2018

Annual NPDES MS4 Report

Prepared for:

Maryland Department of the Environment

Water Management Administration

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National Pollutant Discharge Elimination System
Municipal Separate Storm Sewer Systems

2018 Annual Report

Prepared for

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Water Management Administration
1800 Washington Boulevard
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Prince George's County Government
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EXECUTIVE SUMMARY

This report summarizes the activities carried out by various departments and agencies within Prince George's County in accordance with the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit during fiscal year (FY) 2018, the period of July 2017 through June 2018. This year's report is a continuation of the major revisions initiated in previous reports.

On July 6, 2018, the Maryland Department of the Environment (MDE) provided comments on the County's 2017 NPDES MS4 annual report. In that transmittal, MDE requested that the responses be provided with the 2018 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 2018 report.

In FY 2018, 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 FY 2018, the County's notable accomplishments toward meeting the MS4 goals included:

Restoration Accomplishments

- To date, 2,215 acres of impervious area have been restored and another 2,860 acres were in active planning, design, or construction in FY 2018, for a total of 5,075 acres.
- The County saw a 90 percent increase in water quality improvement projects in either the planning phase, under construction, or completed (from 492 in FY 2017 to 949 in FY 2018).
- Through its Rain Check Rebate Program, 266 BMPs were installed in FY 2018 on private properties, treating 2.3 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 15 projects at a total cost of $1,388,080 in FY 2018. These projects include on-the-ground efforts such as tree planting, trash removal, rain gardens, and bio-retention practices, as well as outreach campaigns to engage citizens in schools, faith-based organizations, and their neighborhoods. While the total impervious acres restoration is not quantifiable at this time, over 7.5 impervious acres are expected to be restored though these projects.

Illicit Discharge Detection and Elimination Inspections (MS4 Regulated Land)

- County inspectors evaluated 150 outfalls in winter 2018 to ascertain the presence of illicit discharges. Of these outfalls, 79 received chemical testing with 6 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 58 commercial and industrial sources identified 33 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 2,100 bags and an estimated 130 tons of trash collected. The overall Anacostia trash reduction program was estimated to reduce the annual trash load by more than 87 tons.

- The County continued to conduct a number of countywide trash reduction, litter reduction, and recycling programs. Specifically, the County undertook several measures, including continuing its Adopt-A-Stream program, using the PGCLitterTRAK mobile app tracking tool, involving communities and municipalities in the Clean Sweep Initiative in the Anacostia watershed, collaborating with the University of Maryland on a litter source reduction study specifically for Prince George's County, and continuing the County's first trash trap project.

- The County's litter control efforts through comprehensive community cleanup, litter control, and Clean Up, Green Up programs removed more than 2,000 tons of trash and debris.

Outreach and Education

- The County hosted more than 500 environmental education and outreach events with the help of approximately 800 volunteers to promote environmental awareness, green initiatives, and community involvement in reducing pollutants to its waterways during which nearly 28,000 participants took part.

- Through the Stormwater Stewardship grants 138 outreach events were held reaching a total of 6,175 people with a total impact of 25,261 hours dedicated to citizen awareness and engagement around clean water solutions.

- The County's Tree Planting Program removed 2,000 high-risk or dying trees and planted 4,800 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 2018, included on the DVD.

- The County continued in FY 2017 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 2018, 170 concept plans for stormwater control were approved.

Land Development Inspection Enforcement

- The County staff performed 10,241 stormwater construction inspections and 14,934 sediment control inspections.

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

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TABLE OF CONTENTS

List of Figures

List of Tables

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ABBREVIATIONS

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

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

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

YMCA	Young Men's Christian Association
Zn	Total zinc

ACKNOWLEDGEMENTS

The Prince George's County Department of the Environment, Stormwater Management Division, has prepared this 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 31 of this report. The following groups also provide the County with programmatic assistance, information and/or ancillary funding to assist the County's efforts in protecting and improving water resources:

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

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

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

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INTRODUCTION

This report summarizes the activities carried out by various departments and agencies within Prince George's County in accordance with the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit during fiscal year (FY) 2018, the period of July 2017 through June 2018. This year's report is a continuation of the major revisions initiated in previous year's.

The next section details the County's responses to the July 6, 2018 comments from the Maryland Department of the Environment (MDE) on the FY 2017 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 2018. These chapters are organized by the four parts of the permit: (1) identification, (2) definitions, (3) water quality, and (4) standard permit conditions. However, the substance of the report is in the fourth part where the County's compliance activities related to numerous permit conditions are described extensively.

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RESPONSE TO MDE COMMENTS

On July 6, 2018, MDE provided its comments on County's 2017 NPDES MS4 annual report and requested that the County provide response with the 2018 NPDES MS4 annual report submittal. Table 0-A-1 below provides the County's response to MDE's comments.

Table 0-A-1. County Response to MDE's July 6, 2018 Comments

MS4 Permit Condition	MDE Assessment and Recommendations	DoE Response
Part V. A Annual Reporting	• The Prince George's County FY 2017 annual report was submitted to MDE on December 21, 2017 in accordance with the permit reporting deadline. • MDE appreciates the County's efforts to respond to each of MDE's comments from prior annual report reviews. The next annual report is due on January 2, 2019. The County shall provide complete information related to impervious area restoration completed and all information related to impervious area baseline for this permit term by June 28, 2019.	Noted. The County is working on to revise its baseline impervious acres and will submit it along with the supporting documents in the final submittal for the permit term before June 28, 2019.
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.	Noted.
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's FY 2016 annual report review noted numerous areas in the geodatabase that needed updates. The County is commended for the substantial progress made in the past year. This allows the County to prepare for this new reporting format for the next permit term. The County shall continue the update process and note the following areas during the transition to this format:	Noted.
	• The County provided a supplemental Access database to aid in the review of the FY 2017 report, which was very helpful. Please continue to provide if available, however, an ARCGIS file	Noted. The County is submitting all related information in the geodatabase.

MS4 Permit Condition	MDE Assessment and Recommendations	DoE Response
	will be necessary for future reviews.	
	• Mandatory fields in the "Permit Info" table need to be completed.	Noted. All mandatory fields are populated in 2018 geodatabase submittal.
	• The unique ID field has been updated for each table and feature class in the format described on page 14 of the Geodatabase Design and User's Guide. There are some areas where corrections are necessary. For example, proper entry was made in the outfall feature class; however, there were areas in the outfall drainage area feature class where corrections are needed. Please verify and update records as appropriate.	The County is reviewing storm drain system plan sets, field verifying, and digitizing them. This is an ongoing process that will continue for the next few years.
	○ Continue data entry for the Outfall feature class for mandatory fields such as Out_Ht, Out_width, and Out_Year, and northing and easting data.	
	○ Type_Matl: MDE previously recommended that all 68,256 structures in the database are composed of concrete. The County responded that concrete is in fact correct. However, there are 64 records for RCP pipe and many are greater than 36 inches. Therefore, as recommended in FY2016 review, the County should continue to verify and update outfall material data.	
	○ 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.	The County has identified 90 storm drain systems that have BMPs that were previously not in the inventory. The County is having these digitized and will submit with the final report of this permit cycle. As mentioned above, the County will continue to review storm drain system plan sets, digitize them, and submit as part of annual reports to MDE.
	• BMPPOI:	
	○ The County has made substantial progress in correlating BMPs, drainage areas, and POIs. There are still records that need to be updated. Please continue this process for further review in the FY 2018 report.	Noted.

MS4 Permit Condition	MDE Assessment and Recommendations	DoE Response
	○ The fields for Pe_Req all have data entry of zero. This information will be needed to update.	Noted. This information has been updated.
	○ There are numerous BMPs that should be moved to the 'REST' BMP feature class. All records with a unique table ID 'RST' (for example, PGI6RST102100) need to be populated in the 'RST' feature class.	Noted. There was an issue with the domain for "Con_purpose" with the Geodatabase, that has been fixed in the version being used for this reporting.
	• BMP:	
	○ BMPs are now linked to a POI as requested by MDE in the FY2016 review.	Noted.
	○ While 23 BMP 'Drain Area' and 6 'As-Built' records are missing, these updates represent substantial progress of capturing and verifying BMP data within this permit term. The County shall continue to make updates on the missing information which will allow impervious area baseline adjustment at the end of the permit term.	Noted.
	• BMP Drainage Area: There are 89 records that are missing a BMP drainage area ID. In addition, 15 of these records have incorrect Unique ID nomenclature.	Noted. This has been revised and corrected in the current submittal.
	• RestBMP:	
	○ There are numerous BMPs listed in the 'REST' BMP feature class that are labeled 'NEWD'. The County should clarify that these are not new development and confirm restoration was not credited for these BMPs. If this is an error, the County shall note in the database.	Noted. There was an issue with the domain for "Con_purpose" with the Geodatabase, that has been fixed in the version being used for this reporting.
	○ The 'REST'BMP feature class includes 11 BMPs that do not provide effective water quality treatment. These include oil grit separators (6) and dry extended detention (5).	Noted. These BMPs have been removed.
	• Altline BMPs: Completion dates are missing for several completed projects.	The completion dates have been updated.
	• Stream Restoration Protocols: The County is predominantly using the interim rate with an exception of two projects. The protocols shall	Noted.

MS4 Permit Condition	MDE Assessment and Recommendations	DoE Response
	be used for future planned projects.	
	• 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.	Noted.
	• BMPinspections, RestBMPInspections, AltBMPLineInspections, AltBMPPoI Inspections, and AltBMPPointInspections: Input reinspection status of all re-inspected BMPs. In addition, inspections need to be reported for AltBMPPoint and AltBMPPoly records.	Noted. Some of the alternate Point BMPs such as septic denitrification or septic disconnection are permanent credits. So far County has not claimed Septic Pumping, which requires pumping system be verified and maintained for annual credits. Also, triannual inspections for operational BMPs such as inlet cleaning or street sweeping is not possible, records for these BMPs are maintained for verification purpose. Impervious surface elimination is verified through the As-Built records. County does its due diligence for inspecting all structural BMPs that are reported in BMPinspections, RestBMPInspections, and AltBMPLineInspections. County will report AltBMPPointInspection when the septic pumping is claimed. For the tree planting BMPs, it is not clear what MDE considers inspection. The County maintains GIS records and verify their survival on an ongoing basis. The County would like to have further clarification from MDE for the tree planning inspections and what is expected in the reporting.
	• County staff certified in RPC training shall be identified in the database.	Noted.
	• Narrative Files: All files uploaded to MDE should be included in this table.	Noted.

MS4 Permit Condition	MDE Assessment and Recommendations	DoE Response
	• The County is required to submit a storm drain system map as part of permit requirements. The County should maintain the map and make available to MDE if requested. MDE appreciates the County submitting a shapefile for verification. MDE requests that as the shapefile is updated, resubmission in annual reports will be helpful.	Noted.
Part IV.D.l Stonnwater Management	• The County adequately maintains storm water program data to show compliance with the three-step review process for implementing environmental site design (ESD) to the maximum extent practicable (MEP).	Noted.
	• MDE performed a triennial review of the County's storm water 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 (MEP) is implemented for all new development and redevelopment. The County has responded to this comment noting that collaboration with the Soil Conservation Service has included revising policy where needed to ensure implementation of ESD to the MEP. The County shall forward any revised policy or documentation related to this matter for MDE review and concurrence. MDE will provide further oversight and comment during the next triennial review in the spring of 2019.	Noted.
	• In the previous annual report review, MDE requested that the County report on the status and resolution of violations and any enforcement actions taken during the year. The County is currently setting up a tracking system to achieve this goal. The County shall provide documentation of the current status and schedule to demonstrate how this required reporting will be achieved.	Noted. The County will start including resolution of violations and any enforcement actions taken on the DVD beginning from the next annual report.
	• The County has reported an increase of BMPs from 3,302 to 3,363 in the past reporting year. These include 3,094 new development BMPs, and 269 restoration and redevelopment BMPs. In addition, 978 alternative BMPs were reported separately (79 stream restoration and 899	Noted.

MS4 Permit Condition	MDE Assessment and Recommendations	DoE Response
	septic disconnections, and additional alternative practices such as tree planting, inlet cleaning, and impervious area elimination).	
	• The County's annual report indicates that 2,933 new development BMPs have recent inspections and 119 restoration and redevelopment BMPs have recent inspections.	Noted.
	• Each year the County has made substantial progress in catching up with triennial inspections to bring all BMP inspections on a three-year cycle in accordance with State regulations. MDE commends the County for these efforts. However, because a large number of BMPs were overdue on inspections, there is now a large number of BMPs that need maintenance. In the FY 2016 annual report review, MDE noted that 733 BMPs did not pass inspections. The County reported that this number has been reduced to 482 BMPs, which has been confirmed in the geodatabase. While the inspection progress has resulted in a reduced number of failed inspections, there is significant work to be done to bring BMPs into compliance. The County's FY 2018 annual report shall detail efforts made to bring privately owned BMPs in compliance and the status of any maintenance operations. Impervious acres that drain to failed BMPs that are not under active remediation work will be added to the County's impervious area baseline.	Noted. The County (DoE) has been corresponding with property owners concerning their failed BMP facilities located on their property. Due to the financial burden on most of the property owners for maintaining or repairing these BMPs especially residential property owners, delayed response is expected. Most of the maintenance repairs on the failed BMPs cannot be completed within the NPDES's BMP inspection reporting year and additional time is needed by the property owner for compliance. By working with the property owners, understanding the financial burden, and giving additional time for maintenance repairs, these failed BMPs are being brought into compliance. The County is reviewing failed BMPs and their status for active remediation work and would provide the details in the next annual report.
	• The County submitted stormwater approval data that noted that 75 stormwater exemptions were granted during FY 2017. When considering that 224 concept plans were approved during this fiscal year, the 75 exemptions represents a significant number of total plans received. Future annual reports shall tabulate exemptions, justification for each decision, and the number of acres of impervious area proposed for each exemption.	Noted. This information is provided on the DVD in the "Exemption table FY 2018" spreadsheet.

MS4 Permit Condition	MDE Assessment and Recommendations	DoE Response
	• The County is tracking maintenance work in the new geodatabase format as requested by MDE during the FY 2016 review. Tracking this information will be useful during future inspections when noting common or recurring problems and effective solutions for BMP maintenance. MDE recommends that tracking this information be continued for more effective program implementation.	Noted.
Part IV.D.2 Erosion and Sediment Control	• Based on the findings of MDE's 2016 erosion and sediment control delegation review, specific information was requested to address areas of improvement needed in the County's program. The County's Department of Permitting, Inspections, and Enforcement (DPIE) has routine training sessions that will address MDE concerns. MDE will perform an additional delegation review in the Fall of 2018. The County shall make available specific training materials that address MDE concerns.	Noted.
	• 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 number of projects with earth disturbances of one acre or more has increased from 97 to 153 projects in the past year.	Noted.
Part IV.D.3 (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 dry weather flows at 84 outfalls and conducted 69 chemical tests, including seven retests. Chemical tests were not conducted at outfalls where the flow was too small to sample.	Noted.
	• The County provided details on four outfalls that required further investigation. Actions taken to eliminate the illicit discharges included coordinating with Washington Suburban Sanitary Sewer Commission on a sewage blockage, ordering property owner to clean up trash and debris, and coordinating with MDE on a discharge from a NPDES permitted-facility.	Noted.
	• The County conducted 69 visual surveys of commercial and industrial areas to fulfill Part IV.D.3.b of the permit. The County identified 18	Noted.

MS4 Permit Condition	MDE Assessment and Recommendations	DoE Response
	potential water quality concerns for follow up inspections, including dumpster leaks, grease disposal, equipment washing, and salt pile storage. All violations were resolved. The County also provided a summary of actions taken address structural problems, sediment deposits, erosion, floatables, and odors. MDE requests that the County continue to report the status of water quality violations and resolutions.	
	• 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 2017, the County received 2,136 citizen reports concerning illegal dumping, and HAZMAT responded to 344 calls for assistance. The Health Department investigated 36 sites to assess water quality threats from sanitary sewer overflows, failing septic systems, and solid waste and hazardous materials spills.	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 and resolutions.	Noted.
	• With the below exceptions, the County has met the IDDE annual reporting requirements in accordance with the MS4 geodatabase and Parts IV.D.3.e and V of the permit. In future annual reports, the County must make the following adjustments in data:	OK.
	○ The local outfall IDs used in Table D-3 of the annual report narrative do not correspond with MDE_OUTFALL_IDs in the IDDE associated table. For example, Outfall ID "3283" is assigned to MDE_OUTFALL_ID "PG040UT02193" in the outfall feature class. However, "PG040UT02193"is not an outfall that was included in the FY 2017 IDDE associated table. The County must verify that the outfalls in the IDDE associated table are correctly linked to the outfall feature class.	Noted.

MS4 Permit Condition	MDE Assessment and Recommendations	DoE Response
	○ If outfalls are identified in the annual report narrative using the local outfall ID, the County must complete the LOCAL_OUTFALL_ID field in the IDDE table of the MS4 geodatabase.	Noted. Starting with FY 2018 submittal the County is using MDE outfall ID.
	○ In the submitted database, the DISCHARGE_SOURCE for all outfalls is "U" (i. e., unknown). The County must ensure that discharge source data reflect the conclusions of the inspectors. For example, if the discharge is a known dry weather sanitary sewer overflow, the source would be "S." If the discharge does not exceed any chemical thresholds and is determined to be most likely groundwater, the source would be "N" for non-illicit discharge and a note must be made in the general comments.	Noted.
	○ If a chemical test detects a pollutant above the acceptable threshold (e.g., chlorine) and the data indicate that it was not an illicit discharge, the County must include a short explanation in the general comments.	Noted.
	• On November 20, 2017, MDE conducted a field audit of the County's IDDE program. MDE determined that the County is in compliance with Part IV.D.3 of the permit. Detailed recommendations can be found in the letter dated April 9, 2018. Information required in the FY 2018 annual report includes updates on the County's efforts to refine the storm sewer system map, annual training and more detailed procedures for conducting visual surveys of commercial and industrial areas, and activities completed for the incorporated municipalities under the co-permittee agreement.	Please see County's response in Table D-4.
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.	Noted.
	• The County has reported that additional trash removal efforts will be implemented in the second half of 2017. These include additional stream clean-ups, additional stream segments	Noted.

MS4 Permit Condition	MDE Assessment and Recommendations	DoE Response
	adopted under the Adopt-A-Stream program, and installation of trash capture devices in the Fall of 2017. The County anticipates achieving their 125,000 pounds of trash reduction goal set in the Implementation Plan for the Anacostia River Watershed Trash TMDL, for calendar year 2017. The County shall report on actual load reductions achieved in prior calendar years with future annual reports.	
	• 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.	Noted.
	• The County continues to work with watershed partners to monitor trash at 16 stream sites throughout the Anacostia River 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 is evaluating installation of trash capture devices along tributaries of the Anacostia and shall report results of these efforts in the next annual report.	Noted.
	• The County has responded to all MDE questions regarding the Anacostia Trash TMDL implementation plan. MDE looks forward to continue working I with the County to continue to reduce trash in the Anacostia River.	Noted.
Part IV.D.5 Property Management & Maintenance	• During the reporting year, 307 staff have been trained at 13 facilities. The County contracted with a nonprofit organization to administer new training.	Noted.
	• The County contracted inspections of industrial facilities. Compliance rates were increased through regular County visits to the facilities and developing schedules for corrections and improvements. Copies of facility inspection forms were provided with the annual report. Issues noted during inspections, including regular BMP maintenance, adequate coverage at salt storage areas, and proper labeling of storage drums, demonstrated that inspections	Noted.

MS4 Permit Condition	MDE Assessment and Recommendations	DoE Response
	were thorough and comprehensive.	
	• The County continued street sweeping major and industrial streets, plus residential streets upon request. During the reporting year 1,491 miles of streets were swept and 2,240 tons of debris was collected.	Noted.
	• The County responded to 1, 771 service requests, inspected 10,344 inlets, cleaned 6,924 linear feet of pipes, and removed 231 tons of debris. Storm drain channels continued to be inspected and cleaned on a triennial basis, and 31 ,244 linear feet of channel were maintained during the reporting year.	Noted.
	• The County applied 18,451 tons of sodium chloride deicer, a decrease of 50%. Brine pretreatment was used in half the snow and ice events during the reporting year and totaled 15,800 gallons, an increase from the previous year. Continued annual training, technology upgrades during equipment replacement, and increased use of pretreatment were implemented to improve the winter weather program.	Noted.
	• The County indicated in a previous annual report that winter weather material application training is conducted annually and is mandatory for all staff and contractors. MDE requests that the County note in future annual reports if this changes.	Noted.
	• Herbicides are applied in limited amounts and by licensed contractors; mowing and other mechanical control is the major method for maintaining roadside vegetation.	Noted.
IV.D.6 Public Education	• County promotes environmental awareness and education outreach Public to the public in coordination with watershed restoration projects. This Education the intent of the County's permit. Some examples are noted below.	Noted.
	• County hosted 350 environmental events during the reporting year with a total of 20,232 attendees at these events. Education topics included trash clean ups, tree plantings, outreach to local schools, environmental events, and numerous pet waste initiatives.	Noted.

MS4 Permit Condition	MDE Assessment and Recommendations	DoE Response
	• County is commended for its broad and comprehensive outreach activities that included a total of 59 events located within the 26 municipalities covered under the County's permit.	Noted.
Part IV.E Restoration Plans and TMDLs	• MDE approved the County's impervious area baseline that requires 6,105 of impervious area restoration by the end of the permit term. The has reported that 937 acres have been restored since the beginning of permit term. Another 3,907 acres are currently planned for implementation. While this represents a substantial increase in implementation from prior years, the County is at risk of non-compliance with meeting restoration targets by the end of the permit term.	Noted. An update for impervious acres restoration within this fiscal year is provided in Restoration Plans and TMDL section of this report.
	• The restoration numbers reported in the annual report discussed above are not consistent with the numbers reported in the geodatabase. For example, the Impervious Acres table specifies that 804 acres have been restored. The numbers in the annual report (937 acres) need to be consistent with the geodatabase.	Noted; however, it is not clear which Impervious Acres table being referred here. "ImperviousSurface" table "Restored_Acres", which is 936.52 impervious acres within the permit term, is consistent with the acres in the report, whereas "completed" within FY 2017 is around 804 acres.
	• MDE evaluated restoration projects completed since January 2. 2014 and reported in the geodatabase as follows.: Rest_BMP (510 acres). AltBMPline (88 acres), AltBMPPoly (147 acres), AltBMPPoint (72 acres) for a total of 817 acres. The County should provide additional information to confirm these numbers. This acreage is different from that presented in the report and in the Impervious Acres table of the geodatabase as noted above. The County needs to provide information to clarify the different numbers described above.	While the County could not replicate numbers mentioned in the comment, it looks like MDE's evaluation is based on the impervious acres and not the impervious acres credits. For the Rest_BMP, the credit should be calculated based on the P_E addressed and the impervious acres. There was no field in the geodatabase to report actual credits for Rest BMPs. For alternative BMPs, the equivalent impervious acres should be used. For the retrofitted BMPs, MDE geodatabase does not have field to report pre and post credits to calculate the net impervious acres restoration achieved. To

MS4 Permit Condition	MDE Assessment and Recommendations	DoE Response
		overcome this, we have added an additional column "REST_CREDIT" in this submittal. Since all the numbers reported in FY 2017 are further refined and now updated with FY 2018 numbers, please use "REST_CREDIT" for Rest_BMP and "EQU_IMP_ACR" for others to calculate the restoration credits achieved.
	• The geodatabase indicates that numerous BMPs in the restoration database are labeled as new development. The County should only include restoration or redevelopment BMPs in the restoration database. In addition, the County should confirm that new development BMPs are not credited for restoration.	The data provided for Rest BMPs are either the restoration projects or redevelopment projects. New development BMPs are not credited for the restoration. Reviewing the 2017 data that was submitted with FY 2017 report to MDE, the County could not locate new development BMPs in the Rest BMP.
	• The County has not taken credit for street sweeping efforts during this permit term. Because the County has swept a total of 2.240 tons of debris during the reporting year, this activity may be eligible for credit. MDE has recommended that the County may evaluate allowable credit in accordance with the Accounting Guidance.	In FY 2018, the County evaluated its street sweeping tonnage and included this information along with inlet cleaning tonnage in the impervious acres calculation.
	○ Based on prior analysis of rural residential and roadway impervious areas, the County's baseline will need to be adjusted as follows:	The County will revise its baseline impervious acres in FY 2019 submittal.
	○ The County acknowledges adding 89 acres of impervious area to the restoration target based on the rural residential analysis.	
	• MDE has commented in the FY2016 report that the revised impervious area baseline analysis shall provide specific information related to restoration BMP performance and verification. The County has recommended adding a field to the geodatabase to indicate that certain practices are undergoing repairs so that these practices are not removed and then re-entered	Noted, the County has been populating more information in the comments field. Going forward, the County would include maintenance status, if applicable, in the comments field.

MS4 Permit Condition	MDE Assessment and Recommendations	DoE Response
	for restoration credit. MDE acknowledges that some maintenance will take time, yet a practice can continue to function while certain repairs are active. For these projects, the County should indicate in the "Comments" field of the geodatabase the status of maintenance upgrades.	
	• 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. The County has reported substantial progress on drainage area data verification. This information will be finalized in the FY20 18 report.	The County has been working on to finalize this information and intent to submit with the final report for this permit term before June 28, 2019.
	• MDE requested that the County provide a comparison with established benchmarks outlined in each proposed TMDL plan. This information has been provided and the County should continue to include in future annual reports in accordance with permit conditions.	Noted.
	• 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 2032. MDE commends the County for developing alternative strategies for BMP implementation in order to stay on track with long term TMDL goals.	Noted.
	• 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 has been provided and shall be updated annually.	Noted.
	• 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. The County has suggested that adjustments will be made after sufficient time to measure the effectiveness of the pet waste campaign. The County should submit a work plan with timelines and schedules for assessing the effectiveness of the pet waste campaign. This will allow MDE to understand the objectives and	Noted. This information will be included in the next annual report.

MS4 Permit Condition	MDE Assessment and Recommendations	DoE Response
	milestones toward quantifying pet waste outreach efforts.	
	• MDE has advised in prior annual reports that dredging is not an acceptable restoration BMP (see MDE FY 2014 annual report review regarding Laurel Lakes dredging). The activities at Greenbelt Lake will need to be reevaluated by MDE for appropriate restoration credit. The County shall provide further information in FY 2018 annual report to justify the credits without accounting for dredging activities.	The credit reported for the Greenbelt Lake is not based on the dredging but based on the retrofitting forebay and increasing the treatment capacity.
	• The County reports that the sediment delivery factor has been accounted for in stream restoration projects. Please clarify where this information is verified in future annual reports.	The TSS load reductions are based on the Table 7 of the MDE guidance issued in 2014. The report does not show the calculation methodology. To verify if the sediment delivery factor is accounted for, please review the spreadsheet included on DVD in the TMDL folder.
	• MDE requested a redline revision to the original TMDL plans in the FY 2016 annual report review. MDE will accept a supplement to the original TMDL plans to highlight program successes, challenges, and adaptive management strategies. The supplemental plan should include any changes to baseline loads and reduction targets when compared to the original plans submitted in FY 2014 report. MDE recommends revising tables 6.3 and 6.4 in each watershed plan and explain the reason for any changes when comparing with loads reported in the original plans.	Noted. This information will be included in the next annual report.
	• The County should provide more information on whether stream restoration projects completed as part of WSSC's consent order are planned for future credit.	The WSSC's stream restoration projects are counted towards current restoration credits and accounted in the total restoration achieved to date since the inception of the current permit.
	The following comment pertain to the TMDL Restoration Plans:	
	• The "Total Annual Load Reduction Targets" in	Noted. This information will

MS4 Permit Condition	MDE Assessment and Recommendations	DoE Response
	Tables E-6 through E-9 in the FY 2017 annual report were compared to the "Remaining Reduction or Reduction Gap" metric referenced in the County's original implementation plans submitted in 2014. The Mattawoman Creek plan provides a final date to achieve pollutant reduction targets. However, the Anacostia River, Upper Patuxent River and Piscataway River plans do not provide a schedule and final date to achieve the required reductions. The County must develop implementation schedules with a final date for achieving the stormwater WLA reductions for all EPA approved TMDLs.	be included in the next annual report.
	• Tables E-1, E-2, E-3, E-4, and E-5 in the County's FY 2017 Annual Report show that the ''Target Load Reduction" has changed from the values reported in the County's original restorations plans submitted for each watershed in 2014 for the following pollutants:	Noted.
	○ TN, TP, TSS, BOD, and Bacteria (Anacostia watershed);	Noted.
	○ TN and TP (Mattawoman watershed);	Noted.
	○ TSS and Bacteria (Patuxent River watershed); In addition, TP was not included in this table and shall be provided in the next report;	Noted.
	○ Bacteria (Piscataway watershed);	Noted.
	○ The County shall provide a discussion describing how baselines numbers have changed for any pollutant since the original 2014 plans, and describe the analysis to determine the new baseline numbers to verify the new target reductions.	Noted. This information will be included in the next annual report.
	• The concerns noted above regarding revisions to baselines and targets in the County's 2014 restoration plans when compared to tables in the FY 2017 report, needs to be addressed so that MDE can evaluate the County's progress toward meeting required load reductions. The following information is needed for further review by MDE:	Noted.
	• Tabulate restoration implementation and associated load reductions for each BMP type to verify how the reported percent reductions	Noted. For FY 2018, we have included a spreadsheet on accompanying DVD under TMDL

MS4 Permit Condition	MDE Assessment and Recommendations	DoE Response
	have been calculated. MDE is not able to verify overall progress toward meeting a certain percentage of the targets with the information available in the annual reports.	folder. This spreadsheet was used for calculating the load reduction.
	• Clarify whether any modeling tools are used to track progress or whether the estimated reductions are calculated with a spreadsheet. MDE requests expanding tables E-1 through E-5 and E-10 through E-17 to provide the numbers requested above to show load reductions for each BMP type as described below.	After adopting MDE's geodatabase, it was easy for the County to analyze this information directly in ArcGIS by generating the summary tables. These tables are further analyzed in spreadsheet for QA/QC or for presenting information in the report. As mentioned above, a spreadsheet is included in the DVD under TMDL folder that includes these information for each BMP. This will provide the additional information that is requested by MDE in the comments.
	• Tables E-1, E-2, E-3, E-4, and E-5 in the County's FY 2017 Annual Report should include the following information:	
	○ Baseline loads ○ Target percent reduction ○ Target loads ○ Implemented BMPs ○ Reductions achieved to date ○ Planned BMPs; ○ Load reductions from those BMPs; ○ A summation of BMPs to meet target load reductions; and ○ The timeframe that the target load reductions with be achieved.	
	• The County indicates that it has nearly achieved the full reductions required by the Upper Patuxent River sediment TMDL. In this regard, the County should consider the following:	Noted.
	○ Load accounting is an approximation of the level of effort to achieve sediment TMDL end points.	
	○ The end point for sediment TMDL achievement is defined by sediment related habitat stressors in Maryland's Biological Stressor Identification Process.	
	○ Until data indicate that sediment related habitat metrics are no longer a stressor to biology, implementation needs to continue.	
	• MDE recommends that the County move forward with PCB source tracking monitoring which was been proposed in the original Anacostia PCB TMDL implementation plan. The source tracking monitoring may be informed by desktop analyses of potential PCB "hotspots. This should supplement BMP implementation	Noted.

MS4 Permit Condition	MDE Assessment and Recommendations	DoE Response
	for sediment load reductions to reduce PCBs, so that these efforts are not the only measure for addressing the PCB TMDL.	
	• The County should provide more information on the biological monitoring data referenced on page xiiv of the FY 2017 Annual Report and include any trend analysis.	Noted. A report on biological assessment and monitoring for round 3, year 2 is included on DVD under TMDL folder.
	• The county should discuss why some watersheds have "Percent Reduction of Target" as 0% (e.g. the watershed is not a priority, funding is not available, etc.).	In FY 2018, the County is reporting "Percent Reduction of Target" above 0% in all watersheds. The primary criteria for a project location selection have been the impairment level of the watershed. Site constraints such as utility conflicts, land owner's restrictions, site accessibility, and easement also play a significant role in decision making, as with these constraints, small watersheds have less latitude for a project selection over a large watershed.
	• There are two page "xxxii" in the FY 2017 annual report. In addition, "Table E-6 through E-6" needs to be changed to "through E-9".	Noted. This is corrected in FY 2018 submittal.
	• Clarify whether the supported by the "Prince George's County Storm Water Stewardship Grant Program" are also credited toward storm water WLAs.	All completed restoration projects are credited towards storm water WLAs, provided if the BMP installed qualify for the credit.
	• Figure 4-1 from the restoration plans presents a lot of valuable information about the distribution of implementation work in Prince George's County. MDE does not need to see these data mapped given it's access to the geodatabase. However, for the general public/constituents of Prince George's County, it would be useful to provide updated versions of Figure 4-1 in future Annual Reports to promote restoration and its benefits.	Noted.
	○ Furthermore, visualizing BMP	

MS4 Permit Condition	MDE Assessment and Recommendations	DoE Response
	implementation using planning maps will assist with ensuring the ecological benefits of implementation are distributed across the watershed.	
	• There are separate TMDLs for Rocky Gorge Reservoir and Upper Patuxent River, therefore, Table E-8 should be split into two separate accountings.	Noted. The Table E-8 has been split per MDEs recommendation.
Part IV.F Assessment of Controls	• Prince George's County submitted its chemical and biological monitoring data via MDE's MS4 geodatabase format.	Noted.
	• The County monitored a total of 13 storms at its PGC003 in-stream station and 12 storms at its PGC005 in-stream station, meeting the permit requirement of 12 storms per year. In addition, the County captured six baseflow measurements. Because no storm data was able to be captured during August 2016, the County captured two baseflow samples in lieu of a storm sample.	Noted.
	• The ChemicalMonitoring table is mostly complete. with a few fields that are missing information:	Noted.
	○ E. coli data is missing for 7 storms	
	○ Total petrochemical hydrocarbon (TPH) data has not been recorded for 7 storms; the County has entered "0" for all entries in these fields. This is an increase from the 3 storms last year that were missing TPH data.	
	○ One storm is missing data for nutrients, metals and hardness	
	• The County cites that "weather constraints" prevented automatic storm sampling in the months of August 2016 and April 2017. "Weather and timing constraints" prevented manual sampling of six storms. As TPH and E. coli data are captured during manual sampling, this effectively prevented TPH and E.coli data from being collected for these storms. The County also indicated that manual sampling is limited to daylight hours due to safety concerns. While MDE recognizes the challenges involved in capturing this information, the County must take steps to improve its capture rate moving forward.	Noted.

MS4 Permit Condition	MDE Assessment and Recommendations	DoE Response
	• The MonitoringSite and onitoringDrainageArea tables are complete.	Noted.
	• The BiologicalMonitoring table is mostly complete, with Embeddedness data missing. The County has stated the embeddedness values are not collected for coastal plain streams. One of the biological monitoring stations (06-006B) was shown to have a lower Benthic Index of Biotic Integrity (BIBI) score in the past few years; the County cites the possibility of upstream road construction in 2012. Conversely, the 06-006C station was shown to have increasing BIBI scores; however, physical habitat scores were lower. The County cites the possibility of nutrient enrichment causing an increase in algae and fish populations without a corresponding improvement in overall habitat quality.	Noted.
	• The County continued its physical monitoring efforts in the Bear Branch watershed. The County monitors five cross-sections in total; monumented cross-section profiles are provided in the FY 2017 Bear Branch Annual Report. Three of the five cross sections show minor adjustments in 2016 compared to 2015; of those three, two appear to show minor aggradation. The County reports all five cross sections to show stable banks.	Noted.
	• The County continued to conduct its Stormwater Management Assessment in the Black Branch watershed. The County monitors 14 monumented cross sections (9 along the main stem). Table 4-9 in the FY 2017 Black Branch Report shows a general increasing trend in channel area and a general decreasing trend in entrenchment ratio in the past 11 years (when comparing all 14 cross sections).	Noted.
Part IV.G Program Funding	• The County's expenditures for capital and operating budgets for implementing NPDES stormwater permit requirements in FY 2017 were $90,315,188 and $14,427,784 respectively.	Noted.
	• The Watershed Protection and Restoration Program (WPRP} Annual Report has been submitted as requested by MDE and is currently under review.	Noted.

MS4 Permit Condition	MDE Assessment and Recommendations	DoE Response
	• MDE requests that the County's submit the next FAP as a narrative file in the MS4 geodatabase by January 2, 2019.	Noted. The 2018 FAP is included in the DVD.
Supplemental Report	• A supplemental report was provided as requested by MDE describing adequate program implementation within the 26 municipalities covered under the County's permit.	Noted.

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PART I: IDENTIFICATION

Permit Condition Part I: Prince George's County's NPDES MS4 Discharge Permit 11-DP-3314 MD0068284 covers stormwater discharges from the municipal separate storm sewer system in Prince George's County, Maryland, except for the City of Bowie. Discharges from the storm drain systems controlled by Prince George's County that may be subject to future NPDES MS4 stormwater program requirements may be added to this Permit at the discretion of the Maryland Department of the Environment (MDE). This permit was issued on January 2, 2014 and will remain in effect through January 1, 2019.

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PART II: DEFINITIONS

Permit Condition Part II: As required by MDE, terms used in this permit are defined in relevant chapters of Title 40 of the Code of Federal Regulations (CFR) Parts 122-I24 or the Code of Maryland Regulations (COMAR) 26.08.0 I, 26.I7.0 I, and 26.I7.02. Terms not defined in CFR or COMAR shall have the meanings attributed by common use.

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PART III: WATER QUALITY

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

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

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

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PART IV: STANDARD PERMIT CONDITIONS

A. PERMIT ADMINISTRATION

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

Jeff DeHan, Associate Director, Stormwater Management Division, Department of the Environment, Prince George's County, is the current liaison for the implementation of this permit. Table A-1 below identifies the lead program management and technical personnel in FY 2017. Table A-2 provides addresses of the coordinating agencies and Figure A-1 through Figure A-13 provides organization charts detailing personnel and groups responsible for major NPDES program tasks.

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

Permit Condition	Department/ Division	Manager, Title/ E-mail Address, Telephone	Technical Personnel, Title/ E-mail Address, Telephone
Permit Administration	DoE/SMD	Jeff DeHan, Associate Director Stormwater Management Division jmdehan@co.pg.md.us 301-883-5838	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	Consultant Services

Permit Condition	Department/ Division	Manager, Title/ E-mail Address, Telephone	Technical Personnel, Title/ E-mail Address, Telephone
		jgmaldonado@co.pg.md.us 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	Yonas Tesfai, Engineer III Site/Road Plan Review Division YSTesfai@co.pg.md.us 301-636-2060
SWM Design Manual	DPIE/SRRD	Mary Giles, PE, Associate Director Site/Road Plan Review Division mcgiles@co.pg.md.us 301-636-2060	Rey de Guzman, Chief Site/Road Plan Review Division redeguzman@co.pg.md.us 301-636-2060
Erosion and Sediment Control and SWM Construction Inspections	DPIE/ID	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/OHM	Vernon Stinnett, Associate Director Office of Highway Maintenance vlstinnett@co.pg.md.us 301-499-8522	Vacant, Division Chief Storm Drainage Maintenance Division
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	Mary Rea, Planner Site/Road Plan Review Division

Permit Condition	Department/ Division	Manager, Title/ E-mail Address, Telephone	Technical Personnel, Title/ E-mail Address, Telephone
		redeguzman@co.pg.md.us 301-636-2060	marea@co.pg.md.us 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	Vernon Stinnett, Associate Director Office of Highway Maintenance vlstinnett@co.pg.md.us 301-499-8556	Michael Brown, Division Chief Special Service Division mobrown@co.pg.md.us 301-499-8520

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

Permit Condition	Department/ Division	Manager, Title/ E-mail Address, Telephone	Technical Personnel, Title/ E-mail Address, Telephone
		lmlowe@co.pg.md.us 301-883-5952	
Restoration Plans and TMDL			
Watershed Assessments	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	See program manager
Restoration Plans	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	Consultant Services
Public Participation	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	See program manager
TMDL Compliance			
Water Quality Retrofits	DoE/SMD	Frank Galosi, Section Head Capital Projects Design Section flgalosi@co.pg.md.us 301-883-5876	See program manager
Construction of SWM Retrofits	DoE/SMD	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 400, Largo, MD 20774
DPW&T/OHM:	Department of Public Works and Transportation, Office of Highway Maintenance (OHM) 8400 D'Arcy Road, Forestville, MD 20747
DPIE:	Department of Permitting, Inspections and Enforcement (DPIE) 9400 Peppercorn Place, Suite 230, Largo, MD 20774
HD/EHDC:	Health Department, Environmental Health/Disease Control Division 9201 Basil Court, Suite 318, Largo, MD 20774

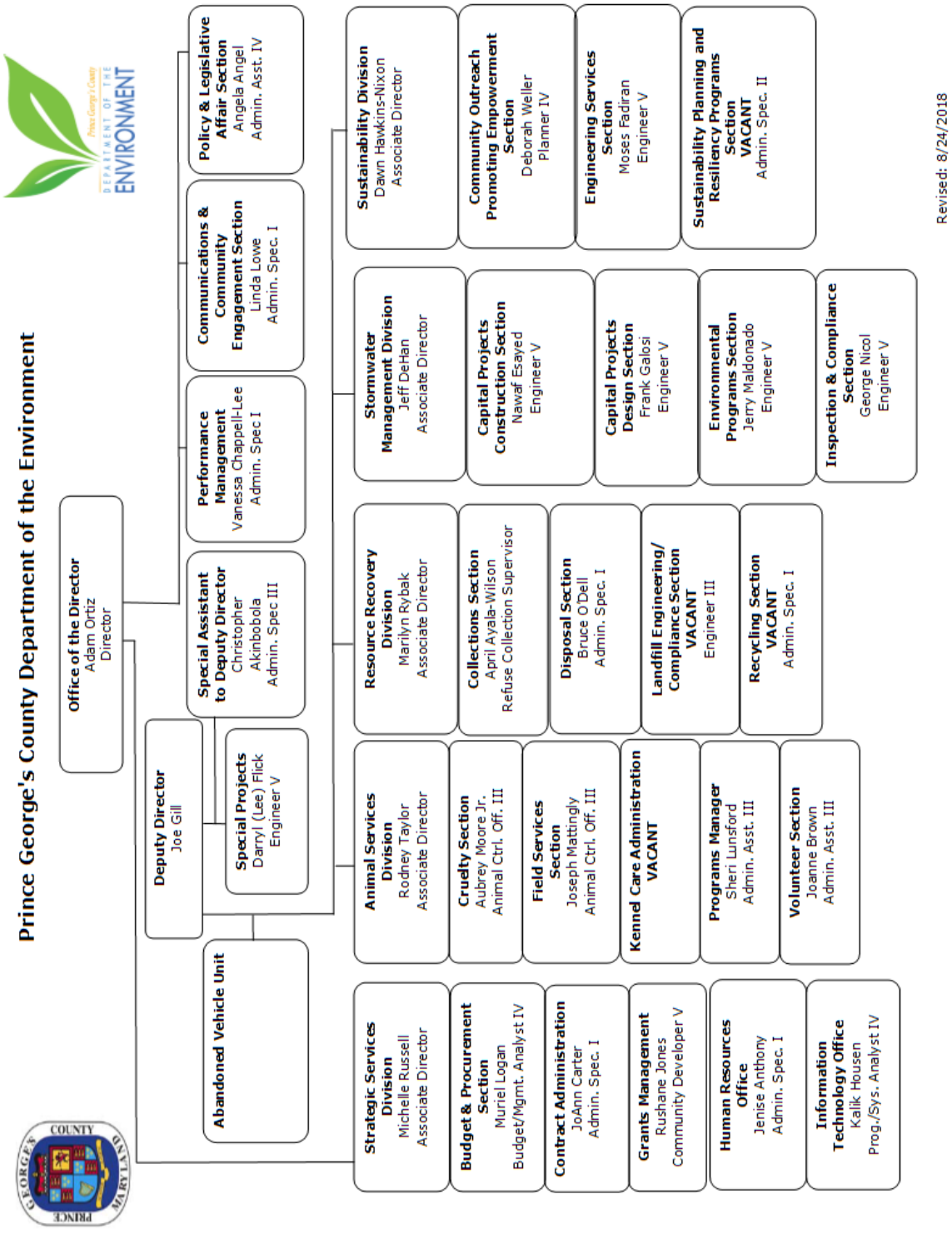

Figure A-1. Department of the Environment - Office of the Director Organizational Chart

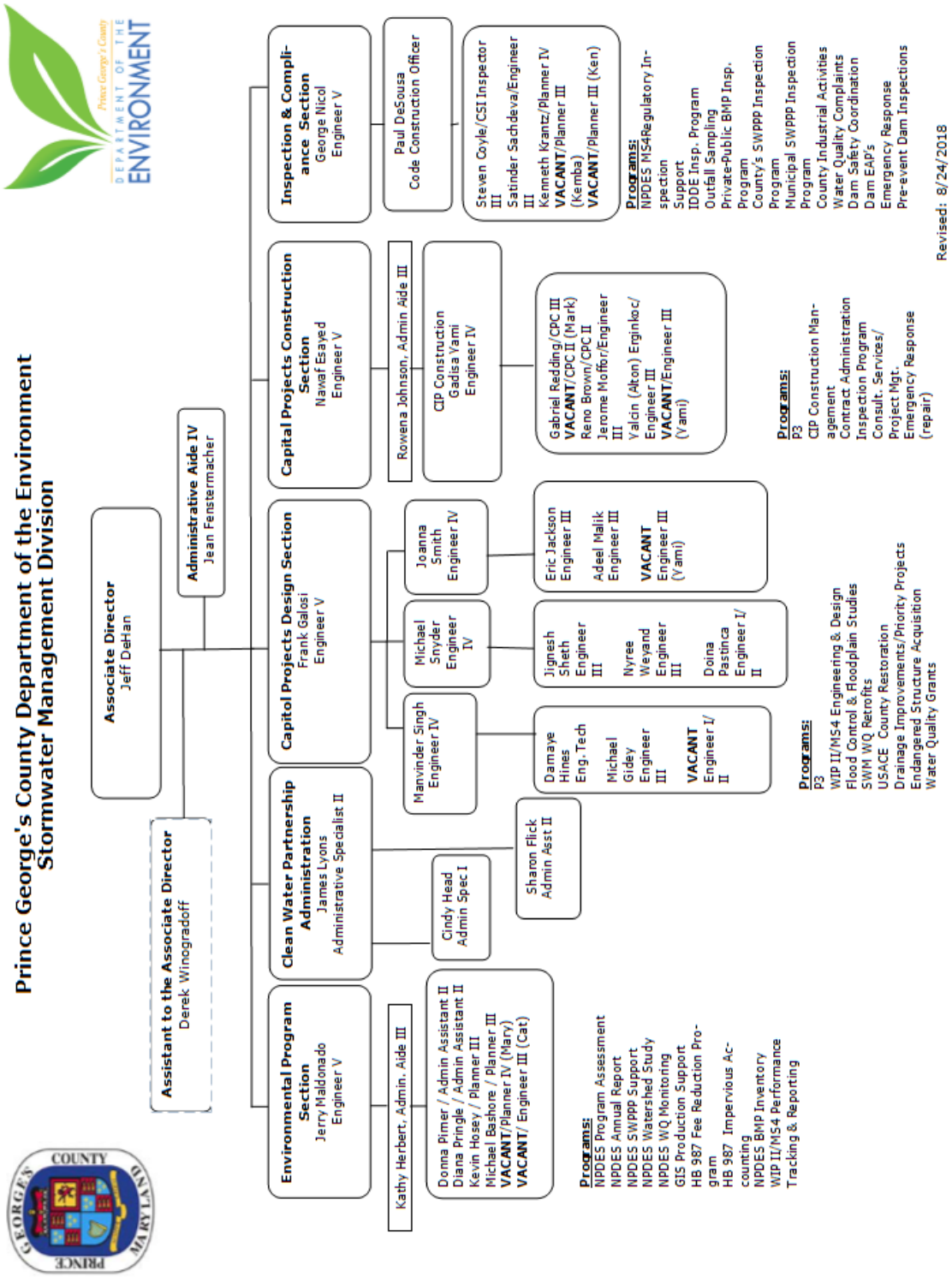

Figure A-2. Department of the Environment - Stormwater Management Division Organizational Chart

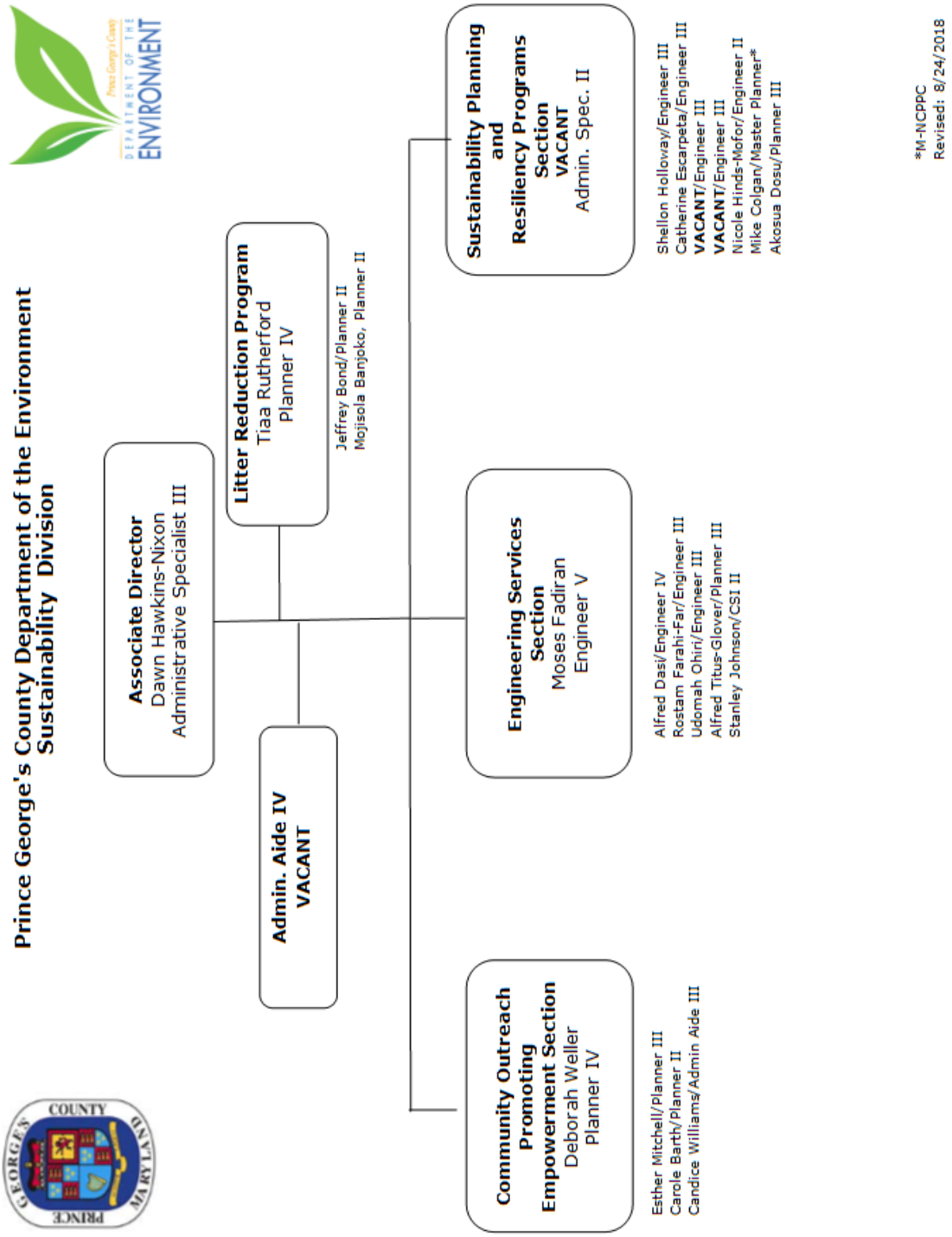

Figure A-3. Department of the Environment - Sustainability Division Organizational Chart

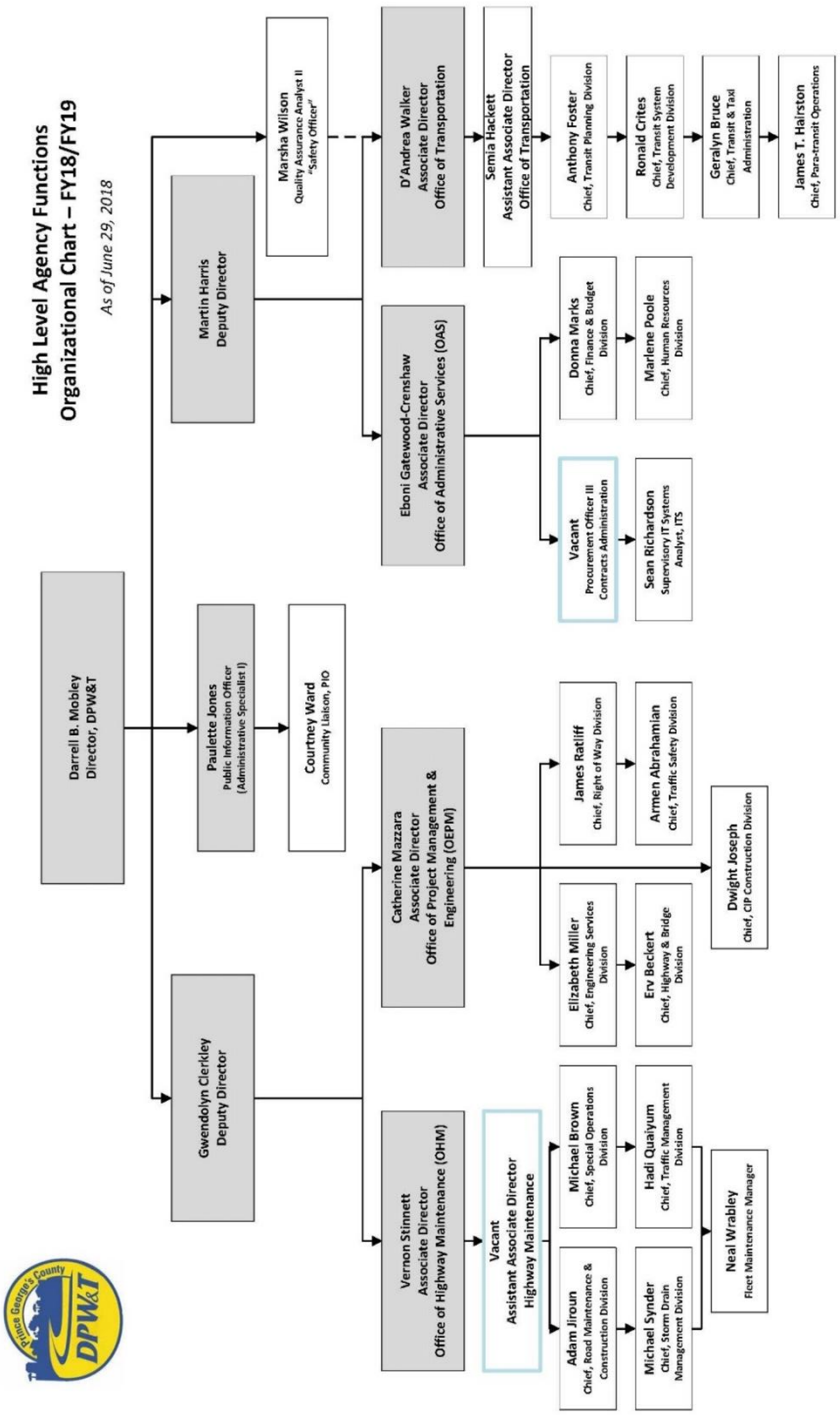

Figure A-4. Department of Public Works and Transportation - Office of the Director Organizational Chart

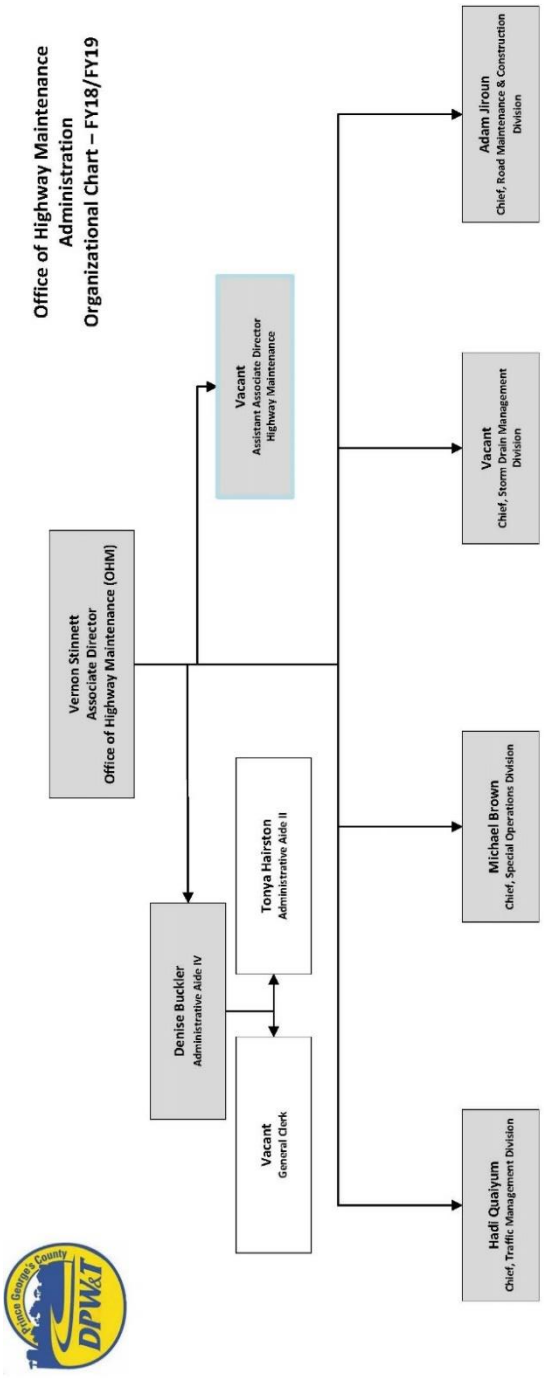

Figure A-5. Department of Public Works and Transportation - Office of Highway Maintenance (OHM) Organizational Chart

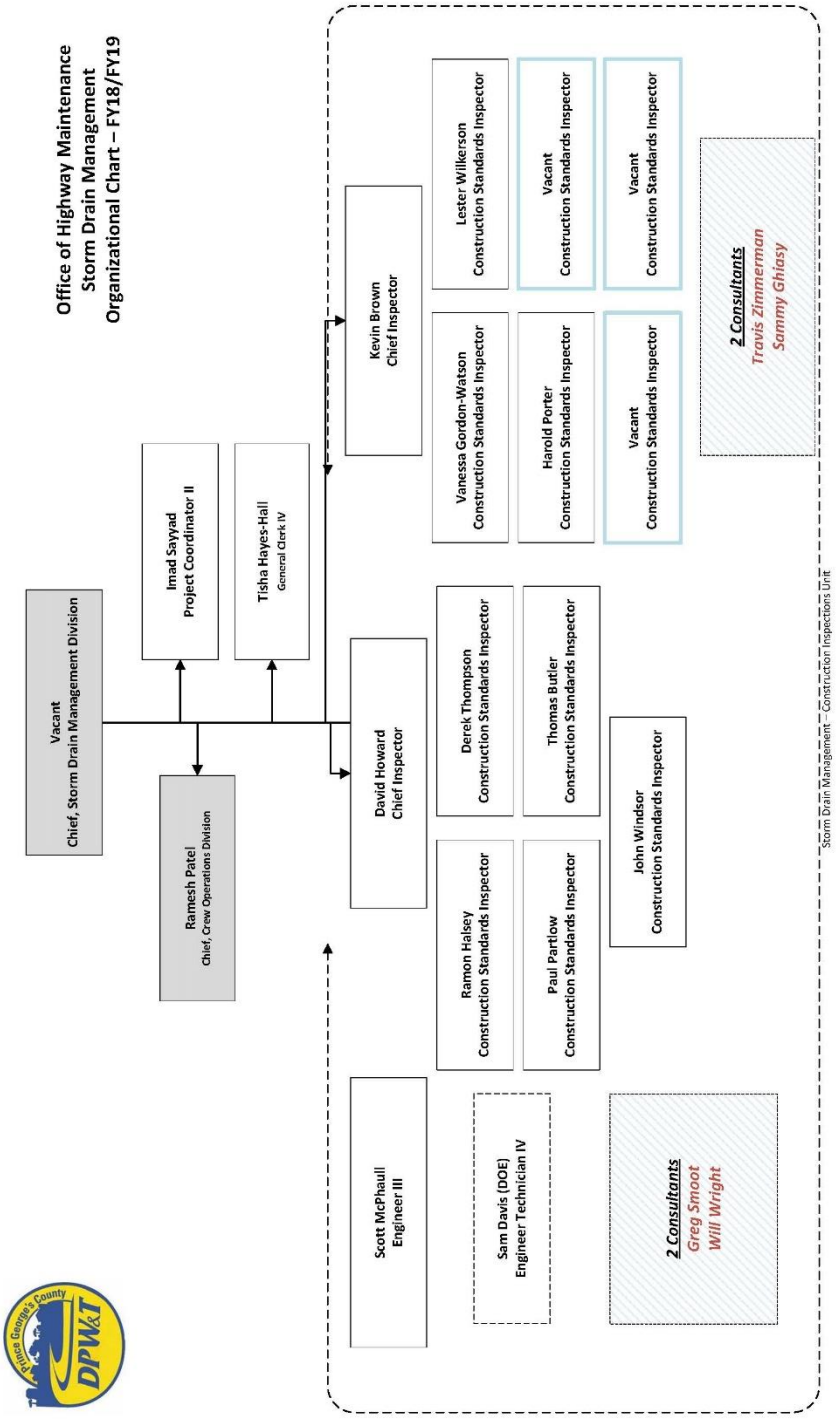

Figure A-6. Department of Public Works and Transportation, OHM - Storm Drain Maintenance Division Organizational Chart

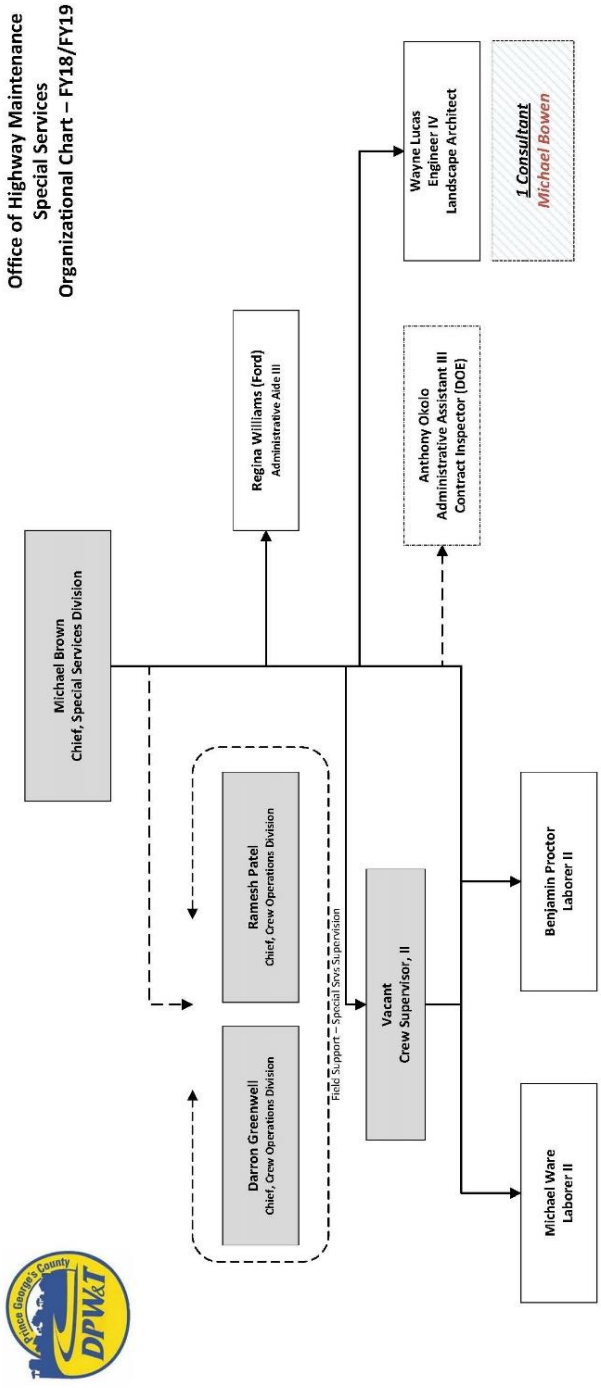

Figure A-7. Department of Public Works and Transportation (OHM) -Special Services Division

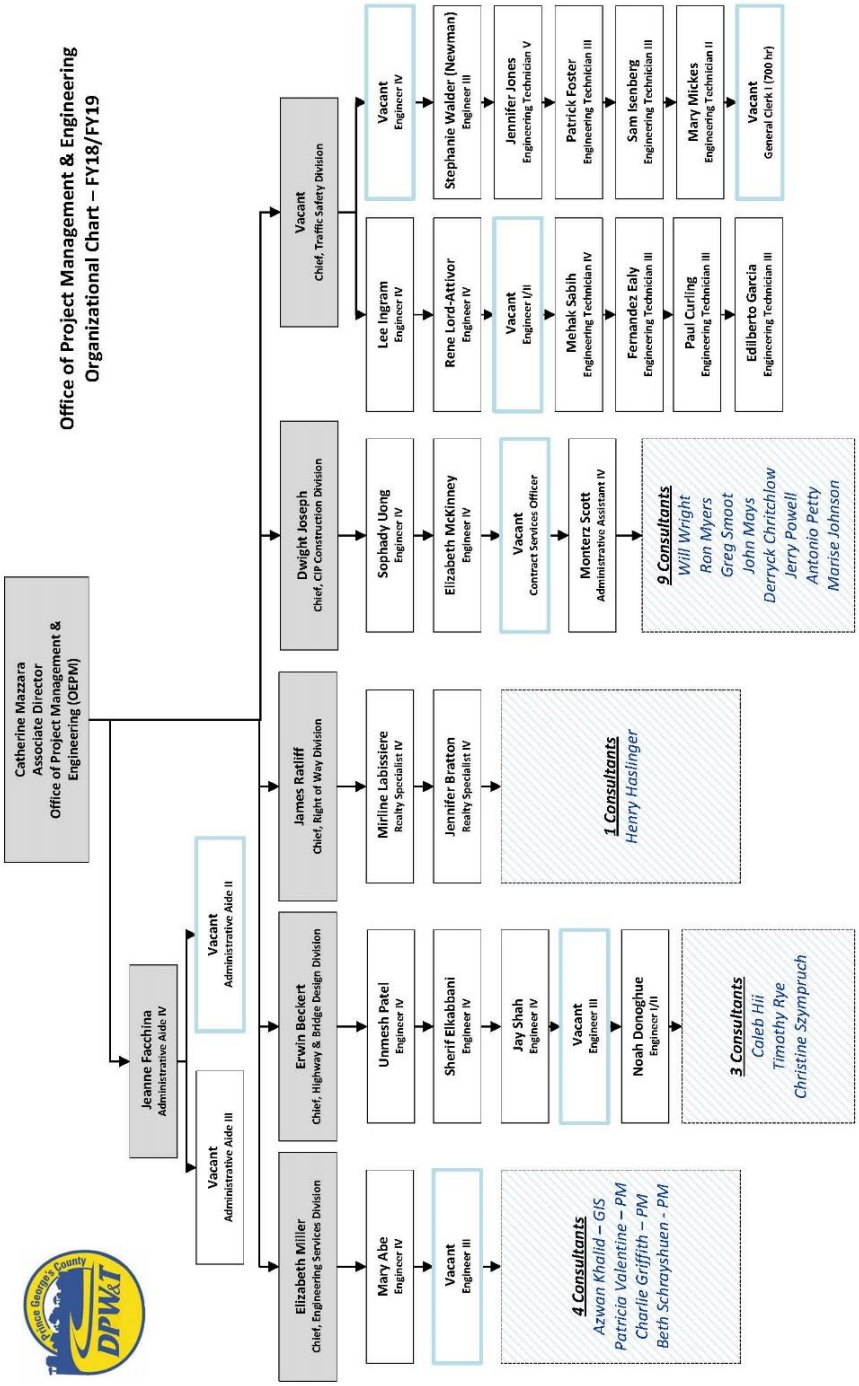

Figure A-8. Department of Public Works and Transportation - Office of Engineering and Project Management Organizational Chart

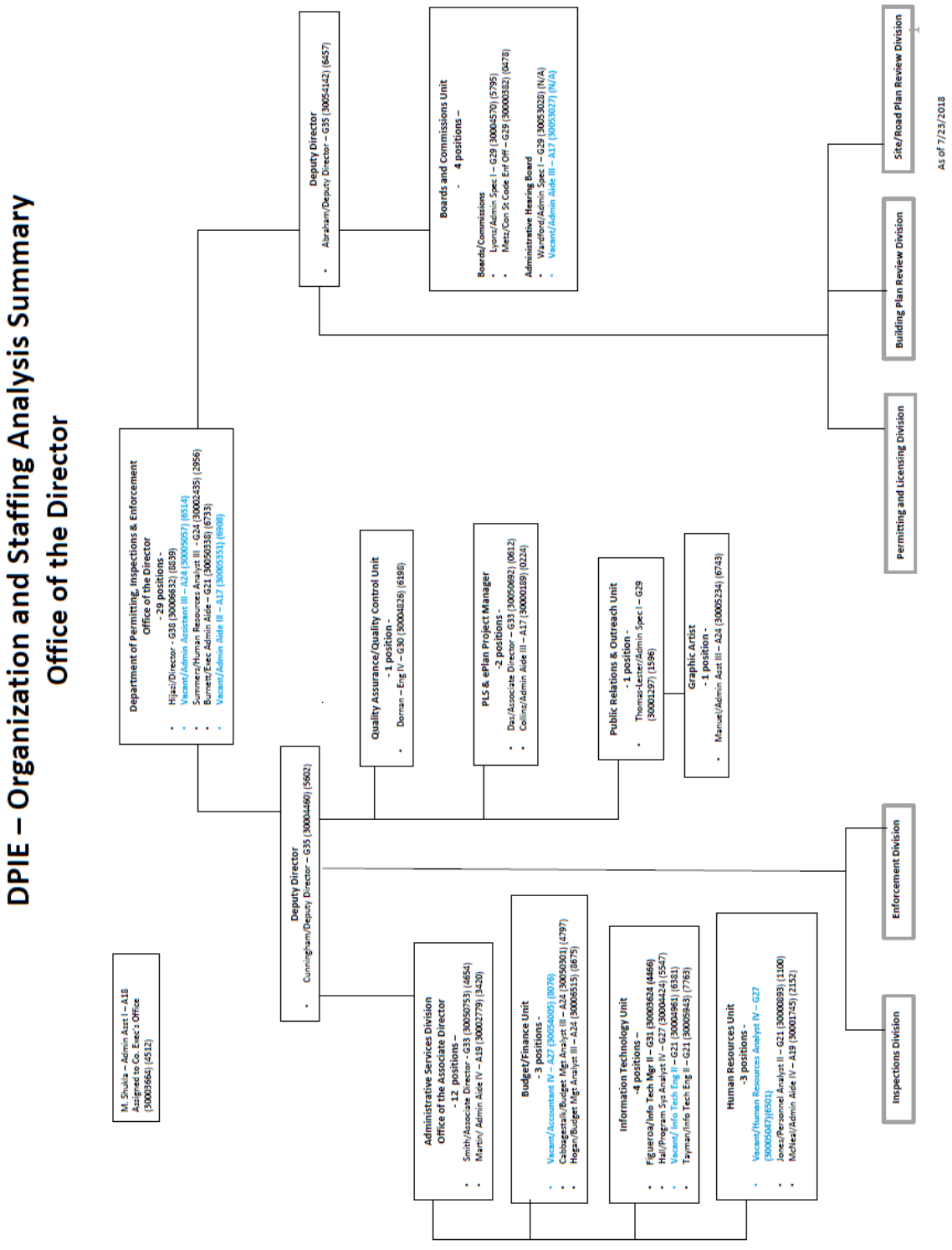

Figure A-9. Department of Permitting, Inspections and Enforcement - Organization and Staffing Analysis Summary, Office of the Director

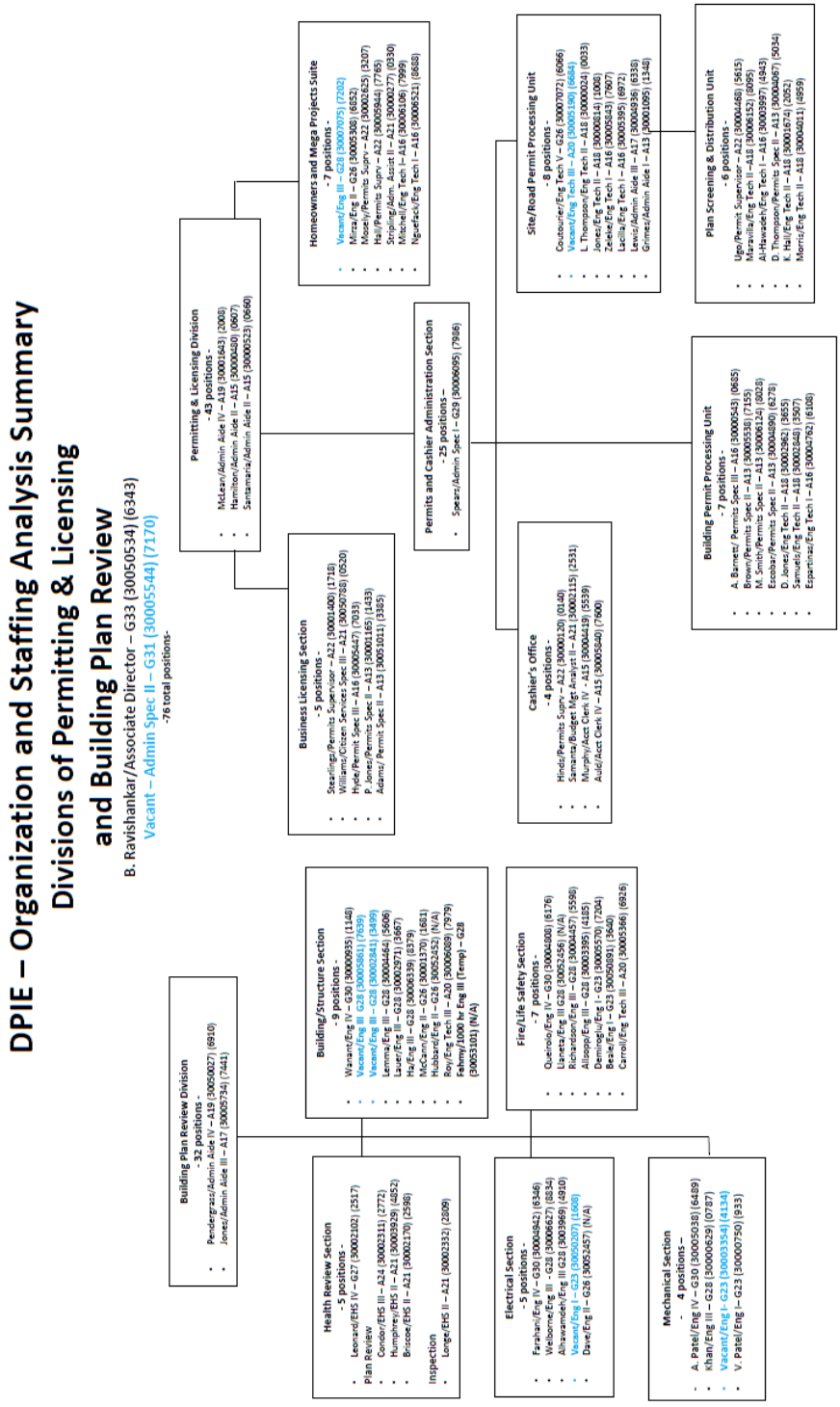

Figure A-10. Department of Permitting, Inspections and Enforcement - Organization and Staffing Analysis Summary, Permitting and Licensing Division and Building Plan Review

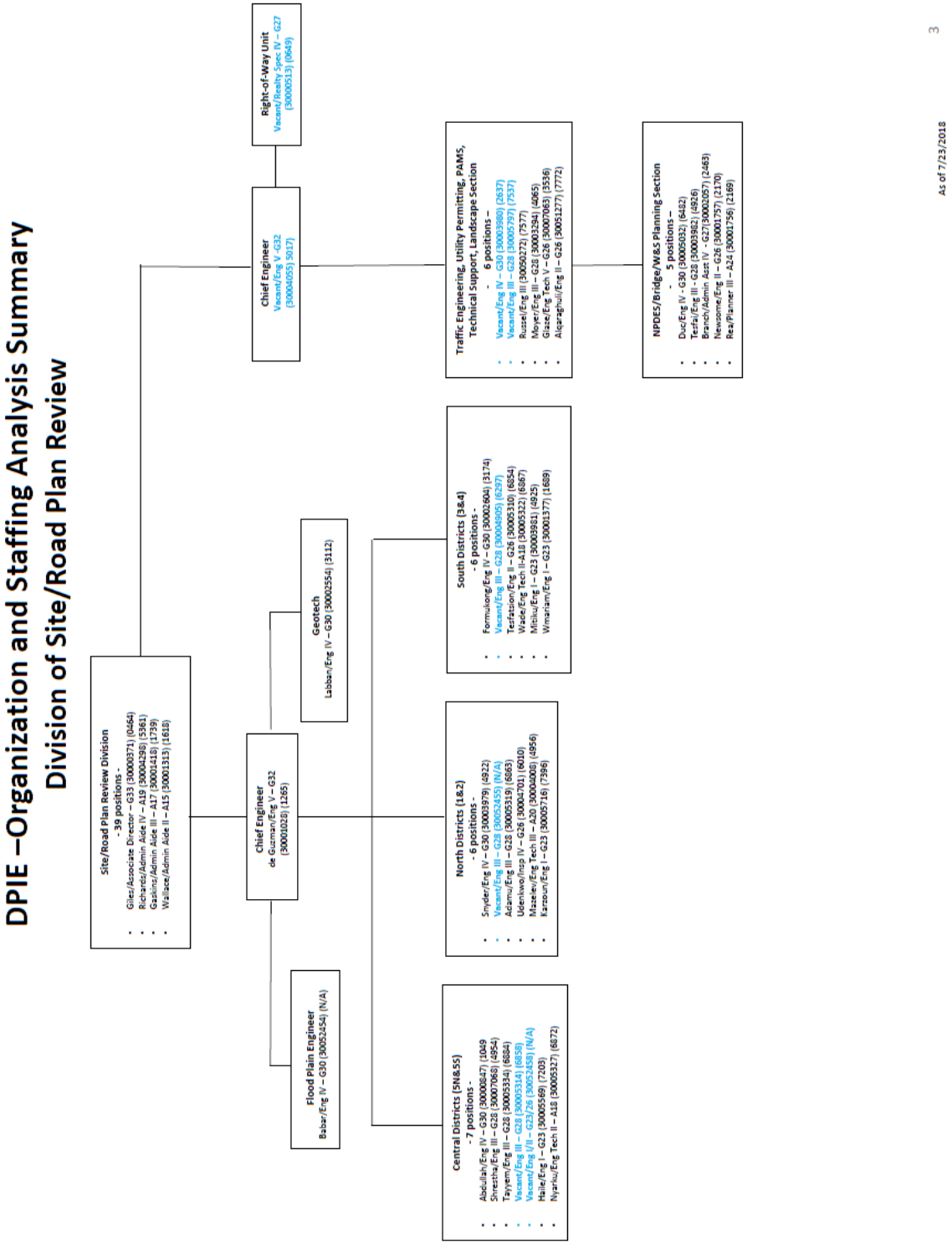

Figure A-11. Department of Permitting, Inspections and Enforcement - Organization and Staffing Analysis Summary, Site/ Road Plan Review Division

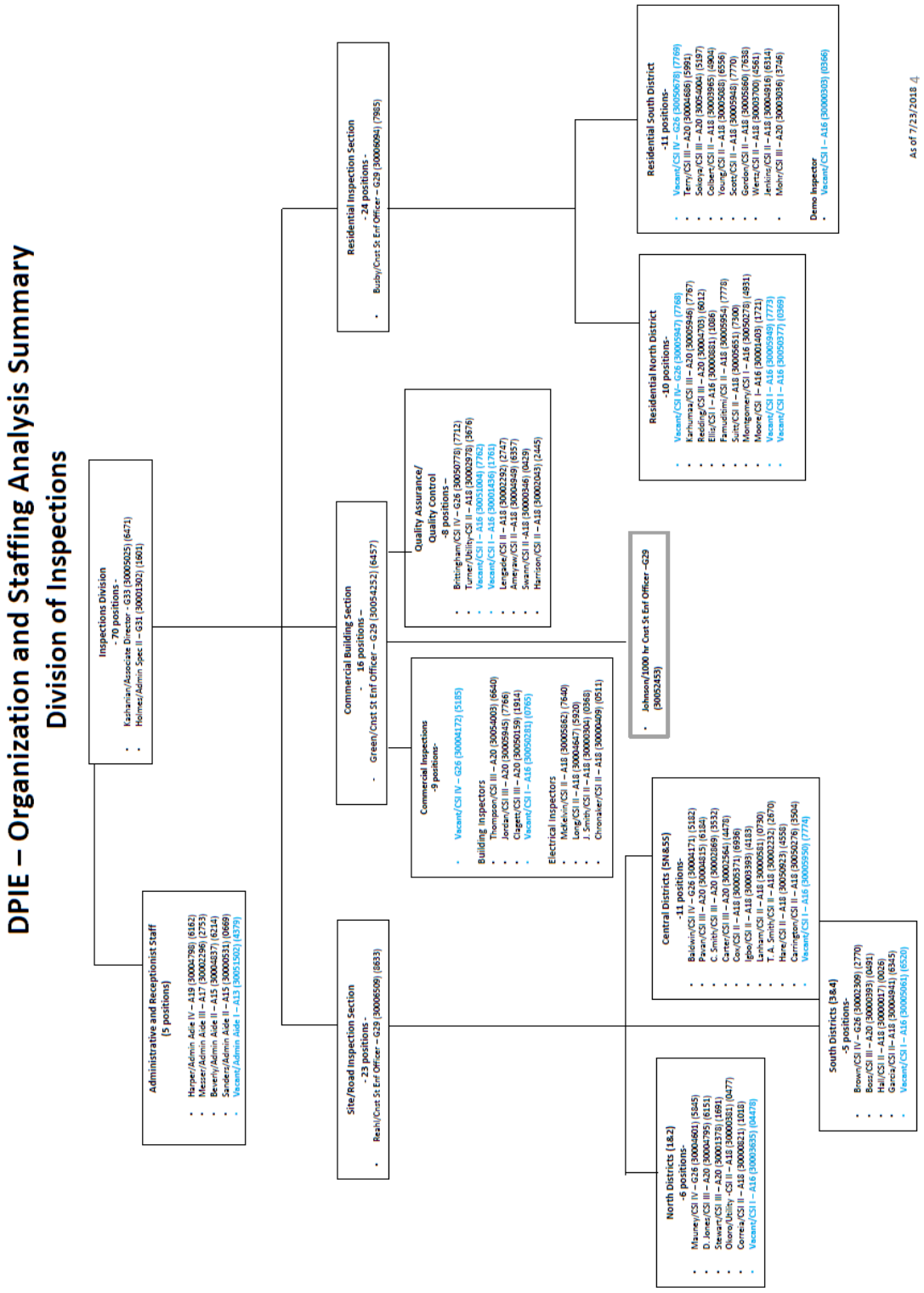

Figure A-12. Department of Permitting, Inspections and Enforcement - Organization and Staffing Analysis Summary, Inspections Division

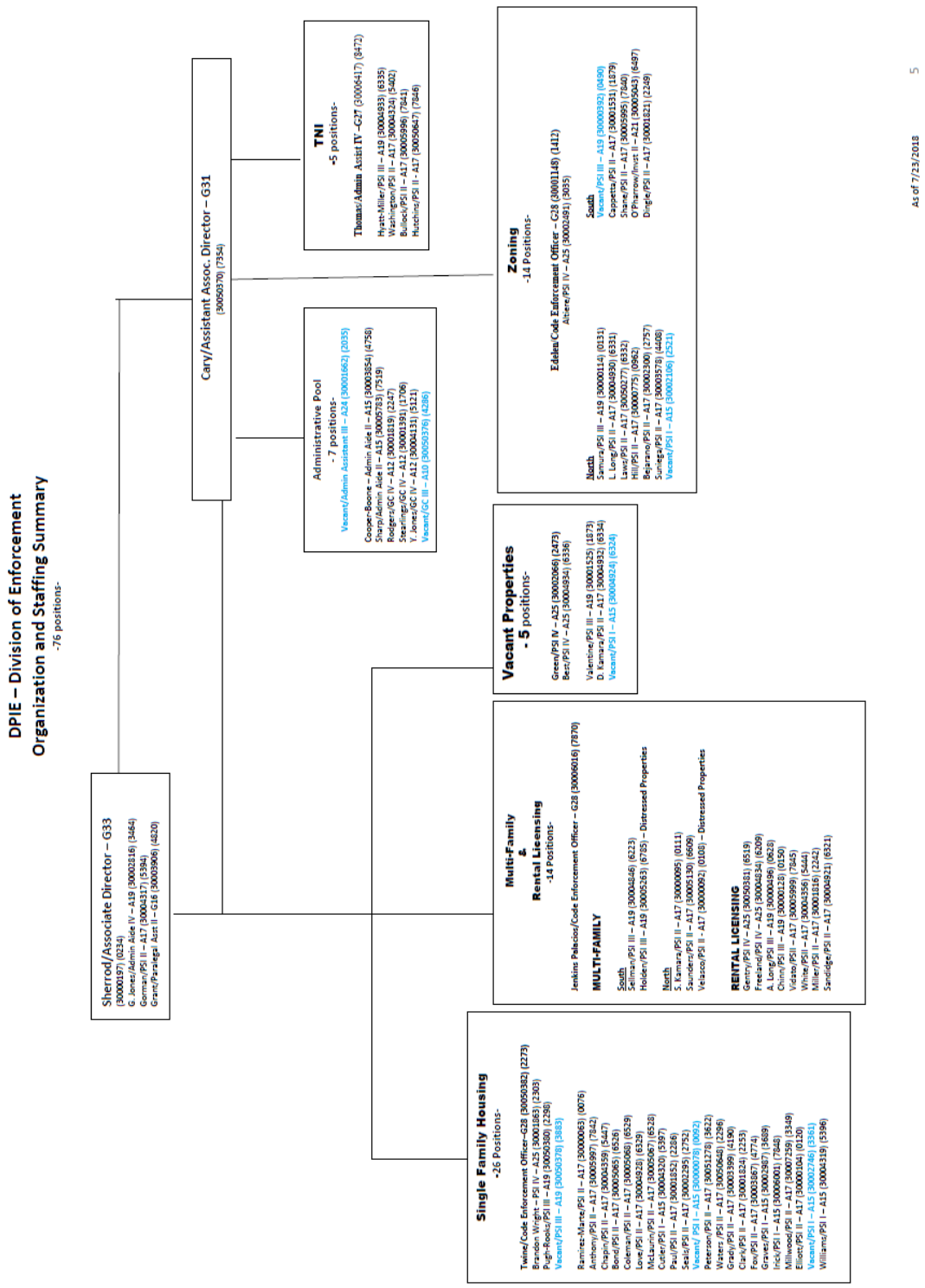

Figure A-13. Department of Permitting, Inspections and enforcement - Organization and Staffing Analysis Summary, Enforcement Division

B. LEGAL AUTHORITY

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

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

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

C. SOURCE IDENTIFICATION

1. STORM DRAIN SYSTEM

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

In FY 2018, the County maintained 65,195 records for infrastructure (manhole, inlet, and outfall) points and 4,982 drainage areas associated with these structures. About 1,652 infrastructure records were added in FY 2018 infrastructure inventory. The outfalls along with their outfall locations and associated drainage areas have been provided on DVD in the MDE's MS4 geodatabase.

2. INDUSTRIAL AND COMMERCIAL SOURCES

Permit Condition Part IV. C. 2: The Industrial and Commercial Sources information shall be submitted annually for all County watersheds within the permit area in geographic information system (GIS) format with associated tables as required in PART V of this permit. The Industrial and Commercial Sources will include industrial and commercial land uses and sites that the County has determined have the potential to contribute significant pollutants.

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

3. URBAN BEST MANAGEMENT PRACTICES (BMPS)

Permit Condition Part IV. C. 3: The Urban Best Management Practices (BMPs) information shall be submitted annually for all County watersheds within the permit area in geographic information system (GIS) format with associated tables as required in PART V of this permit. The Urban best management practices (BMPs) stormwater management facility data shall include outfall locations and delineated drainage areas.

A total of 3,363 urban BMPs (3,094 new development BMPs, and 269 structural restoration BMPs including redevelopment) and 978 alternative BMPs (79 stream restoration and 899 septic disconnections/ improvements) was reported to MDE as part of the FY 2017 BMP inventory. For FY 2018, this inventory has grown to 4,058 completed urban BMPs (3,367 new development BMPs, and 691 structural restoration BMPs including redevelopment), 80 stream restoration and outfall stabilization and 1,447 other alternative BMPs records that include street sweeping, 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 MDE's 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 FY 2018, an update of the MS4 regulated permit area and associated impervious areas has been provided on DVD in the MDE's MS4 geodatabase.

5. MONITORING LOCATIONS

Permit Condition Part IV. C. 5: The Monitoring Locations information shall be submitted annually for all County watersheds within the permit area in geographic information system (GIS) format with associated tables as required in PART V of this permit. The information shall include locations established for chemical, biological, and physical monitoring of watershed restoration efforts and the 2000 Maryland Stormwater Design Manual;

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

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 2017, the County reported 492 projects in various phases of planning, under construction, or completed. For FY 2018, the updated list includes 415 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 MDE's 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. Over the past year, DPIE has developed a procedure for collecting as-builts for ESD devices on single lots in new subdivisions. This new procedure will ensure that DPIE has the ESD device information from all the various builders in the subdivision.

Table D-1. Stormwater Management Concept Plan Approvals by Watershed in FY 2018

MDE 8-digit code	Watershed Name	Number of Plans	Disturbed Area (Acres)	Proposed Impervious Area (Acres)
02131103	Western Branch	37	239.11	74.21
02140205	Anacostia River	90	170.58	128.75
02140201	Potomac River U tidal	11	152.72	19.87
02140203	Piscataway Creek	13	77.05	0.91
02140201	Patuxent River upper	8	34.42	24.32
02140111	Mattawoman Creek	6	72.06	31.98
02140204	Oxon Creek	2	0.14	0.12

MDE 8-digit code	Watershed Name	Number of Plans	Disturbed Area (Acres)	Proposed Impervious Area (Acres)
02131102	Patuxent River middle	2	1.53	0.21
02131107	Rocky Gorge Dam	0	0	0
02131101	Patuxent River lower	1	0.50	0.09
02140108	Zekiah Swamp	0	0	0
Total		***170***	***748.11***	***280.46***

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 during the concept plan approval phase in FY 2018 is provided below:

- A total of 170 concept plans approved
- A total of 182 site development plans reviewed
- A total of 167 final plans reviewed

- A total of 39 redevelopment projects received
- A total of 69 stormwater exemptions granted, a justification of the exemptions granted is provided in the "Exemption table FY 2018" spreadsheet on DVD.
- A total of 2 waiver requests received for qualitative control
- Only 1 waiver request received for quantitative control
- A total of 5 waiver requests 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.

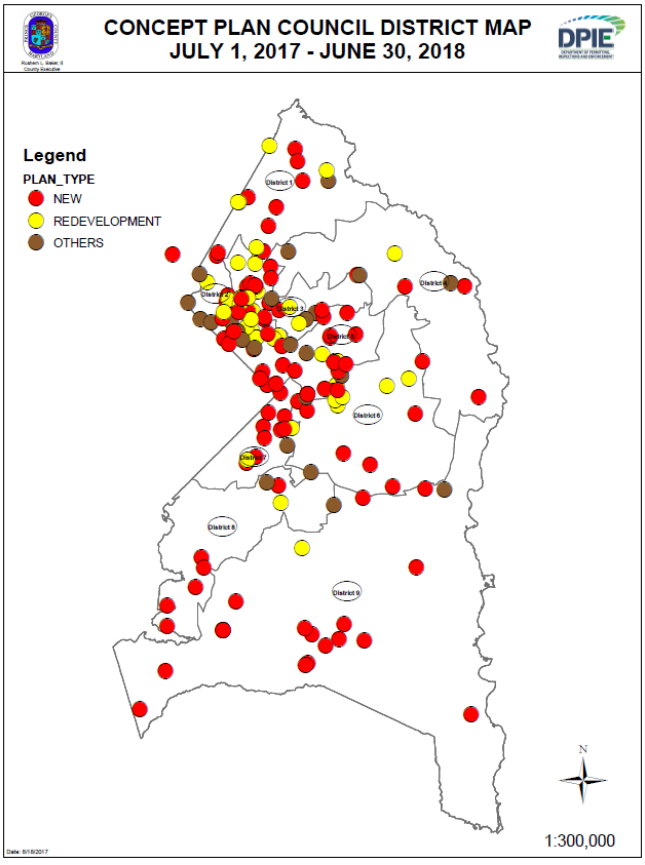

Figure D-1. Stormwater Management Concept Plan Approvals in FY 2018

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 2018 was 18. During this reporting period, these inspectors performed a total of 10,241 stormwater inspections and issued 10 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 3,442 to 4,138 between FY 2017 and FY 2018. This BMP inventory consists of private developer BMPs for new development, restoration and redevelopment BMPs, and stream restoration or outfall stabilization BMPs.

There are 3,367 privately owned BMPs for new development; of these, 3,067 BMPs had recent inspection records in FY 2018. The restoration and redevelopment BMP inventory includes 691 BMPs of which 355 BMPs had recent inspection records. The stream restoration and outfall stabilization BMP inventory includes 80 records. Twenty-four of these BMPs had recent inspection records in FY 2018. 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 the maintenance and operations of all publicly owned BMPs. The DPW&T in-house inspection and maintenance staff inspect ponds at least annually during the mowing season. Routine maintenance work, such as mowing, debris removal from trash racks, and outfall repairs including minor vegetative and structural stabilization, is performed by in house crews.

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 120. 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
2018	17	3	20
Total	***109***	***17***	***126***

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 2018 was 18. During this reporting period, these inspectors performed a total of 14,934 sediment control inspections and issued 126 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 FY 2018 reporting period, Prince George's County reported a total of 126 projects with earth disturbances of an acre or more. The total earth disturbance for these 126 projects was 1,593.92 acres. Copies of the disturbed area databases were forwarded to MDE throughout the year on a quarterly basis. Overall grading permit information for FY 2018 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 2018 inspections, DoE contracted Consultant services to perform field screening of 150 major storm drain outfalls throughout the County. Originally, this effort started in 2015, and focused primarily on the Anacostia watershed; however, in 2016, the target area was expanded to include the entire County.

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

The outfall screening was conducted from December 2017 through March 2018, with 158 inspections being conducted at 150 outfalls. A two-person field crew visited each site following 72 hours of dry weather. The physical condition of each site was recorded on the tablet-based field inspection

tool. If a dry-weather flow was present, a sample was taken and tested with a Hach chemical test kit. Tests were conducted for temperature, pH, ammonia, dissolved oxygen, turbidity, detergents, chlorine, copper, phenols, and fluoride. When a chemical test was conducted and the results showed a high concentration for any contaminant, the site was retested after 4 hours but within 24 hours to verify the results.

It is important to note that a dry-weather flow may not indicate an illicit discharge, groundwater intrusion into storm drains is common; additionally, permitted discharges may be occurring. To determine if an illicit discharge occurred, the results of the chemical tests performed were compared with the accepted statewide averages described in *Dry Weather Flow and Illicit Discharges in Maryland Storm Drain Systems* (MDE, 1997). Using the statewide averages, the 1997 study provides a threshold for each constituent, based on watershed land use. The results from the chemical tests performed during FY 2018 were compared with this threshold to determine which results are considered abnormal for each constituent, and to make recommendations as to which storm drain systems should be investigated further as having possible illicit connections. Numerical thresholds for dissolved oxygen, turbidity, and fluoride are not published. The need for follow-up investigations based on these parameters was determined on a case-by-case basis. The thresholds used for the investigations are as follows:

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

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

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

The results show that, of the 158 inspections, 111 observed dry-weather flow. Of these, 31 sites had minor flow or conditions that did not allow for sampling; 79 chemical tests were performed. Six sites were found to be generating pollutants higher than the threshold limits on at least one of the two tests. The outfall reports for these sites were forwarded to DoE's Code Enforcement Officer to further investigate and determine the source of the possible illicit discharge. Table D-3 below shows the details of the investigation and corrective actions taken to eliminate the illicit discharge observed at the six outfalls.

Table D-3. Details of the Corrective Action Taken for the Illicit Discharges

Outfall ID	Corrective Actions
PG73OUT057825 (Local: 62488)	At the time of the consultant's inspection, this outfall was found to be discharging cloudy water with high concentrations of phenols and detergents, foamy suds floating on the surface, and a chemical odor. The second inspection chemical test found increased concentrations of ammonia above the threshold in the discharge. The illicit flow was traced to the garage door of 6802 Mid Cities Avenue, Beltsville, MD. The Code Enforcement Officer conducted an inspection of the property. It appeared the occupants of the building were washing the garage and allowing the water runoff to flow into the nearest storm drain inlet structure. The occupants of the building were required to halt all garage washing until absorbent booms were purchased to contain any water runoff from the garage during the washing of the garage. The absorbent booms were purchased by the occupants. The occupants also changed their method of washing the garage by using a mop instead of hosing down the garage. The property owner was also contacted about the violation. The County will continue to monitor the outfall at the next scheduled inspection. The issues have been resolved.
PG56OUT056306 (Local: 60688)	At the time of consultant's inspection, this outfall was found to be discharging water with high concentrations of ammonia and detergents, an oil sheen on the surface, and trash floating on the surface. The consultant's inspectors determined the illicit flow was from Queens Car Wash. The Code Enforcement Officer investigated the car wash and determined that one of the drains in the facility was clogged, causing runoff to flow from the facility and into the nearest storm drain inlet structure. The property owner had the drain unclogged. The County will continue to monitor the outfall at the next scheduled inspection. The issues have been resolved.
PG59OUT058062 (Local: 62776)	At the time of consultant's inspection, this outfall was found to be discharging water with high concentrations of detergents and ammonia, trash or debris floating on the surface, and high turbidity caused by sediment. The inspectors tracked the illicit flow to structures in front of the Walmart on Annapolis Road in Landover Hills, MD. The Code Enforcement Officer investigated the structures in the Walmart parking lot. During the inspection, a large area of bare ground was observed. It appeared that the lack of stabilization was contributing to the sediment in the outfall. The other pollutants in the water were from the surface runoff from the parking lot. The property owner was contacted to re-stabilize the bare ground. The property owner was also advised to develop a maintenance schedule for addressing trash and other pollutants in the parking lot. 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.
PG55OUT005144 (Local: 1001)	At the time of consultant's inspection, this outfall was found to be discharging water with high concentrations of detergents and ammonia, trash or debris floating on the surface, and a detergent smell. The water was yellow in color with yellow deposits and high turbidity caused by yellow sediment. During the second inspection and chemical test, the yellow water color and deposits were no longer present, and the outflow no longer had concentrations of ammonia above the threshold. The consultant's inspectors traced the detergent smell but could not find the source of the illicit discharge. The Code Enforcement Officer also investigated the outfall and the drainage system for the outfall but was also not able to locate the point source for the detergent smell. The County will continue to monitor the outfall at the next scheduled inspection. The issues have been resolved.
PG64OUT000311 (Local: 2348)	At the time of consultant's inspection, this outfall was found to be discharging water with high concentrations of ammonia, a bacterial sheen floating on the surface, sediment deposits, and a

Outfall ID	Corrective Actions
	sewage odor. The illicit flow originated from the inlet in front of 1620 Shamrock Avenue, Capitol Heights, MD. Standing water was present in a sanitary manhole near the outfall site may have contributed to the illicit discharge via intrusion. The Code Enforcement Officer contacted WSSC to investigate the sewer line. WSSC staff found a partial blockage in the sewer line which was then removed. The County's DPW&T was also contacted about the sedimentation in the pipe system. DPW&T then had the sediment removed. The County will continue to monitor the outfall at the next scheduled inspection. The issues have been resolved.
PG61OUT022252 (Local: 3382)	At the time of consultant's inspection, this outfall was found to be discharging water with high concentrations of detergents. Detergent concentrations in the illicit discharge had decreased by the time of the second inspection but were still above the threshold. No precise source of detergents was found upstream. The Code Enforcement Officer also investigated the outfall and the drainage system for the outfall but was also not able to locate the point source for the detergent. The County will continue to monitor the outfall at the next scheduled inspection.

Commercial and Industrial Visual Surveys

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

Within the commercial and industrial areas, field teams reviewed the drainage conditions, business practices, and overall site condition to determine if visual evidence of pollution was present that would not be detectable through the chemical tests. Field crews recorded suspicious practices found on commercial and industrial areas surrounding the 150 selected outfalls for IDDE inspections. Using the field inspection tool, commercial and industrial points were generated to indicate the location of the specific violations and polygons were created, verified, and attributed to track the areas that were visually inspected.

A total of 58 commercial and industrial complexes were inspected over the course of the inspections. A total of 33 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 outdoor storage of containers not under cover; five were oil stains on the pavement from vehicles; six were sediment being tracked onto the roadway; two were pavement staining from restaurant grease waste containers; eight were trash & debris around the property; two were staining from dumpsters; three were water runoff from car wash facilities; and one was staining of the pavement from salt piles. 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:

- Outdoor Storage of containers: The property owners were informed of the containers not being stored properly. The property owners were required to either place the containers under an outdoor covered area or store them within their facility. When the properties were re-inspected, it was observed that the property owners complied with the request. The issue has been resolved.

- Trash & Debris: The property owners were informed of the trash and debris around their property. The property owners were required to clean up their property. When the properties were re-inspected, it was observed that the property owners complied with the request. The County also worked with the property owners to educate them on good housekeeping practices and to develop a routine maintenance schedule to eliminate trash & debris on their property and the County's waterways. The issues have been resolved.
- Sedimentation: The property owners were informed of the sedimentation being tracked onto the County roadways. The County worked with most of the property owners of construction owned companies to have the streets routinely cleaned with street sweepers. The other property owners agreed to maintain their properties and eliminate any sedimentation from leaving their property. The issues have been resolved.
- Grease waste containers: The property owners were informed of the grease spills from the waste containers and the potential water quality concerns 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.
- Oil Stains: The property owners were informed of the oil stains on the pavement from the vehicles they store on their property. The property owners were required to either have the vehicles repaired or to place oil pans and absorbent pads under the vehicles until the vehicles can be repaired. When the properties were re-inspected, it was observed that most of the vehicles were repaired and the others were removed from the property. The issues have been resolved.
- Dumpsters: At the time of the inspection, no discharge were observed coming from the dumpsters. The pavement staining appeared to be an orange-reddish color caused by the oxidation of the rusty dumpsters. The property owners were required to make sure the lids on the dumpsters were closed at all times. The issues have been resolved.
- Salt Piles: The property owner was required to either remove the salt stockpile or cover it. The property owner agreed to cover the salt piles until spring and remove any salt left over from the winter season from the property. The issues have been resolved.
- Car washing: The property owners were informed about the water runoff from the car wash facilities flowing into the nearby storm drain inlet structure. The property owners were required to have their facilities inspected to make sure all drains and equipment within the facilities were functional. The County also requested the property owners have absorbent booms on site to stop any water runoff from leaving the carwash property. The property owner complied with the request. The issue has been resolved.

Investigation and Enforcement Program

The County utilizes the full enforcement authority authorized by the County Code to investigate and eliminate illicit discharges. The County Code assigns the authority and responsibility for responding to and eliminating illicit discharges by type, activity or location. For instance, enforcement actions associated with violations involving the improper storage of materials and/or dumping on private property are governed under the zoning ordinance and housing and property codes. Environmental enforcement, including disturbed area, grading, sediment and erosion control, is authorized under the County Code, "Subtitle 32. Water Resources Protection and Grading Code." All of these enforcement responsibilities fall within the authority of the Inspection and Enforcement Divisions of DPIE. The

prevention of human exposure to sewage is administered by the Health Department in accordance with the on-site sewage disposal systems regulations. The initial response to all hazardous material spills are handled by the County's Fire/Emergency Medical Services Department, Hazardous Materials Division (HMD).

Illicit Discharges

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

In FY 2018, DoE received an e-mail from Rebecca Crane with EPA Region III concerning a citizen's complaint about an oil leak by Storm Oil LLC and the improper disposal of the oil by power washing the oil into the parking lot and ultimately into the adjacent concrete drainage channel. The complaint was assigned to DoE's consultant to mobilize to the site and perform an inspection. The pavement just outside Storm Oil, LLC's garage as well as the surrounding area was slick, black and smelled like a restaurants grease trap. Storm Oil, LLC is a Waste Vegetable Oil Recycling company. The cause of the oil spill was due to a crack in the fill hose that pumps waste oil from the collection truck into the storage tanks within the facility. Because Storm Oil LLC had a General Discharge Permit (Permit Number 12SW3292, NPDES Number MDR003292), Mr. James Craig, District Manager for the Water Management Administration, Western Division Compliance Program, MDE, was contacted concerning the oil spill. The owner of Storm Oil, LLC met with DoE's Code Enforcement Officer, consultant's inspectors, and MDE's inspector Mr. Scott Haines, to ensure that the oil spill was cleaned up with vacuum trucks and absorbent booms to stop any oil runoff from entering the stream channel. Mr. Haines will continue to conduct inspections of Storm Oil, LLC to ensure compliance with the permit requirements. DoE also assisted with providing videos of SWPPP training for employee's to Storm Oil, LLC.

DoE was contacted by Mr. Dirk Lueders, Maryland State Highway Administration, concerning an inspection he performed on a State maintained pond, where high levels of detergent at the outfall were detected. The complaint was assigned to DoE's consultant to mobilize to the site and perform an inspection. The consultant's inspector traced the detergent to the car dealership's carwash facility, located within their maintenance shop. Due to a clogged drain within the facility, some of the water runoff overflowed into the storm drain inlet structure in the dealership parking lot. DoE's Code Enforcement Officer required the dealership to unclog the drain system. The dealership complied with the request and had the drain cleaned. The issue has been resolved.

Details of the complaint including the location of the sites are provided on the DVD under Management Programs\IDDE.

Response to MDE's Comments

On November 20, 2017, the MDE evaluated County's IDDE program implementation and provided comments on April 9, 2018. Table D-4 below summarizes the MDE's comments and County's response to the comments.

Table D-4. MDE's Comments Provided on April 9, 2018, and County's Response

MDE's Comment	County's Response
Provide progress updates on the County's efforts to refine the map of the storm drain system	This is an ongoing process to refine and update the map of the County's storm drain system and will provide a status update in next year's report.
Ensure annual training is provided on conducting visual surveys of commercial and industrial areas and provide an example of training materials	The County has begun developing and conducting annual training on how to conduct visual surveys of commercial and industrial areas. The training martial used are DVD training videos called "IDDE-a great concern" and "Rain Check" that the County has purchased. The County is looking into purchasing more training videos in the future, as they become available. The County has also been researching online training courses and workshops for additional staff training.
Expand the visual survey procedures to include examples of good housekeeping practices and violations and submit those procedures to the Department	The County has been working on developing procedures to incorporate examples of good housekeeping practices and violations into the County's current visual survey procedures. The expansion of the visual survey procedures to include examples of good housekeeping practices and violations is being reviewed internally for guidance and approvals by the County Administration. These procedures will be submitted in the next Annual NPDES MS4 Report.
Report on activities completed for the incorporated municipalities under the co-permittee agreement	The County has contracted the Low Impact Development (LID) Center as a liaison between the County and Municipalities to assist with outreach events, community workshops, promote the County's Rain Check Rebate Program for installing stormwater BMPs, and report on activities within the Municipalities. These activities are reported in the Annual NPDES MS4 Supplemental Report.

Environmental Engineering Program

The Prince George's County Health Department responds to complaints about sanitary sewer overflows, failing septic systems, solid waste and hazardous materials spills and dumping that may impact the waters of the State. During this reporting period the Health Department responded to 89 complaints/notifications 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.

Illegal Dumping and Spills

DPW&T responds to illegal dumping occurring along the public road right-of-way. During FY 2018, the County received 3,272 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 90.

HMD is responsible for handling the initial response to all hazardous material spills within the County. In FY 2018, the Hazardous Materials (HAZMAT) team responded to 315 calls for assistance. The number of responses per month is provided in Table D-5. Within each month, the HAZMAT responses have been subdivided into four categories: fuel, carbon monoxide (CO), chemical, and other.

The 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-5. Hazmat Calls in FY 2018

Month	Number of Hazmat Responses	Number of Actions Taken	Response Types				Resolved	Number of Cases Referred to MDE*
			Fuel	CO	Chemical	Other		
Jul-17	32	32	16	8	5	3	32	16
Aug-17	37	37	18	9	8	2	37	18
Sep-17	25	25	7	6	12	0	25	7
Oct-17	32	32	8	6	13	5	32	8
Nov-17	25	25	8	11	4	2	25	8
Dec-17	20	20	8	10	2	0	20	8
Jan-18	30	30	11	13	4	2	30	11
Feb-18	22	22	7	5	8	2	22	7
Mar-18	21	21	6	3	6	6	21	6
Apr-18	28	28	12	5	6	5	28	12
May-18	20	20	7	6	6	1	20	7
Jun-18	23	23	10	6	6	1	23	10
Total	315	315	118	88	80	29	315	118

**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 2018, the County increased efforts to reduce the amount of litter in the Anacostia River. Investments in litter removal projects, and completion of 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 2018 involved community cleanups and stream cleanups in the Anacostia watershed. Load reductions associated with these projects are described in more detail below.

The County continues to conduct countywide trash reduction, litter reduction, and recycling programs. The purpose of these 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 their respective accomplishments are included in this report.

During FY 2018, the County undertook new and additional measures to help meet the MS4 permit goal to remove 170,628 pounds of trash per year. These measures included continuing its Adopt-A-Stream program, continued use of PGCLitterTRAK mobile app tracking tool, involving communities and municipalities in the Clean Sweep Initiative in the Anacostia watershed, collaborating with the University of Maryland on a litter source reduction study specifically for Prince George's County, and continuing County's first trash trap project.

Cleanup Activities

Table D-6 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 for 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 2018. Contractors removed 132,344 pounds of trash (actual pounds without deductions) and 225 discarded tires. These contractors performed cleanups in streams and overbank areas at various locations in the Anacostia watershed. Both point source and non-point source trash were collected. County staff conducted pre-inspections of the contractor's work sites to assess the types and composition of litter and followed-up with post-inspections of these sites to ensure the removal of litter. The contractors segregated tires from bagged litter and loose items (e.g. buckets, cans, pieces of wood etc.) Loads of bagged litter and loose items were weighed and disposed at the County landfill. Staff determined that contractors were inconsistent with reporting the number of bags of litter collected at each site. Instead, for all sites, they reported weight tickets for loads consisting of bags of litter and loose items. A factor of 0.75 has been applied to the weight of litter collection to account for such loose items. The weight of tires has not been included in the load reduction computation.

Table D-6 summarizes the waste load reduction resulting from litter reduction activities in the Anacostia watershed. A total of 261,139 pounds was removed from the watershed at various locations within the County and local municipalities. Factoring in reductions for non-point source items and partially full beverage bottles and cans, the County claims a load reduction of about 175,348 pounds.

Table D-6. Estimated Anacostia Watershed Trash Reduction in FY 2018

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	Radiant Valley	10	-	250	160	Total number of bags 0.7 X 25 lbs. X 0.917 (accounts for liquid in bottles (glass and plastic) and cans
	Roswil HOA	4	-	100	64	
	Village Green	4	-	100	64	
	Beacon Heights	10	-	250	160	
	Lewisdale CA	12	-	300	193	
Additional Roadside Litter Removal-Contracted	Community Bridge, Inc. (DPW&T contractor)	521	0	13,025	8,026	
Municipal Cleanups	Hyattsville	956	-	23,900	15,341	Total number of bags 0.7 X Total number of bags 0.7 X 25lbs X 0.917 (accounts for liquid in bottles (glass and plastic) and cans
	Landover Hills	27	-	675	433	
	Capital Heights	281	-	7,025	4,509	
	Mt. Rainier	20	-	500	321	
	Town of Fairmont Heights (near 5361 Sheriff Road)	-	63,440	63,440	27,279	Total tonnage X 0.43
Other Volunteer Cleanups (as tracked in PGCLitterTRAK and excluding above municipal cleanups and community cleanups)	Various locations in Anacostia River Watershed (specific locations recorded in PGCLitterTRAK)	83		2,075	1,332	
Corvias BMP Clean Ups		263		6,575	4,220	25lbs X 0.917 (accounts for liquid in bottles (glass and plastic) and cans
Contractor	• Brooks Drive, Mentor	-	-	132,344	99,258	Total load x

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
Services - Stream Area Cleanups	Ave and Oakcrest, Ventura Ave, Evergreen Terrace, sites in Watts Branch subwatershed • MLK , Columbia Park, Nalley Terrace and Farmingdale Ave sites in Lower Beaverdam Creek • Queens Chapel location in Sligo Creek subwatershed • Indian Creek • Merrimac, Metzerott and Hyattsville Animal facility locations in Northwest Branch subwatershed			(66 tons)		0.75 to account for non-MS4 items (exclusive of tires) which were disposed with bags at landfill
Earth Day Cleanup	Bladensburg Waterfront Park	-	10,580	10,580	4,549	Total tonnage X 0.43
Outreach and Education at Schools	DuVual High School Columbia Park Elementary				9,014 424	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)]
250 New Inside Recycling Receptacles	-	-	-	-	-	As of FY 2018, M-NCPPC installed 250 recycling receptacles the Anacostia watershed after 2010. Methodology

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
						for load reduction for these installations remains to be developed.
Total		***2,191***	***74,020***	***261,139***	***175,348***	

[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 170,628 pounds per year for 2018, which marks the fifth year of the County's NPDES MS4 permit. The County will continue to conduct community and stream cleanups, promote adoption of additional stream segments under the new Adopt-a-Stream Program, install "No Dumping Signage," and expand the DPW&T's roadside litter collection service through the use of Community Bridge, Inc. The County proposes to invest in outreach activities and new programs as described in the "Recommendations for Developing a Litter Reduction Campaign in Prince George's County, Maryland", a study by University of Maryland. Design and permitting of the County's first Bandalong™ trash trap was completed in FY 2018. This trap will further reduce the litter load on the Anacostia River in FY 2019 and out years by capturing floatables along the Arundel Canal (a tributary to Northwest Branch.) With the successful implementation of these activities, the County expects to achieve the NPDES MS4 permit target for trash load reduction.

The results of instream monitoring performed by the Metropolitan Washington Council of Governments (MWCOG) from 2011 to 2018, are shown in Table D-7 and Table D-8. 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-7. Stream Monitoring Data – Plastic Bottle Composition by Volume of Trash Mix

Year	Number of Surveys per Year	Total Number of Items	Total Number of Plastic Bottles	Percent Plastic Bottles
2011	2	1,569	263	16.8
2012	1	288	62	21.5
2013	2	725	136	18.8
2014	2	817	93	11.4
2015	2	882	95	10.7
2016	2	1,755	185	10.5
2017	2	2,020	286	14.1
2018	2	2,436	705	28.9

(Monitoring data was provided by MWCOG)

Table D-8. Stream Monitoring Data – Plastic Bottle Composition by Weight of Trash Mix

Year	Number of Surveys per Year	Total Weight (grams)	Total Plastic Bottle Weight (grams)	Percent Weight Plastic Bottles
2011	2	292,713	15,731	5.4
2012	1	19,037	4,320	22.7
2013	2	93,158	8,300	8.9
2014	2	73,758	7,410	10.0
2015	2	73,448	8,480	11.5
2016	2	158,153	15,065	9.5
2017	2	182,950	20,550	11.2
2018	2	209,318	38,645	18

(Monitoring data was provided by MWCOG)

While the activities that are outlined in Table D-6 are specific to the Anacostia watershed, the County and volunteers performed litter removal and prevention activities in other areas of the County. These activities cannot be counted towards reducing the annual MS4 trash loads because the associated trash was either larger than point source items or the activities occurred outside of the Anacostia watershed. Table D-9 shows the amount of litter collected through these activities.

Table D-9. Litter Removal and Prevention Outside of the Anacostia Watershed

Activity	Watershed	Weight of Collected Trash (pounds)
Hard Bargain Farm	Piscataway Creek	2,420
National Colonial Farm	Piscataway Creek	3,240
Oxon Hill Farm	Potomac River	280
Riverview Estates	Piscataway Creek	7,040
Fort Washington Mariner	Potomac River	3,800

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-10.

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 139 tons of bulky trash and litter were removed from communities in FY 2018 through this program.

Table D-10. Comprehensive Community Cleanup Achievements in FY 2018

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	51	0	5	4.94	2.00	0
Forest Knolls/Fort Washington Forest	34	0	8	13.18	6	2
Hillandale/Knollwood	36	1	0	3.91	6	0
West Laurel (Phase 1)	28	0	0	4.57	12	9
West Laurel (Phase 2)	150	2	4	7.39	0	0
Radiant Valley	17	1	0	1.00	12	4
Tantallon North	14	0	0	3.50	9	6
Carole Highlands	45	5	0	0.21	7	3
Chapel Oaks/Deanwood Park/Beaver Heights	11	1	0	0.52	2	2
Kastle Estates	409	0	11	7.40	0	0
Wilburn Estates	426	0	4	8.44	8	0
Fort Washington Estates	222	0	11	6.84	0	0
Little Washington/Westphalia Estates	269	6	55	29.86	0	0
Maplewood	266	0	1	4.35	17	15
Marlton (Phase 1)	138	0	2	0.28	6	2
Marlton (Phase 2)	77	5	0	3.75	4	0
Marlton (Phase 3)	114	0	0	8.78	6	4
Kettering (Phase 1)	104	0	10	8.17	4	2
Kettering (Phase 2)	98	0	10	8.15	3	2
Kettering (Phase 3)			3	7.94	0	0
Kettering (Phase 4)	195	0	1	4.71	8	1
Total	***0,195***	***0***	***125***	***137.89***	***112***	***52***

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 2018 was 27 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-way's other than roadsides.

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. This contract was re-awarded in FY 2018.

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.

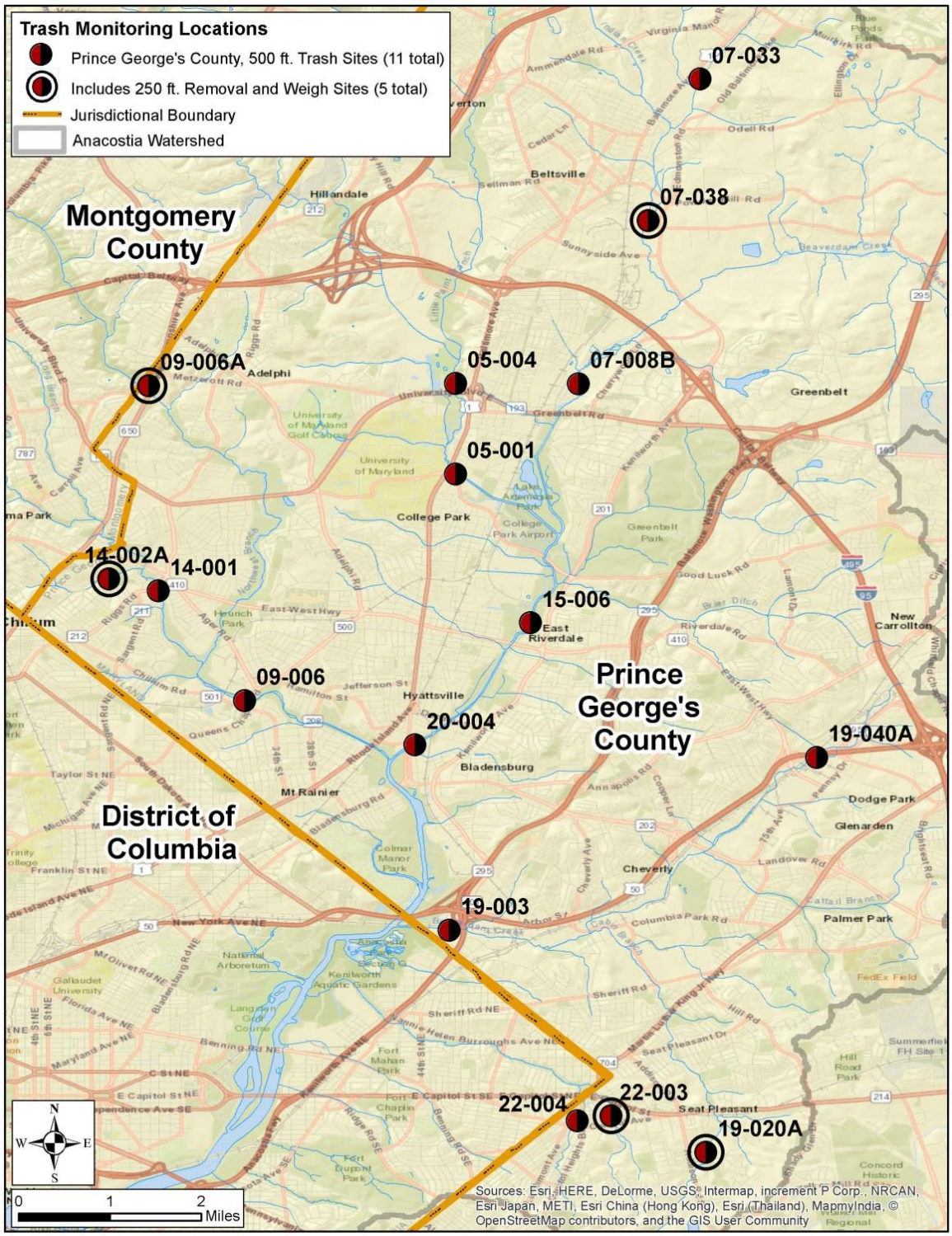

Figure D-2. Anacostia TMDL-Related Trash Monitoring Locations

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.

The County prepared outreach strategies for the seven focus areas required by the County's NPDES-MS4 permit. As part of the development of these strategies, expanded educational outreach took place at local schools within the Anacostia River Watershed. The results of these efforts are itemized in Table D-11.

Table D-11. Litter reduction per school-based outreach event.

School Name	Trash Load Reduction (pounds) Based on School Boundary Area*
Columbia Park Elementary	424
DuVual High School	9,014
DeMatha High School	6,125
Total	**15,563**

**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 2018, DoE worked with volunteers to stencil storm drains in three areas throughout the County. Table D-12 provides a summary of the volunteer projects completed in FY 2018.

Table D-12. Storm Drain Stenciling Summary

Date	Group	Number of Volunteers	Number of Inlets Stenciled
July 2017	DoE Summer Youth	24	37
October 2017	Bishop McNamara	6	3
April 2018	Columbia Park Elementary	15	4
Total		***45***	***44***

Recycling

The Prince George's County Department of the Environment, Recycling Section has continued to support and promote the source reduction and waste diversion initiatives outlined by the County. These efforts have contributed significantly to the county's state recognition as #1 in Waste Diversion, for each of the past three years. The County is piloting a compost collection service for residential areas in a yearlong EPA grant project. Along with the impending completion of the GORE Mega Heap composting system, Prince George's County is well aligned to retain its #1 standing in Waste Diversion.

Realizing the importance of environmental sustainability, the County is preparing for the future. Keep Prince George's County Beautiful (KPGCB), the local affiliate of the nationally recognized Keep America Beautiful, in partnership with the County's Public Schools remains instrumental in supporting teachers and students in environmental education. KPGCB hosted 14 Green Team Seminars with the William S. Schmidt Outdoor Education Center and other environmentally conscientious partners. These seminars include presentations on litter reduction and hands-on activities that address best waste management practices. This 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. To date, the County celebrates 110 certified Maryland Green Schools. The County has more certified green schools than any other jurisdiction in the state.

During FY 2018, the County had an estimated residential recycling amount of 43,413 tons and commercial recycling amount of 26,957 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 MRF. 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 2018 is provided in Table D-13; over 80 tours were conducted.

Table D-13. Materials Recycling Facility Tours

Name of Participant	Date of Tour
Jerry Burgess - John's Hopkins	7/1/2017
D.C. Office of Recycling Summer Youth	7/10/2017
Optimistic Environmental Service	7/11/2017
Alice Ferguson Teacher Institute	7/12/2017
University of Maryland	7/13/2017
Chesapeake Bay Foundation	7/19/2017
PG County Interns (DPIE)	7/20/2017
Sierra Club	7/21/2017
Baltimore County Solid Waste Youth Workers	7/24/2017
ACE School - Baltimore County	7/26/2017
Capital Heights Summer Youth Program	7/27/2017

Name of Participant	Date of Tour
Resource Recovery Youth Group	7/31/2017
NRG Generating	8/2/2017
ALA Daycare	8/4/2017
Brazilian Representative	8/4/2017
Smith Family Group	8/10/2017
Cub Scout Group	8/30/2017
Japanese Delegation Tour	9/5/2017
Dominque Kelley/DOE Intern	9/14/2017
DOE CFO Department	9/20/2017
SWANA Tour	9/28/2017
UMD - Mechanical Engineer Dept.	9/29/2017
The Towers in West Chester Park	10/11/2017
Green America	10/12/2017
Chesapeake Public Charter School	10/24/2017
Greenbelt Middle School (Special Needs)	10/27/2017
Paint Branch U.U. Church	10/30/2017
Arlingtonians' for a Clean Environment (ACE)	11/8/2017
Resident Tour - Oludiyi Oyawayle	11/10/2017
D.C. - GSA Environmental Service Department	11/14/2017
Mundo Verde Charter School - D.C.	11/15/2017
Home School Group	11/16/2017
Huntington High School (Calvert Co)	12/13/2017
Home School Group - Donna (Prince George's County)	12/15/2017
Prince George's Park & Rec - MNCPPC	12/19/2017
Girl Scout Troop	1/5/2018
Capitol Hill Day School - DC	1/10/2018
Girl Scout Troop - 223	1/15/2018
Bond Mill E.S.	1/18/2018
Bond Mill E.S.	1/25/2018
Prince George's County Finance Dept. - Auditors	1/29/2018
EPA	1/31/2018
Prince George's County Resident	2/1/2018
Surratsville High School - Special Needs	2/2/2018
Ludlow Taylor (ES) - DC	2/13/2018
Prince George's Park & Planning	2/14/2018
School without Walls (DC)	2/20/2018
Horace Mann (ES) -DC	2/22/2018
Prince George's Park & Planning	2/28/2018
Lafayette ES - DC	4/10/2018
Kinder Kidz - PG	4/12/2018
Girl Scout Group - Howard Co.	4/13/2018
Yu Ying PSC - DC	4/17/2018
St. Mary's County Commission on the Environment	4/18/2018
Patrick Henry ES - VA	4/19/2018
Phyllis E. Williams ES Tour	4/23/2018

Name of Participant	Date of Tour
Key Elementary ES - DC	4/24/2018
Tyler ES - DC	4/25/2018
Phyllis E. Williams ES Tour	4/26/2018
Town of Berwyn Heights - PG Residents	4/27/2018
Hearst Elementary School - DC	5/1/2018
Sierra Club	5/4/2018
U.S. Army Reserve	5/5/2018
Creative Minds PCS - DC	5/8/2018
Bradbury Heights ES - PG	5/8/2018
City Center PCS - DC	5/8/2018
Carrollton ES - PG	5/10/2018
Carrollton ES - PG	5/11/2018
Friendship Tech Prep Academy - DC	5/14/2018
Van Ness ES - DC	5/16/2018
Maury ES - DC	5/17/2018
PG County Resident	5/17/2018
Patrick Henry ES - VA	5/18/2018
Kimball ES - DC	5/18/2018
Eagle Academy ES - DC	5/23/2018
Burroughs ES - DC	5/30/2018
Tyler Elementary School - DC	6/4/2018
Howard County Resident	6/4/2018
Beers ES - DC	6/5/2018
Paramount Child Development Center - DC	6/6/2018
International High School at Largo	6/8/2018
DOE Budget Department	6/13/2018
My Girlfriends House - PG	6/28/2018
Camp Accokeek	6/28/2018

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.

FY 2019 goals

For FY 2019, 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, Environmental Crimes Team and the rollout of Big Belly Trash receptacles. The expansion of the Clean Sweep Initiative and the use of PGCLitterTRAK will continue. The County will 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 and maintain the FY 2019 annual litter reduction goal of 170,628 pounds per year.

One Bandalong™ trash trap project will be completed in FY 2019 and two additional instream trash capture devices are expected to be under design in FY 2019. The County's first Bandalong™ will be fully installed on the Arundel Canal in the first quarter of FY 2019. Design work will be underway for one trash capture device at Guilford Run and another such device at Cabin Branch.

The County purchased "No Dumping" signs and installed these signs at litter hot spots as identified in the 2010 Anacostia River Watershed Restoration Plan and Report, determined by staff, or reported by residents. Warnings are provided in both English and Spanish. The County has installed signs at 22 locations.

In FY 2018, the University of Maryland Environmental Finance Center (EFC) completed a study entitled "Recommendations for Developing a Litter Reduction Campaign in Prince George's County, Maryland." 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 2019. The recently established Environmental Crimes Taskforce will continue to work to bring illegal dumping to a halt.

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

5. PROPERTY MANAGEMENT AND MAINTENANCE

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

In FY 2018, the County continued to provide compliance assistance for the County-owned and municipal-owned industrial properties listed in Table D-14. Compliance assistance took the form of ensuring that each facility was moving towards implementing the permit requirements. This reporting year, the consultant services 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 the consultant and to assist facilities in completing these corrective actions.

For FY 2018, 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-14. County-Owned and Municipal-Owned Industrial Properties

Number	Name of Facility
DoE	
1	Abandoned Vehicle Impound Lot
2	Brown Station Road Sanitary Landfill
3	Missouri Avenue Convenience Center
4	Materials Recycling Facility
5	Prince George's County's Yard Waste Composting Facility
6	Sandy Hill Creative Disposal Project
OCS	
1	Park Central Vehicle Maintenance Facility
DPW&T	
1	Brandywine Facility
2	Ritchie Service Complex
3	Glenn Dale Facility
Municipal	
1	Town of Cheverly
2	City of College Park
3	City of 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 2018 are described, along with the status of their stormwater pollution prevention plans (SWPPP). Specifically, Table D-15 through Table D-33 detail the status of the County-owned and municipal-owned facilities during FY 2018. 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 2018 are also provided in the updated MS4 geodatabase on DVD.

DoE Facilities

Abandoned Vehicle Impound Lot

In FY 2018, staff at the abandoned vehicle impound lot demonstrated good pollution prevention knowledge and regularly conducted good housekeeping procedures, facility inspections, and staff training. Initiated in FY 2017, the lot continued the process to repair the drainage channel this year. Table D-15 below shows the status of SWPPP implementation for this reporting period.

Table D-15. Abandon Vehicle Impound Lot - FY 2018 Status

Permit Number	County Contact
12SW0312	Rhonda Edelen, Abandon Vehicle Section, DoE
FY 2018 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 the 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. The final project is on hold pending transfer of facility to a new location and another department constructing a training facility with a new site plan.	

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-16 below shows the status of SWPPP implementation for this reporting period.

Table D-16. Brown Station Road Sanitary Landfill – FY 2018 Status

Permit Number	County Contact
12SW0401	Rick Thompson, Engineer Resource Recovery Division (RRD), DoE
FY 2018 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 being performed on the ponds and perimeter ditches. The staff will continue to perform the quarterly Monitoring samples.

Missouri Avenue Convenience Center

The Missouri Avenue Convenience Center is one of the two convenience centers for 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-17 below shows the status of SWPPP implementation for this reporting period.

Table D-17. Missouri Avenue Convenience Center – FY 2018 Status

Permit Number	County Contact
12SW2466	Rick Thompson, Engineer Resource Recovery Division (RRD), DoE
FY 2018 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 Maintain 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 the consultant for inspection support and with the Stormwater Management Division to monitor SWPPP implementation. Table D-18 below shows the status of SWPPP implementation for this reporting period.

Table D-18. Materials Recycling Facility (DoE Facility) – FY 2018 Status

Permit Number	County Contact
12SW1224	Desmond Gladden, Contract Manager Resource Recovery Division (RRD), DoE

FY 2018 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 Maintain SWPPP records at the facility.

Prince George's County's Yard Waste Composting Facility

The County's Yard Waste Composting Facility, commonly known as "Western Branch," is permitted individually by MDE with the individual discharge permit NPDES MDE 0065111. The facility is owned by Prince George's County, but is operated by MES who is responsible for environmental compliance. Table D-19 below shows the status of SWPPP implementation for this reporting period.

Table D-19. Prince George's County Yard Waste Composting Facility – FY 2018 status

Permit Number	County Contact
12DP2792	Rick Thompson, Engineer Resource Recovery Division (RRD), DoE
FY 2018 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 its compliance efforts according to the permit.	

Sandy Hill Creative Disposal Project

The Sandy Hill Creative Disposal Project stopped accepting waste in 2000. The landfill currently holds a 12-SW permit where the facility is being monitored for material storage and transfer (including leachate), pond maintenance, spill prevention, and countermeasures. As with the other County facilities, the consultant assists in monitoring the facilities' progress in 12-SW. The following table presents the fiscal year's status. Table D-20 below shows the status of SWPPP implementation for this reporting period.

Table D-20. Sandy Hill Creative Disposal Project (DoE Facility) - FY 2018 Status

Permit Number	County Contact
12SW0314A	Rick Thompson, Engineer Resource Recovery Division (RRD), DoE
FY 2018 Achievements	
Stormwater Management: The facility completed improvements in the drainage swale and 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-21 below shows the status of SWPPP implementation for this reporting period for OCS' Park Central Vehicle Maintenance Facility.

Table D-21. Park Central Vehicle Maintenance Facility – FY 2018 Status

Permit Number	County Contact
12SW2173	Richard Hilmer, Fleet Administrator Facilities Operation and Management Division, OCS
FY 2018 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 2018, DPW&T staff performed quarterly visual monitoring at each DPW&T facility. Non-structural BMPs, such as spill prevention and response and good housekeeping programs, are well developed and carried out by a team at each facility. 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-22. DPW&T Facility Overview

DPW&T Facility Name	Main Function(s)	Usage Duration	Activities
Brandywine Facility	District 4 Snow Event Response Material Storage/Services for 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-23 through Table D-25 show the status of SWPPP implementation for the DPW&T facilities.

Brandywine Facility

Table D-23. Brandywine Facility (DPW&T) – FY 2018 Status

Permit Number	County Contact
12SW1223	Mary Holden, Program Manager Office of Highway Maintenance, DPW&T
FY 2018 Achievements	
Staff Education and Training: The facility conducted annual pollution prevention training on March 18, 2018 Records were kept on site. Discharge Monitoring: An extended drought period occurred during the late summer, fall and early winter period of 2017. This prevented quarterly sampling during the third and fourth quarter of 2017. Three samples, collectively, were performed during the first and second quarter of 2018. Staff made 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: Record keeping is compliant with the permit including a chemical storage inventory and an MSDS catalog.	
Long-Term Planning	
Site Improvements: Major facility improvements for the building and the shop are in design.	

Ritchie Service Complex

Table D-24. Ritchie Service Complex (DPW&T) – FY 2018 Status

Permit Number	County Contact
12SW0521	Mary Holden, Program Manager Office of Highway Maintenance, DPW&T
2018 Achievements	
Staff Education and Training: The facility conducted two pollution prevention training sessions in March 2018. Multiple planned training sessions were postponed, as late winter weather cancelled training. Make-up sessions are planned for late summer to coincide with snow and ice control training. Records kept on site. Discharge Monitoring: An extended drought period occurred, preventing the performance of monitoring during the fourth quarter of 2017. Make up monitoring was performed. Staff made effective use of the findings to	

determine the impacts of control measure records for the fiscal year Record Keeping: Record keeping is compliant with the permit including a chemical storage inventory and an MSDS catalog.
Long Term Planning
Equipment and Vehicle Wash: A project for compliant vehicle and equipment wash at a neighboring site is in design.

Glenn Dale Facility

Table D-25. Glenn Dale Facility (DPW&T) – FY 2018 Status

Permit Number	County Contact
12SW1234	Mary Holden, Program Manager Office of Highway Maintenance, DPW&T
2018 Achievements	
Staff Education and Training: The annual pollution prevention training is scheduled for September, 2018. Training was planned at this facility for March 2018, but late winter weather cancelled training sessions. Records were kept on site. Discharge Monitoring: An extended drought period occurred, preventing the performance of monitoring during the fourth quarter of 2017. Make up monitoring was performed. Staff made 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: Record keeping is compliant with the permit including a chemical storage inventory and an MSDS catalog.	
Long Term Planning	
BMP Maintenance: Annual maintenance for the oil and grit separator by DPW&T personnel 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 is described on the next few pages. Table D-26 through Table D-33 show the status of SWPPP implementation for each municipality.

Town of Cheverly

Table D-26. Town of Cheverly DPW – FY 2018 Status

Permit Number	County Contact
12SW0197	Juan Lois Torres, Department of Public Works Director
FY 2018 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-27. City of College Park DPW – FY 2018 Status

Permit Number	County Contact
12SW2148	Robert Marsili, Assistant Director of Operations and Facilities
FY 2018 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 City will continue to conduct quarterly discharge monitoring.	

City of District Heights

On March 23, 2017, the MDE issued a no exposure certification registration number 12NE3240 for exclusion from NPDES Stormwater permitting. This certified that the facility located at 2000 Marbury Drive does not need a NPDES permit for its stormwater according to the criteria established in 40 CFR 122.26 (Code of Federal Regulations), which implement requirements under the federal Clean Water Act.

City of Greenbelt

Table D-28. City of Greenbelt DPW – FY 2018 Status

Permit Number	County Contact
12SW2145	Jim Sterling, Department of Public Works Director
FY 2018 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 spill prevention plan. BMP Maintenance: The staff maintained the bioretention facilities regularly.	

City of Hyattsville

Table D-29. City of Hyattsville DPW – FY 2018 Status

Permit Number	County Contact
12SW2150	Leslie Riddle, Department of Public Works Director
FY 2018 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 2018 Status

Permit Number	County Contact
12SW1841	Tommy Helms, SWPPP Coordinator
FY 2018 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 2018 Status

Permit Number	County Contact
12SW2144	Bernard Cochran, Department of Public Works Director
FY 2018 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 continue to 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 2018 Status

Permit Number	County Contact
12SW2146	Leonard Addison, Department of Public Works Director

Permit Number	County Contact
FY 2018 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 2018 Status

Permit Number	County Contact
12SW2143	Markisha Garner, Administrative Assistant
FY 2018 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. The contract for the street sweeping with the local contractor expired and a new contract for services is under progress. As a result, the County could not perform street sweeping during this reporting period.

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 2,531 service requests from constituents, inspected 12,000 inlets, and cleaned 53,101 linear feet of storm drain pipe. A total of 49.5 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 65,822 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 2018, 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-3. Over 13,000 miles of roadway were serviced in the litter control program in FY 2018.

During this reporting period, DPW&T received 3,272 citizen requests for illegal dumping and litter removal through the County's 311 system. Illegal dumping in the right-of-way is removed within 5 working days of notification. Cumulatively, DPW&T litter control programs removed 1,686 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-4.

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 18 snow and ice control events. Salt usage for this winter season was 22,788 tons at a cost of $3,784,800. The significant increase in salt application for this year was due to the timing of events and types of precipitation. Only three of the 18 events had accumulating snow that required plowing. During plowing events salt usage is minimal, as frozen precipitation is removed from roadways mechanically. Most of the winter events for this year were sleet, freezing rain or light snow that occurred during overnight hours when roadway surfaces fell below freezing. Under these conditions, the application of salt prior to the predawn hours was warranted to protect the citizens from icy roadway conditions during the rush hour.

When weather forecasting dictates, pretreatment is utilized to reduce the amount of salting necessary and ensure safety to the traveling public during adverse conditions. During the reporting year, brine was used as a pretreatment in 4 of the 18 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.

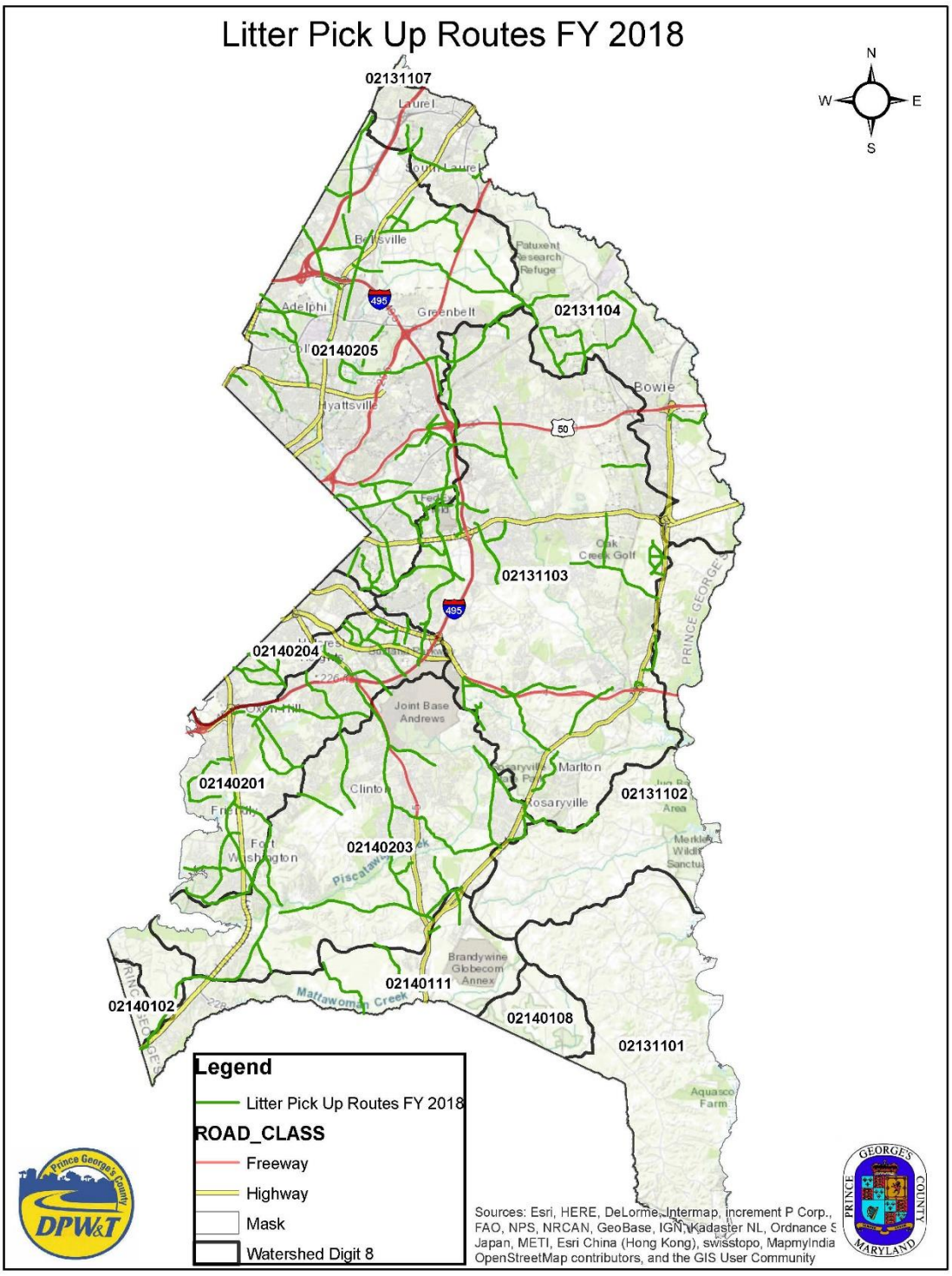

Figure D-3. Litter Pick Up Routes in FY 2018

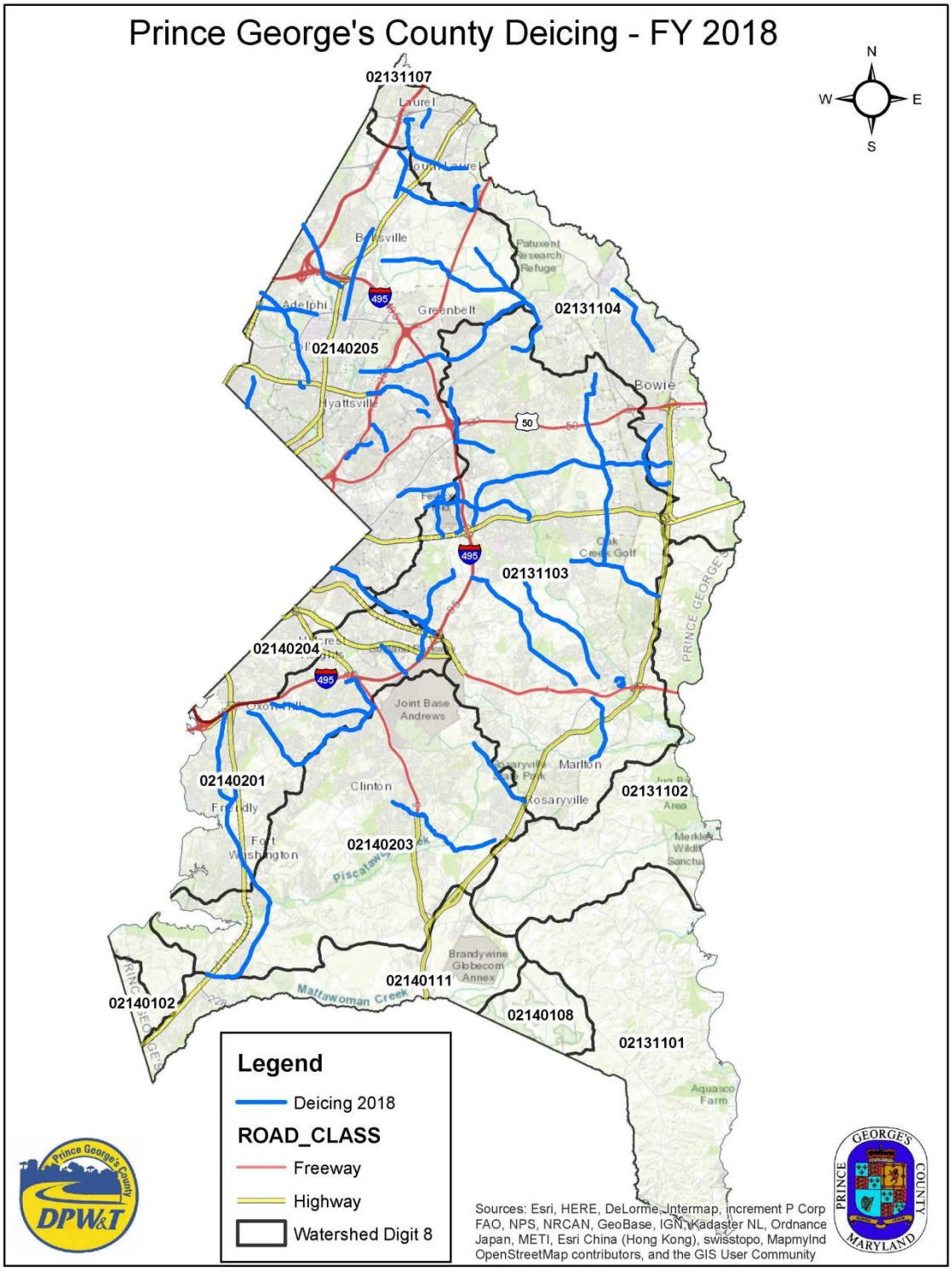

Figure D-4. Snow and Ice Control Program - De-Icing Application Map for FY 2018

6. PUBLIC EDUCATION

Permit Condition Part IV. D. 6. a: Prince George's County shall maintain a compliance hotline or similar mechanism for public reporting of water quality complaints, including suspected illicit discharges, illegal dumping, and spills.

CountyClick 311 is Prince George's County's main source of government information and access to non-emergency services through its call center. Citizens may also utilize alternative forms of communication for lodging water quality complaints, such as through email or by direct calling. More information regarding the investigation and enforcement actions taken to resolve water quality complaints is provided under "Environmental Engineering program" on page 64.

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 500 environmental events that provided information or discussed benefits of one or more categories described in the bulleted items A through G of the permit condition *Part IV.D.6.b* above. 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 2018 DoE outreach events and participants are provided in Table D-34.

Table D-34. FY 2018 DoE Outreach Activities

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Volunteer Orientation	B, G	7/1/2017	ASD	1	13
Pet Adoptions	B, G	7/5/2017	ASD	1	100
Humane Education	B, G	7/6/2017	ASD	1	12

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Humane Education	B, G	7/7/2017	ASD	1	12
Pet Adoptions	B, G	7/12/2017	ASD	1	100
Pet Adoptions	B, G	7/19/2017	ASD	1	100
Volunteer Orientation	B, G	7/20/2017	ASD	1	8
Humane Education	B, G	7/21/2017	ASD	1	7
Pet Adoptions	B, G	7/26/2017	ASD	1	100
Pet Adoptions	B, G	8/2/2017	ASD	1	100
Humane Education	B, G	8/3/2017	ASD	1	11
Volunteer Orientation	B, G	8/5/2017	ASD	1	12
Pet Adoptions	B, G	8/9/2017	ASD	1	100
Pet Adoptions	B, G	8/13/2017	ASD	3	100
Volunteer Meeting	B, G	8/16/2017	ASD	1	12
Pet Adoptions	B, G	8/16/2017	ASD	1	100
Pet Adoptions	B, G	8/17/2017	ASD	3	100
Volunteer Meeting	B, G	8/18/2017	ASD	1	3
Pet Adoptions	B, G	8/19/2017	ASD	49+	100
Volunteer Orientation	B, G	8/22/2017	ASD	1	12
Pet Adoptions	B, G	8/23/2017	ASD	1	100
Public Speaking/Humane Education	B, G	8/24/2017	ASD	1	100
Pet Adoptions	B, G	8/26/2017	ASD	4	100
Humane Education	B, G	8/28/2017	ASD	1	23
Public Speaking/Humane Education	B, G	8/30/2017	ASD	1	100
Humane Education	B, G	9/7/2017	ASD	1	10
Volunteer Orientation	B, G	9/9/2017	ASD	1	8
Humane Education	B, G	9/10/2017	ASD	1	15
Pet Adoptions	B, G	9/16/2017	ASD	1	4
Humane Education	B, G	9/17/2017	ASD	1	14
Humane Education	B, G	9/17/2017	ASD	1	15
Humane Education	B, G	9/19/2017	ASD	1	100
Pet Adoptions	B, G	9/20/2017	ASD	1	100
Humane Education	B, G	9/21/2017	ASD	1	11
Pet Adoptions	B, G	9/23/2017	ASD	3	100
Humane Education	B, G	9/24/2017	ASD	1	9
Volunteer Orientation	B, G	9/24/2017	ASD	1	11
Pet Adoptions	B, G	9/27/2017	ASD	1	100
Pet Adoptions	B, G	9/30/2017	ASD	1	100
Humane Education	B, G	10/1/2017	ASD	1	45
Pet Adoptions	B, G	10/4/2017	ASD	1	100
Humane Education	B, G	10/4/2017	ASD	1	100
Volunteer Orientation	B, G	10/7/2017	ASD	1	7
Humane Education	B, G	10/7/2017	ASD	1	5
Pet Adoptions	B, G	10/11/2017	ASD	1	100

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Humane Education	B, G	10/15/2017	ASD	1	30
Humane Education	B, G	10/18/2017	ASD	1	100
Pet Adoptions	B, G	10/18/2017	ASD	1	100
Humane Education	B, G	10/19/2017	ASD	1	17
Humane Education	B, G	10/22/2017	ASD	1	15
Pet Adoptions	B, G	10/25/2017	ASD	1	100
Humane Education	B, G	10/25/2017	ASD	1	100+
Volunteer Orientation	B, G	10/25/2017	ASD	1	7
Pet Adoptions	B, G	10/29/2017	ASD	3	100
Humane Education	B, G	10/30/2017	ASD	1	1
Pet Adoptions	B, G	11/1/2017	ASD	1	100
Pet Adoptions	B, G	11/2/2017	ASD	14	100
Pet Adoptions	B, G	11/8/2017	ASD	1	100
Volunteer Orientation	B, G	11/11/2017	ASD	1	9
Humane Education	B, G	11/12/2017	ASD	1	15
Humane Education	B, G	11/12/2017	ASD	1	15
Pet Adoptions	B, G	11/15/2017	ASD	1	100
Volunteer Meeting	B, G	11/16/2017	ASD	1	11
Humane Education	B, G	11/19/2017	ASD	1	15
Humane Education	B, G	11/19/2017	ASD	1	15
Humane Education	B, G	11/19/2017	ASD	1	10
Pet Adoptions	B, G	11/22/2017	ASD	1	100
Pet Adoptions	B, G	11/29/2017	ASD	1	100
Pet Adoptions	B, G	12/6/2017	ASD	1	100
Humane Education	B, G	12/10/2017	ASD	1	30
Pet Adoptions	B, G	12/13/2017	ASD	1	100
Humane Education	B, G	12/15/2017	ASD	1	75
Volunteer Orientation	B, G	12/16/2017	ASD	1	8
Pet Adoptions	B, G	12/20/2017	ASD	1	100
Pet Adoptions	B, G	12/27/2017	ASD	1	100
Humane Education	B, G	12/30/2017	ASD	1	9
Pet Adoptions	B, G	1/3/2018	ASD	1	100
Volunteer Orientation	B, G	1/6/2018	ASD	1	6
Pet Adoptions	B, G	1/10/2018	ASD	1	100
Humane Education	B, G	1/11/2018	ASD	1	6
Humane Education	B, G	1/13/2018	ASD	1	20
Pet Adoptions	B, G	1/17/2018	ASD	1	100
Volunteer Orientation	B, G	1/19/2018	ASD	1	11
Humane Education	B, G	1/20/2018	ASD	2	14
Pet Adoptions	B, G	1/24/2018	ASD	1	100
Pet Adoptions	B, G	1/31/2018	ASD	1	100
Humane Education	B, G	2/4/2018	ASD	1	30
Pet Adoptions	B, G	2/7/2018	ASD	1	100
Humane Education	B, G	2/7/2018	ASD	1	100
Volunteer Orientation	B, G	2/10/2018	ASD	1	11
Pet Adoptions	B, G	2/14/2018	ASD	1	100

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Volunteer Meeting	B, G	2/15/2018	ASD	3	11
Humane Education	B, G	2/18/2018	ASD	1	30
Pet Adoptions	B, G	2/21/2018	ASD	1	100
Humane Education	B, G	2/22/2018	ASD	1	15
Pet Adoptions	B, G	2/24/2018	ASD	3	100
Volunteer Orientation	B, G	2/28/2018	ASD	1	13
Humane Education	B, G	3/1/2018	ASD	1	11
Humane Education	B, G	3/4/2018	ASD	1	30
Humane Education	B, G	3/10/2018	ASD	1	8
Humane Education	B, G	3/12/2018	ASD	1	18
Pet Adoptions	B, G	3/14/2018	ASD	1	100
Volunteer Orientation	B, G	3/14/2018	ASD	1	15
Humane Education	B, G	3/15/2018	ASD	1	20
Community Meeting	B, G	3/21/2018	ASD	15	70
Humane Education	B, G	3/25/2018	ASD	1	30
Pet Adoptions	B, G	3/25/2018	ASD	3	100
Humane Education	B, G	3/28/2018	ASD	2	100
Pet Adoptions	B, G	3/28/2018	ASD	1	100
Volunteer Orientation	B, G	3/31/2018	ASD	1	8
Pet Adoptions	B, G	4/4/2018	ASD	1	100
Humane Education	B, G	4/8/2018	ASD	1	30
Pet Adoptions	B, G	4/11/2018	ASD	1	100
Pet Adoptions	B, G	4/12/2018	ASD	10	100
Humane Education	B, G	4/14/2018	ASD	1	4
Volunteer Program	B, G	4/17/2018	ASD	1	50
Volunteer Orientation	B, G	4/17/2018	ASD	1	7
Pet Adoptions	B, G	4/18/2018	ASD	1	100
Humane Education	B, G	4/19/2018	ASD	1	15
Volunteer Meeting	B, G	4/19/2018	ASD	1	15
Volunteer Orientation	B, G	4/22/2018	ASD	1	5
Humane Education	B, G	4/23/2018	ASD	1	6
Pet Adoptions	B, G	4/25/2018	ASD	1	100
Humane Education	B, G	4/25/2018	ASD	1	15
Pet Adoptions	B, G	4/29/2018	ASD	9	100
Pet Adoptions	B, G	5/2/2018	ASD	1	100
Humane Education	B, G	5/4/2018	ASD	1	60
Humane Education	B, G	5/6/2018	ASD	1	30
Pet Adoptions	B, G	5/9/2018	ASD	1	100
Humane Education	B, G	5/11/2018	ASD	1	100
Volunteer Orientation	B, G	5/14/2018	ASD	1	10
Pet Adoptions	B, G	5/16/2018	ASD	1	100
Pet Adoptions	B, G	5/16/2018	ASD	2	
Humane Education	B, G	5/18/2018	ASD	1	125
Humane Education	B, G	5/18/2018	ASD	1	150
MNCPP Fun & Fitness Day	B, G	5/19/2018	ASD	10	20

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Humane Education	B, G	5/21/2018	ASD	1	150
Pet Adoptions	B, G	5/23/2018	ASD	1	100
Pet Adoptions	B, G	5/24/2018	ASD	1	100
Humane Education	B, G	5/25/2018	ASD	1	120
Volunteer Orientation	B, G	5/26/2018	ASD	1	2
Pet Adoptions	B, G	5/30/2018	ASD	1	100
Pet Adoptions	B, G	6/6/2018	ASD	1	100
Humane Education	B, G	6/6/2018	ASD	1	300
Humane Education	B, G	6/7/2018	ASD	1	90
Humane Education	B, G	6/7/2018	ASD	1	10
Humane Education	B, G	6/9/2018	ASD	1	14
Volunteer Orientation	B, G	6/13/2018	ASD	1	8
Pet Adoptions	B, G	6/13/2018	ASD	1	100
Humane Education	B, G	6/19/2018	ASD	1	6
Pet Adoptions	B, G	6/20/2018	ASD	1	100
Pet Adoptions	B, G	6/23/2018	ASD	3	100
Pet Adoptions	B, G	6/27/2018	ASD	1	100
Humane Education	B, G	6/27/2018	ASD	1	18
Volunteer Orientation	B, G	6/27/2018	ASD	1	13
Community Meeting	B, G	7/12/2018	ASD	10	60
Public Speaking/Humane Education	B, G	8/1/2107	ASD	1	100
Pet Adoptions	B, G	1/2 - 1/16-2018	ASD	1	100
Humane Education	B, G	4/14, 4/21, 4/28, 2018	ASD	1	14
Humane Education	B, G	7/13, 7/25, 7/27	ASD	1	Varied per session
Volunteer Meeting	B, G	8/10, 8/11 & 8/12/2017	ASD	1	
Pet Adoptions	B, G	All Month	ASD	1	n/a
Pet Adoptions	B, G	All Month	ASD	1	100
Pet Adoptions	B, G	All Month	ASD	1	n/a
Pet Adoptions	B, G	All Month	ASD	1	n/a
Pet Adoptions	B, G	All Month	ASD	1	100
Pet Adoptions	B, G	All Month	ASD	1	n/a
Pet Adoptions	B, G	All Month	ASD	1	n/a
Pet Adoptions	B, G	All Month	ASD	1	100
Pet Adoptions	B, G	All Month	ASD	1	100
Pet Adoptions	B, G	Entire Month of October	ASD	3	100
Pet Adoptions	B, G	July All Month	ASD	4	100
Pet Adoptions	B, G	Month of July 2017	ASD	1	100
Pet Adoptions	B, G	Month of September	ASD	1	100

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Tour	B, D	7/1/2017	RRD	1	2
Tour	A, B, E	7/6/2017	RRD	1	2
Tour	A, B, E	7/7/2017	RRD	1	2
Tour	B, G	7/10/2017	RRD	1	7
Tour	B, G	7/11/2017	RRD	1	2
Tour	B, G	7/12/2017	RRD	1	22
Tour	B, G	7/19/2017	RRD	1	19
Tour	B, G	7/20/2017	RRD	1	14
Tour	A, B, E	7/24/2017	RRD	1	14
Tour	B, G	7/24/2017	RRD	1	7
Tour	B, G	7/26/2017	RRD	1	8
Tour	B, G	7/27/2017	RRD	1	50
Tour	A, B, E	7/28/2017	RRD	1	2
Tour	B, G	7/31/2017	RRD	1	22
Tour	B, G	8/2/2017	RRD	1	2
Tour	B, G	8/4/2017	RRD	1	15
Tour	A, B, E	8/4/2017	RRD	1	1
Tour	A, B, E	8/6/2017	RRD	1	8
Tour	A, B, E	8/7/2017	RRD	1	1
Tour	A, B, E	8/8/2017	RRD	1	7
Tour	B, G	8/10/2017	RRD	1	9
Tour	B	8/18/2017	RRD	1	18
Tour	A, B, E	8/27/2017	RRD	1	2
Tour	B, G	8/30/2017	RRD	1	8
Tour	B, G	9/5/2017	RRD	1	15
Tour	B, G	9/14/2017	RRD	1	1
Tour	B, G	9/20/2017	RRD	1	3
Tour	A, B, E	9/28/2017	RRD	1	20
Tour	B	9/28/2017	RRD	1	20
Tour	B, G	9/28/2017	RRD	1	20
Tour	B, G	9/29/2017	RRD	1	2
Tour	A, B, E	10/11/2017	RRD	1	3
Tour	B, G	10/11/2017	RRD	1	20
Tour	B, G	10/12/2017	RRD	1	3
Tour	A, B, E	10/12/2017	RRD	1	3
Tour	A, B, E	10/13/2017	RRD	2	12
Tour	A, B, E	10/16/2017	RRD	1	2
Tour	B, G	10/24/2017	RRD	1	48
Tour	A, B, E	10/25/2017	RRD	2	15
Tour	A, B, E	10/26/2017	RRD	1	5
Tour	B, G	10/27/2017	RRD	1	63
Tour	B, G	10/30/2017	RRD	1	5
Tour	B, G	11/8/2017	RRD	1	25
Tour	B, G	11/10/2017	RRD	1	1
Tour	B, G	11/14/2017	RRD	1	10
Tour	B, G	11/15/2017	RRD	1	110

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Tour	B, G	11/16/2017	RRD	1	4
Tour	B	11/29/2017	RRD	1	30
Tour	B	11/29/2017	RRD	10	85
Environmental Education/Presentations	B	12/10/2017	RRD	2	40
Tour	B, G	12/13/2017	RRD	1	15
Tour	A, B, E	12/14/2017	RRD	2	40
Tour	B, G	12/15/2017	RRD	1	5
Tour	B, G	12/19/2017	RRD	1	10
Tour	B, G	1/5/2018	RRD	1	5
Tour	B, G	1/10/2018	RRD	1	20
Tour	B, G	1/15/2018	RRD	1	8
Tour	A, B, E	1/17/2018	RRD	2	20
Tour	A, B, E	1/18/2018	RRD	1	8
Tour	B, G	1/18/2018	RRD	1	54
Tour	B	1/24/2018	RRD	1	21
Tour	A, B, E	1/25/2018	RRD	1	4
Tour	B, G	1/25/2018	RRD	1	55
Tour	B, G	1/29/2018	RRD	1	3
Tour	B, G	1/31/2018	RRD	1	5
Tour	A, B, E	1/31/2018	RRD	1	6
Tour	B	1/31/2018	RRD	1	8
Tour	B, G	2/1/2018	RRD	1	2
Tour	B, G	2/2/2018	RRD	1	8
Tour	B, G	2/13/2018	RRD	1	60
Tour	B, G	2/14/2018	RRD	1	20
Tour	A, B, E	2/20/2018	RRD	2	44
Tour	B	2/20/2018	RRD	1	51
Tour	A, B, E	2/21/2018	RRD	3	120
Tour	A, B, E	2/22/2018	RRD	3	120
Tour	B, G	2/22/2018	RRD	1	83
Tour	B, G	2/28/2018	RRD	1	5
Tour	A, B, E	3/1/2018	RRD	1	10
Tour	B, G	3/5/2018	RRD	1	116
Tour	A, B, E	3/7/2018	RRD	3	97
Tour	B, G	3/7/2018	RRD	1	6
Tour	B, G	3/14/2018	RRD	1	12
Tour	B, G	3/14/2018	RRD	1	20
Tour	B, G	3/14/2018	RRD	1	12
Tour	A, B, E	3/15/2018	RRD	1	14
Tour	B, G	3/16/2018	RRD	1	1
Tour	A, B, E	3/22/2018	RRD	3	66
Tour	B, G	3/22/2018	RRD	1	52
Tour	B, G	3/23/2018	RRD	1	37
Tour	A, B, E	3/27/2018	RRD	1	8
Tour	A, B, E	3/27/2018	RRD	1	5

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Tour	A, B, E	4/2/2018	RRD	1	9
Solid Waste Management/Recycling Program	B	4/4/2018	RRD	1	45
Tour	A, B, E	4/4/2018	RRD	1	40
Tour	A, B, E	4/9/2018	RRD	2	100
Tour	A, B, E	4/10/2018	RRD	2	90
Tour	B, G	4/10/2018	RRD	1	116
Tour	B, G	4/12/2018	RRD	1	34
Tour	A, B, E	4/12/2018	RRD	1	25
Tour	B, G	4/13/2018	RRD	1	8
Tour	B, G	4/17/2018	RRD	1	87
Tour	A, B, E	4/17/2018	RRD	3	120
Tour	B, G	4/18/2018	RRD	1	1
Tour	B, G	4/19/2018	RRD	1	61
Tour	A, B, E	4/20/2018	RRD	1	2
Presentation to School on Recycling	B	4/23/2018	RRD	1	30
Tour	B, G	4/23/2018	RRD	1	172
Tour	A, B, E	4/24/2018	RRD	2	80
Tour	B, G	4/25/2018	RRD	1	64
Tour	A, B, E	4/25/2018	RRD	2	110
Tour	A, B, E	4/26/2018	RRD	2	50
Tour	B, G	4/26/2018	RRD	1	89
Tour	B, G	4/27/2018	RRD	1	13
Tour	A, B, E	4/30/2018	RRD	2	50
Tour	B, G	5/1/2018	RRD	1	56
Tour	B, G	5/4/2018	RRD	1	17
Tour	B	5/5/2018	RRD	1	35
Tour	B, G	5/5/2018	RRD	1	30
Tour	B, G	5/8/2018	RRD	1	46
Tour	B, G	5/8/2018	RRD	1	32
Tour	A, B, E	5/8/2018	RRD	1	77
Tour	A, B, E	5/8/2018	RRD	1	1
Tour	B, G	5/8/2018	RRD	1	50
Tour	B, G	5/8/2018	RRD	1	48
Seminar w/Breakouts supporting Maryland Green Team Certification and Re-certification	B	5/9/2018	RRD	5	60
Tour	A, B, E	5/9/2018	RRD	1	2
Tour	A, B, E	5/9/2018	RRD	1	7
Tour	B, G	5/10/2018	RRD	1	54
Tour	A, B, E	5/10/2018	RRD	1	1
Tour	B, G	5/11/2018	RRD	1	52

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Tour	B, G	5/14/2018	RRD	1	25
Tour	A, B, E	5/16/2018	RRD	1	50
Tour	B, G	5/16/2018	RRD	1	38
Tour	B, G	5/17/2018	RRD	1	62
Tour	B, G	5/17/2018	RRD	1	1
Tour	B, G	5/18/2018	RRD	1	63
tour	B, G	5/18/2018	RRD	1	31
Tour	A, B, E	5/21/2018	RRD	3	3
Tour	A, B, E	5/23/2018	RRD	1	100
Tour	B, G	5/23/2018	RRD	1	96
Tour	B, G	5/30/2018	RRD	1	28
Tour	A, B, C, D, E, F, G	6/1/2018	RRD	1	25
Tour	B, G	6/4/2018	RRD	1	89
Tour	B, G	6/4/2018	RRD	1	1
Tour	B, G	6/5/2018	RRD	1	54
Tour	A, B, E	6/5/2018	RRD	2	64
Tour	B, G	6/6/2018	RRD	1	36
Tour	B, G	6/8/2018	RRD	1	15
Tour	A, B, E	6/15/2018	RRD	1	20
Tour	A, B, E	6/21/2018	RRD	2	38
Tour	A, B, E	6/26/2018	RRD	1	3
Tour	B, G	7/13/207	RRD	1	11
Tour	B, G	7/21.2017	RRD	1	20
Tour	B, G	8/4/20017	RRD	1	1
College Park Rain Barrel Event	A, B, C, D, E, F, G	7/22/2017	SID	1	53
DoE Summer Interns @ the Global Trifecta Service Day	B	7/26/2017	SID	3	45
YMCA Thingamajig 2017	A, B, C, E	7/27/2017	SID	1	350
YMCA Thingamajig 2017	A, B, C, D, E, F, G	7/27/2017	SID	2	1100
ISA's Tree Climbing Contest at the National Arboretum	A, B, C, E	7/29/2017	SID	1	50
SAVE A CITY-BACK TO SCHOOL AND COMMUNITY HEALTH FAIR EVENT	B, G	7/29/2017	SID	2	110
"STIHL Tour des Trees" cycling event on . It's being hosted in partnership with TREE fund	A, B, C, E	7/30/2017	SID	1	20
National Night Out	A, B, C, E	8/1/2017	SID	1	100
Community Day and Teen Summit Event	B, G	8/5/2017	SID	2	65

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Trees fo All: Chesapeake Regional Environmental Justice Workshop	A, B, C, E	8/8/2017	SID	2	110
Trees fo All: Chesapeake Regional Environmental Justice Workshop	A, B, C, E	8/9/2017	SID	2	110
Assisted Living	A, B, C, E	8/9/2017	SID	1	2
Terrariums	A, B, C, E	8/12/2017	SID	1	7
Beautification Judging	A, B, C, E	8/15/2017	SID	1	5
Beautification Judging	A, B, C, E	8/15/2017	SID	1	5
Marlow Heights Back to School event	B	8/18/2017	SID	1	50
Creating a Sustainable Stream of Income for Your Farm Through Forestry	A, B, C, E	8/24/2017	SID	1	41
2nd Annual Mega Back to School Health Fair	A, B, C, D, E, F, G	8/26/2017	SID	2	110
Mel Franklin Friends and Family	A, B, C, E	8/27/2017	SID	1	75
Conducting Effective Pet Waste Outreach Programs	B, G	8/31/2017	SID	1	104
Set up the Ag/Horticulture dept.	A, B, C, D, E, F, G	9/4/2017	SID	1	
Intake of residents produce and flowers entries	A, B, C, D, E, F, G	9/5/2017	SID	1	25
Community Meeting	B	9/6/2017	SID	1	17
Hyattsville Green Expo	B, G	9/9/2017	SID	1	132
College Park Rain Barrel Event	A, B, C, D, E, F, G	9/9/2017	SID	1	40
Companion Planting for the Mt Airy Claybreaker Garden Club	A, B, C, E	9/14/2017	SID	1	30
Bi Annual Environmental Action Council Meeting	A, B, C, E	9/20/2017	SID	1	15
Highway to Health - Senior Services	A, B, C, E	9/25/2017	SID	2	110
Highway to Health – Manned Table	A, B, C, D, E, F, G	9/25/2017	SID	1	50
PGCLitterTRAK Training + Clean Sweep Orientation	B	9/26/2017	SID	1	17
Suitland/Coral Hills TNI	A, B, C, E	9/27/2017	SID	1	57

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Beatification Dinner	A, B, C, E	9/27/2017	SID	1	110
Beatification Dinner - Manning	A, B, C, E	9/27/2017	SID	1	110
Prince George's Police District Citizens Advisory Council	B	9/27/2017	SID	1	27
DoE Resource for Green Schools	A, B, C, E	10/4/2017	SID	1	43
DoE Anti-litter Resource for Green Schools	B	10/4/2017	SID	1	43
Urban Garden Workshop Mission of Love Charities	A, B, C, E	10/4/2017	SID	1	5
Prince George's County Municipal Floodplain Management Workshop	B	10/4/2017	SID	2	39
DoE Resources for Treat and Teach Schools	A, B, C, E	10/5/2017	SID	2	35
DuVal High School	B	10/9/2017	SID	1	15
Environmental Youth Summit - Action Day	A, B, C, E	10/9/2017	SID	2	75
2nd Anacostia River Festival	B, G	10/14/2017	SID	1	136
Hillsmeade HOA community meeting	A, B, C, E	10/19/2017	SID	1	15
Prince George's County Municipal Association (PGCMA	???	10/19/2017	SID	1	75
DoE Green Summit 2017	B, G	10/25/2017	SID	1	100
DoE Green Summit 2017	B, G	10/25/2017	SID	1	50
DoE Green Summit 2017	B	10/25/2017	SID	1	75
DoE Green Summit 2017	B	10/25/2017	SID	1	110
Prince George's Champion Tree Tour	A, B, C, E	10/28/2017	SID	1	36
Cottage City Rain Check Rebate	A, B, C, D, E, F, G	10/29/2017	SID	1	15
Fairmont Heights City Hall	A, B, C, E	11/2/2017	SID	1	8
Kingsford Elementary School	A, B, C, E	11/2/2017	SID	1	3
Patuxent Wildlife Refuge	A, B, C, E	11/4/2017	SID	1	30
River of Life Church Temple Hills	A, B, C, E	11/7/2017	SID	1	10
Storm watershed	A, B, C, E	11/8/2017	SID	1	17

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Steward Academy Class					
Mission of Love Charities	A, B, C, E	11/15/2017	SID	1	5
Contractor Training	A, B, C, D, E, F, G	11/29/2017	SID	2	35
Mission of Love Charities	A, B, C, E	11/29/2017	SID	1	5
Meeting with Academy of Environmental Studies Advisory Committee	A, B, C, E	12/4/2017	SID	1	12
Met with River of Life Committee	A, B, C, E	12/5/2017	SID	1	15
Patuxent River Conferenced: River Management Stories: Making the Leap from Information to Application	A, B, C, D, E, F, G	12/6/2017	SID	2	60
Professional Training	B	12/8/2017	SID	1	130
Met with the Beautification Committee	A, B, C, E	12/18/2017	SID	1	4
Urban Gardening and Farming	A, B, C, D, E, F, G	1/9/2018	SID	1	20
Urban Gardening	A, B, C, D, E, F, G	1/10/2018	SID	1	6
Permits, Licensing, etc.	A, B, C, D, E, F, G	1/19/2018	SID	1	25
Fairmont Heights HS Agriculture and Careers	A, B, C, D, E, F, G	1/24/2018	SID	1	25
Gardening and the Environment	A, B, C, D, E, F, G	1/30/2018	SID	1	3
Fairmont Heights HS Garden presentation and Agriculture and Careers	A, B, C, D, E, F, G	1/30/2018	SID	1	
StormStormwater 301 Teacher Professional Training	A, B, C, E	3/1/2018	SID	1	38
Level 1 CBLP Training for PGC Parks	A, B, C, E	3/1/2018	SID	1	21
StormStormwater 101 Teacher Professional Training	A, B, C, E	3/6/2018	SID	1	33
Contractor training	A, B, C, E	3/8/2018	SID	2	30
Botany (Master Gardner Training)	A, B, C, E	3/12/2018	SID	1	24
Ecology and Global	A, B, C, E	3/12/2018	SID	1	24

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Warming (Master Gardner Training)					
Soils and Fertilizers (Master Gardner Training)	A, B, C, D, E, F, G	3/14/2018	SID	1	24
Entomology (Master Gardner Training)	A, B, C, E	3/16/2018	SID	1	24
Interactive EnvioScape	A, B, C, D, E, F, G	3/16/2018	SID	1	28
Seasonal Planting	A, B, C, E	3/17/2018	SID	1	15
Starting A Spring Veggie Garden	A, B, C, E	3/17/2018	SID	1	10
National Women's History Month, the Accokeek First Church of God	A, B, C, E	3/18/2018	SID	2	41
Pesticides (Master Gardner Training)	A, B, C, D, E, F, G	3/19/2018	SID	1	24
PGCLitterTrak	B	3/20/2018	SID	1	15
Community Forklift – Baywise	A, B, C, D, E, F, G	3/23/2018	SID	1	52
Tree planting and RCR	A, B, C, E	3/24/2018	SID	2	125
LPGlitter Track	B	3/27/2018	SID	2	14
Region 3 Trash Free Stormwaters Summit - Tackling Trash: How Communities are Finding Ways to Address Trash in the Urban Environment	B	3/27/2018	SID	1	70
Career Day	A, B, C, E	3/27/2018	SID	1	27
PGCLitterTRAK Training	B	3/28/2018	SID	1	5
Rain Check Rebate rain barrels and Pet	A, B, C, D, E, F, G	3/28/2018	SID	1	30
Pruning workshop	A, B, C, E	3/28/2018	SID	1	20
Pet Waste Summit	B, G	3/29/2018	SID	1	88
Consultation on Gardening	A, B, C, E	3/29/2018	SID	1	6
MG Basic Training Lecture	A, B, C, D, E, F, G	4/2/2018	SID	1	22
Volunteer Project – Senior Green Team	B	4/3/2018	SID	2	24
MG Basic Training Lecture	A, B, C, D, E, F, G	4/4/2018	SID	1	22
UMD Good Neighbor Day	A, B, C, E	4/7/2018	SID	2	0
Pollinators	A, B, C, D, E, F, G	4/7/2018	SID	1	10

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
MG Basic Training Lecture	A, B, C, D, E, F, G	4/9/2018	SID	1	22
MG Basic Training Lecture	A, B, C, D, E, F, G	4/10/2018	SID	1	22
Fairmount Heights FFA training	B, G	4/10/2018	SID	1	15
Charles Flower High - ADED planting	A, B, C, E	4/11/2018	SID	1	40
Tree Symposium - Dr. Richard Olsen	A, B, C, E	4/11/2018	SID	1	60
WSA Storm Watershed Stewards	B, G	4/11/2018	SID	1	20
WSA Storm Watershed Stewards	B	4/11/2018	SID	1	20
Friendly Tree Demo -	A, B, C, E	4/11/2018	SID	1	30
Urban Tree Workshop	A, B, C, E	4/11/2018	SID	1	15
Tree and Small Fruits (Master Gardner Training)	A, B, C, D, E, F, G	4/11/2018	SID	1	25
Volunteer Project – College Park parkrun & Phi Kappa Psi	A, B, C, E	4/14/2018	SID	2	75
Green Expo - Bowie	B, G	4/14/2018	SID	1	88
Green Expo - Bowie	A, B, C, E	4/14/2018	SID	1	40
Green Expo - Bowie	A, B, C, E	4/14/2018	SID	1	70
Mt. Rainier Spring Greening Fair and Expo 2018	B, G	4/14/2018	SID	1	155
Mt. Rainier Spring Greening Fair and Expo 2018	A, B, C, D, E, F, G	4/14/2018	SID	1	110
Mt. Rainier Spring Greening Fair and Expo 2018	B, G	4/14/2018	SID	1	10
Mt. Rainier Spring Greening Fair and Expo 2018	A, B, C, D, E, F, G	4/14/2018	SID	1	10
Mt. Rainier Spring Greening Fair and Expo 2018	A, B, C, D, E, F, G	4/14/2018	SID	1	85
Columbia Park Elementary Festival	B, G	4/14/2018	SID	2	45
Columbia Park Elementary Festival	B	4/14/2018	SID	2	45
Columbia Park Elementary Festival	B	4/14/2018	SID	2	45

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Potomac Cleanup	A, B, C, D, E, F, G	4/14/2018	SID	1	120
Radiant Valley Clean Sweep	B	4/14/2018	SID	1	15
Friendly/Fort Washington Community Beautification Event	A, B, C, D, E, F, G	4/14/2018	SID	1	25
Parts of A Flower	A, B, C, D, E, F, G	4/14/2018	SID	1	6
Vertical Garden	A, B, C, D, E, F, G	4/14/2018	SID	1	10
Volunteer Project – Friends of Guilford Run	A, B, C, E	4/15/2018	SID	1	38
Baywise, Composting	A, B, C, D, E, F, G	4/16/2018	SID	1	22
Pollinator Training	A, B, C, D, E, F, G	4/17/2018	SID	1	10
Volunteer Project – Food & Drug Administration Staff	A, B, C, E	4/18/2018	SID	1	10
St Pius X Green Team Tree demo	A, B, C, E	4/18/2018	SID	2	20
Urban Gardening Workshop	A, B, C, D, E, F, G	4/18/2018	SID	1	22
Houseplants	A, B, C, D, E, F, G	4/18/2018	SID	1	22
Levee Systems, Flood Risk Management and Preparedness	B	4/18/2018	SID	1	32
Garden, Hydroponics	A, B, C, D, E, F, G	4/19/2018	SID	1	4
Volunteer Project – Eagle Scout Service Project	A, B, C, E	4/21/2018	SID	2	27
Earth Day Cleanup Riverdale - Tanglewood	A, B, C, D, E, F, G	4/21/2018	SID	2	75
Earth Day Cleanup Bladensburg Stormwater Front	B	4/21/2018	SID	2	135
Earth Day Cleanup Lower Beaver Creek	A, B, C, D, E, F, G	4/21/2018	SID	1	65
Earth Day Cleanup Briers Mill Run (William Wirt)	A, B, C, D, E, F, G	4/21/2018	SID	2	120
Garden, Good Bugs/Bad Bugs	A, B, C, D, E, F, G	4/21/2018	SID	1	15
Palmer Park TNI Village Green Clean Sweep	B	4/21/2018	SID	2	
Palmer Park + MNCPPC Clean Sweep	B	4/21/2018	SID	2	10
Volunteer Project – Rotary Club & Sigma Chi	A, B, C, E	4/22/2018	SID	1	51
Vegetables	A, B, C, D, E, F, G	4/23/2018	SID	1	22

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Ritchie Heights/Ritchie Manor Civic Association	A, B, C, E	4/24/2018	SID	1	15
Trees and Shrubs	A, B, C, E	4/25/2018	SID	1	22
Career day at John Hanson Montessori	B	4/27/2018	SID	2	40
Arbor Day	A, B, C, E	4/27/2018	SID	2	70
North Forestville Elementary School - Celebrating Earth Day	B, G	4/27/2018	SID	1	140
Volunteer Project – DeMatha Ecology Club, CKAR, Town of Riverdale	A, B, C, E	4/28/2018	SID	1	15
Kentland TNI-Kent Baptist Church Clean Sweep	B	4/28/2018	SID	2	20
Meadowview Clean Sweep	B	4/28/2018	SID	2	30
Hillcrest Heights TNI Clean Sweep	B	4/28/2018	SID	2	20
Lewisdale Clean Sweep	B	4/28/2018	SID	2	25
Earth Day Celebration Greenbelt Tree Demo	A, B, C, E	4/28/2018	SID	1	30
Stenciling in Suitland.	A, B, C, D, E, F, G	4/28/2018	SID	2	
Annual Cleanup/Green Up	A, B, C, D, E, F, G	4/28/2018	SID	2	45
Weeds	A, B, C, D, E, F, G	4/30/2018	SID	1	22
WSA Storm Watershed Stewards	A, B, C, E	5/2/2018	SID	1	20
District III Coffee Circle	B	5/2/2018	SID	1	50
PGCLitterTrak	B	5/2/2018	SID	1	6
ADED Tree Demo at Rober Goddard	A, B, C, E	5/4/2018	SID	1	78
Baywise Yard Certification	A, B, C, D, E, F, G	5/5/2018	SID	1	5
Native plants/Invasive	A, B, C, E	5/7/2018	SID	1	21
AWCAC Meeting	B	5/8/2018	SID	1	10
PGCLitterTrak	B	5/9/2018	SID	1	60
Abiotics and IPM	A, B, C, D, E, F, G	5/9/2018	SID	1	21
PGCLitterTrak	B	5/10/2018	SID	1	50
Patuxent District Scout Leader Program Launch	A, B, C, E	5/10/2018	SID	2	150
Greenbelt Green Man Festival	A, B, C, E	5/12/2018	SID	2	130
Highland Park Career Event	B, G	5/14/2018	SID	1	150
MWCOG Air and Climate	???	5/14/2018	SID	1	10

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Public Advisory Committee					
Town of Capitol Heights PW Directors Roundtable	B	5/22/2018	SID	2	10
Saxony Square/Kingsley Hall	B, G	5/28/2018	SID	2	50
MAEOE Youth Summit	A, B, C, D, E, F, G	5/31/2018	SID	2	230
MAEOE Youth Summit	B	5/31/2018	SID	2	220
MAEOE Youth Summit	A, B, C, E	5/31/2018	SID	1	1820
Greenbelt DPWT Open House	A, B, C, D, E, F, G	6/2/2018	SID	1	100
City of Greenbelt Pet Expo 2019	B, G	6/2/2018	SID	1	155
Brentwood Day	A, B, C, E	6/2/2018	SID	1	100
Bowiefest	B, G	6/2/2018	SID	1	250
Community Outreach Develop	A, B, C, D, E, F, G	6/4/2018	SID	1	5
Parks and Rec Candle Presentation	B	6/6/2018	SID	1	70
District III Coffee Circle	A, B, C, E	6/6/2018	SID	1	60
	A, B, C, D, E, F, G	6/6/2018	SID	1	5
NBC 4 News on Growing Veggies	A, B, C, D, E, F, G	6/6/2018	SID	1	25
Colmar Manor Sustainability Workshop	A, B, C, D, E, F, G	6/9/2018	SID	1	13
Colmar Manor Sustainability Workshop	A, B, C, D, E, F, G	6/9/2018	SID	1	13
	A, B, C, D, E, F, G	6/13/2018	SID	1	25
State of the River Report Card	A, B, C, D, E, F, G	6/13/2018	SID	1	40
	A, B, C, D, E, F, G	6/16/2018	SID	1	6
School Education	A, B, C, D, E, F, G	6/19/2018	SID	1	27
School Education	B	6/19/2018	SID	1	27
	A, B, C, D, E, F, G	6/23/2018	SID	2	8
Brentwood Pollinator Festival	A, B, C, E	6/23/2018	SID	1	25
Good Housekeeping Green Housekeeping	A, B, C, D, E, F, G	6/27/2018	SID	2	45
Houseplants that Clean the Air	E	6/27/2018	SID	1	25
Pollinators	A, B, C, E	6/30/2018	SID	2	20
Pollinators	A, B, C, E	6/30/2018	SID	2	20
Professional Training	A, B, C, E	12/8/2017	SID	1	130
Pet Waste and Stormwater	B, G	2/14/2018	SID	2	185

Activity - Event	Permit Condition Satisfied[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Kentland Palmer Park TNI Meeting	B	5/14/2018	SID	1	30
Green School Training	B		SID	1	45
Green School Training	A, B, C, E		SID	1	45
College Park Rain Barrel Event	A, B	7/1/2017	SMD	1 (DoE)	53
Community Meeting	B	8/16/2017	SMD	1	25
College Park Rain Barrel Event	A, B	9/1/2017	SMD	2 (1 DoE, 1 CBT)	40
Cottage City Rain Check Rebate Presentation	A, B, C	10/1/2017	SMD	2 (1 DoE, 1 Town Member)	15
Community Meeting	B	10/17/2017	SMD	1	25
Rain Check Rebate Contractor Training (Classroom)	A, B, C	11/1/2017	SMD	7 (4 LID, 2 DoE, 1 CBT)	18
Community Meeting	B	2/21/2018	SMD	1	30
Presentation	A, B, C	3/1/2018	SMD	1 (DoE)	30
Rain Check Rebate Contractor Training (Classroom)	A, B, C	3/1/2018	SMD	7 (4 LID, 2 DoE, 1 CBT)	25
Rain Check Rebate Contractor Training (Field)	A, B, C	3/1/2018	SMD	7 (4 LID, 2 DoE, 1 CBT)	18
Mount Rainier Spring Greening Fair and Exposition	A, B, C	4/1/2018	SMD	3 (1 DoE, 2 CBT)	110
Community Meeting	A, B, C, E	4/18/2018	SMD	1	40
Greenbelt Open House	A, B, C	6/1/2018	SMD	2 (DoE)	100
Colmar Manor Sustainability Workshop	A, B, C	6/1/2018	SMD	2 (1 DoE, 1 Town Member)	13

[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

Over the past year, the Community Outreach Promoting Empowerment (COPE) has continued to partner with local communities, schools, homeowner associations, and civic groups as well as municipalities, to promote environmental stewardship and long-term behavior change.

In this reporting period, DoE through its Sustainability Division has held 197 events reaching more than 12,400 people to engage communities and individuals in restoration, promoting sustainable solutions and leveraging community action. Educational events also included general environmental stewardship to promote the wise use of environmental resources through garden and protection of pollinators.

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, 42 events and numerous clean-us were held reaching over 2,039 people. Anti-litter activities included 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. Forty-six events were held which reached 3,353 people. 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 through a variety of workshop, educational events and festival participation. During this reporting period, seven workshops were held to promote stormwater stewardship and promote environmental stewardship. Two workshops were focused on rain barrels (held in College Park and District 1 Coffee Club), and three workshops were focused on stormwater and Rain Check Rebate program (held at Cottage City, Mount Rainier, and Colmar Manor). Each workshop was customized to focus on the specific practices of interest to the community. All workshops promoted the Rain Check Rebate and Tree programs as an incentive to install practices. In addition, COPE in conjunction with the City of Greenbelt held a pollinator workshop in June to celebrate of Pollinator month to promote protection of our pollinators through sustainable practices. On June 27, the Sustainability Division held the County's first Good Housekeeping Green Housekeeping workshop at the Laurel Senior Center (Figure D-5). The focus was on learning the negative affects some cleaning products have on environment and health. Participants highlighted best practices for greening your cleaning routine.

In addition, three Sustainable Division staff have been certified as Green School leaders. Thus, staff has participated in six teacher trainings to teachers on stormwater practices, trees, and anti-litter. COPE has developed professional training that links trees with class room curriculum (See Figure D-6).

Figure D-5 Example of the Events by Sustainability Division

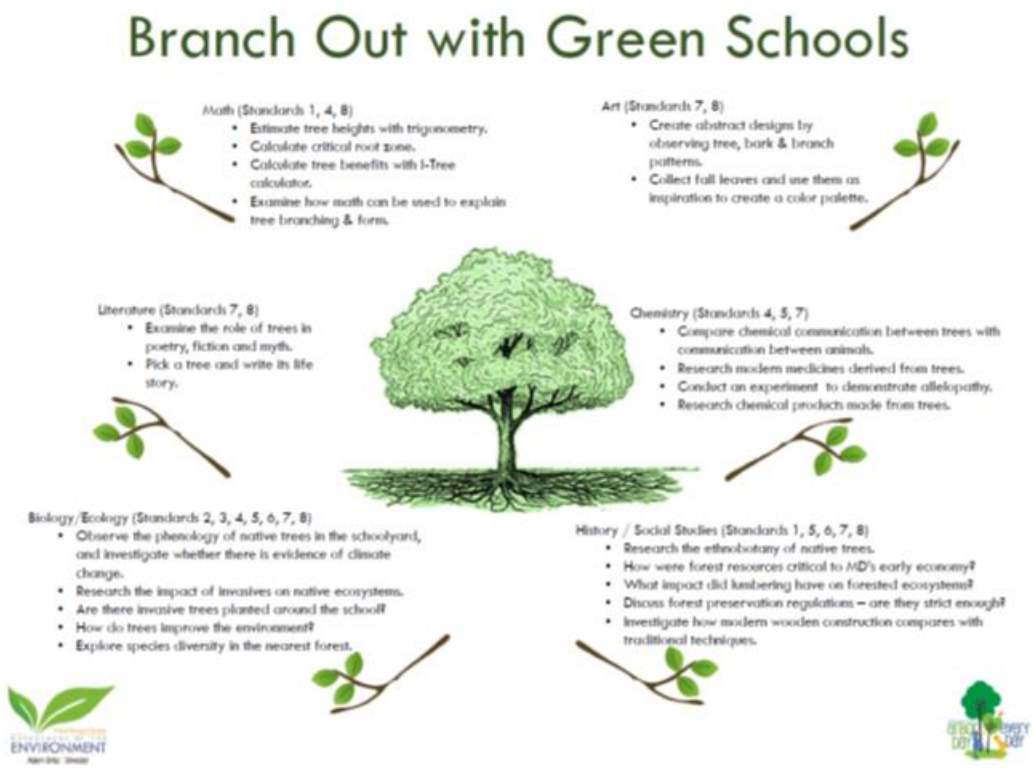

Figure D-6. Example of the Training that Links Trees with Class Room Curriculum.

Pet Waste Campaign

In FY 2017, COPE launched a pet waste disposal campaign to reduce the amount of nutrient and bacterial pollution from pet waste in local waterways. The goal of this 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".

COPE is using a multi-pronged approach which includes development of educational materials, 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. In FY 18, DoE designed signage for use at dog parks and in high use areas in communities. Two versions of the high use area signs were produced to reflect community demographics. The Scoop That Poop sign is for communities that have an older age demographics (few children). The second high use sign, Kids Play: Keep Poop Away was designed to target communities with children. These signs are shown in Figure D-7. The signage will be distributed in FY 2019.

COPE has continued promoting pet waste stewardship by taking the poop game to festivals and community events as well as working with communities and municipalities. COPE has partnered with Mount Rainier, City of Greenbelt and the City of Bowie to promote their pet waste campaigns. COPE participated in the Greenbelt Pet Waste Expo and Bowiefest on June 2, 2018. Both events were great successes.

Figure D-7. Signs for the High Use Areas

Through the FY 2018 stormwater stewardship grants, the University of Maryland Environmental Finance Center (EFC) was 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. Seven municipalities and five unincorporated communities and homeowner's associations (HOAs) were selected to participate in the FY 2018 campaign to install stations and engage dog owners. The municipalities are Berwyn Heights, Capital Heights, Colmar Manor, Fairmount Heights, Forest Heights, Hyattsville and Seat Pleasant. The HOAs are Village Green, East Pines Neighborhood Association, Fox Chase I, Avondale North Woodridge and Riverdale RRC Community Association. Eighty-six stations were purchased in FY 2018 with 76 installed. The remaining 10 stations will be installed in Fall 2018. Nine of the stations (Mini pet waste station) consisted of sign and bag dispenser only.

Figure D-8. Mini Pet Waste Station: Eastpines Community Center

Table D-35. Pet Waste Station Installation in FY 2017 and FY 2018 through DoE's Stormwater Stewardship Grant

Fiscal Year	Number of Stations	Type of Station	Location
2017	60	Full	Municipality
2017	13	Full	HOA
2018	77	Full	Municipality
2018	9	Mini	HOA

While the metrics for tracking nutrient and bacterial reductions is still under development, EFC estimated that a full container is about 10 pounds and half of a container is 5 pounds. Using this relationship, the County estimates that municipalities have collected at least 4,522 pounds of pet waste in the first two years of this program (1,132 pounds in FY 2017, and 3,390 pounds in FY 2018). Since some municipalities have not been as diligent in reporting back to the County and some citizens take their pet waste home with them, the County considers this to be a conservative estimate.

DoE in partnership EFC also hosted the second Prince George's County Pet Waste Management Summit on March 29, 2018 in Largo. This free event kicked off the second year of DoE's Pet Waste Campaign. A total of 88 residents registered for the summit of which 43 attended. All registrants and attendees received an extensive meeting follow-up with the summit presentations, outreach campaign material and pet waste outreach program templates.

In total, 17 pet waste related events were held reaching 1,651 people. In addition, the County staff participated in a webcast sponsored by Chesapeake Stormwater Network on Conducting Effective Pet Waste Outreach Programs. A key to this success has been to use of the poop game which engages people in a fun manner.

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 FY 2018, a Great Rain Barrel Event was held in College Park in September 2017. The City of College Park, DoE and the Plumbers and Gasfitters UA Local 5 offered discounted 50-gallon rain barrels for purchase. A total of 95 rain barrels were sold. In addition, Rain Barrel events are currently under development for fall 2018 at Mount Rainier and a second one for College Park. 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 cost $0 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."

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 through three Nature Centers, two Waterfront Parks and a Park Ranger Unit. 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 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 and Bladensburg Waterfront Park are unique sites that offer a wide variety of on-site programs for adults and students. Bladensburg Waterfront Park and Patuxent River Park partner with many state and national agencies to conduct wetland and water quality research along the Patuxent River.

Total numbers in FY 2018 for the M-NCPPC programs were:

- Total programs: 2,600
- Total program participants: 83,000
- Total special events: 40
- Total special event participation: 30,000
- Total participants in environmental education and outreach programs: 113,000

The Table D-36 includes some other programs and projects not included in the numbers noted above.

Table D-36. Additional Events by M-NCPPC

Activity - Event	Satisfy Permit Condition Type[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Hillcrest Heights Clean-up with Thurgood Marshall Academy	A, B, C, D	4/20/18	M-NCPPC	85	92

Activity - Event	Satisfy Permit Condition Type[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Patuxent River Clean-up	A	4/8/18	M-NCPPC	53	53
AWS Earth Day Clean-up	A,B,C,D,E,F	4/21/18	M-NCPPC, AWS	300	300
Jug Bay Run for Wildlife	A, B, C, D, E	11/4/18	M-NCPPC	20	700
Parkdale High School Environmental outreach	A, B, C, D	Various	M-NCPPC, IB Program	50	50
Mt. Rainier Nature Center Spring Greening Fair	D, E	4/14/18	M-NCPPC	20	550
Trash to Treasure Green Craft Fair	A	11/5/17	M-NCPPC	20	600
Alice Ferguson Potomac River Clean-up	A, B, C, D, E, F	4/14/18	M-NCPPC	100	100
Prince George's County Envirothon	A, B, C, D	Multiple	M-NCPPC PGCPS		100
9/11 Day of Service stream clean-up (partnership with City of Hyattsville and Catholic University)	A, B, C, D, E	8/27/17	M-NCPPC, city of Hyattsville	25	30
College Park Scholars Day	A, B, C, D	8/25/17	M-NCPPC, UMD	300	300
Carole Highlands Community Clean-up	A, B, C, D	4/4/18	M-NCPPC	20	20
Chesapeake Bay Landscape Professional training	A, B, C, D, E	3/1/18-3/2/18	M-NCPPC, CPLB		15
Wild Rice in the Classroom (Field work)	A, B	Various	M-NCPPC, Schmidt Center	125	125
Sunfish in the Classroom	A, B, C, D, E	Various	M-NCPPC, Schmidt Center		
Tadpoles for Teachers	A, B,	Various	M-NCPPC	68	68
Farm Conservation Programs	A, B, D	various	M-NCPPC		330
Educator Workshops	A, B, C	Various (6 workshops)	M-NCPPC	5	38
Good Neighbor Day stream/park clean-up	A, B, C, D, E	Various	M-NCPPC, UMD	300	300

Activity - Event	Satisfy Permit Condition Type[1]	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Park Clean-up with Beacon Heights Elementary School	A, B, D	Various	M-NCPPC	130	130
Senior Green Team projects and educational activities	A, B, C, D, E	Various	M-NCPPC	50	50
J. E Howard stream clean-up	A, C, D	4/3/18	M-NCPPC, Alice Ferguson Foundation	25	35
Tree planting with FDA	A, C	4/18/18	M-NCPPC	15	15
PGCPS STEAM Festival	A, B, C, D	11/01/17	M-NCPPC	15	300
Environmental Studies Academy Advisory Committee	A, B, C, D	various	M-NCPPC\ PGCPS		15
Environmental Health Meeting	A, B, D, E	various	M-NCPPC	70	70
Cross Borders meeting	A, B, C, D, E	4/26/18	P.G. DOE		35
Schoolhouse Pond Clean-up Day	A, B, C, D, E	4/8/18	M-NCPPC	35	35
Stream Waders Stream Sampling	A, B, C, D, E	Various	M-NCPPC/DNR	5	5
Patuxent River Conference committee meetings	A, B, D,	various	Friends of Jug Bay/M-NCPPC		25
Eagle Scout projects	A, B, C, D, E	Various	M-NCPPC	100	100
Bald Eagle Program at Leonardtown Earth Day		4/22/18	M-NCPPC, Leonardtown	20	400
Upper Marlboro Day of Service	A, B, C, D	9/16/17	Upper Marlboro/M-NCPPC	30	35
Geocaching conservation day	A, B, C, D	9/27/17	M-NCPPC	4	6
Weed Warrior programs	A, B, C, D	Various	M-NCPPC	165	165
Prince George's Champion Tree tour	A, B,	10/28/17	M-NCPPC, PG Forestry board	5	30
SMART Litter Workgroup	A, B, C, D, E, F	Various	DPWT, DOE		30
Monarch Conservation programs		Various	M-NCPPC	22	25
Total				***2,182***	***5,277***

[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.*

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 88 participants in the program. Trash collected during the cleanup is left along the roadway, usually in the vicinity of the Adopt-a-Road sign. DPW&T crews then pick up the trash collected by the communities as part of routine road maintenance. The tonnage collected is captured under the achievements of the Litter Control Program.

Stormwater Management Facility Maintenance

Pilot Pond Community Program

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

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

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

This pilot program was started in 2010. In FY 2018, 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-37.

Table D-37. SWMF Projects Completed for 2011-18.

Calendar Year	SWMF Projects Completed
2011	2
2012	4
2013	3
2014	0
2015	3
2016	0
2017	2
2018	3
Total	***17***

BMP Inspection Program for Private Stormwater Management Facilities

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

Household Hazardous Waste

The "Household Hazardous Waste and Electronics Recycling" brochure promotes the proper disposal of chemicals and hazardous waste and recycling opportunities available to County residents. The brochure, both in English and Spanish, stresses the importance of safe disposal of hazardous waste and opportunities for recycling unwanted electronic devices. The County maintains a permanent household hazardous waste acceptance site, open and free-of-charge to County residents, at the Brown Station Road Sanitary Landfill in Upper Marlboro. The County contracts with Care Environmental Corporation, a licensed hazardous waste disposal company, to ensure the proper handling and disposal of all hazardous materials collected at the site. Additionally, the County continues to provide a "front door" waste pickup service option for elderly or disabled residents who qualify for this free service. Approximately 6,765 vehicles were dropped off hazardous and electronic waste during this reporting year. A summary of the materials collected in FY 2018 are listed below:

- 225.58 tons of electronics
- 49,556 gallons of liquid household hazardous waste
- 19.51 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 22 Master Gardener interns on the Bay-Wise Landscape Management Program and Stormwater Management Program in Prince George's County on March 21, 2018
- A total of 10 Master Gardeners took the Beautification Judges Sustainability Training and were certified.
- A total of 54 Master Gardeners took the 2-day Advance Bay-Wise Landscape Management Course and 1-day practicum and were certified in June 2018.

Community Events

Bay-Wise handouts and discussions with residents took place at the following community events:

- Bowie Green Expo on April 14, 2018
- Montpelier Herb, Tea and Arts Festival on April 28, 2018
- Hyattsville Green Festival on September 9, 2017
- Mount Rainier Nature Center Spring Greening on April 14, 2018
- Community Forklift Garden Party on March 24, 2018
- 2017 Festival Del Rio on October 14, 2017
- Laurel River Fest on September 24, 2017

Yard Certifications in Stormwater Management

- University of Maryland Extension Master Gardener Volunteers in Prince George's County certified three residents yards as Bay-Wise.
- A resident whose yard is certified as Bay-Wise receives a certificate and yard sign.
- The town of Cheverly is encouraging their residents to get their yards Bay-Wise certified.

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 2,000 high risk or dying trees were removed, and 4,800 trees were planted. Figure D-9 illustrates the communities where projects were conducted in FY 2018. Table D-38 lists the number of trees planted since program inception.

Table D-38. Right Tree, Right Place Program Accomplishments (2011-2018)

NPDES Year	Trees Planted (approximate) [1]
July 1 - October 31, 2011	1,400
November 1, 2011 - October 31, 2012	4,500
November 1, 2012 - December 31, 2013	4,300
January 1, 2014 - July 01, 2014	5,300
July 1, 2014 - June 30, 2015	5,157
July 1, 2015 - July 01, 2016	3,242
July 1, 2016 – June 30, 2017	4,700
July 1, 2017 – June 30, 2018	4,800
Total	***33,399***

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 50 groups throughout the County through DPWT's Clean Up, Green Up Program. The FY 2018 Clean Up, Green Up event was held on October 28, 2017. The achievement realized through this partnership is detailed in Table D-39.

Table D-39. Clean Up, Green Up Program Achievements in FY 2018

Achievement	Amount
Sites	132
Volunteers	1,150
Trees Installed	1,167
Shrubs Installed	1,021
Perennials and Ornamental Grasses Planted	2,093
Spring Flowering Bulbs Planted	22,300
Landscape Designs by NDC	20
Litter and Debris Collected	16.5 tons

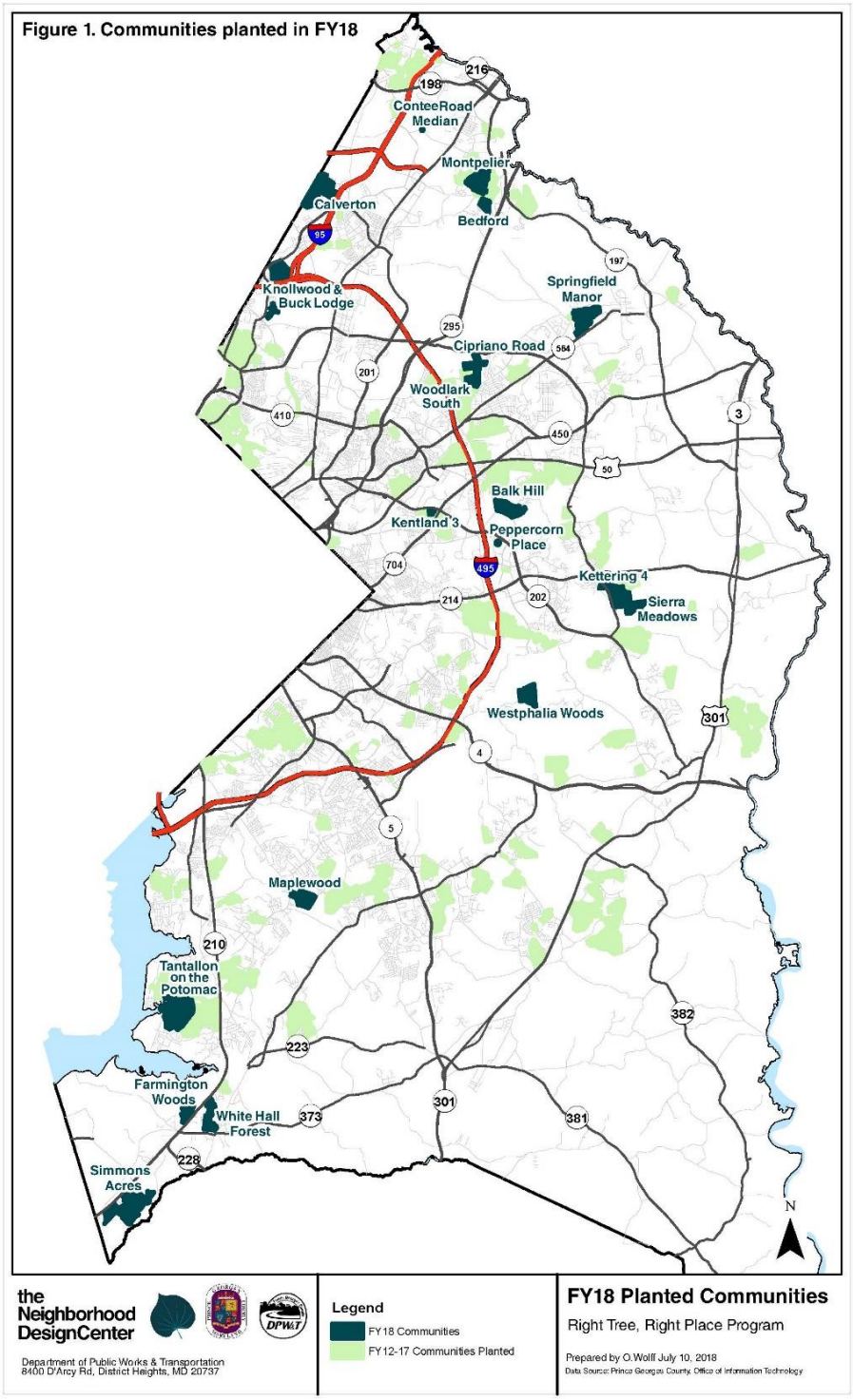

Figure D-9. Right Tree, Right Place Program Project Areas

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 27, 2018, at the Birchwood Community Recreation Center. A total of 27 trees and shrubs were planted to help with stormwater runoff in this event.

Prince George's Beautification/Tree Planting Committee

This year marked the 48th 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 34rd 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 2018, a total of four projects were completed between October 2017 and May 2018, resulting in 75 native trees being planted at a cost of $10,250 with an average cost of $150 per tree. The four projects are summarized in Table D-39. Based on the National Tree Benefit Calculator, the trees for these projects will intercept 5,747 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-40. Tree ReLeaf Program Achievements in FY 2018

Applicant	Number of Trees	Cost
Cinnamon Ridge Condo Association	15	$2,250
Lake Arbor	20	$3,000
Number One of the Pines Condo Association	15	$2,250
Greenbrook HOA	25	$3,750
Total	***75***	***$11,250***

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 123 native trees and shrubs were planted at five County schools in FY 2018, as detailed in Table D-41. In addition, mulch and pots were provided to Bladensburg High and New Hope Academy to ensure long term survival of the trees planted in FY 2017. Based on the National Tree Benefit Calculator, the trees for these projects will intercept 6,118 gallons of stormwater runoff per year.

Table D-41. Arbor Day Every Day Program Achievements in FY 2018.

School	Number of Trees
Charles Flower High School	28
John Hanson Montessori[1]	15
Montpelier Elementary	7
Capital Heights [1]	8
AWS Environmental Youth Summit[1]	50
Calverton Elementary School [1]	2
New Hope	Mulch
Robert Goddard	3
Carrollton Elementary School	11
Carrolton Elementary School	9
Bladensburg High	Mulch and pots
Total	***133***

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.

Seven tree planting demonstration were done during the FY 2018 planting season resulting in an additional 18 trees being planted. The tree demonstration done at Charles Flowers High School and Robert Goddard Montessori School tree demonstrations were done at the time of planting. Based on the National Tree Benefit Calculator, the trees for these projects will intercept 829 gallons of stormwater runoff per year. The following tree demonstrations were completed:

[1] Partnership with Alliance for the Chesapeake Bay

- Charles Flowers High School
- City of Greenbelt
- Fredrick Douglass High School
- Friendly High School
- Robert Goddard Montessori School
- St. Pious X Regional School
- Forestry Board Workshop.

Stormwater Stewardship Grants for Trees

In FY 2018, 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. Family Tree Adoption Tree Global Health Initiative, Alliance for the Chesapeake Bay and Central Kenilworth Avenue Revitalization Community Development Corporation (CKAR) received funds to plant trees on private property.

CKAR developed and managed a pilot outreach and tree planting program under the umbrella of the County's Tree ReLeaf initiative to plant a minimum of 100 trees in spring 2017 and to increase urban tree canopy cover. Through their FY 2018, Stormwater Stewardship grant, CKAR planted 213 native trees and shrubs.

Global Health and Education Project's Family Tree Adoption Program will be planting in the fall of 2018. The Alliance for the Chesapeake Bay provided 61 trees to DoE's ADED program for projects at Capital Heights Elementary School and Bladensburg Waterfront Park.

MNPPC and Greenbelt Homes planted trees as a deliverable in their larger stormwater stewardship grant. MNCPPC planted 754 trees with the majority on public or common grounds (parkland or stream valleys). Greenbelt Homes planted 8 trees as part of two rain garden projects. In addition, Glen Arden planted 1,095 trees and DoE's Capital Improvement Program planted 99 trees as part of mitigation projects.

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

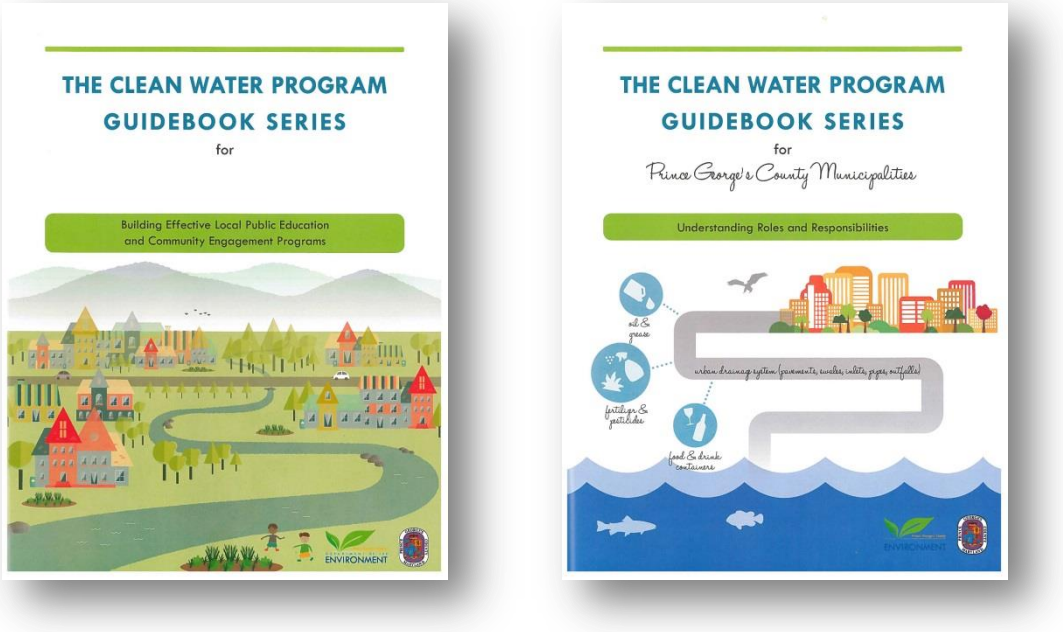

Figure D-10. The Clean Water Program Guidebook Series

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 on page 75.

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 2018 is provided in Table D-42.

Table D-42. FY 2018 Volunteer Neighborhood Cleanup Summary

Project Date	Volunteer Group	Tons of Trash
April, 2018	Hard Bargain Farms	1.21
April, 2018	Tire Drop Site	0.21
April, 2018	National Colonel Farm	1.62
April, 2018	Oxon Hill Farm - 6411 Oxon Hill Farm Road	0.14
April, 2018	Riverview Estates - 1100 Mariner Drive	3.52
April, 2018	Fort Washington Mariner	1.9
April, 2018	Bladensburg Waterfront Park	5.29
April, 2018	Lower Beaver Dam	20.7
April, 2018	Brier's Mill Run	0.62
April, 2018	Riverdale	2.5
Total		***37.71***

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 71.

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 2018, the County continued to host numerous countywide recycling events, as listed in Table D-43 , 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-43. FY 2018 Countywide Waste Reduction Participation Events

Name of Event (Participant)	Date of Event	No. of Participants
MRF Tour	July 1, 2017	2
MRF Tour	July 6, 2017	2
Tour of Western Branch	July 7, 2017	2
MRF Tour	July 10, 2017	7
MRF Tour	July 11, 2017	2
MRF Tour	July 12, 2017	22
MRF Tour	July 13, 2017	11
MRF Tour	July 19, 2017	19
MRF Tour	July 20, 2017	14
MRF Tour	July 21, 2017	20
MRF Tour	July 24, 2017	14
Tour of Western Branch	July 24, 2017	7

Name of Event (Participant)	Date of Event	No. of Participants
Tour of Western Branch	July 26, 2017	8
Tour of Western Branch	July 27, 2017	50
MRF Tour	July 28, 2017	2
Tour of Western Branch	July 31, 2017	22
MRF Tour	August 2, 2017	2
MRF Tour	August 4, 2017	15
MRF Tour	August 4, 2017	1
Tour of Western Branch	August 4, 2017	1
Tour of Western Branch	August 6, 2017	8
Tour of Western Branch	August 7, 2017	1
Tour of Western Branch	August 8, 2017	7
MRF Tour	August 10, 2017	9
MRF Tour	August 18, 2017	18
Tour of Western Branch	August 27, 2017	2
MRF Tour	August 30, 2017	8
MRF Tour	September 5, 2017	15
MRF Tour	September 14, 2017	1
MRF Tour	September 20, 2017	3
Tour of Western Branch	September 28, 2017	20
MRF Tour	September 28, 2017	20
MRF Tour	September 28, 2017	20
MRF Tour	September 29, 2017	2
Tour of Western Branch	October 11, 2017	3
MRF Tour	October 11, 2017	20
MRF Tour	October 12, 2017	3
Tour of Western Branch	October 12, 2017	3
Tour of Western Branch	October 13, 2017	12
Tour of Western Branch	October 16, 2017	2
MRF Tour	October 24, 2017	48
Tour of Western Branch	October 25, 2017	15
Tour of Western Branch	October 26, 2017	5
MRF Tour	October 27, 2017	63
MRF Tour	October 30, 2017	5

Name of Event (Participant)	Date of Event	No. of Participants
MRF Tour	November 8, 2017	25
MRF Tour	November 10, 2017	1
MRF Tour	November 14, 2017	10
MRF Tour	November 15, 2017	110
MRF Tour	November 16, 2017	4
Tour of Western Branch	November 29, 2017	30
Tour of Western Branch	November 29, 2017	85
MRF Tour	December 10, 2017	40
MRF Tour	December 13, 2017	15
Tour of Western Branch	December 14, 2017	40
MRF Tour	December 15, 2017	5
MRF Tour	December 19, 2017	10
MRF Tour	January 5, 2018	5
MRF Tour	January 10, 2018	20
MRF Tour	January 15, 2018	8
Tour of Western Branch	January 17, 2018	20
Tour of Western Branch	January 18, 2018	8
MRF Tour	January 18, 2018	54
MRF Tour	January 24, 2018	21
MRF Tour	January 25, 2018	5
Tour of Western Branch	January 25, 2018	55
MRF Tour	January 29, 2018	3
MRF Tour	January 31, 2018	5
Tour of Western Branch	January 31, 2018	6
MRF Tour	January 31, 2018	8
MRF Tour	February 1, 2018	2
MRF Tour	February 2, 2018	8
MRF Tour	February 13, 2018	60
MRF Tour	February 14, 2018	20
Tour of Western Branch	February 20, 2018	44
MRF Tour	February 20, 2018	51
Tour of Western Branch	February 21, 2018	120

Name of Event (Participant)	Date of Event	No. of Participants
Tour of Western Branch	February 22, 2018	120
MRF Tour	February 22, 2018	83
MRF Tour	February 28, 2018	5
Tour of Western Branch	March 1, 2018	10
MRF Tour	March 5, 2018	116
Tour of Western Branch	March 7, 2018	97
MRF Tour	March 7, 2018	6
MRF Tour	March 14, 2018	12
MRF Tour	March 14, 2018	20
MRF Tour	March 14, 2018	12
Tour of Western Branch	March 15, 2018	14
MRF Tour	March 16, 2018	1
Tour of Western Branch	March 22, 2018	66
MRF Tour	March 22, 2018	52
MRF Tour	March 23, 2018	37
Tour of Western Branch	March 27, 2018	8
Tour of Western Branch	March 27, 2018	9
Tour of Western Branch	April 2, 2018	45
Tour of Western Branch	April 4, 2018	34
Tour of Western Branch	April 4, 2018	40
Tour of Western Branch	April 9, 2018	100
Tour of Western Branch	April 10, 2018	90
MRF Tour	April 12, 2018	116
MRF Tour	April 12, 2018	34
Tour of Western Branch	April 13, 2018	8
MRF Tour	April 17, 2018	25
Tour of Western Branch	April 17, 2018	87
MRF Tour	April 18, 2018	120
MRF Tour	April 19, 2018	1
Tour of Western Branch	April 20, 2018	61
Mulch Giveaway	April 21, 2018	163
Tour of Western Branch	April 23, 2018	30
Tour of Western Branch	April 23, 2018	172

Name of Event (Participant)	Date of Event	No. of Participants
MRF Tour	April 24, 2018	80
MRF Tour	April 25, 2018	64
Tour of Western Branch	April 25, 2018	110
Tour of Western Branch	April 26, 2018	50
MRF Tour	April 26, 2018	89
MRF Tour	April 27, 2018	13
Tour of Western Branch	April 30, 2018	50
MRF Tour	May 1, 2018	56
MRF Tour	May 4, 2018	17
MRF Tour	May 5, 2018	35
MRF Tour	May 5, 2018	30
MRF Tour	May 8, 2018	46
MRF Tour	May 8, 2018	32
Tour of Western Branch	May 8, 2018	77
Tour of Western Branch	May 8, 2018	1
MRF Tour	May 8, 2018	50
Tour of Western Branch	May 8, 2018	48
Tour of Western Branch	May 9, 2018	60
Tour of Western Branch	May 9, 2018	2
Tour of Western Branch	May 9, 2018	7
MRF Tour	May 10, 2018	54
Tour of Western Branch	May 10, 2018	1
MRF Tour	May 11, 2018	52
MRF Tour	May 14, 2018	25
Tour of Western Branch	May 16, 2018	50
MRF Tour	May 16, 2018	38
MRF Tour	May 17, 2018	62
MRF Tour	May 17, 2018	1
MRF Tour	May 18, 2018	63
MRF Tour	May 18, 2018	31
Tour of Western Branch	May 21, 2018	3
Tour of Western Branch	May 23, 2018	100
MRF Tour	May 23, 2018	96

Name of Event (Participant)	Date of Event	No. of Participants
MRF Tour	May 30, 2018	28
Tour of Western Branch	June 1, 2018	25
MRF Tour	June 4, 2018	89
MRF Tour	June 4, 2018	1
Tour of Western Branch	June 5, 2018	54
MRF Tour	June 5, 2018	64
MRF Tour	June 6, 2018	36
MRF Tour	June 8, 2018	15
Tour of Western Branch	June 15, 2018	20
Tour of Western Branch	June 21, 2018	38
Tour of Western Branch	June 26, 2018	3

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 70,000 tons annually.

An educational single-stream recycling display is housed at the MRF and can travel to community events, public libraries, and office buildings throughout the County. Tours of the MRF are open to the public, schools, and recycling coordinators, educating over 2,300 individuals annually.

County Office Recycling Program

On October 1, 2011, the County Office Recycling Program (CORP) began single-stream recycling in County offices. An outreach campaign was developed to educate employees on the transition from dual-stream to single-stream collection and increase the amount of recycling collected from County offices. The CORP, which has been in existence since 1990, now serves 89 local County offices; all locations are serviced on a regular pickup schedule. All forms of paper and commingled materials are collected from these facilities by a County contractor. A recent CORP expansion includes the addition of exterior side by side recycling and trash collection containers being placed at the entrances of eleven County office buildings. On average 19.4 tons of recyclables are collected monthly with 10 locations also recycling toner cartridges. Nearly 1 ton of toner cartridges are recycled annually through a contract with Recycling Ink.

Source Reduction & Recycling

The Source Reduction – Stop Waste Before it Starts brochure, available in English and Spanish, provides tips for reducing waste at home, in the yard, and in the office. The brochure also promotes the use of reusable bags rather than non-biodegradable plastic shopping bags. In order to reinforce their recycling and source reduction message, Recycling Section (RS) staff regularly distributes outreach materials, gives presentations, and offers giveaways at community and other special events. Additionally, plastic bags are now banned from yard waste collection. Instead, the public 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 MRF processing equipment. There is an ongoing public outreach campaign to inform the public to return plastic bags to participating stores for recycling and to utilize reusable bags to avoid plastic disposal bags altogether. To further encourage re-use, DoE distributes reusable bags at special events and speaking engagements.

Business Recycling and Source Reduction

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

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. DoE is recently hired three Recycling 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 9,785 tons of food scraps from the landfill into 100 percent organic compost. Construction of a permanent GORE 12 Mega Heap composting system, allowing for the acceptance of approximately 32,500 tons of food scraps for composting annually is nearing completion.

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 173,493 households in the County. The yard waste composting program, including 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.

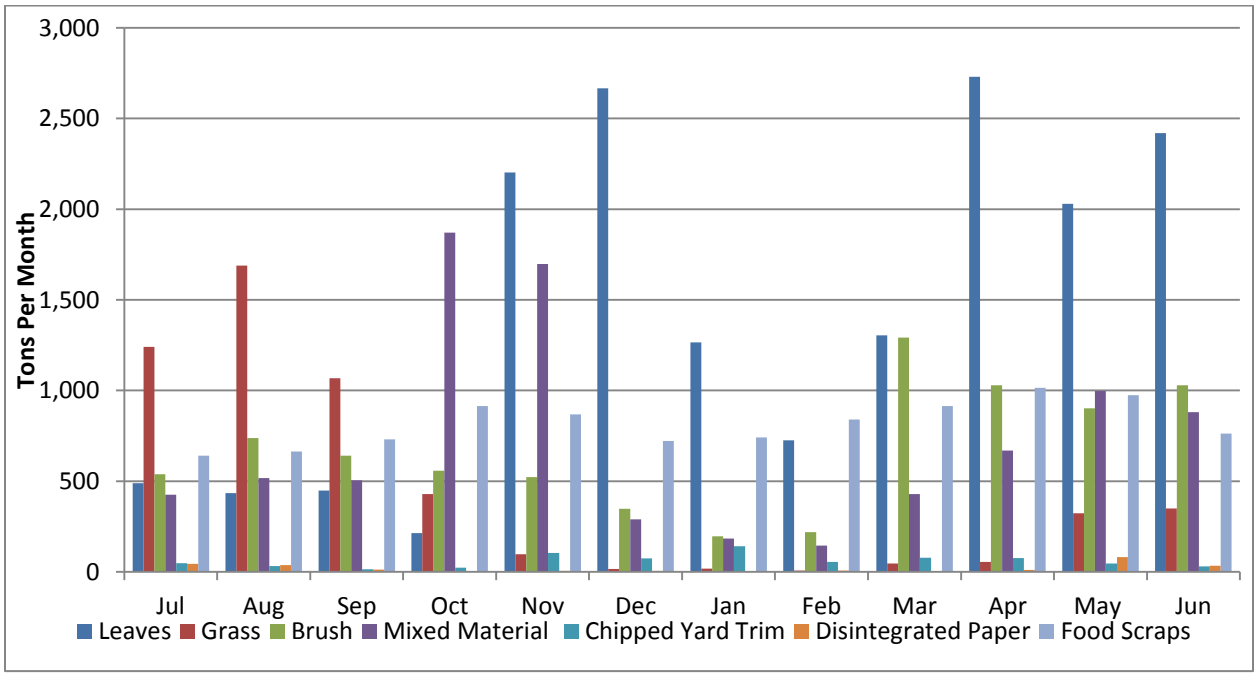

Figure D-11. Yard Waste Composting – FY 2018

Car Care, Mass Transit, and Alternative Transportation

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

Ride Smart

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

Ride Matching Network

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

Biking to Work

Bike to Work Day was initially scheduled for Friday, May 18, 2018; however, the event was postponed till June 1, 2018, due to heavy rain. More than 17,000 people in the metropolitan

Washington region participate in this annual event. In Prince George' County, 679 people rode their bicycles to work and visited one of 12 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, the University of Maryland, and two new locations in Bladensburg and Largo.

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. DPW&T in partnership with the County's Health Department, DoE, County Police, and a local bicycle group, the Beech Tree Pedalers, hosted the new Largo pit stop and featured bicycle convoy trips from the government office buildings to the Largo Town Center Metro station to encourage employees and residents to consider biking to the metro instead of driving. The pit stop also was a zero-waste event featuring composting, recycling, and reusable water bottles.

Bike Share

Prince George's County launched Capital Bikeshare on June 1, 2018 with stations along the Route 1/Baltimore Avenue corridor and stations in Largo. Guided by a bike share feasibility study completed in 2016, the County will install approximately 67 bike share stations over several years throughout Prince George's County, locating near employment centers, commercial areas, and transit facilities. Phase 1 includes stations in the Anacostia Trails Heritage Area, Largo and National Harbor. Specifically, Phase 1 will locate bike share stations in Mount Rainier, Hyattsville, Riverdale Park, Brentwood, 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 Prince George's 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 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 seatbelt 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. Information for commuters on biking to work is available through Commuter Connections and Ride Smart programs.

Vanpool Subsidy Program

Since the startup period for a new vanpool is the most difficult time, any qualifying individual who starts a new vanpool is eligible to receive a generous startup subsidy from the County. This program assists residents seeking to start a new vanpool with startup costs and assistance with finding passengers. This three-month subsidy program covers 100 percent of the first month's vehicle rental

fee (not to exceed $700), 50 percent of the second month's vehicle rental fee (not to exceed $350), and 25 percent of the third month's vehicle rental fee (not to exceed $175). A County Rideshare coordinator is also available to assist groups in forming a vanpool and maintaining ridership.

Park and Ride

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

1. Bowie Fringe Parking: MD Route 197 and Northview Drive
2. South Laurel: MD Route 197 and Briarcroft Lane
3. Montpelier: MD Route 197 and Brock Bridge Road
4. Clinton Fringe Parking: MD Route 5 and Woodyard Road
5. Equestrian Center: MD Route 4 in Upper Marlboro
6. Fort Washington: MD Route 210 and East Swann Creek Road
7. Oxon Hill Fringe Parking: MD Route 210 and Oxon Hill Road
8. Beltway (I-494/I-95): I-95 and the Capital Beltway
9. Laurel Fringe Parking: Sandy Spring Road and Van Dusen Road
10. Accokeek Fringe Parking: MD Route 373 and MD Route 210
11. Bowie Market Place: MD Route 450 and Stoneybrook Drive
12. Penn Mar Shopping Center: Donnell Drive and Marlboro Pike

Metrorail

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

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

TheBus is the County's public transit system. Schedule information and bus vehicle real time arrivals are available through the Internet at http://www.princegeorgescountymd.gov/1120/TheBus or through www.NextBus.com. Area specific transit guides offer comprehensive information on public transportation, including transit options. Ridership for the 28 fixed-routes of transit service provided by TheBus in FY 2018 was approximately 2.7 million passengers. Patrons are now able to see all of TheBus transit stops on Google® Maps and NextBus.com.

The County also provides a demand response, curb-to-curb service "Call-A-Bus", a complementary ADA/Paratransit, curb-to-curb service. Service is available to all residents of Prince George's County who

are not served by or cannot use existing bus or rail services. However, priority is given to senior and persons with disabilities. Persons with disabilities must provide their own escort, if needed. Service animals are allowed for the visually impaired.

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

E. RESTORATION PLANS AND TMDL

1. WATERSHED ASSESSMENTS

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

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

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

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

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

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

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. The County will revise its impervious surface baseline assessment by the end of the permit term.

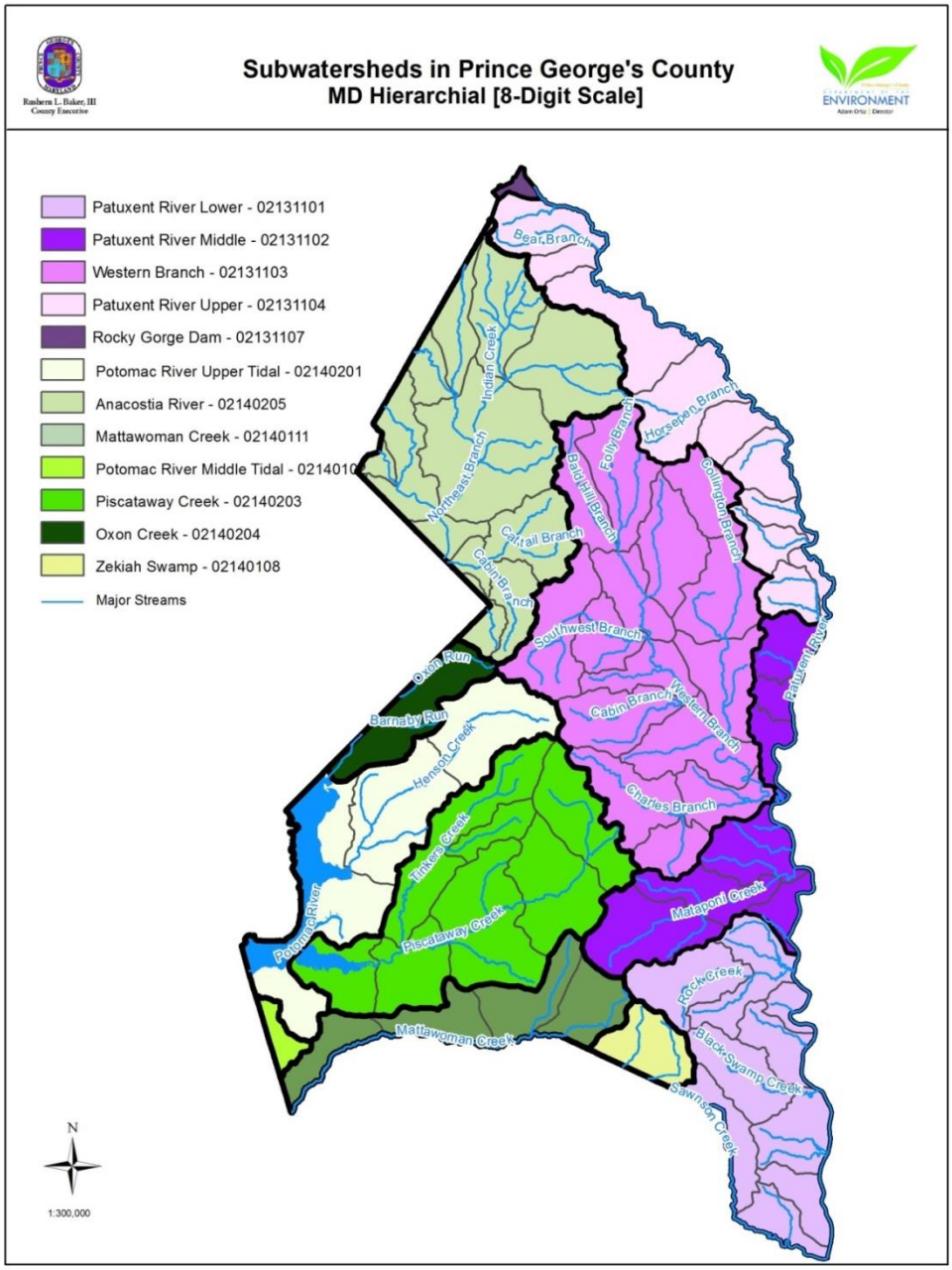

Figure E-1. Major Watersheds

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

The county has put forth a plan to restore 6,105 acres by the end of the permit term. As of FY 2018, the County has already restored 2,215 acres towards this goal. Approximately 2,860 impervious acres of restoration is either in active planning (concept plan), design or construction. In addition, the County intends to trade up to 3,905 impervious acres of equivalent credits with WSSC. In this regard, the County has initiated the communication with WSSC and working towards finalizing the process. This trade will be confirmed to MDE no later than December 10, 2019.

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 2018 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 various stages that cover over 5,000 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]	54.26	6.46	3,356.29	269.47	971.70
BMP Reduction - FY 2015	15.79	1.75	734.19	48.11	177.99
BMP Reduction - FY 2016	350.43	160.71	521,067.32	704.81	2,662.02
BMP Reduction - FY 2017	3,462.80	488.78	708,056.00	14,151.12	41,779.74
BMP Reduction - FY 2018	7,622.47	906.86	917,594.09	29,587.97	81,341.36
Total BMP Reduction	12,003	1,916	2,380,911	57,184	133,226
Percent Reduction of Target	5%	6%	5%	9%	8%
Percent reduction increased from previous term (Up to 2013 verses FY 2014 to date)	2,215%	346%	835%	260%	1,917%

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

Table E-2. Mattawoman Creek – Current Achieved Reductions

Pollutant	Total Nitrogen (lbs./year) [4]	Total Phosphorus (lbs./year) [4]
TMDL	Local	Local
Baseline Year	2000	2000
Target Load Reduction[1]	11,206	948
BMP Reduction - Up to 2013[2]	0	0
BMP Reduction - 2014[3]	0	0
BMP Reduction - 2015	3.14	0.16
BMP Reduction - 2016	0	0
BMP Reduction - FY 2017	0	0
BMP Reduction - FY 2018	1230.28	110.04
Total BMP Reduction	1233.42	110.2
Percent Reduction of Target	11%	11.6%

[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]	27.39	0.00
BMP Reduction - 2015	645,718.55	16.15
BMP Reduction - 2016	167.85	22.70
BMP Reduction - FY 2017	490,797.22	69,169.87
BMP Reduction - FY 2018	64,163.89	11,362.81
Total BMP Reduction	1,377,743.90	81,213.52
Percent Reduction of Target	359%	137%
Percent reduction increased from previous term (Up to 2013 verses FY 2014 to date)	579%	12,450%

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

Table E-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]	2.68
BMP Reduction - 2015	3.27
BMP Reduction - 2016	607.67
BMP Reduction - 2017	2,844.76
BMP Reduction - FY 2018	28,683.95
Total BMP Reduction	32,784.35
Percent Reduction of Target	147%

**Bacteria and BOD calculation does not include reduction through alternative BMPs*
[1] TMDL required load reduction for MS4 areas
[2] Reductions achieved for 2009 through 2013 (permit term started in January 2014)
[3] Only covers half of FY 2014 (January to June)

[4] *MPN B = Most probable number of Bacteria per 100 milliliters*

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

Pollutant	Total Phosphorus (lbs./year) [4]
TMDL	Local
Baseline Year	2000
Target Load Reduction[1]	27
BMP Reduction - Up to 2013[2]	0
BMP Reduction - 2014[3]	0
BMP Reduction - 2015	0
BMP Reduction - 2016	0
BMP Reduction - FY 2017	0
BMP Reduction - FY 2017	0
BMP Reduction - FY 2018	0.22
Total BMP Reduction	0.22
Percent Reduction of Target	0.81%

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

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

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

Fiscal Year	Total Nitrogen (lbs./year) [1]	Total Phosphorus (lbs./year) [1]	Total Suspended Solids (ton/year)	Biochemical Oxygen Demand (lbs./year) [1]	Fecal Coliform Bacteria* (MPN B/year) [2]	Status
2016 (Actual)	*350.43*	*160.71*	*260.53*	*704.81*	*2,662.02*	*Achieved*
2017 (Actual)	*3,462.80*	*488.78*	*354.03*	*14,151.12*	*41,779.74*	*Achieved*
2018 (Actual)	*7,622.47*	*906.86*	*458.80*	*29,587.97*	*81,341.36*	*Achieved*
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

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
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
2030	4,377.80	893.4	522.2	24,483.20	86,573.30	Projected
2031	8,252.57	1,594.99	765.67	47,408.39	167,467.98	Projected
2032	6,287	1501.02	808.97	40,377.18	151,034.26	Projected
2032	3,275	1317.04	841.00	31,355.43	134,156.64	Projected
Total	***154,919***	***31,617***	***18,479***	***866,404***	***3,063,633***	***Projected***

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

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

Fiscal Year	Total Nitrogen (lbs./year) 1	Total Phosphorus (lbs./year) 1	Status
2016 (Actual)	0	0	Achieved
2017 (Actual)	0	0	Achieved
2018 (Actual)	1,230	110	Achieved
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	99	32	Projected
2031	0	63	Projected
2032	0	39	Projected
Total	***6,124***	***1,126***	***Projected***

[1] *lbs. = pounds*

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

Fiscal Year	Total Phosphorus (lbs./year) [1] Rocky Gorge	Status Rocky Gorge	Total Suspended Solids (ton/year) Upper Patuxent	Fecal Coliform Bacteria* (MPN B/year) [2] Upper Patuxent	Status Upper Patuxent
2016 (Actual)	*0*	*Achieved*	0.083925	22.7	*Achieved*
2017 (Actual)	*0*	*Achieved*	245.40	69,169.87	*Achieved*
2018	0.22	*Achieved*	32.08	11,362.81	Achieved
2019	1	Projected	0	0	Projected
2020	1	Projected	0	0	Projected
2021	1	Projected	0	0	Projected
2022	1	Projected	0	0	Projected
2023	1	Projected	0	0	Projected
2024	1	Projected	0	0	Projected
2025	1	Projected	0	0	Projected
2026	1	Projected	0	0	Projected
2027	1	Projected	0	0	Projected
2028	0.9	Projected	0	0	Projected
2029	0.8	Projected	0	0	Projected
2030	0.4	Projected	0	0	Projected
2031	0.8	Projected	0	0	Projected
2032	0.9	Projected	0	0	Projected
2033	0.78	Projected	0	0	Projected
Total	***13.80***	***Projected***	***278***	***80,555***	***Achieved***

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

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

Fiscal Year	Fecal Coliform Bacteria (MPN B/year) [1]	Status
2016 (Actual)	*608*	*Achieved*
2017 (Actual)	*2,845*	*Achieved*
2018 *(Actual)*	*28,684*	*Achieved*
2019	18,819	Projected
2020	18,819	Projected
2021	18,819	Projected
2022	18,819	Projected

Fiscal Year	Fecal Coliform Bacteria (MPN B/year) [1]	Status
2023	18,819	Projected
2024	18,819	Projected
2025	18,819	Projected
2026	18,819	Projected
2027	17,878	Projected
2028	15,055	Projected
2029	7,302	Projected
2030	14,349	Projected
2031	15,654	Projected
2032	5,467	Projected
Total	***258,394***	***Projected***

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

County progress towards the Bay TMDL

Table E-10 through Table E-17 below show the progress of the County's restoration efforts toward the Chesapeake Bay TMDL (Phase II watershed implementation plan, 2025 target year) for each of the 8-digit MDE watersheds in the County.

Table E-10. Anacostia River Watershed 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]	54.26	6.46	3,356.29
BMP Reduction - FY 2015	15.79	1.75	734.19
BMP Reduction - FY 2016	350.43	160.71	521,067.32
BMP Reduction - FY 2017	3,462.80	488.78	708,056.00
BMP Reduction - FY 2018	7,622.47	906.86	917,594.09
Total BMP Reduction	12,003	1,916	2,380,911
Percent Reduction of Target	24%	21%	136%
Percent reduction increased from previous term (Up to 2013 verses FY 2014 to date)	2,215%	346%	835%

[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
BMP Reduction - 2014[3]	0	0	0
BMP Reduction - 2015	3.14	0.16	63.48
BMP Reduction - 2016	0	0	0
BMP Reduction - FY 2017	0	0	0
BMP Reduction - FY 2018	1,230.28	110.04	57,918.29
Total BMP Reduction	1,233	110	57,982
Percent Reduction of Target	95%	28%	46%

[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]	0.16	0.02	11.69
BMP Reduction - 2015	0.10	0.01	7.17
BMP Reduction - 2016	0	0	0
BMP Reduction - FY 2017	140.22	9.89	1,797.89
BMP Reduction - FY 2018	13.38	1.24	598.00
Total BMP Reduction	154	11	2,415
Percent Reduction of Target	28%	13%	21%

[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]	0.00	0.00	0.05
BMP Reduction - 2015	0.00	0.00	0.07
BMP Reduction - 2016	0.24	0.03	16.95
BMP Reduction - FY 2017	72.72	5.36	1,061.22
BMP Reduction - FY 2018	28.71	3.72	1,073.17
Total BMP Reduction	102	9	2,151
Percent Reduction of Target	4%	3%	3%

[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]	1.73	0.14	27.39
BMP Reduction - 2015	197.01	177.24	645,718.55
BMP Reduction - 2016	2.12	0.35	167.85
BMP Reduction - FY 2017	5,987.65	646.06	490,797.22
BMP Reduction - FY 2018	1,392.84	134.02	64,163.89
Total BMP Reduction	7,914	1,227	1,377,744
Percent Reduction of Target	32%	35%	141%
Percent reduction increased from previous term (Up to 2013 verses FY 2014 to date)	2,177%	256%	579%

[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]	0.16	0.04	15.43
BMP Reduction - 2015	17.74	14.17	50,961.29
BMP Reduction - 2016	36.37	4.31	2,341.89
BMP Reduction - FY 2017	289.12	124.93	387,400.63
BMP Reduction - FY 2018	2,958.86	456.69	842,322.06
Total BMP Reduction	3,501	780	1,402,103
Percent Reduction of Target	19%	23%	219%
Percent reduction increased from previous term (Up to 2013 verses FY 2014 to date)	1,559%	233%	978%

[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) [7]	Total Phosphorus (lbs./year) [7]	Total Suspended Solids (lbs./year) [7]
TMDL	Bay	Bay	Bay
Baseline Year	2009	2009	2009
Target Load Reduction[1]	30,793	5,038	1,307,785
BMP Reduction – Up to 2013[2]	3	2	1,910
BMP Reduction - 2014[3]	46.58	35.20	125,251.00
BMP Reduction - 2015[5]	29.03	24.89	89,867.72
BMP Reduction - 2016[5]	90.71	54.89	187,863.29
BMP Reduction - FY 2017[5]	196.97	97.53	320,185.39
BMP Reduction - FY 2018[6]	2,646.84	289.17	154,068.97
Total BMP Reduction	3,013	504	879,146
Percent Reduction of Target	10%	10%	67%
Percent reduction increased from previous term (Up to 2013 verses FY 2014 to date)	100,238%	24,984%	45,829%

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

[4] *Includes Oxon Creek, Potomac River U Tidal, Potomac River M Tidal, and Zekiah Swamp*
[5] *Includes Oxon Creek and Potomac River U tidal only*
[6] *Includes Oxon Creek, Potomac River U Tidal, and Potomac River M Tidal*
[7] *lbs. = pounds*

Table E-17. Western Branch Watershed 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]	18.16	14.92	53,637.85
BMP Reduction - 2015	103.34	90.41	327,821.22
BMP Reduction - 2016	10.19	1.37	642.42
BMP Reduction - FY 2017	752.23	121.47	136,240.64
BMP Reduction - FY 2018	11,332.57	1,078.47	575,886.50
Total BMP Reduction	12,273	1,349	1,121,944
Percent Reduction of Target	35%	23%	82%
Percent reduction increased from previous term (Up to 2013 verses FY 2014 to date)	21,332%	3,011%	3,848%

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

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

A 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 2018, the County has restored 2,215 acres under the NPDES MS4 permit. This restoration progress was accomplished through 725 projects costing over $90 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 2018

Watershed Code	Watershed Name	Number of Projects	Impervious Acres Restored1	Implementation Cost ($1000)3
Restoration BMPs through CIP and CWP Projects, and Redevelopment (see Geodatabase Record: RestBMP)				
2131101	Patuxent River lower	4	0.88	$32
2131102	Patuxent River middle	3	0.41	$15
2131103	Western Branch	50	400.66	$20,662
2131104	Patuxent River upper	14	334.73	$12,768
2140111	Mattawoman Creek	3	35.96	$2,000
2140201	Potomac River U tidal	27	126.44	$5,168
2140203	Piscataway Creek	23	117.65	$5,331
2140204	Oxon Creek	4	1.14	$46
2140205	Anacostia River	189	484.01	$23,767
		317	**1,501.88**	**$69,789**
Septic System Upgrade or Removal (see Geodatabase Record: AltBMPPoint)				
2131101	Patuxent River Lower	5	1.30	$70
2131102	Patuxent River Middle	7	4.29	$224
2131103	Western Branch	27	14.43	$630
2131104	Patuxent River Upper	16	5.59	$252
2140111	Mattawoman Creek	2	0.78	$14
2140201	Potomac River Upper Tidal	22	7.93	$280
2140203	Piscataway Creek	21	8.06	$336
2140204	Oxon Creek	5	1.95	$70
2140205	Anacostia River	51	19.89	$714
		156	**64.22**	**$2,590**
Tree Planting (see Geodatabase Record: AltBMPPoly)				
2131101	Patuxent River lower	2	8.67	$887
2131102	Patuxent River middle	5	5.69	$569
2131103	Western Branch	17	34.98	$3,562
2131104	Patuxent River upper	10	11.58	$1,186
2131107	Rocky Gorge Dam	1	0.19	$19
2140102	Potomac River M tidal	1	0.01	$583.50
2140111	Mattawoman Creek	1	1.93	$197
2140201	Potomac River U tidal	8	29.48	$2,978
2140203	Piscataway Creek	4	0.57	$15
2140204	Oxon Creek	7	3.00	$296
2140205	Anacostia River	96	25.72	$2,504
		152	**121.82**	**$12,797**
Inlet Cleaning and Street Sweeping (see Geodatabase Record: AltBMPPoly)				

Watershed Code	Watershed Name	Number of Projects	Impervious Acres Restored1	Implementation Cost ($1000)3
2131102	Patuxent River Middle	3	0.29	
2131103	Western Branch	13	93.57	
2131104	Patuxent River Upper	4	16.57	
2131107	Rocky Gorge Dam	2	0.63	
2140201	Potomac River Upper Tidal	5	59.53	
2140203	Piscataway Creek	6	25.82	
2140204	Oxon Creek	3	24.68	
2140205	Anacostia River	13	117.13	
		49	**338.22**	
Stream Restoration[2] and Outfall Stabilization Projects (see Geodatabase Record: AltBMPLine)*				
2131103	Western Branch	4	19.84	$766
2131104	Patuxent River Upper	3	32.03	$1,691
2140201	Potomac River Upper Tidal	12	23.55	$1,426
2140203	Piscataway Creek	10	45.25	$581
2140204	Oxon Creek	2	5.27	$0
2140205	Anacostia River	20	63.81	$841
		51	**189.75**	**$5,305**
Grand Total		***725***	***2,215.89***	***> $90,481***

[1] *Impervious acre's 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.*
** Zero cost indicates no cost to the County; however, IA credits are claimed.*

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

A summary of the implementation cost for completing all projects in planning, design, or under construction is provided in Table E-19. 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 2018

Watershed Code	Watershed Name	Number of Projects	Impervious Acres Under Restoration1	Implementation Cost3 ($1000)
Restoration BMPs through CIP and CWP Projects, and Redevelopment (see Geodatabase Table: RestBMP)				
2131103	Western Branch	32	1,077	$15,922
2131104	Patuxent River upper	16	182	$5,612
2140111	Mattawoman Creek	3	11	$363
2140201	Potomac River U tidal	16	241	$5,722
2140203	Piscataway Creek	13	133	$3,341
2140204	Oxon Creek	2	2	$61
2140205	Anacostia River	90	343	$7,643
		172	**1,989**	**$38,664**
Tree Planting and Impervious Surface Removal (see Geodatabase Record: AltBMPPoly)				
2131103	Western Branch	1	0.24	
2131104	Patuxent River Upper	1	0.003	$1
2140203	Piscataway Creek	1	0.34	$81
2140205	Anacostia River	4	0.64	
		7	**1.22**	**$82**
Stream Restoration[2] or Outfall Stabilization Projects (see Geodatabase Record: AltBMPLine)				
2131101	Patuxent River Lower	2	95.60	
2131102	Patuxent River Middle	2	125.12	$9,912
2131103	Western Branch	6	42.27	$1,895
2131104	Patuxent River Upper	9	63.26	$2,831
2140201	Potomac River Upper Tidal	5	106.73	$7,366
2140203	Piscataway Creek	4	332.56	$2,080
2140204	Oxon Creek	9	33.54	$70
2140205	Anacostia River	8	70.24	$7,962
		45	**869.32**	**$32,116**
	Grand Total	***224***	***2,860***	***$70,862***

[1] *Impervious acre's 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, 2,215 acres of impervious area credits have been achieved and another 2,860 acres are in active planning, design, or construction in FY 2018, for a total of 5,075 acres. To meet the MDE-approved baseline 20-percent restoration goal (6,105 acres), 1,030 acres remain to be

planned and executed for FY 2019 and beyond. For the remaining 1,030 acreage, the County will be selecting the water quality practices identified in the *Anacostia Restoration Plan* (ARP) for implementation through the Capital Improvements Program. A list of potential projects from the ARP was submitted to MDE in previous years. 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. Only 1,030 acres from the ARP 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.

In addition to the projects listed above, over 7.5 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 165.

Permit Condition Part IV. E. 4:

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

Additional Restoration Activities

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

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

Programmatic initiatives consist of enhancing programs to promote tree planting, domestic and urban animal control, pet waste pickup, and residential/commercial lawn care education amongst other programs. These initiatives involve an expanded public outreach campaign to inform the public of ways they can contribute to the restoration of the local watersheds. The County will initiate and strengthen various County programs to support these initiatives.

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

Clean Water Partnership Program

The Clean Water Partnership (CWP) completed its second full year in operation in FY 2018. CWP outreach staff participated in approximately 140 stakeholder events, 8 community/ planting events and 210 site visits and distributed approximately 5,000 flyers/outreach materials. 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 2018, the CWP expanded its Mentor-Protégé Program (MPP) 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 which was accomplished by the addition of a supportive services budget. Each of the Protégés received customized business development supportive services to strengthen their businesses resulting in improved positioning for them to bid on work for the CWP and other stormwater projects in Prince George's County and neighboring regions. The contract requirement is to mentor two businesses each year. Eleven businesses completed the second cohort year of the CWP Mentor-Protégé in December 2018. This includes: DAD Environmental, AED, Bota Engineering, Arya Civil, Bourne Environmental, Celsue Construction, Hybrid Construction, United General Construction, LE Blue Construction, G-11 Enterprises and Community Bridge. All of 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. Supportive services provided included the following: tax preparation and planning services, accounting services, branding, website development, strategic planning, IT assessment, Human Resources Procedures Manual.

CWP Schools Program

The CWP Schools Program began in FY 2016 and continued through FY 2018. The program is designed to assist the County Public Schools with treating stormwater runoff by constructing BMPs on school facilities. The CWP Schools Program incorporates a community-based approach to engage school facilities staff, educators, students and community members in every element of the BMP process. Educators and students gain experience and confidence while using the BMP projects in the classroom. 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.

Student Enrichment

The CWP continued its support of End Time Harvest Ministries (ETHM) in FY 2018. ETHM is a Prince George's County-based non-profit that was established to empower youth through providing opportunities to build educational, social and economic life skills. ETHM students learned about the importance of stormwater management. Seventy students from Bladensburg High School, Parkdale High School, Duval High School, Northwestern High School and College Park Academy participated in this six-week program in July – August 2018. These students were placed in internships at approximately 30 businesses. Students learned about the work process of stormwater management and how the environment impacts community health. The students performed 12 percent higher on a stormwater

management and environmental literacy knowledge test given at the end of the internship as compared to when they entered the program.

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 186 eligible organizations. The CWP team meetings 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 schedule of work. In FY 2018, a total of 16 retrofit projects were in the planning, design, construction or completion phase through the ACP. CWP outreach staff participated in approximately 36 ACP meetings and 184 site visits.

Municipal Engagement

Numerous CWP restoration projects were conducted within municipal boundaries during FY 2018. Various school, ACP, pond and other restoration projects that were in the planning, design, construction or completion phase in FY 2018 were located within the county's 26 municipalities that are covered by this permit. As of June 2018, 20 retrofit projects were either completed or in process within municipal boundaries. A map showing the location of CWP projects within municipal boundaries is provided in Figure E-2.

Maintenance and Litter Reduction

During FY 2018, the CWP expanded its maintenance program to ensure long-term functionality of installed stormwater BMPs. Regular and thorough maintenance at CWP project sites optimizes BMP performance and keeps their original aesthetic appeal. During FY 2018, CWP crews maintained 153 BMPs 694 times. An important and measurable aspect of maintenance is trash collection. In addition to structural and landscape maintenance, CWP crews regularly remove trash from CWP project sites to support BMP performance and appearance. Between July 2017 and June 2018, trash was collected at 87 sites, totaling 874 bags of litter (see Table E-20).

Table E-20. Trash Collected through Routine CWP Maintenance in FY 2018

Program	Number of Times BMPs Maintained in FY 2018	Number of Stormwater Inspections in FY 2018
ACP	52	74
General Retrofit	308	72
Schools	334	63
Total	***694***	***209***

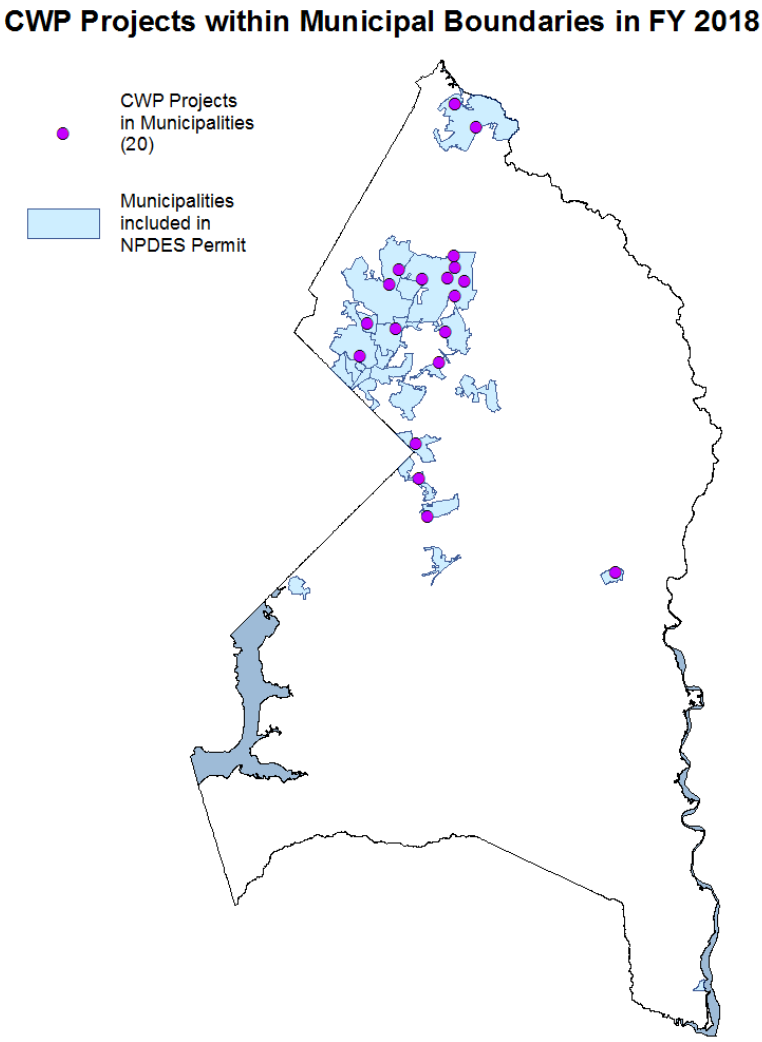

Figure E-2. CWP Projects within Municipal Boundaries in FY 2018.

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, civic associations, multi-family dwellings, and nonprofit entities (including housing cooperatives and faith-based institutions) can recoup some of the costs of installing practices covered by the program. To

ensure the continued success of this program, public outreach events are conducted to promote the adoption of endorsed stormwater management practices and gain maximum participation by the property owners in the County. Another incentive for property owners to participate in the Rain Check Rebate Program is that they are eligible for a fee reduction credit on the Clean Water Act fee included in their tax bill, for installing stormwater management practices on their property.

In July 2014, DoE partnered with the Chesapeake Bay Trust (CBT) 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 the County's commercial, industrial, municipal and nonprofit property owners. With CBT's efforts, DoE has seen an increase in the programs participation by property owners. A summary of the program performance in FY 2018 is provided in Table E-21.

Table E-21. Rain Check Rebate Program Performance in FY 2018

Projects	Total Applications		Applications Processed in FY 2018		Applications In Process	Actual Number of BMPs Installed	Impervious Area Treated (square feet)	Total Amount of Rebate Approved
	Received in FY 2018	Pending from FY 2017	Denied	Approved				
Cisterns	0	2	1	2	0	2	1,645	$1,463
Pavement Removal	16	46	21	14	27	14	8,370	$23,298
Permeable Pavement	12	36	15	9	24	9	5,880	$24,646
Rain Barrels	78	134	61	109	42	196	58,310	$18,311
Rain Gardens	22	22	11	10	23	13	19,617	$19,206
Urban Tree Canopy	11	23	11	7	16	32	5,206	$4,610
Green Roof	0	1	0	0	0	0	0	$0
Total	***139***	***264***	***120***	***151***	***132***	***266***	***99,028***	***$91,534***

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 are added to the County's public list of landscape professionals who have completed this 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.

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 impervious area removal, vegetated swales (bioswales), submerged gravel wetlands, and bioretention facilities 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, light-emitting diode (LED) lighting, landscaping, integrated epoxy painted bike lanes, and LED rapid-flashing warning systems (located at two pedestrian crossings without a traffic signal) 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 summer 2018. 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 Programs

The DPW&T has completed a county-wide channel assessment program to identify and prioritize channels for replacement utilizing ecosystem restoration solutions when viable. At a preliminary level, the assessment identified the current conditions of the channels and ranked them accordingly, while seeking green infrastructure solutions, such as stream restoration and floodplain reconnections, rather than in-kind replacements for legacy stormwater conveyances, whenever possible. By embracing ecosystem friendly practices as a rule rather than exception, DPW&T aspires to fix a growing list of

stormwater management hazards with the channel program. It is the County's intent to deliver substantive nonpoint pollution reductions to be applied towards the County's NPDES MS4 Permit.

The first project identified and currently under design from this county-wide assessment effort is the Calverton Channel Rehabilitation project. This project will demonstrate and pilot ecosystem restoration practices in-lieu of or integrated with gray infrastructure repair or replacement within dedicated DPW&T easements. Positive outcomes and timely delivery will help support the agency's county-wide channel assessment which will inform both budget and opportunity for future ecosystem restorations in lieu of gray infrastructure replacements.

Countywide Storm Drain Inventory Programs

DPW&T is working with a consultant to develop a geometric storm drain network and inventory database. DPW&T provided the consultant with a notice to proceed on this project in January 2017. The Storm Drain Inventory builds off the NPDES MS4 Geodatabase Design and User's Guide Version 1.1 March 2015, referred to as the MDE Geodatabase. The Storm Drain Inventory uses the same domains as the MDE Geodatabase; where applicable the Storm Drain Inventory uses the same features classes as the MDE Geodatabase. The project involves the following phases:

- Phase 1 involves developing the database schema and validating schema by populating with assets from the pilot watershed, Lower Beaver Dam Creek Watershed. Included in this task is field verification.
- Phase 2 is based on valid results from Phase 1. This phase involves establishing protocols, procedures and QA/QC for programmatic standards.
- Phase 3 involve scaled up production of database populating it on a countywide level.

To capture the needs and functionality of the database, DPW&T held a series of workshops with all stakes holders of the database. These meetings were held February 2017. From these workshops and working with the existing data sources, the database schema was developed.

DPW&T is finalizing the database schema. The County also has additional paper resources that need to be indexed and cataloged for this effort. The County is working on a way to make these files available electronically to be included in the Storm Drain Inventory.

Outfall Program

DPW&T began an outfall repair program in 2016, to stabilize the banks downstream of a number of outfalls that have been identified as failing. The County plans to stabilize between 50 to 200 feet from the outfalls. DPW&T has five outfalls stabilizations to be constructed in 2018 and four outfalls currently under design with construction anticipated for 2019. County staff inspects outfalls on a continuous basis to ensure stability. The County's goal is to ensure all outfalls are stable, and to utilize green practices such as step pools, regenerative stream conveyances, and natural vegetated banks, when possible. The County expects to replace approximately five outfalls per year.

Suitland road at Regency Parkway is the first outfall to be constructed. DPW&T was awarded FY 2018 funding from the Maryland DNR Trust Fund to help construct this outfall, which is scheduled to start construction in the fall of 2018.

Alternative Compliance Program

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

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

As of June 30, 2018, DoE has received and processed 186 applications from qualified faith-based organizations. To date 75 Projects are either completed or under design and/or construction, treating 51.6 acres of impervious. Option 1 so far has been very successful in building and maintaining these BMP facilities. DoE has also given grants to various reputable nonprofit organizations such as Interfaith Partnership and Peoples for Change Coalition to help ACP applicants to implement Option 2 and Option 3. Also, a public website is being developed to allow Option 2 and Option 3 participant to self-report the yearly activities. This website will help DoE to keep monitoring and accessing the impact these activities on the environment and to keep engaging and educating the community about clean water issues.

Prince George's County Stormwater Stewardship Grant Program

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

The advertisement strategy aimed to reach new, diverse organizations, to support projects throughout the County that aid the community while treating and controlling stormwater runoff. The advertisement included emails to past applicants, grantees, Transforming Neighborhood Initiative (TNI) leads, as well as distributing to the County and CBT email distribution lists (e.g. the CBT Grantee e-news reaches 2,400 people). Additional advertisement was accomplished through the Chesapeake Network (5,800 people), past press releases, and a Prince George's Stormwater Stewardship e-newsletter (500 people).

The FY 2018 grant applications were due in late July 2017, underwent external review, and the awards were announced in late September 2017. This FY 2018, the program awarded 15 grantees to support implementation of green infrastructure on City streets, trash removal from streams,

environmental education, pet waste reduction, and tree planting. A summary of 15 projects that were awarded this year are provided by project type in Table E-22, and listed individually in Table E-23.

Table E-22. Projects awarded in FY 2018 by project type in the Stormwater Stewardship Grant Program.

Project Type	Projects Funded (#)	Projects Funded ($)
Water Quality	2	$298,000
Citizen Engagement – Pet Waste, Conceptual Design, Watershed Stewards Academy	3	$142,689
Alternative Compliance Program	4	$123,057
Tree Planting	3	$205,542
Treating and Teaching - School	1	$384,057
Trash Traps	2	$234,735
Total	***15***	***$1,388,080***

Table E-23. Grants awarded in FY 2018 of the Stormwater Stewardship Grant Program.

Grant #	Organization	Project Title	Type of Grant	Proposed Impervious Acreage Treated (acres)	Award Amount
15275	Maryland National Capital Park and Planning Commission	Tracks 1&2 M-NCPPC Stormwater Stewardship	Implementation and Citizen Engagement	1.7	$150,000
15256	Town of Edmonston	1-Water Quality Retrofits for the 46th Avenue Green Street Project	Implementation	5.8	$148,000
15259	University of Maryland College Park	2. Sustainable Maryland -- Prince George's County Pet Waste Education Campaign II	Citizen Engagement	NA	$100,000
15270	Neighborhood Design Center	Stormwater Savvy: Community-engaged Design with a Stormwater Focus	Citizen Engagement	NA	$27,689
15279	Anacostia Watershed Society	Track 2: National Capital Region Watershed Stewards Academy	Citizen Engagement	NA	$15,000
15253	National Wildlife Federation	Track 2: Sacred Grounds in Prince George's County	ACP support	NA	$41,465
15258	Interfaith Partners for the Chesapeake (IPC)	Track 2 - Faith Community Teacher Training	ACP support	NA	$19,214
15268	CENTRO DE APOYO FAMILIAR	Agua Sanas-Familia Sanas/Healthy Waters-	ACP support	NA	$30,000

Grant #	Organization	Project Title	Type of Grant	Proposed Impervious Acreage Treated (acres)	Award Amount
		Healthy Families			
15262	Interfaith Partners for the Chesapeake (IPC)	Track 3 - Faith Community ACP Technical Assistance	ACP support	NA	$32,378
15271	Alliance for the Chesapeake Bay, Inc.	Trees for Sacred Places Prince George's County	Tree Planting	trees	$30,000
15260	Global Health and Education Projects, Inc.	Track 4: Family Tree Adoption Program, Community Partnerships for Environmental Action and Sustainability (COPEAS)	Tree Planting	trees	$50,000
15280	Central Kenilworth Avenue Revitalization Community Development Corporation, Inc.	Tree Planting Projects on Private Individual Residential Property and Support for Existing County Tree Canopy Programs	Tree Planting	trees	$125,542
15272	Anacostia Watershed Society	Track 5: Treating and Teaching	Environmental Education	NA	$384,057
15257	Anacostia Riverkeeper	Track 6: Trash Reduction in the Anacostia: Trapping Trash Guilford Run	Trash Reduction in the Anacostia	NA	$214,985
15263	Anacostia Riverkeeper	Track 6: Litter Trap Trash maintenance Arundel Canal	Trash Reduction in the Anacostia	NA	$19,750
Total				***7.5***	***$1,388,080***

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F. ASSESSMENT OF CONTROLS

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

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

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

1. WATERSHED RESTORATION ASSESSMENT

Monitoring Locations

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

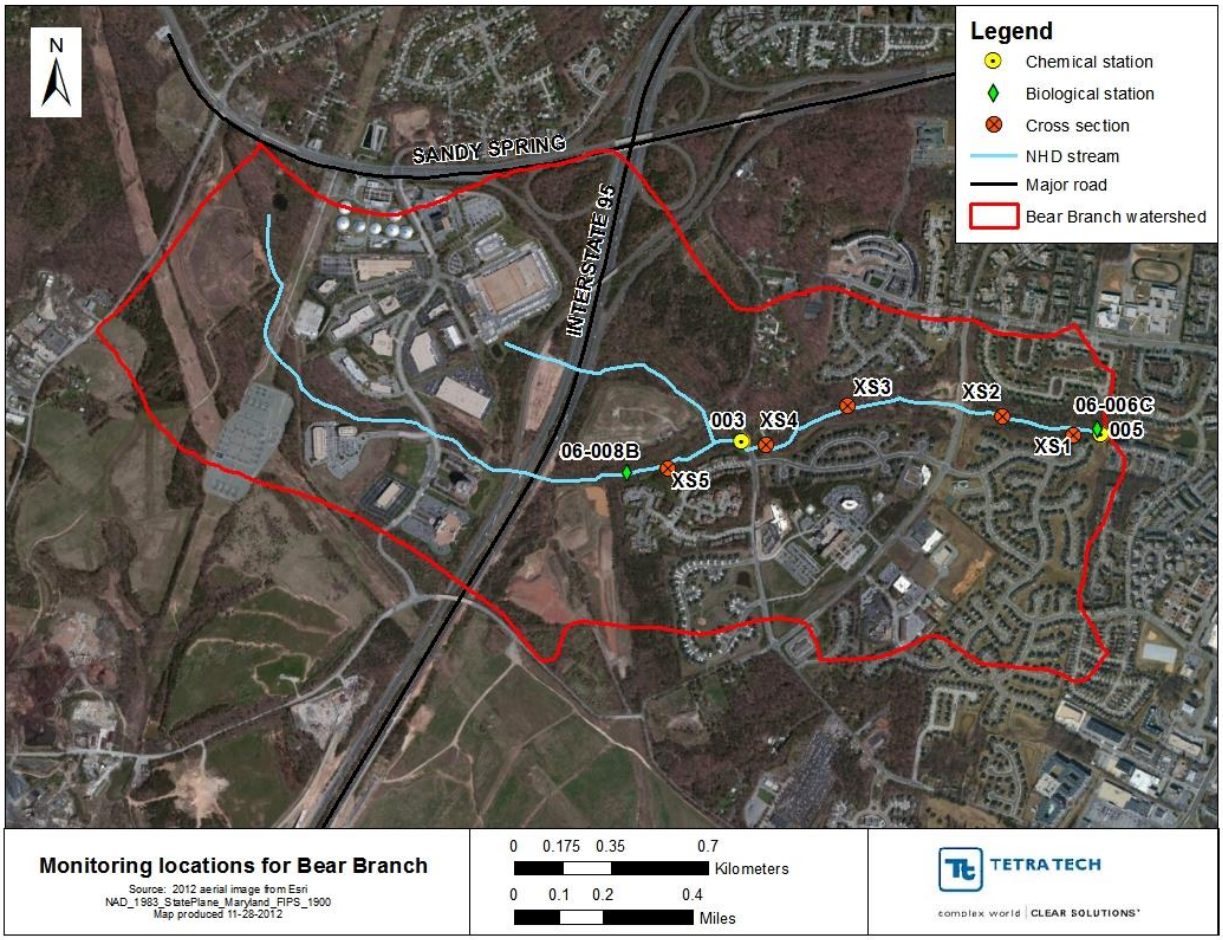

Figure F-1. Bear Branch Monitoring Locations

Chemical Monitoring

Permit Condition Part IV. F. 1. a. (i): Twelve (12) storm events shall be monitored per year at each monitoring location with at least two occurring per quarter. Quarters shall be based on the calendar year. If extended dry weather periods occur, baseflow samples shall be taken at least once per month at the monitoring stations if flow is observed.

Chemical Monitoring Locations and Sampling

Chemical monitoring was performed 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

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

Sampling events at each monitoring stations are provided in Table F-2 below. During FY 2018, automatic storm samples were collected in seven months. Weather constraints and malfunctioning of the autosampler prevented sample collection in September, November, December, January, and June. Weather and timing constraints were also responsible for missing four manual storm samples. Baseflows samples were collected on a quarterly basis at both stations. In addition, three baseflow samples were taken in lieu of a storm sample for the automatic sampling parameters and four baseflow samples were taken in lieu of storm samples for the manual sampling parameters.

Table F-2. Chemical Monitoring Sampling Events

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

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. The results of this analysis can be found on page 4-1 in "Prince George's County, Maryland—Long-Term Stormwater Monitoring Program—Bear Branch", which is saved on DVD, under Assessment of Controls\Bear Branch folder.

Table F-3. Monitoring Parameters

Parameter	EPA method	Holding time at 4 °C	Project reporting limit	Units
Copper (Cu)	EPA 200.8/6020	6 months	1	µg/L
Lead (Pb)	EPA 200.8/6020	6 months	1	µg/L
Zinc (Zn)	EPA 200.8/6020	6 months	5	µg/L
BOD5	SM (20) 5210B	48 hours	2–5	mg/L
NO3/NO2	EPA 353.2	28 days	0.05–0.1	mg/L
TKN	SM (20) 4500N-org/NH3-G	28 days	0.1	mg/L
TP	EPA 365.1	28 days	0.01	mg/L
TSS	SM (20) 2540D	7 days	2	mg/L
E. coli	SM (20) 9221F	6 hours	2	MPN/100 mL
TPH	EPA 1664A	28 days	5	mg/L
Hardness	SM (20) 2340 C	28 days	1.0	mg CaCO3/L

Parameter	EPA method	Holding time at 4 °C	Project reporting limit	Units
pH	EPA 150.1	In-stream measurement	--	
Temperature	EPA 170.1	In-stream measurement	--	°C
Notes: µg/L = micrograms per liter; mg/L = milligrams per liter; MPN/100 mL = most probable number per 100 milliliters.				

Permit Condition Part IV. F. 1. a. (iv): Continuous flow measurements shall be recorded at the in-stream monitoring station or other practical locations based on the approved study design. Data collected shall be used to estimate annual and seasonal pollutant loads and reductions, and for the calibration of watershed assessment models. Pollutant load estimates shall be reported according to any EPA approved TMDLs with stormwater WLAs.

Flow Measurement and Event Mean Concentration Calculation

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

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

Stage data were analyzed to determine total baseflow and stormflow volumes during the monitoring period. Stage was recorded at 5-minute intervals. Stage-to-flow rate conversions were made using rating curves. The curves involve power functions, developed through regression analysis, that relate measured stage-to-flow relationships. To date, 58 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, six measurements were taken after the ponding conditions created, and nine measurements have been taken since the ponding has receded. The data were plotted, and a relationship between stage and flow was determined. That relationship was then used to calculate the flow at the monitoring stations for subsequent use in determining event mean concentrations (EMCs).

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

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

Where,

C was the concentration of each sampled parameter;

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

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

Biological Monitoring

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

Biological Monitoring Locations

Monitoring was performed in spring 2018 in the Bear Branch watershed. Two assessment locations were surveyed; these locations are described in Table F-4. One station is upstream of station 005 (station 06-006C) and about 90 feet upstream of the confluence of Bear Branch and Laurel Lake. The newer station (station 06-008B) is on the mainstem of Bear Branch northeast of the end of Bonnet Lane, upstream of Contee Road, and approximately 250 meters downstream of I–95.

Table F-4. Locations of Sampling Stations

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

Permit Condition Part IV. F. 1. b. (ii): The County shall use the EPA Rapid Bioassessment Protocols (RBP), Maryland Biological Stream Survey (MBSS), or other similar method approved by MDE.

Bioassessment Protocols

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

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

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

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

Physical Monitoring

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

Monitoring Protocols (physical)

During this reporting period, the stream physical condition was assessed using longitudinal profile data, cross-sectional analysis, and geomorphic characterization. These assessments are completed each year in the fall. August 2017 was the eleventh year that the County has performed a geomorphologic assessment in the Bear Branch watershed. The next assessment is planned for August 2018.

A longitudinal profile was measured from just downstream of station 005 to 6,643 feet upstream. A benchmark was established in 2007 and was used as a common reference datum to relate past work. However, the benchmark was not able to be found in 2017. Consequently, a new benchmark was established for reference between the 2017 data and future monitoring work. Throughout the profile, the elevations and locations of the thalweg were surveyed using a total station data collector.

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

Particle size was estimated near each cross section, along an assessment reach length of approximately 20 to 24 bankfull channel widths. In addition, an attempt was made to identify a geomorphological feature that corresponds to a channel-forming (bankfull) discharge so that a Rosgen Level II classification could be made. Finally, an analysis of bank erosion potential was made using

methodologies described in Rosgen (1996). Vertical stability was tracked via the thalweg profile and by locating the presence of nickpoints as indicators of headcutting processes.

Table F-6. Location of Five Monumented Cross Sections

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

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

Permit Condition Part IV. F. 1. c. (ii): A stream habitat assessment shall be conducted using techniques defined by the EPA's "Rapid Bioassessment Protocol for use in Streams and Rivers," or other similar method;

Stream Habitat Assessment

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

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

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

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

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

Channel Geometry Analysis

As required by the permit, a hydrologic and/or hydraulic model will be used in FY 2019 to analyze the effects of rainfall; discharge rates; stage; and, if necessary, continuous flow on channel geometry.

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

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

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

iii. Any requests and accompanying justifications for proposed modifications to the monitoring program.

Monitoring Results

A full analysis of the monitoring results are provided in the Bear Branch monitoring report, *Prince George's County, Maryland—Long-Term Stormwater Monitoring Program —Bear Branch Annual Report 2018,* 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 2018)*

Monitoring Activity	Report Section	Page
1(a)(i) Storm Event Sampling Frequency	3.1.2	3-2
1(a)(ii) Storm Event Sampling Procedure	3.1.2	3-2
1(a)(iii) Parameters Requiring EMC Calculations	3.1.3	3-2
1(a)(iv) Continuous Flow Monitoring	3.1.4	3-4
1(b)(i) Biological Sampling Locations	3.2.1	3-8
1(b)(ii) Biological Sampling Method	3.2.1	3-8
1(c)(i) Geomorphological Stream Assessment Location and Methods	3.3.2	3-9
1(c)(ii) Stream Habitat Assessment	3.2.2	3-9
1(c)(iii) Hydrologic and Hydraulic Modeling	--	--
1(d)(i) Reporting EMCs on MDE's Database	--	--
1(d)(ii) Results and Analysis of Monitoring Data	4.0	4-1
1(d)(iii) Proposed Modifications to the Monitoring Program	--	--

2. STORMWATER MANAGEMENT ASSESSMENT

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

Physical Monitoring

The County began monitoring the Black Branch watershed and a small Black Branch tributary (Tributary 1) in 2001, using physical, hydrologic, and hydraulic methods. The County discontinued the chemical monitoring program along Tributary 1 in March 2008. Biological monitoring, just below the confluence of Tributary 1 and Black Branch, was discontinued after 2007. For this reporting year, the County continued with its physical monitoring of the Black Branch watershed and Tributary 1, which are conducted between August and October each year.

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

Monitoring Locations

To monitor and compare changes in channel geometry, 14 permanently monumented cross sections (named MS1 through MS9 along the Black Branch and T1 through T5 along the Tributary 1) were surveyed; the locations of these cross sections are shown in Figure F-2. The entire Black Branch mainstem was surveyed from its confluence with Collington Branch for approximately 2.2 miles upstream to slightly beyond the uppermost cross sections. The overall channel slope of the Black Branch mainstem was 0.31 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 2017 was 0.0052 (0.52 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 (five cross sections in main and four 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 Black Branch watershed has been evaluated to determine whether there were any significant changes to the watershed's physical conditions since the baseline evaluation. For the FY 2018 report, the mainstem and Tributary 1 in the Black Branch watershed were evaluated in 2017 to determine whether any significant changes to the physical conditions of the BBW had occurred since they were last evaluated in 2016. The results are presented in the 2018 *Black Branch Geomorphic Report*

for 2016 and 2017 with comparison to the base year of 2001. The report is provided on the DVD, under Assessment of Control\ Black Branch folder.

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

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G. PROGRAM FUNDING

Permit Conditions Part IV. G:

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

Fiscal Analysis

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

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

A financial assurance plan showing the County meeting its 75-percent requirement of the projected expenses for the next two years is submitted with this report.