6	10
Hyattsville Tree Planting Demo	A, C, E	11/7/2016	SD	1	10
Harborside Hotel	A, B, C, D, E, F, G	11/9/2016	DIR	50	50
High Point High School	A, B, C, D, E, F, G	11/14/2016	DIR	100	100
Bowie Baysox Stadium	A, B, C, D, E, F, G	11/16/2016	DIR	1	100
DoE	A, B, C, D, E, F, G	11/16/2016	DIR	23	23
Environmental Engagement – tree and stormwater	A, B, C, D, E, F, G	11/17/2016	SD	3	50
Environmental Engagement - Anti-litter to Willow Grove Community	A, B, C, D, E, F, G	11/18/2016	SD	1	10
Clean Water Clear Choices - Pervious Pavement for Customers Who Want a Contractor Now	B	11/19/2016	SD	1	11
Recycling Town Hall meeting	D	11/28/2016	SD	2	12
DoE	A, B, E	11/30/2016	DIR	5	5
Chesapeake Bay Landscaping Professional - Hosting the maintenance practicum	E	11/30/2016	SD	2	15
Facility Tour	B	12/1/2016	RRD	7	7
Facility Tour	B	12/2/2016	RRD	14	14
Environmental Engagement - Contractor Training on Tree Care	A, B, C, D, E, F, G	12/3/2016	SD	1	18
Environmental Engagement – Stormwater education at Grand Re-Opening of the Fore bays at Greenbelt Lake	A, B, C, D, E, F, G	12/3/2016	SD	1	110
Facility Tour	B	12/5/2016	RRD	2	2
Sustainability in Comprehensive Plans Workshop - Briefed representatives of member jurisdictions on DoE programs & initiatives that focus on air & water quality improvement and protection.	A, B, C, D, E, F, G	12/5/2016	SD	1	31

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Environmental Engagement Contractor Training - Rain Gardens	A, B, C, D, E, F, G	12/10/2016	SD	1	10
Facility Tour	B, C, E	12/13/2016	RRD	9	9
Facility Tour	B	12/22/2016	RRD	2	2
Facility Tour	B	12/23/2016	RRD	5	5
Facility Tour	B	1/13/2017	RRD	37	37
Facility Tour	B	1/23/2017	RRD	2	2
Facility Tour	B	1/24/2017	RRD	15	15
Environmental Engagement – School education on soil and water	A, B, C, D, E, F, G	1/25/2017	SD	1	20
Environmental Engagement – PGC Farmer's Market Manager's Meeting on water and trees	A, B, C, D, E, F, G	1/26/2017	SD	1	25
Facility Tour	B	1/27/2017	RRD	60	60
Facility Tour	B	2/1/2017	RRD	124	124
Facility Tour	B, C, E	2/2/2017	RRD	1	1
Facility Tour	B	2/3/2017	RRD	11	11
Environmental Engagement – Water Quality and Development Workshop	A, B, C, D, E, F, G	2/4/2017	SD	1	31
Environmental Engagement – Green School Stormwater Professional Development Day - Cohort 2	A, B, C, D, E, F, G	2/7/2017	SD	1	36
Facility Tour	B	2/8/2017	RRD	14	14
Facility Tour	B	2/9/2017	RRD	27	27
Facility Tour	B, C, E	2/9/2017	RRD	25	25
Facility Tour	B	2/15/2017	RRD	23	23
Preparation for Tree ID, Planting and Tour – Anti-litter to Radiant Valley Homeowner's Association Meeting	A, B, C, D, E, F, G	2/16/2017	SD	1	24
Facility Tour	B	2/17/2017	RRD	16	16
Facility Tour	B, C, E	2/20/2017	RRD	1	1
UMD Arboretum - Preparation for Tree ID, Planting and Tour	A, C, E	2/22/2017	SD	1	20
Community Meeting	B	2/23/2017	RRD	4	4
Riverdale Outdoor Farmers Market	A, B, C, D, E, F, G	2/23/2017	SD	1	61
Native Trees presentation at Charles County Master Gardener at Thomas Stone HS	A, C, E	2/23/2017	SD	1	15

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Environmental Engagement – School - Stormwater	A, B, C, D, E, F, G	2/24/2017	SD	2	90
Environmental Engagement – School – Anti-liter	A, B, C, D, E, F, G	2/24/2017	SD	1	90
Talk on Starting a vegetable garden and maintaining healthy soil and plants using compost and no pesticides	A, C, E	2/24/2017	SD	1	28
Facility Tour	B	2/28/2017	RRD	19	19
Community Meeting	A, B, C, D, E, F, G	3/1/2017	RRD	50	50
Professional Development for teachers- Storm Drain Art project for Schools	B	3/1/2017	SD	2	70
Facility Tour	B	3/2/2017	RRD	22	22
Facility Tour	B	3/3/2017	RRD	15	15
Stormwater 201 Professional Development Day for teachers - Trees	A, C, E	3/4/2017	SD	2	55
Stormwater 201 Professional Development workshop. – Anti-litter	B, D	3/7/2017	SD	1	56
Stormwater 201 Professional Development workshop. - Stormwater	A, B, C, D, E, F, G	3/7/2017	SD	2	56
Community Meeting	A, B, C, D, E, F, G	3/8/2017	RRD	60	60
Community Meeting	A, B, C, D, E, F, G	3/8/2017	RRD	25	25
Facility Tour	B	3/9/2017	RRD	94	94
Train the Trainer Event - Stormwater	A, B, C, D, E, F, G	3/9/2017	SD	1	6
Facility Tour	B	3/10/2017	RRD	16	16
Contractor Training - Rain Check Rebate - pervious pavement	A, B, C, D, E, F, G	3/11/2017	SD	1	24
Environmental Engagement - MG Basic Training series	A, B, C, D, E, F, G	3/13/2017	SD	1	20
Environmental Engagement – Anti-liter	A, B, C, D, E, F, G	3/14/2017	SD	2	50
Environmental Engagement - MG Basic Training - series	A, B, C, D, E, F, G	3/15/2017	SD	1	20
Facility Tour	B	3/16/2017	RRD	6	6
Facility Tour	B	3/17/2017	RRD	18	18
Stormwater 101 – Professional Development on Stormwater and Trees	A, B, C, D, E, F, G	3/18/2017	SD	1	24
Facility Tour	B	3/20/2017	RRD	25	25
Environmental Engagement - MG Basic Training - series	A, B, C, D, E, F, G	3/20/2017	SD	1	20
Facility Tour	B	3/22/2017	RRD	26	26

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Environmental Engagement - MG Basic Training -series	A, B, C, D, E, F, G	3/22/2017	SD	1	20
Facility Tour	B	3/23/2017	RRD	27	27
Flood	B	3/23/2017	SD	1	76
Contractor Training - Rain Check Rebate and rain gardens	A, B, C, E	3/25/2017	SD	1	25
Environmental Engagement South Bowie Library - Workshop	A, B, C, D, E, F, G	3/25/2017	SD	1	50
Environmental Engagement - MG Basic Training -series	A, B, C, D, E, F, G	3/27/2017	SD	1	20
Master Gardner Stormwater 101	B	3/29/2017	SD	1	20
Master Gardner Stormwater 101	B	3/29/2017	SD	1	20
Environmental Engagement PGCLitterTRAK	B, D	3/30/2017	SD	1	22
Facility Tour	B	3/31/2017	RRD	23	23
Environmental Engagement – Schools on trees	A, C, E	3/31/2017	SD	1	150
Greenbelt Great Rain Barrel Event = Stormwater	A	4/1/2017	SD	1	100
Anti-litter Clean ups: Good Neighbors - College Park	A, B, C, D, E, F, G	4/1/2017	SD	1	600
Environmental Engagement – Trees Good Neighbors - College Park	A, B, C, D, E, F, G	4/1/2017	SD	1	45
Environmental Engagement at Community Forklift on Baywise Landscaping and gardening	A, B, C, D, E, F, G	4/1/2017	SD	1	200
MG Basic Training	A, B, C, D, E, F, G	4/3/2017	SD	1	19
Community Meeting	B	4/5/2017	RRD	200	200
Community Meeting	A, B, C, D, E, F, G	4/5/2017	RRD	30	30
Facility Tour	B	4/5/2017	RRD	27	27
MG Basic Training Series – Environmental Engagement	A, B, C, D, E, F, G	4/5/2017	SD	1	19
MWCOG Meeting	A, B, C, D, E, F, G	4/6/2017	RRD	10	10
Pet Waste Management - Prince George's County Pet Waste Management Summit	G	4/6/2017	SD	1	72
Anti-litter Clean up	B, D	4/6/2017	SD	2	37
Facility Tour	B	4/7/2017	RRD	47	47
Facility Tour	B, C, E	4/7/2017	RRD	54	54

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Increasing Tree Canopy and Decreasing Food Deserts Fruit Tree Workshop	E	4/8/2017	SD	1	18
Bowie Greenfest – Environmental Education - Stormwater	A, B, C, D, E, F, G	4/8/2017	SD	2	200
Environmental Engagement - Anti-Litter	A, B, C, D, E, F, G	4/8/2017	SD	2	135
Environmental Engagement - Anti-Litter School Green Up Clean Up	A, B, C, D, E, F, G	4/8/2017	SD	2	180
Facility Tour	B	4/10/2017	RRD	15	15
Facility Tour	B	4/10/2017	RRD	3	3
Facility Tour	B	4/10/2017	RRD	6	6
Environmental Engagment - MG Basic Training Series		4/10/2017	SD	1	19
Facility Tour	B, C, E	4/11/2017	RRD	9	9
Facility Tour	B, C, E	4/11/2017	RRD	8	8
Facility Tour	B	4/13/2017	RRD	3	3
MG Meeting Lecture – Native Trees	A, C, E	4/13/2017	SD	1	45
Facility Tour	B, C, E	4/14/2017	RRD	35	35
Facility Tour	B	4/14/2017	RRD	35	35
Facility Tour	B	4/19/2017	RRD	50	50
Mulch Giveaway	E	4/22/2017	RRD	538	538
Environmental Engagement –Litter pick up - AWS - Earth Day Celebration 2017	A, B, C, D, E, F, G	4/22/2017	SD	2	173
Environmental Engagement – Stormwater - AWS - Earth Day Cleanup 2017 -	A, B, C, D, E, F, G	4/22/2017	SD	2	255
Anti- litter Annual Stream Clean up	B	4/22/2017	SD	2	45
Environmental Stormwater Engagement to JB Andrews Child & Youth Programs	A, B, C, D, E, F, G	4/22/2017	SD	2	100
Facility Tour	B	4/24/2017	RRD	20	20
Facility Tour	B	4/26/2017	RRD	40	40
Facility Tour	B	4/27/2017	RRD	48	48
Facility Tour	B	4/28/2017	RRD	37	37
Arbor Day Tree Planting		4/28/2017	SD	15	55
Environmental Engagement on Pet Waste at Mowatt Memorial United Methodist Church	G	4/28/2017	SD	2	20
tree planting demo	A, B, E	4/30/2017	SD	1	10
MG Basic Training – Pesticides and weeds	E	5/1/2017	SD	1	20

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Facility Tour	B	5/2/2017	RRD	88	88
Community Meeting	A, B, C, D, E, F, G	5/3/2017	RRD	50	50
Facility Tour	B	5/3/2017	RRD	8	8
MG Basic Training on Pollinators Baywise Planning	E	5/3/2017	SD	1	20
Facility Tour	B	5/4/2017	RRD	34	34
Community Cleanup	A, B, C, D, E, F, G	5/6/2017	RRD	30	30
Tree Planting Training to Port Towns Elem Green Team	A, B, C, D, E, F, G	5/6/2017	SD	1	16
Environmental Pet Waste Management Education at Seat Pleasant Day	G	5/6/2017	SD	2	75
Mt Ennon Baptist Church GreenFest - Baywise, Stormwater Mgm		5/6/2017	SD	1	50
Balmoral HOA – Wise Lawncare	A, B, D	5/6/2017	SD	1	15
Anti-litter - The Preserves at Mount Airy Development Activities Day	B, D	5/6/2017	SD	2	25
MG Basic Training on Native Plants/Invasive Plants	A, C, E	5/8/2017	SD	1	20
Facility Tour	B	5/9/2017	RRD	7	7
Facility Tour	B	5/10/2017	RRD	74	74
WSSC Children Water Festival - Stormwater	A, B, C, D, E, F, G	5/10/2017	SD	1	375
Tall Oaks HS Litter Presentation + Clean Up	B, D	5/10/2017	SD	1	10
MG Meeting – native plants	A, C, E	5/10/2017	SD	1	47
Facility Tour	B	5/11/2017	RRD	103	103
WSSC Children Water Festival	A, B, C, D, E, F, G	5/11/2017	SD	1	200
Bladensburg High Green team	A, B, C, D, E, F, G	5/11/2017	SD	1	11
Environmental Education on Pet Waste – Greenbelt	G	5/11/2017	SD	1	40
Greenman Festival – Pet Waste	A, B, C, D, E, F, G	5/13/2017	SD	1	120
Greenman Festival – Stormwater	A, B, C, D, E, F, G	5/13/2017	SD	1	75
Greenman Festival - Stormwater	A, B, C, D, E, F, G	5/14/2017	SD	1	40
Facility Tour	B	5/16/2017	RRD	45	45
Facility Tour	B	5/16/2017	RRD	50	50
Facility Tour	B, C, E	5/17/2017	RRD	39	39
Facility Tour	B	5/18/2017	RRD	56	56

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Environmental Pet Waste Management Engagement at Maryland Green Schools Youth Summit	G	5/18/2017	SD	1	50
Green Summit	A, B, C, D, E, F, G	5/19/2017	DIR	4	150
Environmental Stormwater Engagement Smithsonian Environmental Research Center Open House	A, B, C, D, E, F, G	5/20/2017	SD	1	135
Environmental Pet Waste Management Engagement at Greenbelt Public Works Open House	G	5/20/2017	SD	1	60
Facility Tour	B	5/23/2017	RRD	57	57
PG Co. Litter Town Hall Meeting	B, D	5/23/2017	SD	2	29
Facility Tour	B, C, E	5/24/2017	RRD	4	4
PG Co. Litter Town Hall Meeting	B, D	5/24/2017	SD	2	40
Anti-litter Montpelier Elementary School Green Day	B, D	5/25/2017	SD	2	12
Oxon Hill HS-Stormwater Presentation/PGCLitterTRAK + Clean - Up	B, D	5/26/2017	SD	1	45
Facility Tour	B, C, E	5/30/2017	RRD	10	10
Facility Tour	B	5/31/2017	RRD	30	30
Environmental Education Anti-litter - International High School at Largo	B, D	5/31/2017	SD	2	16
Environmental Education Anti-litter - Northwestern High School Stenciling	B, D	6/1/2017	SD	1	15
Environmental Education Anti-litter - Highpoint High School Stenciling	B, D	6/2/2017	SD	1	35
FEMA's Everybody's Going Green work session in Emmitsburg, MD	B	6/2/2017	SD	1	40
Pet Waste Expo at Greenbelt	G	6/3/2017	SD	1	240
Bay wise Training – supporting reduction in Stormwater pollution	B, C, E	6/3/2017	SD	1	20
PG Co. Litter Town Hall Meeting	B	6/6/2017	SD	2	34
Facility Tour	B	6/7/2017	RRD	46	46
Facility Tour	B, C, E	6/7/2017	RRD	50	50
Anti-litter: Town Hall - Mary Lehman District 1	B	6/7/2017	SD	1	134
Community-based litter discussion sessions	B	6/8/2017	SD	2	8

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Facility Tour	B, C, E	6/9/2017	RRD	8	8
Bay wise Training – Stormwater education	B, C, E	6/10/2017	SD	1	20
Marwood Development Stenciling/anti-litter	D	6/10/2017	SD	1	12
Pet Waste management PFCC New Member Orientation	G	6/13/2017	SD	2	15
Facility Tour	B	6/16/2017	RRD	4	4
PFCC - Pet Waste Town Hall	G	6/17/2017	SD	2	17
Pet Waste Management Glenn Estates Ice Cream Social	G	6/17/2017	SD	2	10
Facility Tour	B, C, E	6/20/2017	RRD	27	27
Facility Tour	B, C, E	6/21/2017	RRD	2	2
Maryland Sea Grant Advisory Board Spring Session Impacts of trash and littering on water quality and how the County is tackling the litter issue	B	6/21/2017	SD	2	20
National Pollinators – Talk on pollinators	E	6/24/2017	SD	1	75
Greenbelt Rain garden	A, B	6/24/2017	SD	1	23
Tree Festival / Tree Planting on residential	A, B	6/24/2017	SD	2	65
School Gardens - Focus on engaging and education teachers on starting a school garden Templeton ES	A	6/27/2017	SD	1	25
Total				5,208	20,232

[1] *Permit Conditions:*

- *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.*

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.

Community Outreach Promoting Empowerment (COPE)

Over the past year, the Community Outreach Promoting Empowerment (COPE) has continued to partner with local communities, homeowner associations, and civic groups as well as municipalities, to promote environmental stewardship and long-term behavior change. In addition, COPE has strengthened their partnership with local schools and the Board of Education to promote environmental stewardship among the County's youth. In this reporting period, DoE through its Sustainability Division and COPE has held 144 events reaching nearly 10,000 people to engage communities and individuals in restoration, promoting sustainable solutions and leveraging community action.

As part of the County's outreach and education program, a variety of games and activities were used to promote anti-litter, trees, and stormwater stewardship. Over the past year, over 42 events related to anti-litter were held. These events were a mix of community cleanups, town hall meetings, stenciling events, and festivals.

The stormwater management outreach and engagement campaign focused on events that targeted private property since approximately 81 percent of the County was developed prior to current stormwater regulations. Promotion of the County's Rain Check Rebate Program, which promotes installation of stormwater practices on private land, was a primary pathway to engaging property owners by providing them with the opportunity and incentives to install eligible practices that reduce runoff from yards and landscaping.

COPE continued to promote the Clean Water Clear Choices programs launched in the last reporting period. During this reporting period, four workshops were held to promote stormwater stewardship. These workshops provided an overview of the Rain Check Rebate Program, but focused on specific practices per community interest. They were held in Greenbelt (rain gardens), Seat Pleasant (rain barrels) and District Heights (rain check rebates). In addition, COPE in conjunction with the Ports Towns Community Health Partnership, held three Clean Water Clear Choice contractor training programs to help local businesses get the skills that they need to help expand the County's rebate program as well as help the community protect the water quality of the Chesapeake Bay. The training focused on pervious pavement, rain gardens, and tree canopy; these programs had over 59 attendees.

COPE/DoE also launched a pet waste disposal campaign (more details in the next section). The County hopes to reduce the amount of nutrient and bacterial pollution from pet waste in local waterways. Therefore, the goal of this pet waste campaign is to raise residents' awareness and concern about pet waste disposal enough to spur behavior change. The overall message is "Be a responsible pet owner by picking up your dog's waste".

Pet Waste Campaign

COPE/DoE used a multi-pronged approach to launch the new pet waste campaign which includes building partnerships, participating in community and municipal festival and events, and utilizing the stormwater stewardship grants to fund the installation of pet waste disposal stations.

DO YOUR DOODY!
SCOOP THAT POOP!
SCOOP IT, BAG IT, TRASH IT

To this end, COPE/DoE has developed a "Scoop the Poop" pledge, a poop game (based on a Snohomish County, WA poop toss game), a brochure, and posters. The pledge card asks County residents to commit to picking up after their pets. COPE is promoting pet waste stewardship by attending festivals and community events. In addition, COPE /DoE is working with Greenbelt and the City of Bowie to assist in their pet waste campaigns. DoE/COPE participated in the Greenbelt Pet Waste Expo on June 3, 2017 which was a great success. COPE/DoE hopes to hold several of these events in FY 2018. The poop game has been a great success in engaging people; a sample is shown in Figure D-6.

Figure D-6. Greenbelt Pet Expo: DoE/COPE Poop Toss Game: Scooping has never been so fun

Through the stormwater stewardship grants, the Environmental Finance Center (EFC) at University of Maryland and the People for Change Coalition were selected to partner with DoE to increase awareness about the issue of pet waste pollution and to encourage residents to pick up their pets' poop. The People for Change Coalition is working with Glendale/Lanham (the Glen Estates, Kettering, and Largo Town Homes homeowner associations) to install pet waste disposal stations and promote awareness of the problem that pet waste can cause.

DoE in partnership EFC hosted a Prince George's County Pet Waste Management Summit on April 6, 2017 in Largo. This free event kicked off DoE's efforts to address the problem of pet waste in

communities across the County and its impact on the health of residents and local waterways. The summit had 86 registrants, with 57 people attending the event. All registrants and attendees received an extensive meeting follow-up with the summit presentations, outreach campaign material, and pet waste outreach program templates.

With funding from last year's Chesapeake Bay Trust watershed stewardship grant, EFC was instrumental in launching the County's new pet waste education campaign, which was piloted in six municipalities: Bladensburg, Brentwood, Colmar Manor, Edmonston, District Heights, and Landover Hills. EFC developed community marketing and communications plans, as well as maintenance and monitoring plans tailored to each community. EFC plans to install 60 new pet waste stations by the end of 2017. They have engaged 30 unique communities in these municipalities through events geared toward identifying goals related to pet waste and stormwater management. They have also adapted the County's English outreach education material into Spanish. This project was done in partnership with DoE.

Figure D-7. Pet Waste Summit Held April 6 to Kick Off DoE's Pet Waste Campaign

In addition, EFC and DoE have begun development of a GIS based Pet waste tracking application. It is being developed using survey 123. It should be available for testing in August 2017. It will serve to measure the amount of pet waste collected via the pet waste stations. It will also help assess the success of educational efforts. It is assumed that the amount of pet waste collected should increase as individual awareness through education increases.

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.

In this reporting year, COPE/DoE in partnership with the Plumber and Gasfitters Local 5 Washington, DC held two Great Rain Barrel events in Greenbelt and Hyattsville. Homeowners and business were able to buy a rain barrel at a discounted price. The 50-gallon rain barrel which regularly sells for $129 was sold at the discounted price of $75. Gutter attachments were not included. For County residents, the barrels were no cost after applying for the rain check rebates. Non-residents could take advantage of the discounted price with its $54 savings. The barrels were made in the USA from 100-percent recycled plastic and included all needed parts. An installation demonstration and rain barrel pick-up were held at the Plumbers and Gasfitters Training Facility in Lanham. The demonstration allowed individuals to see how a rain barrel was installed and to ask questions.

"This collaboration represents the best of public-private partnerships in sustainability efforts," said DoE Director Adam Ortiz. "Rain barrels are a great way to prevent stormwater pollution and reuse water and it's just one more way you can make Prince George's a greener place to live, work and play."

In partnership with the City of Hyattsville, Plumbers and Gasfitters Local 5 and the Hyattsville Environmental Committee, the Hyattsville Great Rain Barrel Event was held from September 17, 2016 to October 29, 2016. The Hyattsville Great Rain Barrel Event was kicked off at the Hyattsville Green Expo where attendees learned about rain barrels, placed an order, and could apply for their rain check rebate. From September 17 through October 23, 2016, rain barrels could be purchased online at the discounted price of $75. A total of 163 rain barrels were sold.

In February 2017, the City of Greenbelt, DoE, and the Plumbers and Gasfitters Local 5 launched the Greenbelt Great Rain Barrel event with a rain barrel workshop. The rain barrels again could be purchased online at the discounted price of $75. This sales event, which ended March 18, 2017, resulted in 111 rain barrels being sold. DoE is currently working with the City of College Park, the College Park Committee for a Better Environment and the College Park City – University Partnership to promote the use of rain barrels. Another rain barrel workshop was scheduled for July 2017 to kick off the College Park rain barrel event.

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 environmental education programs and outreach opportunities. They have classroom programs that educate students on subjects such as watersheds, wetlands, native plants, wildlife, insects, dinosaurs and much more. M-NCPPC naturalists and park rangers also attend career days at Prince George's County schools. Each career day is an opportunity for their staff to share their environmental knowledge and passion. These are great opportunities to educate students and encourage them to become stewards of the environment.

M-NCPPC 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.

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.

Patuxent River Park is a unique site that offers a wide variety of on-site programs for adults and students. Patuxent River Park partners with many state and national agencies to conduct wetland and water quality research along the Patuxent River.

Total numbers in FY 2017 for the M-NCPPC programs were:

- Total programs: 2,600
- Total program participants: 83,000
- Total special events: 39

- Total special event participation: 26,000
- Total participants in environmental education and outreach programs: 109,000

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. Currently, there are 60 associations and community groups participating in the program, and approximately 200 events are supported annually. 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.
- The community would execute 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 2017, 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 2011-17.

Calendar Year	SWMF Projects Completed
2011	2
2012	4
2013	3
2014	0
2015	3
2016	0
2017	2
Total	**14**

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 eCycling 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. Approximately 7,461 vehicles were dropped off hazardous and electronic waste during this reporting year. A summary of the materials collected in FY 2017 are listed below:

- 301.27 tons of electronics
- 54,698 gallons of liquid household hazardous waste
- 21.54 tons of solid household hazardous waste

Conservation Landscaping

Prince George's Master Gardeners Program

The Maryland Master Gardener Program was started in 1978 as a means of extending the horticultural and pest management expertise of the University of Maryland Extension Service (UMES) to the general public. The program is designed to train volunteer horticultural educators for UMES – the principal outreach education unit of the University of Maryland (UM). Participants receive 40 to 50

hours of basic training from UM professionals in return for volunteering within their community, teaching Marylanders how to manage sustainable landscapes.

The Prince George's Master Gardener Program is a part of the Maryland Bay-Wise Program offered by UMES. This program takes a holistic approach to cleaning the Bay and promotes better water quality through smarter gardening with stormwater management, composting, watering efficiently, fertilizing wisely, mulching and composting, recycling of yard waste, integrated pest management, emphasizing native plantings, and protecting the waterfront. The County's master gardeners teach citizens and residents ways to decrease the number of toxins, nutrients, and sediments that flow into County streams and the Chesapeake Bay. Prince George's County recognizes and demonstrates the importance of this program by funding the master gardener coordinator's position at UMES. The talents and skills of the master gardener coordinator are used to instruct new recruits, coordinate and lead workshops and plant clinic classes, and coordinate and lead community education and outreach programs. This year's lectures and workshops related to stormwater management and water quality are listed below:

Training

- Instruction to 19 master gardener interns on the Bay-Wise Landscape Management Program and Stormwater Management Program in Prince George's County on March 29, 2017
- 19 master gardeners took the 2-day Advance Bay-Wise Landscape Management Course and 1-day practicum and were certified in June 2017.

Community Events

- Bay-Wise handouts and discussions with residents took place at the following community events:
    - Green Man Festival in Greenbelt on May 13 and 14, 2017
    - Bowie Green Expo on April 8, 2017
    - Mount Ennon Green Fest on May 6, 2017
    - Bay-Wise Presentation at Community Forklift Garden Party on April 1, 2017
    - Montpelier Herb, Tea and Arts Festival on April 29, 2017

Yard Certifications

- Prince George's master gardener volunteers certified four residential yards as Bay-wise. The residents whose yards were certified as Bay-wise received a certificate and yard sign.

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. 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 to provide designs and recommendations unique to each neighborhood.

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. During this reporting period, approximately 1,900 high risk or dying trees were removed, and 4,700 trees were planted. Figure D-8 illustrates the communities where projects were conducted in FY 2017. Table D-37 lists the number of trees planted since program inception.

Table D-37. Right Tree, Right Place Program Accomplishments (2011-2017)

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
Total	**28,599**

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

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 90 groups throughout the County through DPWT's Clean Up, Green Up Program. The FY 2017 Clean Up, Green Up event was held on October 29, 2016. The achievement realized through this partnership is detailed in Table D-38.

Table D-38. Clean Up, Green Up Program Achievements in FY 2017

Achievement	Amount
Sites	227
Volunteers	4,573
Trees Installed	1,514
Shrubs Installed	1,050
Perennials and Ornamental Grasses Planted	3,750
Spring Flowering Bulbs Planted	21,300
Landscape Designs by NDC	84
Litter and Debris Collected	16.5 tons

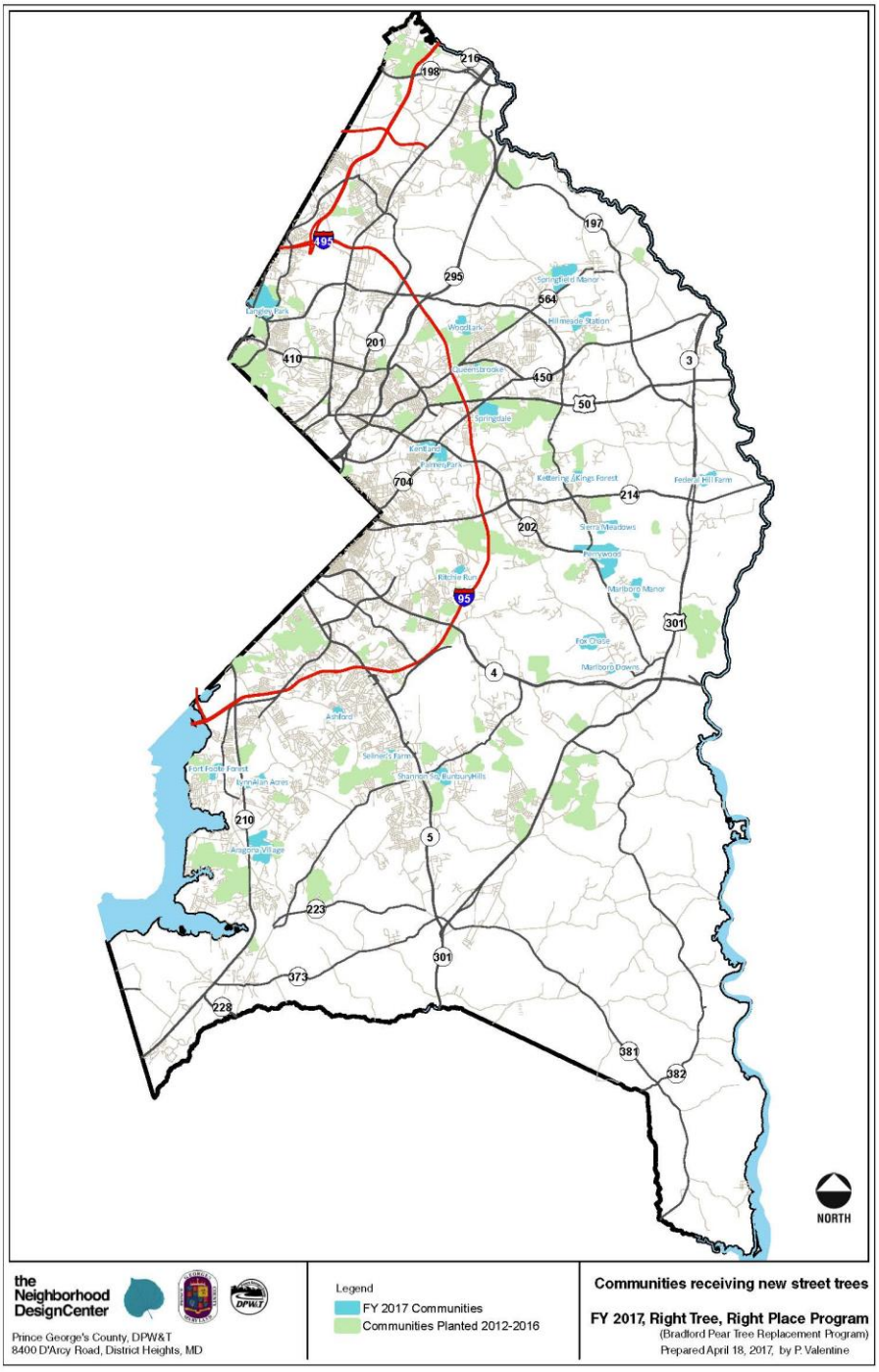


Figure D-8. Right Tree, Right Place Program Project Areas

Arbor Day

DoE in partnership with the Beautification/Tree Planting Committee holds an annual Arbor Day celebration. In FY 2017, Arbor Day was celebrated on April 28, 2017, at the Glen Dale fire station. For the celebration, students from Duval High School planted 50 trees and shrubs were planted to help with stormwater runoff. The partnership details are presented in Figure D-9.

Figure D-9. Arbor Day Poster

Prince George's Beautification/Tree Planting Committee

This year marked the 47th anniversary of the Prince George's County Beautification/Tree Planting Committee, an all-volunteer organization dedicated to honoring the landscaping efforts of those in the community who make a difference. It also marks the 33rd consecutive year of receiving the Tree City USA designation. The annual beautification awards ceremony held each fall recognizes excellence in gardening and landscape design. Entries are judged using the National Garden Clubs, Inc. standards for evaluating landscape design. These standards include rating on first impression, the suitability of the design to the purpose, the design, the implementation, sustained maintenance, and the final impression. This year, the committee recognized 88 individuals and organizations during an event held at the Newton White mansion.

Tree ReLeaf Grant Program

The Tree ReLeaf Grant Program is a countywide program that provides up to $5,000 to civic, neighborhood, community, and homeowner organizations, as well as 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. In FY 2017, a total of 6 projects were completed between October 2016 and May 2017, resulting in 139 native trees being planted at a cost of $10,169. The six projects were accomplished at four sites as detailed in Table D-39. Based on

the National Tree Benefit Calculator, the trees for these projects will intercept 5,977 gallons of stormwater runoff per year.

In addition, DoE provided supplies (mulch, stakes and gator bags) to the Field of Greens community garden in Riverdale. The grant for this project did not directly fund tree planting but provided funds to buy 30 watering bags and mulch to ensure the survival of previously planted trees.

Table D-39. Tree ReLeaf Program Achievements in FY 2017

Applicant	Number of Trees
City of Hyattsville	54
Town of Edmonston	27
Pleasant Prospect at Woodmore HOA	36
Lake Largo Town Home HOA	22
Total	**139**

Arbor Day Every Day Program

The Arbor Day Every Day Program seeks to increase the number of 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 plan, and provides training on planting and care. The schools are responsible for year-round care for 2 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, then schedule a consultation with DoE staff, and lastly submit a program application. DoE then works with the schools to develop the planting plan and post-planting maintenance plan. Under this program, a total of 92 native trees and shrubs were planted at five County schools in FY 2017, as detailed in Table D-40.

Table D-40. Arbor Day Every Day Program Achievements in FY 2017.

School	Number of Trees
Gwynn Park High	20
Port Towns Elementary	10
Benjamin Foulois Academy	18
New Hope Academy	32
Charles Flower High	12
Total	**92**

Tree Planting Demonstration Program

In FY 2016, DoE initiated a tree planting demonstration program to increase tree canopy and survival by showing residents and business the proper way to care and plant trees. The demonstration can be done in combination with the Arbor Day Every Day Program, the Tree ReLeaf Grant Program, or independently. Through a hands-on demonstration, a presenter from DoE or COPE shows the group how to properly plant one to three trees, as well as discusses the benefits of native trees and the long-term care to ensure survival of the trees. Information on the tree planting programs (Arbor Day Every Day, Tree ReLeaf Grant, and Rain Check Rebate) is available to assist the groups in planting trees. One

tree demonstration independent of the Tree ReLeaf Grant and Arbor Day Every Day programs was done during the FY 2017 planting season.

Stormwater Stewardship Grants for Trees

In FY 2017, DoE utilized several stormwater stewardship grants to fund tree plantings on private property. These projects supported DoE's effort to increase urban tree canopy with an emphasis on underserved areas as well as to assist in improving water and air quality. Prince George's Green (PG Green, a nonprofit group) in partnership with Ecoasis Garden Center (a local nursery) and Central Kenilworth Avenue Revitalization Community Development Corporation (CKAR) received $50,000 for this effort. With these funds, CKAR planted 123 trees on residential property, and PG Green and Ecoasis planted 100 trees.

In addition, DoE in partnership with CKAR, PG Green and Ecoasis held a tree festival in June 2017 at the Palmer Park Community Center to promote the value of trees.

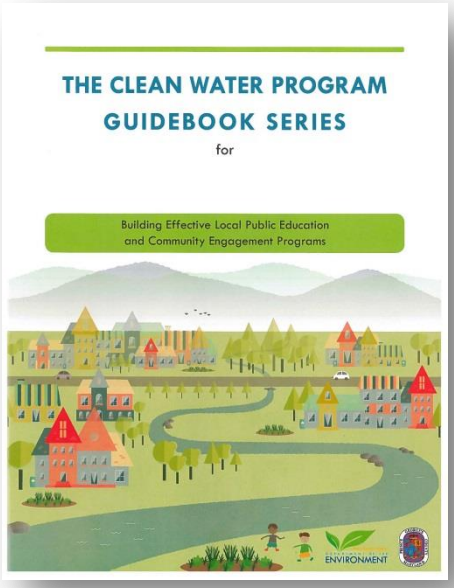
In addition, the Interstate Commission on the Potomac River planted 11 trees and 7 shrubs on school property through their stormwater stewardship grant.

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-10. 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



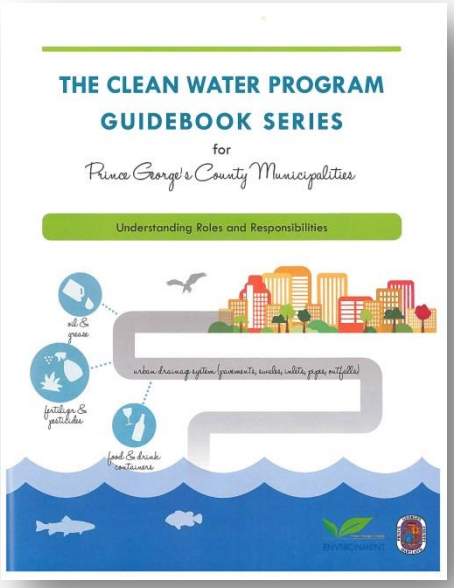


Figure D-10. The Clean Water Program Guidebook Series

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 in chapter IV.D.4. on page 51.

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. A list of the community participation projects and an estimate of the tonnage of trash collected on FY 2017 is provided in Table D-41.

Table D-41. FY 2017 Volunteer Neighborhood Cleanup Summary

Project Date	Volunteer Group	Tons of Trash
July 2016	Carter Construction Services	10.17
July 2016	Delta LLC	15.69
July 2016	University of Maryland, College Park	6.31
July 2016	BHM Contractors, Inc.	8.59
November 2016	Great Landover Hills Development	0.5

Project Date	Volunteer Group	Tons of Trash
April 2017	Alice Ferguson Potomac Watershed Cleanup	4.92
April 2017	Anacostia Watershed Society Earth Day Cln Up	12.52
April 2017	Town of Forest heights	0.5
June 2017	BHM Contractors, Inc.	0.61
Total		**59.81**

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 47.

Recycling

DoE's Resource Recovery Division (RRD) administers the County services and programs that reduce solid waste, including recycling, composting, and hazardous materials recovery and disposal. In FY 2017, the County continued to host numerous countywide recycling events, as listed in Table D-42 , to shred documents and dispense free mulch recycled from Christmas trees. These events offered County residents 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-42. FY 2017 Countywide Waste Reduction Participation Events

Name of Event (Participant)	Date of Event	Number of Participants
Materials Recycling Facility (MRF) Tour	July 11, 2016	35
MRF Tour	July 12, 2016	40
MRF Tour	July 13, 2016	25
Tour of Western Branch	July 13, 2016	20
Tour of Western Branch	July 14, 2016	4
MRF Tour	July 14, 2016	51
MRF Tour	July 15, 2016	23
MRF Tour	July 19, 2016	25
Tour of Western Branch	July 21, 2016	13
Tour of Western Branch	July 27, 2016	1
MRF Tour	August 1, 2016	3
Tour of Western Branch	August 5, 2016	18
Tour of Western Branch	August 8, 2016	14
Tour of Western Branch	August 10, 2016	6
MRF Tour	August 18, 2016	22
Tour of Western Branch	August 30, 2016	13
MRF Tour	September 9, 2016	14
Tour of Western Branch	September 23, 2016	13

Name of Event (Participant)	Date of Event	Number of Participants
Tour of Western Branch	September 30, 2016	2
Tour of Western Branch	October 4, 2016	1
MRF Tour	October 12, 2016	2
MRF Tour	October 21, 2016	8
Green Team Meeting	October 25, 2016	30
MRF Tour	October 27, 2016	2
Clean Up Green Up	October 30, 2016	300
MRF Tour	November 2, 2016	10
E-Cycling Event	November 5, 2016	150
MRF Tour	November 17, 2016	21
Tour of Western Branch	November 17, 2016	16
Tour of Western Branch	November 18, 2016	80
Tour of Western Branch	November 18, 2016	25
MRF Tour	November 18, 2016	70
Tour of Western Branch	November 18, 2016	6
MRF Tour	November 28, 2016	20
Tour of Western Branch	December 1, 2016	5
MRF Tour	December 1, 2016	6
Tour of Western Branch	December 1, 2016	24
Tour of Western Branch	December 2, 2016	30
MRF Tour	December 2, 2016	14
E-Cycling Event	December 3, 2016	201
MRF Tour	December 5, 2016	2
Tour of Western Branch	December 6, 2016	2
Tour of Western Branch	December 14, 2016	40
Tour of Western Branch	December 16, 2016	1
Tour of Western Branch	December 20, 2016	2
MRF Tour	December 22, 2016	2
MRF Tour	January 13, 2017	37
MRF Tour	January 23, 2017	2
MRF Tour	January 24, 2017	15
MRF Tour	January 27, 2017	60
MRF Tour	February 1, 2017	134

Name of Event (Participant)	Date of Event	Number of Participants
Tour of Western Branch	February 2, 2017	1
MRF Tour	February 3, 2017	11
MRF Tour	February 8, 2017	14
MRF Tour	February 9, 2017	27
MRF Tour	February 15, 2017	23
MRF Tour	February 17, 2017	16
Tour of Western Branch	February 20, 2017	1
MRF Tour	February 28, 2017	19
MRF Tour	March 2, 2017	22
Tour of Western Branch	March 2, 2017	2
MRF Tour	March 3, 2017	15
Tour of Western Branch	March 3, 2017	2
Green Team Meeting	March 8, 2017	60
MRF Tour	March 9, 2017	94
Tour of Western Branch	March 9, 2017	90
MRF Tour	March 10, 2017	16
Tour of Western Branch	March 10, 2017	8
MRF Tour	March 16, 2017	6
Tour of Western Branch	March 16, 2017	1
MRF Tour	March 17, 2017	17
Tour of Western Branch	March 17, 2017	5
MRF Tour	March 20, 2017	25
MRF Tour	March 22, 2017	26
MRF Tour	March 23, 2017	27
MRF Tour	March 31, 2017	23
Tour of Western Branch	April 5, 2017	4
Tour of Western Branch	April 7, 2017	38
MRF Tour	April 10, 2017	16
Tour of Western Branch	April 12, 2017	10
Tour of Western Branch	April 12, 2017	8
MRF Tour	April 13, 2017	3
Tour of Western Branch	April 14, 2017	35

Name of Event (Participant)	Date of Event	Number of Participants
MRF Tour	April 14, 2017	35
Tour of Western Branch	April 18, 2017	1
Tour of Western Branch	April 18, 2017	6
MRF Tour	April 19, 2017	50
Mulch Giveaway	April 22, 2017	536
MRF Tour	April 24, 2017	20
Mulch Giveaway	April 25, 2017	538
MRF Tour	April 26, 2017	40
MRF Tour	April 27, 2017	84
MRF Tour	April 28, 2017	37
MRF Tour	May 2, 2017	88
MRF Tour	May 3, 2017	8
MRF Tour	May 4, 2017	34
MRF Tour	May 9, 2017	7
MRF Tour	May 10, 2017	74
MRF Tour	May 11, 2017	103
MRF Tour	May 16, 2017	44
MRF Tour	May 16, 2017	50
Tour of Western Branch	May 17, 2017	39
MRF Tour	May 18, 2017	56
MRF Tour	May 23, 2017	57
Tour of Western Branch	May 24, 2017	4
Tour of Western Branch	May 30, 2017	10
MRF Tour	May 31, 2017	30
MRF Tour	June 16, 2017	4

Single-Stream Recycling

The County's single-stream recycling program is promoted through direct mail, press releases, newspaper advertisements, displays, and speaking engagements. The County's MRF processes glass bottles and jars, plastic containers, aluminum, steel and bi-metal cans, paper, aseptic containers, and newspapers from 173,493 residences served by the residential, curbside single-stream recycling program, as well as merchants (commercial sector). Currently, the County's MRF is operating with the latest state-of-the-art equipment to accommodate single-stream recycling, processing over 71,000 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 2,100 individuals annually.

County Office Recycling Program (CORP)

On October 1, 2011, the County Office Recycling Program 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 to increase the amount of recycling collected from County offices. The office recycling program, which has been in existence since 1990, now serves 89 County offices, with all locations being serviced on a regular pickup schedule. All forms of paper and commingled materials are collected from these facilities by a County contractor. On average 19.25 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, DoE's Recycling Section staff regularly distribute 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 must utilize paper yard waste bags, which can be composted or re-used. Furthermore, plastic bags, other than transparent clear liners, are banned from the recycling program as this material is not captured through or by the Materials Recycling Facilities processing equipment. A public outreach campaign was conducted to inform the public to return plastic bags to participating stores for recycling and to utilize reusable bags to avoid plastic disposal bags altogether.

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.

The Recycling Section 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. Additionally, DoE is currently in the process of hiring three inspectors to enforce CB-87-2012 recycling mandates.

Composting

Food Scraps

During this reporting period, the County has transitioned from the pilot phase to the project phase of food scrap composting utilizing the GORE® Cover System technology, diverting more than 5,492.3 tons of food scraps from the landfill into 100 percent organic compost.

Yard Waste

The Prince George's County Organics Composting Facility (also known as Western Branch) is operated by the Maryland Environmental Service (MES), and accepts yard waste from approximately 173,493 households in the County. The yard waste composting program, including the Christmas tree recycling, diverts a significant tonnage of materials from the County's solid waste stream, as shown in Figure D-11. Leafgro®, a product of the composting process, 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 being sold as Leafgro Gold.

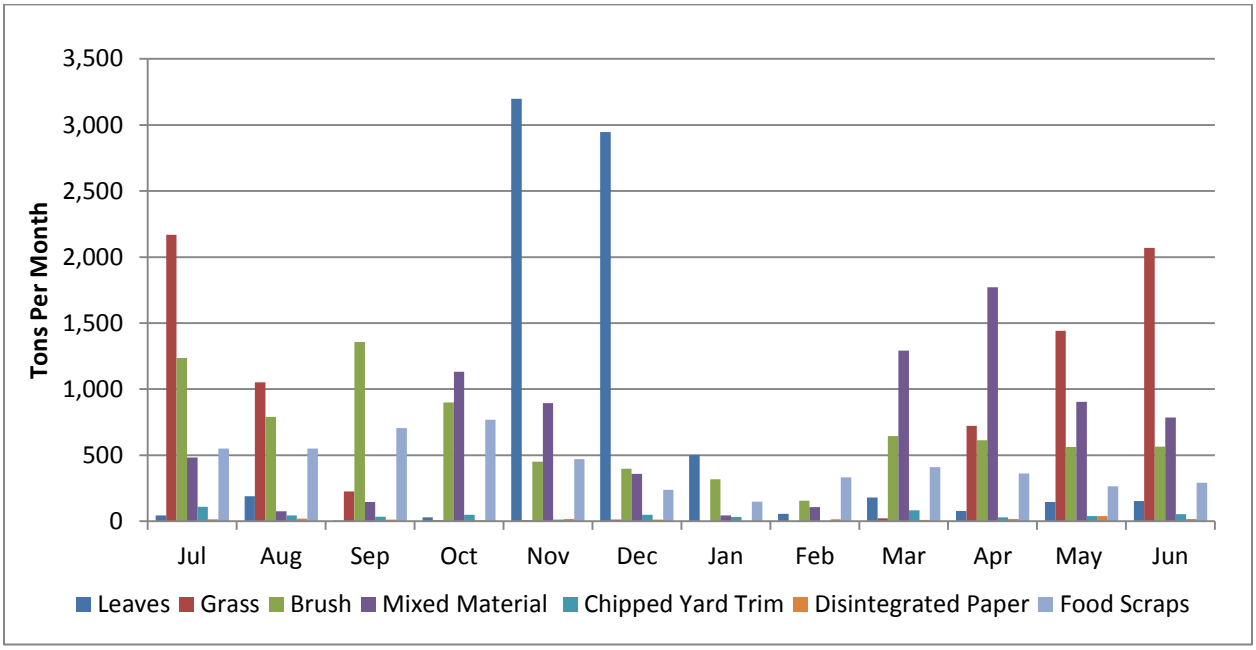


Figure D-11. Yard Waste Composting – FY 2017

Car Care, Mass Transit, and Alternative Transportation

Each year, vehicles release hundreds of tons of harmful emissions into the air that people breathe. Since 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, which promote the reduction of these harmful emissions. These services are in the following sections.

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

Bike to Work Day was held on Friday, May 19, 2017. This year over 18,000 people in the Washington, D.C. region participated in this annual event, marking a 7-percent increase over 2016. In Prince George' County, 679 rode their bicycles to work and visited 1 of 10 bicycle pit stops located throughout the County, including Bowie Town Center, Bowie Fire Station, Capitol Heights, College Park, Greenbelt, Hyattsville, Oxon Hill, National Harbor, Port Towns/Edmonston, Suitland/Census Bureau, and the University of Maryland. Bicycle pit stops are partnerships between local government, businesses, and community groups who collaborate to host a site that features healthy and environmental activities including sampling locally grown foods, repurposing recycled materials, bicycle safety and check-ups, and environmental education.

Bike Share

The County will launch Capital Bikeshare next spring 2018. Guided by a bike-share feasibility study completed in 2016, the County will install 67 bike-share stations over several years, focusing on locations near employment centers, commercial areas, and transit facilities. Phase 1 includes 29 stations in the Anacostia Trails Heritage Area and National Harbor. Specifically, Phase 1 will locate bike-share stations in Mount Rainier, Hyattsville, Riverdale Park, Brentwood, North Brentwood, Cottage City, Colmar Manor, Bladensburg, and unincorporated areas of Prince George's County. Phase 1 will provide bike-share connectivity from Prince George's County to Capital Bikeshare systems already established in Montgomery County, the District of Columbia, and Alexandria. The bike-share program will utilize the Anacostia Tributary Trails network and the Woodrow Wilson Bridge bicycle infrastructure.

Bicycle and Pedestrian Program

The County's bicycle and pedestrian program utilizes the four E's of safety to improve and increase walking and biking in the County. The four E's are: engineering, education, enforcement, and emergency services. 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 utilizing street teams, who target education 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 seat belt enforcement. Fire and emergency medical service personnel not only respond to vehicle crashes, but they also promote traffic safety through car seat/booster checks and walk-to-school safety events.

Literature on biking to work in the Washington metropolitan area is produced by Commuter Connections and the Washington Area Bicyclist Association. This guide, written for employers and employees, promotes cycling as a healthy, clean, quiet, economical, and fun way to get to work. The County annually participates in the regional Bike to Work Day activities. In spring 2017, the County offered free rides on TheBus, a local transportation service, for County residents who chose to bike on Bike to Work Day.

Vanpool Subsidy Program

Since the start-up period for a new vanpool is the most difficult time, any qualifying individual who starts a new vanpool is eligible to receive a generous start-up subsidy from the County. This program assists residents seeking to start a new vanpool with start-up costs and assistance with finding passengers. This 3-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 vanpools 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:

- Bowie Fringe Parking: MD Route 197 and Northview Drive
- South Laurel: MD Route 197 and Briarcroft Lane
- Montpelier: MD Route 197 and Brock Bridge Road
- Clinton Fringe Parking: MD Route 5 and Woodyard Road
- Equestrian Center: MD Route 4 in Upper Marlboro
- Fort Washington: MD Route 210 and East Swann Creek Road
- Oxon Hill Fringe Parking: MD Route 210 and Oxon Hill Road
- Beltway (I-494/I-95): I-95 and the Capital Beltway
- Laurel Fringe Parking: Sandy Spring Road and Van Dusen Road
- Accokeek Fringe Parking: MD Route 373 and MD Route 210
- Bowie Market Place: MD Route 450 and Stoneybrook Drive
- 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 the County's local public transit system. Schedule information is available through the Internet at http://www.princegeorgescountymd.gov/1120/TheBus, Google Maps, or through www.NextBus.com. Area-specific transit guides offer comprehensive information on public transportation, including transit options. Patrons are now able to see all of TheBus transit stops on

Google® Maps and Next Bus.com. Ridership for the 28 fixed routes of transit service provided by TheBus for FY 2017 was approximately 2.9 million passengers.

The County also provides a demand response, curb-to-curb service, called Call-A-Bus. Call-A-Bus is a complimentary ADA-compliant (American with Disabilities Act)/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.

DPW&T's Taxicab Licensing Section 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 purchased reduced-price taxicab coupons.

This page is intentionally left blank.

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 will continue to evaluate its watersheds and will include the following,

- Current water quality conditions;
- Results of a visual watershed inspection;
- Identify and rank water quality problems;
- All structural and nonstructural water quality improvement projects prioritization; and
- Pollutant load reduction benchmarks and deadlines that demonstrate progress toward meeting all applicable stormwater WLAs.

The County intends to use the recently developed local TMDL plans as the source of data for this assessment. For watersheds that have no TMDL, the County will perform a cursory watershed evaluation using watershed characterization and biological monitoring. To fulfill this requirement, the County plans to submit this analysis by the end of the permit term in January 2, 2019. The County looks forward to coordinating this plan with MDE before finalizing.

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.

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 the permit term. In this effort, the County has already restored 936.52 acres from the beginning of the permit until June 30, 2017. Approximately 3,906.62 impervious acres of restoration is either in active planning (concept plan)/design or construction and anticipated to be completed by the end of the permit term.

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 2017 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 retrofit projects in the various stages that cover over 3,600 acres of impervious area (see Table E-19). 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
BMP Reduction - FY 2014[3]	46	6	3,128	262	945
BMP Reduction - FY 2015	112	96	63,841	51	181
BMP Reduction - FY 2016	294	53	20,034	803	3,097
BMP Reduction - FY 2017	5,263	1,185	1,757,628	5,237	13,252.25
Total BMP Reduction	6,212	1,691	2,074,734	18,776	23,768
Percent Reduction of Target	3%	6%	5%	3%	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*
[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
BMP Reduction - 2014[3]	0	0
BMP Reduction - 2015	0.3	0
BMP Reduction - 2016	0	0
BMP Reduction - FY 2017	0	0
Total BMP Reduction	0.3	0
Percent Reduction of Target	0.00%	0.00%

[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
BMP Reduction - 2014[3]	0	0
BMP Reduction - 2015	6,081	0
BMP Reduction - 2016	0	0
BMP Reduction - FY 2017	150,119	203
Total BMP Reduction	333,069	845
Percent Reduction of Target	87%	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*
[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
BMP Reduction - 2014[3]	0
BMP Reduction - 2015	0
BMP Reduction - 2016	517
BMP Reduction - 2017	2,608
Total BMP Reduction	3,125
Percent Reduction of Target	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] *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

Pollutant	Total Phosphorus (lbs./year) [4]
BMP Reduction - Up to 2013[2]	0
BMP Reduction - 2014[3]	0
BMP Reduction - 2015	0
BMP Reduction - 2016	0
BMP Reduction - FY 2017	22
Total BMP Reduction	22
Percent Reduction of Target	81%

[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:
a. 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-6 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)	*294.08*	*53.43*	*10.02*	*802.52*	*3,096.56*	*Achieved*
2017 (Actual)	*5,263.00*	*1,185*	*878.8*	*5,237*	*13,252.25*	*Achieved*
2018	10,897.10	2,223.90	1,299.80	60,943.40	215,498.00	Projected
2019	11,282.90	2,302.70	1,345.80	63,101.00	223,127.20	Projected
2020	11,282.90	2,302.70	1,345.80	63,101.00	223,127.20	Projected
2021	11,282.90	2,302.70	1,345.80	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	10,718.70	2,187.50	1,278.50	59,946.00	211,970.80	Projected
2029	9,026.30	1,842.10	1,076.70	50,480.80	178,501.70	Projected

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
2030	4,377.80	893.4	522.2	24,483.20	86,573.30	Projected
2031	8,308.92	1,702.27	1,016.18	47,310.68	167,033.44	Projected
2032	4,487	805	285	49,291.00	179,561.00	Projected
Total	**154,919**	**31,617**	**18,479**	**866,404**	**3,063,632**	**Projected**

[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*	*Achieved*
2017 (Actual)	*0*	*0*	*Achieved*
2018	431	79	Projected
2019	446	82	Projected
2020	446	82	Projected
2021	446	82	Projected
2022	446	82	Projected
2023	446	82	Projected
2024	446	82	Projected
2025	446	82	Projected
2026	446	82	Projected
2027	446	82	Projected
2028	424	78	Projected
2029	357	66	Projected
2030	173	32	Projected
2031	340	63	Projected
2032	385	70	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]	Total Suspended Solids (ton/year)	Fecal Coliform Bacteria (MPN B/year) [2]	Status
2016 (Actual)	*0*	*0*	*0*	*Achieved*
2017 (Actual)	*22*	*75*	*203*	*Achieved*
2018	0	8.1	1,469	Projected
2019	0	8.4	1,521	Projected
2020	0	8.4	1,521	Projected
2021	0	8.4	1,521	Projected
2022	0	6.2	1,521	Projected
2023	0	0	1,521	Projected
2024	0	0	1,521	Projected
2025	0	0	1,521	Projected
2026	0	0	1,521	Projected
2027	0	0	1,521	Projected
2028	0	0	1,445	Projected
2029	0	0	1,217	Projected
2030	0	0	590	Projected
2031	0	0	1,159	Projected
2032	0	0	1,107	Projected
Total	**022**	**115**	**20,879**	**Projected**

[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)	*517*	*Achieved*
2017 (Actual)	*2,608*	*Achieved*
2018	18,819	Projected
2019	18,819	Projected
2020	18,819	Projected
2021	18,819	Projected
2022	18,819	Projected
2023	18,819	Projected
2024	18,819	Projected
2025	18,819	Projected

Fiscal Year	Fecal Coliform Bacteria (MPN B/year) [1]	Status
2026	18,819	Projected
2027	17,878	Projected
2028	15,055	Projected
2029	7,302	Projected
2030	14,349	Projected
2031	15,745	Projected
2032	15,569	Projected
Total	**258,394**	**Projected**

[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 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
BMP Reduction - FY 2014[3]	46	6	3,128
BMP Reduction - FY 2015	112	96	63,841
BMP Reduction - FY 2016	294	53	20,034
BMP Reduction - FY 2017	5,263	1,185	1,757,628
Total BMP Reduction	6,212	1,691	2,074,734
Percent Reduction of Target	12%	19%	118%

[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 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

Pollutant	Total Nitrogen (lbs./year) [4]	Total Phosphorus (lbs./year) [4]	Total Suspended Solids (lbs./year) [4]
BMP Reduction - 2014[3]	0	0	0
BMP Reduction - 2015	0.3	0	25
BMP Reduction - 2016	0	0	0
BMP Reduction - FY 2017	0	0	0
Total BMP Reduction	0.3	0	25
Percent Reduction of Target	0.03%	0.01%	0.02%

[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 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
BMP Reduction - 2014[3]	0	0	0
BMP Reduction - 2015	0	0	0
BMP Reduction - 2016	0	0	0
BMP Reduction - FY 2017	15	17	13
Total BMP Reduction	15	17	13
Percent Reduction of Target	3%	19%	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 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
BMP Reduction - 2014[3]	0	0	0
BMP Reduction - 2015	0	0	0
BMP Reduction - 2016	0	0	0

Pollutant	Total Nitrogen (lbs./year) [4]	Total Phosphorus (lbs./year) [4]	Total Suspended Solids (lbs./year) [4]
BMP Reduction - FY 2017	8	9	7
Total BMP Reduction	8	9	7
Percent Reduction of Target	0%	3%	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 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]	0	0	0
BMP Reduction - 2015	10	9	6,081
BMP Reduction - 2016	0	0	0
BMP Reduction - FY 2017	77	45	150,119
Total BMP Reduction	420	323	333,069
Percent Reduction of Target	2%	9%	34%

[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-15. Piscataway Creek Watershed 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
BMP Reduction - 2014[3]	0	0	0
BMP Reduction - 2015	15	14	9,215
BMP Reduction - 2016	28	3	1,621
BMP Reduction - FY 2017	782	362	1,094,100
Total BMP Reduction	1,024	559	1,223,998
Percent Reduction of Target	6%	17%	191%

[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]) TMDL Progress

Pollutant	Total Nitrogen (lbs./year) [6]	Total Phosphorus (lbs./year) [6]	Total Suspended Solids (lbs./year) [6]
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
BMP Reduction - 2014[3]	8	1	503
BMP Reduction - 2015	21	16	10,344
BMP Reduction - 2016	168	93	49,826
BMP Reduction - FY 2017 [5]	455	177	324,180
Total BMP Reduction	655	289	386,763
Percent Reduction of Target	2%	6%	30%

[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] *lbs. = pounds*

Table E-17. Western Branch Watershed 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]	34,656	5,978	1,362,322
BMP Reduction – Up to 2013[2]	57	42	27,715
BMP Reduction - 2014[3]	0	0	0
BMP Reduction - 2015	101	90	59,414
BMP Reduction - 2016	56	20	6,179
BMP Reduction - FY 2017	826	168	138,539
Total BMP Reduction	1,040	320	231,847
Percent Reduction of Target	3%	5%	17%

[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:

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

A summary of the completed projects, programs, and initiatives to meet the established pollutant reduction goals is provided in Table E-18. 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 2017, the County has restored 936.52 acres under the NPDES MS4 permit. This restoration progress was accomplished through 255 projects costing over $32 million.

In addition to programmatic restoration activities being implemented through the Capital Improvements Program (CIP) and the Clean Water Partnership (CWP), the County has been able to track creditable restoration through redevelopment, connection of septic systems to wastewater treatment, septic denitrification, and inlet cleaning.

Table E-18. Summary of Completed Projects through FY 2017

Watershed Code	Watershed Name	Number of Projects	Impervious Acres Restored[1]	Implementation Cost ($1000)[3]
Restoration BMPs through CIP and CWP Projects, and Redevelopment (see Geodatabase Record: RestBMP)				
2131103	Western Branch	7	99.58	$3,964
2131104	Patuxent River Upper	1	1.94	$388
2140111	Mattawoman Creek	1	0.02	$0
2140201	Potomac River Upper Tidal	6	8.62	$1,256
2140203	Piscataway Creek	7	17.52	$1,853
2140204	Oxon Creek	1	0.98	$247
2140205	Anacostia River	15	425.76	$15,121
Septic System Upgrade or Removal (see Geodatabase Record: AltBMPPoint)				
2131101	Patuxent River Lower	3	1.30	$70
2131102	Patuxent River Middle	5	4.29	$224
2131103	Western Branch	24	14.43	$630
2131104	Patuxent River Upper	13	5.59	$252
2140111	Mattawoman Creek	1	0.39	$14
2140201	Potomac River Upper Tidal	20	7.54	$280
2140203	Piscataway Creek	20	8.06	$336
2140204	Oxon Creek	5	1.95	$70
2140205	Anacostia River	51	19.89	$714
Tree Planting (see Geodatabase Record: AltBMPPoly)				
2131101	Patuxent River Lower	1	8.74	$895
2131102	Patuxent River Middle	1	4.56	$467
2131103	Western Branch	4	10.24	$1,049

Watershed Code	Watershed Name	Number of Projects	Impervious Acres Restored[1]	Implementation Cost ($1000)[3]
2131104	Patuxent River Upper	1	0.38	$39
2131107	Rocky Gorge Dam	1	1.66	$170
2140201	Potomac River Upper Tidal	2	5.31	$517
2140203	Piscataway Creek	1	5.93	$607
2140204	Oxon Creek	1	4.44	$455
2140205	Anacostia River	1	16.08	$1,646
Inlet Cleaning and Impervious Removal (see Geodatabase Record: AltBMPPoly)				
2131102	Patuxent River Middle	2	0.13	
2131103	Western Branch	4	4.53	
2131104	Patuxent River Upper	2	0.05	
2131107	Rocky Gorge Dam	1	3.78	
2140201	Potomac River Upper Tidal	2	5	
2140203	Piscataway Creek	1	0.17	
2140204	Oxon Creek	2	1.81	
2140205	Anacostia River	7	74.23	
Stream Restoration[2] and Outfall Stabilization Projects (see Geodatabase Record: AltBMPLine)				
2131103	Western Branch	2	16.21	
2131104	Patuxent River Upper	3	21.38	
2140201	Potomac River Upper Tidal	6	18.52	
2140203	Piscataway Creek	11	51.25	
2140204	Oxon Creek	2	5.27	
2140205	Anacostia River	17	58.99	$925*
Total		**255**	**936.52**	**> $32,189**

[1] *Impervious acres restoration through all programs (inlet cleaning, tree planting, septic, micro scale, and structural BMP).*
[2] *Stream Restoration Projects include WSSC consent decree for sewer line repair in the stream valley.*
[3] *Stream Restoration cost estimates are not provided for WSSC projects.*
** Cost for two CIP projects only.*

Permit Condition Part IV. E. 4:
a. 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 Table E-20. 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.

In addition to the planned restoration projects, the County's stormwater management ordinance (approved by the State) for redevelopment has raised the amount of existing impervious area to be treated from 50 percent to 75 percent. Although, as of this report, the tangible effects of the ordinance has not been quantifiable, the County expects that it will play a significant role in restoring older urbanized areas that currently have no stormwater management.

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.

Table E-19. Summary of the Project under Planning, Design, or Construction During FY 2017

Watershed Code	Watershed Name	Number of Projects	Impervious Acres Under Restoration[1]	Implementation Cost[3] ($1000)
Restoration BMPs through CIP and CWP Projects, and Redevelopment (see Geodatabase Table: RestBMP)				
2131101	Patuxent River Lower	1	0.22	0
2131102	Patuxent River Middle	1	0.40	0
2131103	Western Branch	49	1,573.90	$3,964
2131104	Patuxent River Upper	13	279.01	$388
2140111	Mattawoman Creek	4	82.19	0
2140201	Potomac River Upper Tidal	20	454.58	$1,256
2140203	Piscataway Creek	18	365.50	$1,853
2140204	Oxon Creek	1	18.66	$247
2140205	Anacostia River	85	800.06	$15,121
Tree Planting and Impervious Surface Removal (see Geodatabase Record: AltBMPPoly)				
2131102	Patuxent River Middle	1	0.79	$81
2131103	Western Branch	3	8.77	$873
2131104	Patuxent River Upper	1	1.66	$170
2140201	Potomac River Upper Tidal	1	5.42	$555
2140203	Piscataway Creek	2	4.37	$413
2140204	Oxon Creek	1	0.33	$34
2140205	Anacostia River	1	9.49	$971
Stream Restoration[2] or Outfall Stabilization Projects (see Geodatabase Record: AltBMPLine)				
2131101	Patuxent River Lower	1	27.99	
2131102	Patuxent River Middle	1	21.28	
2131103	Western Branch	5	35.86	
2131104	Patuxent River Upper	7	39.55	$1500*
2140201	Potomac River Upper Tidal	5	68.21	$500*
2140203	Piscataway Creek	4	25.93	
2140204	Oxon Creek	7	31.54	
2140205	Anacostia River	5	50.91	$750*

Watershed Code	Watershed Name	Number of Projects	Impervious Acres Under Restoration[1]	Implementation Cost[3] ($1000)
Total		**237**	**3,906.61**	

[1] *Impervious acres restoration through all programs (inlet cleaning, tree planting, septic, micro scale, and structural BMP).*
[2] *Stream Restoration Projects include WSSC consent decree for sewer line repair in the stream valley.*
[3] *Stream Restoration cost estimates are not provided for WSSC projects.*
** Estimated Cost for one CIP project only.*

To date since permit inception, 936.52 acres of impervious area has been restored and another 3,906.62 acres are in active planning, design, or construction in FY 2017, for a total of 4,843 acres. To meet the MDE-approved baseline 20-percent restoration goal (6,105 acres), 1,262 acres remain to be planned and executed for FY 2018 and beyond. For the remaining 1,262 acreage, the County will be selecting the water quality practices identified in the *Anacostia Restoration Plan* (ARP) for implementation through the Capital Improvements Program. While some of the projects in the ARP list have already being implemented, the site locations for the remaining projects are being investigated for suitability of installation. Table E-20 is a summary of projects from the ARP report, and their potential contributions to the restoration program and their associated costs. Only 1,262 acres from the ARP candidate projects are expected to be selected for restoration within the permit term. Some of the criteria for selection include implementation cost, location, and potential for quick turnaround. A detailed list of planned projects from ARP and their expected implementation cost were provided in County's 2016 financial assurance plan submittal. The County will update this list of projects and include with the 2018 financial assurance plan submittal.

Table E-20. Projected Restoration by Watershed for Meeting the 20-Percent Restoration Goal

Watershed Code	Watershed Name	Number of Projects	Potential Impervious Acres	Cost ($1,000)
2140205	Anacostia River	1,305	8,274	$929,380
Total		**1,305**	**8,274**	**$929,380**

In addition to the projects listed above, over 3 acres of impervious area restoration is expected through Prince George's County Stormwater Stewardship Grant Program. Details of this program are provided in the next section on page 133.

Permit Condition Part IV. E. 4:
a. 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 and Outfall Restoration Programs,
- 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

Described below are current CWP activities and programs that can be accelerated or have an increase in capacity to meet permit obligations if the funding for implementation is inadequate.

Mentor-Protégé Program

In FY 2017, the CWP Program continued its Mentor-Protégé Program as part of its economic development requirements. The program is designed to support the growth of local, small companies with the capacity to perform high quality work. Each of the companies received customized business development support designed in accordance with their current levels of expertise to better prepare them to bid on work for CWP and other stormwater projects in Prince George's County and neighboring localities. The contract requirement is to mentor two businesses each year. Seven businesses will complete the first year of the CWP Mentor-Protégé Program by August 2017. These businesses include: Estimé Enterprises, Inc.; Faulkner Lawn Care and Landscaping; Grace Management & Construction, LLC; Green Forever; Kirila Earthworks; M & G Services, Inc.; and Phoenix Infrastructure. All the protégés are small, County-based businesses and represent a diverse mix of capabilities, expertise, and qualifications to maximize the impact of local capacity growth in the County. During FY 2017, the protégés completed introductory training on stormwater best management practices, blueprint reading training (two courses), and cost estimating training.

The CWP staff participated in numerous jobs outreach programs in FY 2017. CWP sponsored two general contractor roundtable sessions which provided the protégé firms the opportunity to develop a relationship with mentor general contractors, learn the contracting pipeline and receive feedback on bid submittals. The CWP staff also participated in events with four businesses and six organizations to identify County businesses and raise their awareness of CWP contracting opportunities. These included

events sponsored by Prince George's County Community College, the Prince George's County Economic Development Corporation, the Prince George's County Chamber of Commerce, and the Maryland Washington Minority Contractors Association.

CWP Schools Program

The CWP Schools Program began in FY 2016 and continued through FY 2017. The program is designed to assist Prince George's County public schools with treating stormwater runoff by constructing BMPs on school facilities. The CWP Schools Program incorporates a community-based approach to engage 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 in the classroom. Additionally, 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.

During FY 2017, a total of 31 Prince George's County schools were in the planning, design, construction, or completion phase for program activities. New schools identified by the County are evaluated for opportunities to incorporate green stormwater retrofits to manage untreated runoff from impervious areas and to reduce the impact of sediments and pollution that flow into the County's 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, and 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 CWP continued its support of End Time Harvest Ministries (ETHM) in FY 2017. ETHM is a County-based nonprofit that was established to empower youth through providing opportunities to build educational, social, and economic life skills. As part of the CWP activities, ETHM students learned about the importance of stormwater management. Fifty students participated in this 6-week program in July – August 2016. These students learned about the work process of stormwater management and how the environment impacts community health. Forty-eight out of the 50 students performed 13 percent higher on a stormwater management knowledge test given at the end of the program from the prior year.

Alternative Compliance Program Support

The CWP engages with the faith-based community 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 CWP has received applications from more than 140 eligible organizations. The CWP 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 CWP community outreach team works with the organizations from design through construction certification, ensuring they are properly informed of the devices installed and the schedule of work. In FY 2017, a

total of 29 retrofit projects were in the planning, design, construction, or completion phase through the ACP. CWP outreach staff participated in approximately 17 ACP meetings and 75 site visits.

Municipal Engagement

Numerous CWP restoration projects were conducted within municipal boundaries during FY 2017. Various school, Alternative Compliance Program, pond, and other restoration projects that were in the planning, design, construction, or completion phase in FY 2017 were located within the County's 26 municipalities that are covered by this permit. As of June 2017, 12 retrofit projects that treat 15 impervious or equivalent impervious acres were either completed or in process on municipally-owned properties. Twelve additional retrofit projects on municipally-owned properties are being planned for FY 2018.

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, 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-21 identifies the overall performance of the Rain Check Rebate Program in FY 2017.

In July 2014, DoE partnered with the Chesapeake Bay Trust on the administrative and operational functions of the Rain Check Rebate Program. CBT provides support with administration of the program, public education and outreach; applicant guidance with BMP selection; reviewing and processing applications, and conducting inspections of installed practices. DoE oversees total program management, processes final payments, and guides CBT efforts to increase program participation through continued emphasis with residential property owners and focused outreach and participation with our commercial, industrial, municipal and nonprofit property owners. With CBT's efforts, DoE has seen an increase in the programs participation by 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. More information on the Rain Check Rebate Program is provided on the DVD, under Restoration Plans and TMDL\Rain Check Rebate.

Table E-21. Rain Check Rebate Program Performance in FY 2017

Projects	Total Applications		Applications Processed in FY 2017		Applications In Process	Actual Number of BMPs Installed	Impervious Area Treated (square feet)	Total Amount of Rebate Approved
	Received in FY 2017	Pending from FY 2016	Denied	Approved				
Cisterns	2	0	0	1	1	4	1,028	$2,440
Pavement Removal	45	12	1	10	46	38	12,408	$49,693
Permeable Pavement	37	8	2	7	36	32	9,494	$65,062
Rain Barrels	111	65	2	42	132	152	43,880	$13,374
Rain Gardens	22	6	2	3	23	13	14,652	$34,158
Urban Tree Canopy	41	4	19	5	21	60	9,932	$5,045
Green Roof	2	0	1	0	1	0	0	$0
Total	**260**	**95**	**27**	**68**	**260**	**299**	**91,394**	**$169,772**

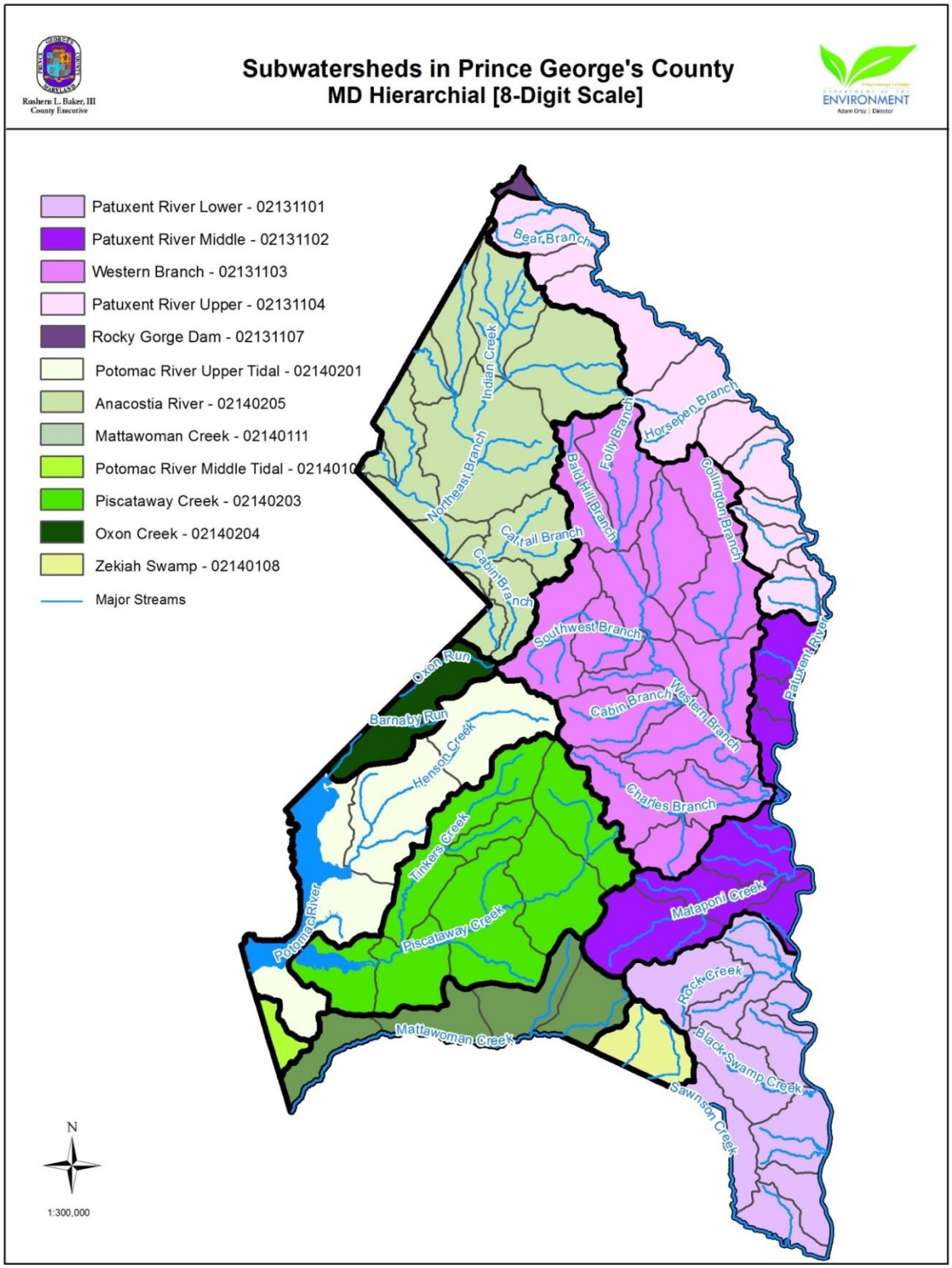


Figure E-1. Major Watersheds

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, 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 first Green/Complete Street project to be constructed is the Ager Road project. This project will use vegetated swales (bioswales and biofiltration), inlet filtration devices, modular wetlands, outfall protection, and stream restoration within the right-of-way to address TMDL load reductions. In addition to the green components of the project, the design incorporates linked pathways for pedestrians, bus shelters, street furniture, light-emitting diode (LED) lighting, and integrated bike lanes, making this a true Green/Complete Street. DPW&T's Office of Engineering and Project Management has incorporated Green/Complete Street design elements into additional highway and bridge projects. The Ager Road project is scheduled to begin construction in late fall 2017. Other projects are currently under development with set construction dates yet to be determined.

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 perception, 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.

Countywide Channel and Outfall Restoration Programs

DPW&T has initiated a countywide channel and outfall assessment program to identify and prioritize channels and outfalls for replacement, utilizing ecosystem restoration solutions when viable. The assessments specifically identify, evaluate, and rank stream restoration, green infrastructure, and floodplain reconnection opportunities in lieu of in-kind replacement for legacy stormwater conveyances. By embracing eco-friendly practices as a rule rather than exception, DPW&T's channel and outfall repair program aspires to fix a growing list of stormwater management hazards and deliver substantive nonpoint pollution reductions to be applied towards the County's NPDES MS4 permit.

The first projects identified and currently under design from this countywide assessment are the Suitland Road and Regency Parkway outfall repair and the Calverton channel restoration projects. These projects will demonstrate and pilot ecosystem restoration practices in lieu of or integrated with gray

infrastructure repair or replacement within dedicated DPW&T easements. Both projects will utilize funds normally earmarked for only gray infrastructure repair and reconstruction, supported by adjoining stormwater retrofits which treat contributing impervious acreage, and work within established easement or right-of way under DPW&T's jurisdiction to enable swift implementation. These two projects will also provide a well-timed public demonstration of DPW&T's ecosystem restoration efforts. Positive outcomes and timely delivery will help support the agency's countywide channel and outfall assessment which will inform both the budget and the opportunity for future ecosystem restorations in lieu of gray infrastructure replacements. DPW&T was also awarded FY 2018 funding from the Maryland Department of Natural Resources' Trust Fund to help construct the Suitland Road and Regency Parkway outfall repair which is scheduled to start construction in late fall 2017.

Alternative Compliance Program

The Alternative Compliance Program (ACP) 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 the ACP are eligible to receive a reduction in their Clean Water Act fee. The reductions range from 25 to 50 percent, depending on the level of project undertaken. The eligible projects include providing easements for installation of BMPs, maintaining the BMPs, participation in the County's education and outreach campaign, organizing and hosting trash pick-up and recycling events, planting trees, and utilizing eco-friendly outdoor housekeeping and landscaping maintenance practices.

As of this reporting period, DoE had received and processed 186 applications from qualified faith-based organizations, and 73 ACP projects were completed or under construction, treating 51 acres of impervious area. Through the ACP, DoE has so far been very successful in building and maintaining 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 undertake the outreach and education activities, as well as the eco-friendly maintenance activities. For this program, a public website is being developed to allow the outreach and maintenance activities participants to self-report their yearly activities and events. This website will allow DoE to monitor more easily and assess the impacts of these activities on the environment, as well as to keep engaging and educating the community about clean water issues.

Prince George's County Stormwater Stewardship Grant Program

DoE and the Chesapeake Bay Trust supported the Prince George's County Stormwater Stewardship Grant (SSG) Program in FY 2017. The collaborative SSG Program encouraged on-the-ground restoration activities that reduce nutrient and sediment pollution, as well as community education activities that engage Prince George's County neighborhoods, faith-based organizations, nonprofits, and residents in the restoration and protection of local rivers, streams, parks, and other natural resources. This grant program is funded by DoE and administered by the Chesapeake Bay Trust.

The SSG Program sought proposals in six specific areas:

1. Water quality projects that achieve nutrient and/or sediment reduction (funding from $20,000–$200,000 was available for each project).
2. Citizen awareness and engagement projects that aim to involve residents in efforts to improve local watersheds ($5,000–$50,000 was available per project).

3. Technical assistance to support the Alternative Compliance Program's outreach and education activities, as well as the eco-friendly maintenance activities.
4. Technical assistance for tree planting on private individual residential properties.
5. Technical assistance for environmental education.
6. Technical assistance for trash reduction in the Anacostia watershed

The technical assistance tracks allowed for higher application requests that included up to $100,000 for ACP activities, up to $250,000 for tree planting, up to $400,000 for environmental education, and up to $100,000 for trash reduction. These budgets for the proposals were guidelines and could be higher if the project justified the budget. The grantees included nonprofit organizations, community associations, civic groups, municipalities, and higher educational institutions. The grantee's organization type was a reflection of the organizations that were encouraged to apply. This grant program supports both DoE's water quality and citizen engagement goals.

There were two requests for proposals released under this program in FY 2017. The first request for proposals was announced in May 2016, with a deadline for applications of July 21, 2016. The technical review committee reviewed the applications and recommended to fund or decline implementation, with the project awards being announced in October 2016. The grant program received 35 applications that requested $5,091,638. In this first FY 2017 round, $1,951,010 was awarded to 21 projects.

The second proposal request focused on ACP support and tree planting on private individual residential properties. This request was announced in October 2016, with a deadline for applications of January 12, 2017. The technical review committee reviewed the applications, and recommended to fund or decline implementation, with the project awards being announced in March 2017. The second round of the FY 2017 grant program received four applications that requested $572,965. In this second round, $100,000 was awarded to two projects to plant 200 trees on private residential properties.

Accordingly, in FY 2017, a total of 23 projects were funded at a total cost of $2,051,010. The projects that were funded in the FY 2017 grant program included on-the-ground efforts such as rain gardens and bioretention practices, as well as outreach campaigns to engage citizens in schools, faith-based organizations, and their neighborhoods. Through the ACP grant projects, technical assistance, tree planting on private individual residential properties, environmental education ("Treating and Teaching"), and installing Bandalong trash traps in the Anacostia watershed were achieved. The project types spanned across the board to support all of the project types that were important to the County (implementation, citizen engagement, technical assistance for specific work tasks such as ACP, tree planting, environmental education, and trash removal).

The FY 2017 grants are currently underway and on track to meet the outreach and restoration outcomes proposed. As of late summer 2017, several projects are near completion and two projects are complete (grant #14226 ETHM and grant #14231 LID Center). However, there have been delays in some projects, such as the delays to attain the stormwater permit (e.g., grant #14225 for the Town of Cheverly) and delays in supporting the ACP as the reporting website was delayed. The Chesapeake Bay Trust works with each grantee throughout the process and provides quarterly status reports to DoE that detail each grantee's progress, final report materials, and funds expended. A few examples of project progress include:

- ETHM (End Time Harvest Ministries) is a woman- and minority-operated nonprofit organization located in Prince George's County that supports the Prince George's County

Jobs First Act. The SSG project enhanced and sustained students' stormwater management knowledge using experiential learning events that occur in various venues. This project engaged citizens by supporting the Central Kenilworth Avenue Revitalization Inc.'s tree planting effort on Edmonston Road. This project supported youth engagement, stewardship, and experiential learning in the Port Towns and Kenilworth/Riverdale areas (Grant #14226, "Track 2: Wellness Ambassadors Rain Garden Project," $16,415).

- The Low Impact Development Center, Inc. provided stormwater management designs to the Port Towns (Bladensburg, Colmar Manor, Cottage City, and Edmonston). This project assisted the Port Town municipalities in the selection and prioritization of stormwater management projects and the outreach and community engagement necessary for projects to have long-term success. The center assisted with the County's overall effort to meet stormwater management obligations. The projects identified in the plan will provide the most credit and will demonstrate a watershed-based, cooperative restoration effort. In addition, this project will support the Port Town's EcoDistrict Initiative, which seeks to provide a district-scale sustainable development framework for the Port Towns by promoting strategies furthering equity, resilience, and climate protection (Grant #14231, "Port Towns Eco District Stormwater Masterplan," $60,000).

- The Anacostia Watershed Society leads the "Treating and Teaching" environmental education project. The awarded project, expanded the County's "Treating and Teaching: Stormwater Stewardship" to an additional 16 schools in the first year and another 20 schools in the second year. Currently, the first 16 schools have completed the training and are in the second phase of the program where they install outdoor classroom features on their schoolyards. The program links stormwater management with meaningful watershed educational experiences to meet educational environmental standards. The "Treating and Teaching: Stormwater Stewardship" program is a strong first step to train Prince George's County teachers in how to use outdoor stormwater practices as a resource for teaching their students. This innovative program connects the real-world problem of stormwater runoff with student learning outdoors on their schoolyards (Grant #14235, "Track 5: Conservation Green Earth" now known as "Treating and Teaching," $500,000).

Table E-22 lists the grant projects awarded in FY 2017.

Table E-22. Grant Awarded for the Stormwater Stewardship Grant Program, FY 2017 Solicitation

Grant #	Organization	Title	Type of Grants*	Proposed Impervious Acreage Treated (acres)	Award Amount
14212	Interfaith Partners for the Chesapeake	Tracks 2 and 3: Faith Community Training and Technical Support	2 & 3	NA	$51,010

Grant #	Organization	Title	Type of Grants*	Proposed Impervious Acreage Treated (acres)	Award Amount
14213	Neighborhood Design Center	Track 2 Citizen Awareness and Engagement: Providing Technical Assistance to Prince George's County Stormwater Stewardship Grant Applicants	2	NA	$27,363
14217	Interstate Commission on the Potomac River Basin	Track 2: Score Four: Students, Schools, Streams, and the Bay	2	NA	$60,189
14219	Greenbelt Homes, Inc.	Greenbelt Homes Incorporated Clean Water Initiative	1 & 2	TBD (estimated 0.09)	$101,935
14220	Anacostia Riverkeeper	Track 6: Trash Reduction in the Anacostia: Trapping Trash	6	NA	$200,000
14223	Alliance for the Chesapeake Bay, Inc.	Track 1 - RiverWise Homeowner Associations	2	NA	$33,322
14224	REAL School Gardens	REAL School Gardens Two-Year Train and Support Program	5	NA	$100,000
14225	Town of Cheverly	Town of Cheverly -- Boyd Park / 64th Avenue Retrofit Project	1	0.77	$121,833
14226	End Time Harvest Ministries	Track 2: Wellness Ambassadors Rain Garden Project	2	NA	$16,415
14227	Maryland League of Conservation Voters Education Fund	Track 2 - Festival del Rio Anacostia - Anacostia River Festival	2	NA	$11,791
14228	Maryland-National Capital Park and Planning Commission	Tracks 1 and 2: M-NCPPC Stormwater Stewardship Program	1&2	2.3	$250,000

Grant #	Organization	Title	Type of Grants*	Proposed Impervious Acreage Treated (acres)	Award Amount
14230	Clean Water Fund	Track 2 Citizen Engagement: Residential Outreach and Behavior Change Campaign for Central Prince George's County	2	NA	$42,402
14231	The Low Impact Development Center, Inc.	Port Towns EcoDistrict Stormwater Masterplan	2	NA	$60,000
14232	DuVal High School	Track 1: DuVal High School Courtyard Rain Garden	2	0.06	$26,207
14233	University of Maryland, College Park	Sustainable Maryland -- Prince George's County Petwaste Education Campaign	2	NA	$135,000
14234	Anacostia Watershed Society	Track 5: Conservation Green Earth	5	NA	$500,000
14237	Maryland League of Conservation Voters Education Fund	Conectando con la Naturaleza (Connecting with Nature)	2	NA	$29,497
14238	Centro De Apoyo Familiar	(2-3) Agua Sanas-Familia Sanas/Healthy Waters-Healthy Families	2	NA	$30,333
14242	People for Change Coalition	Stormwater for Residential Communities	2	NA	$44,151
14245	People for Change Coalition	Faith-Based Technical Assistance Program	2	NA	$41,130
14246	People for Change Coalition	ScoopDaPoop	2	NA	$68,432
14708	Prince George's Green	The Giving Tree	Trees	NA	$50,000

Grant #	Organization	Title	Type of Grants*	Proposed Impervious Acreage Treated (acres)	Award Amount
14710	Central Kenilworth Avenue, Inc.	Technical Assistance in Engaging the Community to Plant and Care for 850 Trees in Prince George's County	Trees	NA	$50,000
Total				**3.13**	**$2,051,010**

**Type of grants: 1 = Water Quality, 2 = Citizen Engagement, 3 = ACP Technical Assistance, 5 = School Technical Assistance, and 6 = Trash Trap Technical Assistance*

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.

1. WATERSHED RESTORATION ASSESSMENT

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.

Monitoring Locations

The County completed its tenth full year of chemical and physical monitoring and its eleventh 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 was done at stations 06-006C and 06-008B.

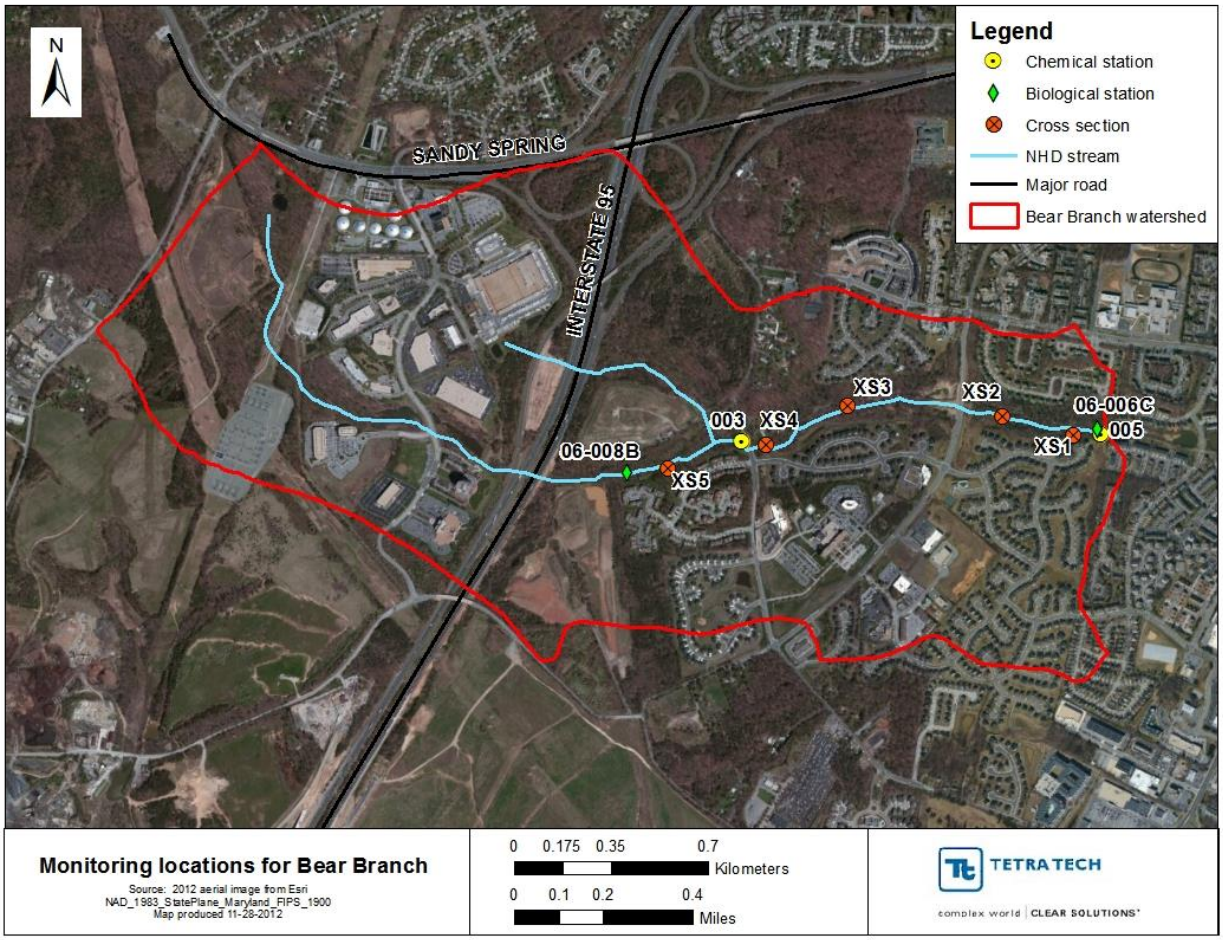


Figure F-1. Bear Branch Monitoring Locations

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 at monitoring stations listed in Table F-1 below:

Table F-1. Chemical Monitoring Locations

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	1,089	39.09044	-76.86980

Station	Station Type	Location	Drainage Area (acres)	Latitude	Longitude
		Chapel Cove Drive			

Sampling events at each monitoring stations are provided in Table F-2 below. During FY2017, automatic storm samples were collected in 10 months. Because of weather constraints automatic storm samples were not collected during August and April. In addition, six manual storm samples were not collected because of weather and timing constraints. In addition to the four quarterly baseflows, one baseflow sample was taken in lieu of a storm sample for the automatic sampling parameters and two baseflow samples for the manual sampling parameters were taken in lieu of storm samples.

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							
August			B1, B2	Q			B1, B2	Q
September	X	X			X	X		
October	X		B2	Q	X		B2	Q
November	X	X			X	X		
December	X							
January	X	X			X	X		
February	X, X				X, X			
March	X	X		Q	X	X		Q
April								
May	X	X		Q	X	X		Q
June	X	X			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 (BOD_5)
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. Please see results of the analysis on page 18 in the report titled "Prince George's County, Maryland—Long-Term Stormwater Monitoring Program—Bear Branch" saved on DVD, Assessment of Controls\Bear Branch.

Table F-3. Monitoring Parameters

Parameter	EPA method	Holding time at 4 °C	Project reporting limit	Units
Copper (Cu)	EPA 200.8/6020	6 months	1	µg/L
Lead (Pb)	EPA 200.8/6020	6 months	1	µg/L
Zinc (Zn)	EPA 200.8/6020	6 months	5	µg/L
BOD_5	SM (20) 5210B	48 hours	2–5	mg/L
NO_3/NO_2	EPA 353.2	28 days	0.05–0.1	mg/L
TKN	SM (20) 4500N-org/NH3-G	28 days	0.1	mg/L
TP	EPA 365.1	28 days	0.01	mg/L
TSS	SM (20) 2540D	7 days	2	mg/L
E. coli	SM (20) 9221F	6 hours	2	MPN/100 mL
TPH	EPA 1664A	28 days	5	mg/L
Hardness	SM (20) 2340 C	28 days	1.0	mg $CaCO_3$/L
pH	EPA 150.1	In-stream measurement	--	

Parameter	EPA method	Holding time at 4 °C	Project reporting limit	Units
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 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, 53 stage-to-flow measurements have been taken at station 003. Forty-two measurements have been taken at station 005 prior to the ponding conditions during the Laurel Lake dredging project and 10 measurements were taken after the ponding conditions created from the Laurel Lake dredging project. The data were plotted, and a relationship between stage and flow were 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 are 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 is the concentration of each sampled parameter;

Q is 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 are used in calculating the loading rates. Total seasonal pollutant loads are estimated for stormflow and baseflow by applying the median storm EMCs to unmeasured flows. Those values are 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 2017 in the Bear Branch watershed. Two assessment locations were surveyed as listed in the Table F-4 below. 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, ≈ 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 is a modification of EPA's Rapid Bioassessment Protocols (RBP) III for use in the Coastal Plain physiographic region in which the County resides. 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 is distributed throughout the available physical habitat (e.g., undercut banks, riffles, snags) in rough proportion to its occurrence within the assessment reach. Organisms collected are preserved in 95 percent ethyl alcohol and returned to the laboratory for identification. Sample identification results are 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 described the MBSS B-IBI assessment values.

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

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 2016 was the tenth year that the County performed a geomorphologic assessment in the Bear Branch watershed. The next assessment is planned for August 2017.

A longitudinal profile was measured from just downstream of station 005 to approximately 6,480 feet upstream, as it was in FY 2016. A benchmark was established in 2007; this benchmark is used as a common reference datum to relate elevation data collected previously to this year's measurements. 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.

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-3[a]	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.*

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 being tracked via the thalweg profile and by locating the presence of nickpoints as indicators of headcutting processes.

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;

Monitoring Protocols (Biological)

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 are 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.

Analysis (Channel Geometry)

As required by the permit, a hydrologic and/or hydraulic model will be used in FY 2018 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 are provided in the Bear Branch monitoring report, *Prince George's County, Maryland—Long-Term Stormwater Monitoring Program —Bear Branch Annual Report 2017,* 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 2017)*

Monitoring Activity	Report Section	Page
1(a)(i) Storm Event Sampling Frequency	3.1.2	7
1(a)(ii) Storm Event Sampling Procedure	3.1.2	7
1(a)(iii) Parameters Requiring EMC Calculations	3.1.3	8
1(a)(iv) Continuous Flow Monitoring	3.1.4	9
1(b)(i) Biological Sampling Locations	3.2.1	12
1(b)(ii) Biological Sampling Method	3.2.1	12
1(c)(i) Geomorphological Stream Assessment Location and Methods	3.3.2	14
1(c)(ii) Stream Habitat Assessment	3.2.2	14
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	18
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 2,130 feet upstream to slightly beyond the uppermost cross sections. The channel slope of Tributary 1 in 2016 was 0.0058 (0.58 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 (6 cross sections in main and 4 cross sections in the tributary). 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 BBW was evaluated to determine whether any significant changes to the physical conditions of the BBW had occurred since conducting the baseline evaluation. The mainstem and Tributary 1 in the BBW were evaluated in 2016 to determine whether any significant changes to the physical conditions of the BBW had occurred since it was last evaluated in 2015. The results are presented in 2016 Black Branch Geomorphic Report for 2015 and 2016 with comparison to the base year of 2001. The report is provided on DVD, Assessment of Control\ Black Branch.

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

This page is intentionally left blank.

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 new 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 75-percent requirement of the projected expenses for the next two years was submitted to MDE on June 30, 2016. This plan was approved by the County Council on October 27, 2016.