



2016

Annual NPDES MS4 Report

Prepared for:

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National Pollutant Discharge Elimination System Municipal Separate Storm Sewer Systems

2016 Annual Report

Prepared for

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

Prepared by

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ACKNOWLEDGEMENTS

The Prince George's County Department of the Environment, Stormwater Management Division, prepares the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (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 under Permit Administration, beginning on page 7 of this report. The following groups also provide the County with programmatic assistance, information and/or ancillary funding to assist the County's efforts in protecting and improving water resources:

Maryland-National Capital Park and Planning Commission

Department of Parks and Recreation, Department of Planning

Maryland Department of Natural Resources

Maryland Department of the Environment

Neighborhood Design Center

Prince George's County Agencies

Environment:

Directors Office: Communications and Community Engagement Section

Administrative Services Division: Budget and Procurement Section

Stormwater Management Division: Capital Projects Construction Section, Capital Projects Design Section, Environmental Programs Section, Inspection and Compliance Section

Waste Management Division: Disposal Section, Recycling Section, Project Management Section, Collections Section

Sustainability Initiatives Division: Community Outreach Promoting Empowerment Section

Fire/Emergency Medical Services: Hazardous Materials Division

Health Department: Environmental Engineering Program

Office of Information Technology and Communications

Public Works and Transportation:

Office of Engineering & Project Management: Engineering Services Division

Office of Engineering & 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 Review Division, Inspections Division, Enforcement Division, Building Plan Review

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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ABBREVIATIONS

95-CLEAN	Prince George's County Water Pollution Line
AFF	Alice Ferguson Foundation
ASD	Administrative Services Division, (DoE)
AWS	Anacostia Watershed Society
BBW	Black Branch Watershed
B-IBI	Benthic-Index of Biotic Integrity
BMP	Best Management Practices
BPRUC	Bureau of Public Roads Use Codes
BSR	Brown Station Road Sanitary Landfill
CAP	Compliance Action Plan
CBT	Chesapeake Bay Trust
CCCC	Comprehensive Community Cleanup Program
CIP	Capital Improvements Program
COMAR	Code of Maryland Regulations
COPE	Community Outreach Promoting Empowerment, (DoE)
CORP	County Office Recycling Program, (DoE)
CPCS	Capital Projects Construction Section, (DoE)
CPDS	Capital Projects Design Section, (DoE)
CFR	Code of Federal Regulations
Cu	Total Copper
CWP	Clean Water Partnership
DoE	Prince George's County Department of the Environment
DO	Director's Office
DPIE	Department of Permitting, Inspection and Enforcement
DPW&T	Prince George's County Department of Public Works and Transportation
DVD	Digital Versatile Disc
<i>E. coli</i>	<i>Escherichia coli</i>
EED	Environmental Engineering Division (Health Department)
EMC	Event Mean Concentration
EMS	Emergency Medical Services
EPA	U.S. Environmental Protection Agency
ESD	Environmental Site Design
ESS	Engineering Services Section (DoE)
ETHM	End Time Harvest Ministries
FD	Fire Department
FEMA	Federal Emergency Management Agency
F-IBI	Fish-Index of Biotic Integrity
FOG	Fats, Oil and Grease
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
ICS	Inspection & Compliance Section
ID	Inspections Division (DPIE)
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
MDE	Maryland Department of the Environment
MD DNR	Maryland Department of Natural Resources
MEP	Maximum Extent Practicable
MES	Maryland Environmental Service
M-NCPPC	Maryland-National Capital Park and Planning Commission
MOU	Memorandum of Understanding
MRF	Materials Recycling Facility
MS4	Municipal Separate Storm Sewer System
MWCOG	Metropolitan Washington Council of Governments
NDC	Neighborhood Design Center
NO3+NO2	Total Nitrate+Nitrite
NPDES	National Pollutant Discharge Elimination System
OCS	Prince George's County Office of Central Services
OEPM	Office of Engineering and Project Management (DPW&T)
OHMD	Office of Highway Maintenance Division, (DPW&T)
OPM	Office of Project Management, (DPW&T)
P2	pollution prevention
P3	Public Private Partnership
PAG	Proposal Analysis Group
Pb	Total Lead
PGCPS	Prince George's County Public Schools
PGSCD	Prince George's Soil Conservation District
PSS	Program Support Section (DoE)
QA/QC	Quality Assurance/Quality Control
R&DS	Research & Development Section (DoE)
RS	Recycling Section (DoE)
RTPID	Real-Time Passenger Information Display
SDI	Storm Drain Inventory
SDMD	Storm Drain Maintenance Division, (DPW&T)
SIC	Standard Industrial Classification
SID	Sustainability Initiatives Division (DoE)
SMD	Stormwater Management Division (DoE)
SOP	Standard Operating Procedures
SRRD	Site/Road Review Division (DPIE)
SSO	Sanitary Sewage Overflows

SWM	Stormwater Management
SWMF	Stormwater Management Facility
SWPPP	Stormwater Pollution Prevention Plan
TKN	Total Kjeldahl Nitrogen
TMDL	Total Maximum Daily Load
TNI	Transforming Neighborhoods Initiative
TP	Total Phosphorus
TSS	Total Suspended Solids
UM	University of Maryland
UMES	University of Maryland Extension Service
US ACE	United States Army Corp of Engineers
VOC	Volatile Organic Compounds
WMD	Waste Management Division, (DoE)
WSSC	Washington Suburban Sanitary Commission
Zn	Total Zinc



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OVERVIEW

This report summarizes the activities carried out by various departments and agencies within the Prince George's County in accordance with the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit terms during FY 2016.

This year's report is a continuation of the major revisions initiated in last year's report. One of the revisions initiated by MDE last year was the reporting format of the supporting data submittal. MDE distributed a new MS4 geodatabase format and supporting guidance documents. MS4 reporting municipalities were to familiarize themselves with the new reporting format, begin migrating existing data into the new format, and initiate production on new Feature Class and Associated Table reporting requirements required by the Geodatabase.

MDE recognized the need for the Geodatabase to be improved upon as a tracking and reporting tool, and established the Geodatabase Working Group, which consisted of GIS staff from the reporting municipalities. The group met three times in 2016, discussing best practices for production and reporting, establishing a quorum on what data was unnecessary, and coming to shared understanding of how reporting requirements should be interpreted. The ultimate goal of the meetings was to produce a revised and improved version of the Geodatabase reporting format for 2017 MS4 reports. The discussions were driven by questions submitted by all of the municipalities. Significant topics of discussion were as follows:

- POI production for structural versus ESD BMPs, reporting credit, and relationship to BMP Associated Table and BMP Drainage Area Feature Class.
- Which mandatory fields should become conditional, optional, or eliminated altogether.
- Population of Alternative BMP Feature Classes.
- BMP Inspection records.
- Nested BMPs and overlapping treatment areas.

The County had also identified a tracking deficiency for Restoration BMPs where the Construction Purpose was Conversion of Existing BMP. The Geodatabase never differentiated between the impervious draining to the structure as opposed to the restoration credit achieved by increasing the PE of the BMP. The County submitted an additional table named "Conversion of Existing BMP Associated Table" to the MDE Geodatabase Working group to facilitate better tracking and reporting of restoration credit. The County will continue to work with the MDE and share best practices with other municipalities in an effort to improve the tracking and reporting of MS4 Geodatabase.

Despite limitations as discussed above, this year, the County made its priority to migrate data to new MS4 geodatabase format in full measure. In addition to having migrated all of the existing data, the County performed extensive production on the various new Feature Classes, Associated Tables, and provided extensive data connectivity as required by the Relationship Classes. Notable challenges that were met and are ongoing are as follows:

- Identification of BMP POI Feature Class and Association of BMP POI with BMP Associated Table:
 - Identifying POI Features in the Storm Drain inventory using drainage areas, Digital Elevation Model, contours, and aerial imagery.



- Identifying BMP POI Features where there were nested BMPs and treatment trains and correctly associating the records in the BMP Associated Table.
- Identifying BMP POI where the ESD BMPs don't discharge into stormdrain system, such as dry wells, impervious disconnection, and sheetflow to conservation using agreed upon best practices discussed in MDE Geodatabase meetings.
- Consolidating ESD BMP:
 - Identifying and consolidating ESD BMP records in BMP Associated Table.
 - Consolidating ESD BMPs drainage areas in BMP Drainage Area Feature Class.
 - Consolidating and associating ESD BMP inspection records to BMP Associated Table.
- Production of Alternative BMP:
 - Delineating Alt BMP Line Stream Restoration Features based off of extent of water quality features on the As-Built or Final Plan Set.
 - Delineating Alt BMP Polygon for Forestation BMPs
 - Identifying which storm drain inlets had been vacuumed, and associating the pounds removed to Census Tract Polygons as recommended by the MDE Geodatabase Guidance.
- Production of Data and Population of Countywide Stormwater Watershed Assessment Associated Table and Local Stormwater Watershed Assessment Associated Table:
 - Creating a distinct record for every TMDL Pollutant in each TMDL Watershed.
 - Creating a distinct record for each Bay Pollutant in each of the 8 digit watersheds.
- Digitizing Restoration Feature Class Points and Drainage Areas for BMPs in Planning, Design and Construction.
- Calculating the cumulative completed or planned acres restored where RestBMP Type was Conversion of Existing BMP (Described above).
 - The MDE Geodatabase had not considered this situation and therefore the County developed a defensible tracking method.
- Calculating the completed or planned acres restored where RestBMP was redevelopment (Ongoing):
 - Using the amount of existing impervious and the PE of each BMP to establish the amount of untreated impervious that existed prior to Redevelopment was actually restored.

The County will continue to refine and update its methodology and provide updated data in the FY 2017 report.

On January 12, 2016, the Maryland Department of the Environment (MDE) sent a letter to the County and asked the County to include information on specific progress related to the six Minimum Control Measures (MCMs) as described in Part III of the General Permit for all incorporated municipalities. MDE recommended that future annual reports outline specific progress for each municipality except for the City of Bowie.

In response, as part of the major revisions, this year's reporting includes a supplementary report on DVD that identifies the activities the County and various municipalities have taken in relation to the six MCMs identified in Part III of the General Permit. Information is included for all twenty-six (26) municipalities, including the three municipalities which do not meet the General Permit's one thousand (1,000) population threshold: Eagle Harbor, Upper Marlboro, and North Brentwood. This

supplementary report refers back to Prince George's County's NPDES MS4 2016 Annual Report where applicable.

In addition to the major revisions, the County also worked on to address the issues raised by MDE on its FY2015 annual report. The County submitted its 2015 NPDES MS4 Annual Report on December 30, 2015. On April 5, 2016, the MDE completed its review in parts and provided its first set of comments in two categories: 1) comments that needed immediate response, 2) comments that needed a response with FY 2016 annual NPDES MS4 report. On August 3, 2016, MDE provided its second sets of comments mostly on TMDL section of the report. While the County has already submitted its response to the comments that needed immediate attention, the County is including its response to the comments that need to be provided with this annual NPDES MS4 report for the first set of comments in Table A-1 and second sets of comments in Table A-2.

Table A-1. County Response to MDE's Comments Dated April 5 2016.

Permit Condition	MDE Comments	County's Response
Part V.A Annual information	The 2015 annual report covered fiscal year FY2015. The majority of the required in the County's annual report was submitted on Reporting December 30, 2015; however, some information was missing and is noted in this review. The County shall submit a complete 2016 annual report to MDE no later than January 2, 2017.	Comment noted.
	Please provide a response to each comment outlined below.	See response below.
Part IV.C Source Identification	MDE distributed the new MS4 geodatabase format on March 15, 2015, and the County will be required to begin submitting data in this format with its next annual report submittal on January 2, 2017. MDE will continue to work with the MS4 community in transitioning to the new database.	The County is submitting the data in new MS4 geodatabase format on the DVD.
	In 2015, Prince George's County continued to provide significant updates to the storm drain inventory and resolve data deficiencies that have existed in the past. The County has added data related to storm drain infrastructure, drainage areas, and major outfalls. The County reported that 3,195 major outfalls and 1,271 drainage areas have been converted to the most recent version of ARCGIS. The County should continue to update all drainage areas associated with major outfalls. The County should clarify whether the 3,195 major outfalls represent the total number of major outfalls countywide.	Outfall delineation is a working progress and last year's inventory did not represent the total number of major outfalls countywide. This year, since the County is providing data in new MS4 geodatabase format, all outfall structures and drainage area delineated to date is included in the submittal. The updated inventory includes over 7,000 outfalls.
	The County has made significant progress in creating a commercial and industrial geographical information system (GIS) data layer identifying 1,371 parcels that have potential exposure to stormwater. The County should consider incorporating this information into routine	Comment noted. Moving forward the County will be prioritizing its routine outfall inspections based on this data.



Permit Condition	MDE Comments	County's Response
	outfall inspections for priority areas under the illicit discharge program.	
	MDE's February 20, 2015, correspondence detailed specific items related to the County's urban best management practice (BMP) database. Many of these items have been addressed. Resolution of BMPs with missing drainage areas is ongoing and the County has provided updates for 116 BMPs. The County shall provide a schedule as to when all BMP drainage area data will be complete.	As this is an ongoing process, the County has completed almost all outstanding drainage area delineations (~ 400) with the exception of very few (~50). County expects that by the end FY2017, remaining drainage areas will be delineated.
	The water quality improvement projects that include 123 BMPs plus stream restoration need to be tabulated separately from the comprehensive urban BMP database. Table D of Attachment A (and the new MS4 geodatabase) requires a separate database for water quality improvement projects.	This information is provided in the new MS4 geodatabase.
	In accordance with MDE's July 17, 2015 letter the County shall verify the water quality treatment provided for BMPs constructed during 1985 to 2002 through the BMP inspection catch up process. The County expects to complete this verification by the Summer of 2016. The County shall report the status and provide updates to the BMP database in annual report.	This year County made its priority to complete all inspections including BMPs constructed during 1985 to 2002. The inspection verified the functionality of the BMPs in terms of pass and fail. This data is presented in the new MS4 geodatabase. BMPs that pass the inspection were functioning per their design to treat water quality volume. Failed BMPs need maintenance or retrofitting. This information will be updated in the next annual report and database.
Part IV.D.I Storm water Management	The County developed a geodatabase to track storm water implementation policy decisions, maintenance responsibility, disturbed areas, watershed, and BMP type. The County's geodatabase allows tracking development trends and activities watershed wide. MDE believes this is a useful tool for promoting internal communications among the various departments involved with stormwater plan review, approval, maintenance, inspection, and database tracking. MDE commends the County for this effort and requests updates in future annual reports.	This geodatabase is being used by DPIE at the County and was submitted to MDE with 2015 NPDES MS4 report. County is presently evaluating an interagency need and working with ESRI to develop a Countywide geodatabase.
	The County adequately maintained stormwater program	Agree.

Permit Condition	MDE Comments	County's Response
	data to show compliance with the three step review process for implementing environmental site design (ESD) to the maximum extent practicable (MEP).	
	The County 2014 Storm water Management Manual was introduced to the County Council on October 14, 2014. The revisions provided updates to current standards to remove design impediments to ESD to the MEP to comply with Part IV .D.I.a of the permit.	Comment noted.
	The County conducted a total of 821 stormwater management facility inspections during the reporting year. The past two reporting years have shown consistent improvement over previous years, however, the County inventory indicates that a total of 3,070 BMPs need to be inspected once every three years. The County submitted a schedule to MDE in May 2015 to comply with required triennial inspections by the end of the permit term. The schedule specifies that 3,070 BMPs will be inspected by FY2018 and the County is on pace to meet the commitments outlined in May 2015.	The County completed most of the inspections during FY16 and scheduled to complete all catch-up inspection by the end of FY17. Please see details on Page 39.
	MDE commends the County for efforts in place to catch up with triennial inspections. However, the County needs to plan for ongoing BMP implementation due to new development, redevelopment, and restoration. The County needs to incorporate new BMPs into the inspection program schedule and report on the status in the next annual report.	The County has made progress and completed approximately 95% of the catch up inspections. All new development BMPs are now incorporated in the tri-annual inspection program. The details are provided on Page 39.
	The County addressed MDE concerns noted in the 2014 annual report related to maintenance agreements with homeowner's on the 188 BMPs that needed inspection.	Comment noted.
Part IV.D.2 Erosion and Sediment Control	MDE conducted the County's 2014 delegation review for erosion and sediment control inspection authority. Results of this review were provided in MDE's April 3, 2015, letter to Prince George's County.	Comment noted.
	In accordance with MDE comments, the County adopted an updated erosion and sediment control ordinance on June 23, 2015. MDE granted delegation authority on September 3, 2015 effective through June 30, 2017.	Comment noted.
	The County shall submit quarterly reports to MDE regarding earth disturbances exceeding one acre or more. While this information was available in the annual report, it has not been provided to MDE on a quarterly basis for FY2015 as required by the permit.	The earth disturbances reports for all jurisdictions are being submitted on a quarterly basis now.
	Quarterly grading reports need to include all earth disturbances exceeding one acre within the County and all incorporated municipalities (except the City of Bowie).	Comment noted.



Permit Condition	MDE Comments	County's Response
	The County needs to coordinate with these municipalities and provide quarterly grading reports from these jurisdictions as part of reporting requirements in the permit.	
Part IV.D.3 Illicit Discharge Detection and Elimination (IDDE)	In the 2014 annual report review, MDE requested that the County reevaluate its procedures for outfall inspections due to the County's failure to discover any dry weather flows. As a result, the County revised screening procedures that utilize a field application tool and GIS map. These new procedures have proven more effective in identifying dry weather discharges. MDE recognizes the significant improvement to the County's IDDE program.	Comment noted.
	Field screening for illicit discharges was focused in the Anacostia watershed. The County conducted 186 screenings at 151 outfalls meeting Part IV.D.3 of its permit. Of the 186 screenings, 6 were rescreened in FY2015 and 29 were rescreened in FY2016.	Comment noted.
	In accordance with Part IV.D.3.a, the County conducted chemical testing of dry weather discharges. The County detected 134 dry weather flows and conducted 72 chemical tests. The County reported that some discharges had too little flow to test. Illicit discharges were detected at five outfalls but have not been eliminated.	Please see Table D-5 on page 44 for the response.
	The County reported numerous problems during illicit discharge screenings, including structural problems, sediment deposits, erosion, floatables, and odors. The County shall report plans to address these problems in the next annual report. In addition, the County shall provide information on the investigations or status of the illicit discharges observed at the five outfalls. This shall include details of investigations, corrective actions, and any enforcement activities.	Please see response under Illicit Discharge Detection and Elimination section on page 44.
	The County conducted visual surveys of commercial and industrial areas in accordance with Part IV.D.3.b. The surveys included 53 commercial and industrial complexes and identified 55 potential water quality violations, which are currently being investigated. The County shall provide results and status of these violations in the next annual report.	Please see response under Commercial and Industrial Visual Surveys on page 45.
	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. The County should continue to report the status of violations and resolutions of reported problems.	Comment noted.
	The County complied with requirements under Part	Comment noted.

Permit Condition	MDE Comments	County's Response
	IV.D.3.d to maintain appropriate enforcement procedures. The County included a detailed summary of investigations, resolutions, and fines when applicable. The Health Department has begun using a database to track and report water quality violations from failed septic systems and public sewer overflows. MDE acknowledges the County's improved efforts in tracking problems. Future annual reports shall continue to provide information on the status and resolution of any violation.	
	The County complied with the IDDE annual reporting requirements in accordance with Part IV.D.3.e and Part V of its permit. The County submitted a complete IDDE data set in Attachment A.	Comment noted.
Part IV.D.4 Trash and Litter	The County provided a description of the status of trash reduction efforts and an evaluation of the effectiveness of programs for meeting goals outlined in Litter the trash total maximum daily load (TMDL) work plan.	Comment noted.
	The County's permit requires a schedule for implementing the necessary controls for attaining annual trash removal goals by the fifth year of the permit. Therefore, a benchmark was established for year two of the permit to remove 62,000 pounds of trash in 2015. The County met this milestone by removing 66,512 pounds of trash through various communities clean up events during the year. The County shall continue to report on progress toward meeting established milestones in each annual report.	Comment noted.
	The County has additional programs such as the Comprehensive Community Cleanup, the Clean Up, Green Up, and Roadside Cleanup Programs that work with volunteers to remove trash in communities, roadways, medians, and selected locations across the County. These reductions were not counted toward reported trash reduction progress. In future years, the County may expand these programs in order to take credit toward required TMDL goals.	Comment noted.
	Table 2.11 of the Implementation Plan states that approximately 142,675 pounds of trash are being removed that can be counted toward the TMDL. However, the 2015 milestone is set at 62,000 pounds. The County should clarify whether the 2015 milestone is in addition to the values stated in the implementation plan on Table 2.11.	Please see response on page 63.
	The County is working with watershed partners to monitor trash at 15 locations throughout the Anacostia watershed. These monitoring efforts will continue to inform future strategies for meeting the trash reduction requirements outlined in the permit.	Comment noted.



Permit Condition	MDE Comments	County's Response
	The County is required to continue to evaluate the success of ongoing trash reduction programs and incorporate adaptive management strategies in order to achieve the annual trash removal targets by the fifth year of the permit.	Comment noted.
Part IV.D.5 Property Management and Maintenance	The County conducts street sweeping on major public roads and targets efforts based on past amounts of collected material. In the past year, a total of 1,850 curb miles were swept. The County is continuously evaluating its system to maximize pollution reduction effectiveness.	Comment noted.
	The County collects roadside litter in urban areas and in response to citizen requests through a 311 hotline. In 2015, 1,395 tons of materials were removed.	Comment noted.
	In the last reporting year, 67 inlets and 22,054 linear feet of pipe were cleaned. Additionally, 69 major channels are cleaned on a triennial cycle, and 34,810 linear feet of channels were cleaned in the past year. The County should expand these efforts and prioritize cleaning of storm drain pipes in areas of high pollutant potential.	Comment noted.
	The County promotes efficiency in applying deicing material through methods such as reading temperature probes embedded in roadways, upgrading equipment in the past year, and the extensive use of pre-treatment material. The County should report the amount of salt and pre-treatment material used as requested by MDE in the FY2014 annual report review.	This information is provided under Snow and Ice Control Program. The data are provided in the new MS4 geodatabase on DVD.
	The County reported that staff is trained in application of deicing material. The next annual report should specify how frequently training occurs.	The training occurs on an annual basis. Please see page 74 for the response.
	No fertilizers or pesticides are used along roadways, and herbicides are applied by a contractor at limited locations.	Comment noted.
	The County tracks 19 County and municipal owned industrial facilities to ensure those requiring coverage under permit 12-SW are in compliance. A consultant assisted in developing storm water pollution prevention plans (SWPPPs) for these facilities. These include municipal public works, abandoned vehicle impoundment lot, sanitary landfill, recycling, composting, and vehicle maintenance facilities.	Comment noted.
	Accomplishments in FY2015 at the 19 facilities covered under the 12-SW include improved documentation of records, monitoring progress of catch basin cleaning efforts, maintaining spill kits, and continuous staff training.	Comment noted.
	Quarterly inspections are performed and long term planning efforts have identified improvements for BMP maintenance, staff training, oil and antifreeze recycling,	Comment noted.

Permit Condition	MDE Comments	County's Response
	and material and container storage procedures to eliminate exposure to stormwater. The County shall continue to report on the status of these efforts.	
Part IV.D.6 Public Education	The County promotes environmental awareness and education outreach efforts to the public in coordination with watershed restoration projects. This meets the intent of the County's permit. Some examples are noted below.	Comment noted.
	The County sponsored 317 environmental public participation programs during the reporting year. Education topics included water conservation, residential BMP maintenance, erosion and sediment control practices, household hazardous waste disposal, improved lawn care, residential car washing, and proper pet waste management. The numerous outreach events resulted in participation from thousands of residents and the County is commended for its broad and comprehensive outreach activities.	Comment noted.
	The County's Rain Check Rebate program is designed to encourage residents to install stormwater practices on their property. The County approved 68 applications and awarded \$53,000 to homeowners under this program.	Comment noted.
	The County partners with the Neighborhood Design Center to develop the Pilot Pond Community program that promotes community involvement in addressing poor aesthetics and maintenance concerns of older ponds. The partnership involves County inspections related to proper function while also enlisting a landscape architect to work with communities to develop a plan to improve the aesthetics of the pond and surrounding area. The community partnership involves performing landscape maintenance, removal of invasive plants, and clearing outfalls of trash and debris. The County should report the status of the number of ponds brought into the program in future annual reports.	The information is provided under Preventive Maintenance Inspections of Public Facilities section on Page 40.
Part IV. E Restoration Plans And TMDLs	MDE approved the County's impervious area baseline of 6,105 acres on July 17, 2015. During the 2015 reporting period, the County completed 35 acres of restoration. In 2014, the County completed 0.5 acres of restoration. The County notes that an additional 426 acres of restoration will be achieved by projects that are currently in various stages of planning. However, even with this increased effort, the current pace does not put the County on target to meet restoration requirements established in the permit.	Comment noted.
	The County provided a list of specific BMPs with locations, drainage areas, impervious area treated, and costs that can be implemented to meet impervious area restoration	Comment noted.



Permit Condition	MDE Comments	County's Response
	requirements. The list of BMPs will collectively restore a total of 8,334 acres for restoration. As noted above, compliance with the conditions of the County's permit is dependent on significantly increasing the pace of implementation of these water quality improvement projects.	
	MDE requests that construction completion dates shall be included for all projects listed in the planning, design, and construction phase to show how the County will meet impervious area restoration requirements by the end of the permit term.	Since data are being submitted in new MS4 geodatabase, this information is provided in the "REST_BMP" in projected implementation year column.
	By June 1, 2016, the County shall submit an analysis to support the exclusion of rural residential and roadway impervious areas in the County's baseline.	The information has been submitted to MDE on June 10, 2016.
	The County submitted comprehensive restoration plans for each TMDL with EPA approved stormwater waste load allocations (WLAs) in January 2015. MDE's 2014 annual report review provided specific comments on the restoration plans. The County provided a written response to these comments, and indicated that the 2016 plans are still under revision to incorporate MDE comments. The County shall submit updated TMDL plans by June 1, 2016 and address the following:	The information has been submitted to MDE on June 10, 2016.
	Each restoration plan shall include a TMDL assessment in accordance with Part IV .E.4 of the permit. The assessment shall tabulate pollutant load reductions achieved during the reporting period and provide a comparison with established benchmarks outlined in each proposed TMDL plan. When benchmarks are not met, the County shall identify specific programs to be implemented as part of the adaptive management process.	The information has been submitted to MDE on June 10, 2016.
	The local TMDL plans have identified specific benchmarks related to the level of annual impervious area restoration achieved in order to meet the pollutant load reduction targets established in the restoration plans. However, the County is not on pace to meet these restoration goals. Revised restoration plans need to show how the County intends to make up for the load reductions that were not achieved in 2015.	The information has been submitted to MDE on June 10, 2016.
	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. These loads should provide a comparison of countywide baseline and anticipated 2025 progress toward these targets. This shall be updated annually.	The information has been submitted to MDE on June 10, 2016.

Permit Condition	MDE Comments	County's Response
	The County has proposed to revise TMDL plans with a more conservative estimate of pollutant reductions under the pet waste campaign. This will allow the County to incorporate adaptive management strategies to meet the proposed reduction targets. MDE will provide further review after receipt of the revised plans.	The information has been submitted to MDE on June 10, 2016.
	The County has agreed to evaluate public outreach and education success using the pet waste campaign. By the fourth year annual report, the County should provide estimates related to the bacteria reductions achieved using this program.	The information has been submitted to MDE on June 10, 2016.
	The stream restoration expert panel report was amended in September 2014 to incorporate a sediment delivery factor for TSS removal rate. The County has agreed to update load reductions, WLAs, and final date analyses based on the sediment delivery factor. In addition, the annual report indicates that stream restoration implementation goals will be revised to reflect more realistic implementation efforts by the County. MDE will provide further review after receipt of the revised plans.	The information has been submitted to MDE on June 10, 2016.
	MDE has advised the County that BMPs with missing drainage areas cannot be used for calculating current year baseline loads. When these data deficiencies are rectified the County should improve the baseline load calculations with more accurate data.	The information has been submitted to MDE on June 10, 2016.
	Red-line revisions should be provided on the updated TMDL plans to highlight all new information. In addition, provide a response letter addressing each TMDL comment individually to further assist MDE's review and feedback.	The information has been submitted to MDE on June 10, 2016.
	The County's restoration plans include numerous efforts to develop partnerships with the public and local stakeholders. These include the Clean Water Partnership program, participation in the Anacostia Watershed Restoration Partnership, the Rain Check Rebate and Grant Program, and the Alternative Compliance Program. In addition, the County has awarded over \$1 Million to applicants under the Storm water Stewardship Grant Program. MDE recognizes the significant effort required to develop these innovative programs. These will assist the County toward implementation of local water quality projects in order to meet the long term goals outlined in the restoration plans.	The information has been submitted to MDE on June 10, 2016.
	The County has satisfied the public participation requirements in the TMDL process through public meetings and response to public comments. The County shall report on continued outreach efforts to engage the public and develop partnerships with local stakeholders in	The information has been submitted to MDE on June 10, 2016.



Permit Condition	MDE Comments	County's Response
	future annual reports.	
Part IV. F Assessment of Controls	The County continued its chemical, biological and physical monitoring in the Bear Branch watershed as required.	Comment Noted.
	A total of 13 storms at its PGC003 station and 8 storms at its PGC005 instream station were monitored. The County cites nearby dredging in Laurel Lakes as the reason for capturing fewer storm samples at PGC005 as reported to MDE in June of 2015.	Comment Noted.
	The County submitted its chemical and biological monitoring data through the MS4 geodatabase. The Monitoring Site and Monitoring Drainage Area tables are complete.	Comment Noted.
	The Chemical Monitoring geodatabase table is missing data for several storms, and only partial data for total petrochemical hydrocarbons (TPH) and E. Coli. MDE recognizes the challenges in capturing these data, and requests that the County continue its effort to capture TPH and E. Coli samples for as many storms as possible.	Comment Noted.
	Table 7 (Section 3.1.6) of the Bear Branch FY2015 report indicates that some data are missing because storm flows could not always be captured or sampled. While the County did make numerous attempts to collect samples, the Laurel Lakes dredging project altered flow conditions on several occasions and the data were considered invalid. Other problems encountered included equipment malfunctions and missed opportunities for storm sampling when anticipated rainfalls missed the area. While some of these problems will be resolved at the conclusion of the dredging project, the County has also taken action to rectify field equipment issues so that future sampling activities will be more successful.	Comment Noted.
	The County uses the placeholder "-1" in required fields where it was unable to capture data. MDE requests that all MS4s enter "999" in instances where there are no data to report in the required fields.	Comment Noted.
	The County shall move forward with chemical monitoring program in accordance with the permit for FY2016.	Comment Noted.
	The County submitted its storm water management assessment report of the Black Branch Watershed. The County surmises that the stream's instability may be primarily due to land use changes over the past few years, however, there appear to be insignificant changes to the channel compared to last year. The County shall continue to provide updates in future annual reports.	Comment Noted.
Part IV. G Program Funding	The County's expenditures for capital and operating budgets for implementing NPDES stormwater permit requirements in FY2015 were \$96,460,000 and	Comment Noted.

Permit Condition	MDE Comments	County's Response
	\$66,921,000, respectively. Funding has increased over the past few years, demonstrating the County's commitment to the NPDES stormwater permit program and to improving water quality.	
	In accordance with Maryland State law, the County is required to submit a Financial Assurance Plan by July 1, 2016 to demonstrate that the County has the resources necessary to comply with its permit requirements.	The Draft Financial Assurance Plan was submitted to the State on June 30, 2016. Approved by County Council on October 27, 2016.

Table A-2. County's Response to MDE's Comments dated August 3, 2016.

MDE Comments	County Response
Page 114 of the County's 2015 annual report stated that revised restoration plans would be submitted to MDE in the spring of 2016. This information created confusion during the annual report review as it led MDE to believe that more updated information would follow. However, the June 10, 2016 submittal indicated that the revised restoration plans were already submitted in December of 2015. Please ensure that information provided in future annual reports are consistent with all attachments in order to avoid such confusion.	Comment Noted.
In MDE's review of the County's 2015 annual report, a TMDL assessment in accordance with Part IV.E.4 of the permit was requested. This requires a tabulation of load reductions and a comparison with proposed benchmarks identified in each total maximum daily load (TMDL) plan. While the County did offer a tabulation of load reductions achieved with completed restoration strategies, the comparison with proposed benchmarks was not included. Please include this information in future annual reports to comply with the conditions of the permit.	This information is provided in TMDL Compliance section on Page 118. Proposed benchmarks have been revised based on progress achieved to date.
The restoration plans submitted in December 2015 were updated to show how the County intended to make up for load reductions not achieved in 2015. The County provided adequate information to show how revised BMP strategies would meet TMDL requirements by 2030. MDE recognizes the County's efforts to incorporate adaptive management strategies to revise implementation schedules in order to stay on track to meet long term TMDL goals.	Comment Noted.
MDE has advised the County that BMPs with missing	Comment Noted.



MDE Comments	County Response
drainage areas could not be used for calculating current year baseline loads during the 2014 and 2015 annual report reviews. However, the calculated baseline restoration plans submitted in December 2015 for all TMDLs were not adjusted. When these data deficiencies are corrected the County should improve the baseline load calculations with more accurate data. The fourth year annual report shall provide updated baseline loads for all pollutants to account for missing drainage areas and more up to date information.	
<p>The County has revised stream restoration implementation goals to be approximately 5,000 linear feet per year. This addresses past MDE concerns as prior proposals were nearly nine times this amount. The County's efforts to utilize adaptive management strategies to address MDE comments while showing that projected load reductions can be achieved is commended.</p> <p>However, as noted in past annual report reviews, the stream restoration expert panel report was amended September of 2014 to incorporate a sediment delivery factor for total suspended solids (TSS) removal rates. Therefore, the credit for TSS load reduction needs to be revised because this factor was not applied properly. After computing TSS load reductions using the sediment delivery factor, MDE determined 1,688 tons/year may be credited toward the Anacostia TSS TMDL (for 5,000 linear feet of restoration per year over the next 15 years, or 75,000 linear feet total). Please include this correction in future annual reports.</p>	TSS credits for stream restoration projects now include the sediment delivery factor.
<p>MDE's 2014 annual report review requested that TMDL plans should include an overall summary of countywide load reductions for meeting the Chesapeake Bay TMDL.</p> <p>These loads should provide a comparison of countywide baseline and anticipated 2025 progress toward these targets. This information shall be updated annually. While the County provided information for local TMDLs the information requested related to the Chesapeake Bay TMDL could not be found anywhere. Please provide this information in future annual report and specify where it is located in the submittal.</p>	This information is provided in TMDL Compliance section on Page 118. The report includes progress made to date towards meeting the Chesapeake Bay TMDL. The County used the WTM model that was developed for the local watershed restoration plans to estimate the countywide baseline loads.
The County provided updated information related to anticipated impervious acre and load reduction credits using street sweeping in a July 5, 2016 email	Comment Noted.

MDE Comments	County Response
<p>to MDE. MDE responded on July 18, 2016 to clarify that the County performed calculations incorrectly. The impervious acre credit received for 700 miles of street sweeping is 121.3 acres and not the 2,000 acres anticipated by the County. This will affect the anticipated load reductions as well. MDE has re-calculated load reductions based on 933 acres (700 miles of 11 foot wide roadways). Accordingly, the revised pollutant load reductions for the County's proposed street sweeping program in the Anacostia watershed are as follows:</p> <ul style="list-style-type: none"> • TN (total nitrogen) = 713lbs (versus 12,853lbs) • TP (total phosphorus) = 95lbs (versus 1,704lbs) • TSS = 103lbs. (versus 1,848 lbs.) <p>MDE's calculations have confirmed that despite the revisions noted above, the County will still meet required wasteload allocations (WLAs) for TSS, BOD, and fecal coliform. In addition, the gap for TP is very small as the County will still achieve 98% of the required WLA. The County should continue to rely on adaptive management strategies to make up for the last 2% reduction for TP.</p>	
<p>Based on comment 7, the County will have a significant gap toward achieving the required load reduction for the TN TMDL in the Anacostia watershed. The proposed implementation strategy will result in 180,923 lbs. of TN reduced versus the required 227,917 lbs. While MDE recognizes that the proposed implementation strategy will allow the County to achieve a substantial amount of the required load reductions, the County still needs to consider adaptive management strategies to make up for the gap.</p> <p>The County may evaluate opportunities for upgrading the proposed street sweeping program to gain additional credit toward TN removal. In addition, the County should determine TN loads reduced associated with redevelopment projects. The County also has the option of selecting from the list of projects identified in the 2015 annual that may be implemented to address impervious acre restoration and TMDL requirements. MDE has offered the County different options for BMP implementation to meet permit requirements. The County should assess the practices that are</p>	<p>Comment Noted.</p>



MDE Comments	County Response
reasonable and achievable and evaluate the success of these efforts during implementation. In this way the strategies outlined in the restoration plan should be adjusted in future annual reports in order to address the additional TN reduction needed to meet the TMDL in the Anacostia watershed.	
MDE's review of the County's 2015 annual report requested an analysis to support the exclusion of rural residential and roadway impervious areas from the County's baseline. In response, the County only provided information related to the roadway impervious area. The impervious area deducted from the County's baseline analysis for rural roadways was 350 acres. However, the analysis provided by the County can only verify 271.7 acres. The County shall perform an updated baseline analysis and submit with the fourth year annual report and justify the remaining acreage that was deducted from the baseline analysis. If the County cannot verify the 78.3 acres' difference, then this acreage will be added to the County's baseline.	Comment Noted.
As discussed above, the County did not provide information related to rural residential area that was subtracted from the County's baseline. This information is long overdue as it was first requested in MDE's July 17, 2015 letter. The County has subtracted 1,437 acres from their baseline and has yet to justify this number. MDE approved the baseline in good faith with the understanding that this information would be available soon. If sufficient information is not provided to verify this analysis, an additional 287 acres of impervious area required to be restored within this permit term. This will change the impervious area restoration requirement to 6,392 acres. The County has committed to submitting this information by the end of August 2016. Please forward as soon as available.	The County had completed the first phase of the rural residential disconnection analysis, and was submitted to MDE on August 19, 2016. This analysis represented the initial pass using 10-meter grid resolution, and resulting impervious area disconnection is included in that report (included in this report's DVD). The county is continuing with its analysis utilizing a finer grid size one-meter resolution, and expects to identify additional impervious disconnection acreage beyond the August 19th initial analysis. The last phase of this work is expected to be completed by the spring of 2017.
MDE provided the County with a spreadsheet analysis of BMP data submitted by the County in the past annual report in an August 3, 2016 email. The analysis can assist the County in identifying areas of database improvement in order to get greater credit toward TMDLs.	Comment noted.

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 122-124 or the Code of Maryland Regulations (COMAR) 26.08.01, 26.17.01, and 26.17.02. Terms not defined in CFR or COMAR shall have the meanings attributed by common use.



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PART III: WATER QUALITY

Permit Condition Part III: As required by MDE, the Prince George's County'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.

Permit Condition Actions

Jeff DeHan, Associate Director, Stormwater Management Division, Department of the Environment, Prince George's County, will act as a liaison for the implementation of this permit. Table A-1 below identifies the lead program management and technical personnel for the FY 2016. Table A-2 provides addresses of the coordinating agencies and Figure A-1 through Figure A-15 provides organization charts detailing personnel and groups responsible for major NPDES program tasks.

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

Permit Condition	Department/ Division	Manager, Title/ E-mail Address, Telephone	Technical Personnel, Title/ E-mail Address, Telephone
Permit Administration	DoE/SMD	Jeff DeHan, Associate Director Stormwater Management Division jmdehan@co.pg.md.us 301-883-5838	N/A
Legal Authority	Office of Law	County Attorney 301-952-5225	N/A
Source Identification	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	Technical staff listed below
Storm Drain System	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	Tony Newsome, Engineer Environmental Programs Section acnewsome@co.pg.md.us 301-883-7647
Industrial Commercial Sources	DoE/SMD	George Nicol, Section Head Inspection Programs Section gsnicol@co.pg.md.us 301-883-5976	Consultant Services
Urban Best Management Practices (BMP)	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	Consultant Services
Impervious Surfaces	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us	Consultant Services

Permit Condition	Department/ Division	Manager, Title/ E-mail Address, Telephone	Technical Personnel, Title/ E-mail Address, Telephone
		301-883-5943	
Monitoring Locations	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	Consultant Services
Water Quality Improvement Projects	DoE/SMD	Jerry Maldonado, Section Head Environmental Programs Section jgmaldonado@co.pg.md.us 301-883-5943	Consultant Services
<i>Management Programs</i>			
Stormwater Management			
Implementing SWM Design Policies and Principles	DPIE/SRRD	Mary Giles, PE, Associate Director Site/Road Review Division mcgiles@co.pg.md.us 301-636-2060	Rey de Guzman, Chief Site/Road Review Division redeguzman@co.pg.md.us 301-636-2060
SWM Programmatic Information	DPIE/SRRD	Rey de Guzman, Chief Site/Road Review Division redeguzman@co.pg.md.us 301-636-2060	Mary Rea, Planner Site/Road Plan Review Division marea@co.pg.md.us 301-883-5921
SWM Design Manual	DPIE/SRRD	Mary Giles, PE, Associate Director Site/Road Review Division mcgiles@co.pg.md.us 301-636-2060	Rey de Guzman, Chief Site/Road 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, CSI III Inspection and Compliance Section sssachdeva@co.pg.md.us 301-883-5830
Public BMP Inspection and Maintenance	DPW&T/OHMD	Gwen Clerkley, Associate Director Office of Highway Maintenance gtclerkley@co.pg.md.us 301-499-8522	Vernon Stinnett, Division Chief Storm Drainage Maintenance Division vlstinnett@co.pg.md.us 301-499-8520
Erosion and Sediment Control			
Green Card Training	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 Review Division redeguzman@co.pg.md.us	Mary Rea, Planner Site/Road Plan Review Division marea@co.pg.md.us

Permit Condition	Department/ Division	Manager, Title/ E-mail Address, Telephone	Technical Personnel, Title/ E-mail Address, Telephone
		301-636-2060	301-883-5921
Illicit Connection and Enforcement Program			
Field Screening and Outfall Sampling	DoE/SMD	George Nicol, Section Head Inspection and Compliance Section gsnicol@co.pg.md.us 301-883-5976	Paul DeSousa, Code Enforcement Officer Inspection and Compliance Section pddesousa@co.pg.md.us (301) 883-5871
Commercial Industrial Area Surveys	DoE/SMD	George Nicol, Section Head Inspection and Compliance Section gsnicol@co.pg.md.us 301-883-5976	Paul DeSousa, Planner IV 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, Planner IV 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/SID	Dawn Hawkins-Nixon, Acting Associate Director Sustainable Initiatives Division DHNixon@co.pg.md.us 301-883-5839	See program manager
Trash and Litter Control – Private Property	DPIE	Ruby Sherrod, Associate Director Enforcement Division RJSherrod@co.pg.md.us 301-883-6067	See program manager
Street Sweeping	DPW&T/OHMD	Gwen Clerkley, Associate Director Office of Highway Maintenance gtclerkley@co.pg.md.us 301-499-8522	Michael Brown, Division Chief Special Service Division mobrown@co.pg.md.us 301-499-8520
Recycling, Trash and Garbage Collection, Public Education	DoE/WMD	Roger Merritt, Associate Director Waste Management Division REMerritt@co.pg.md.us 301-780-6315	Marilyn Rybak, Section Head Recycling 301-883-6081



Permit Condition	Department/ Division	Manager, Title/ E-mail Address, Telephone	Technical Personnel, Title/ E-mail Address, Telephone
Property Management and Maintenance			
SWPPP	DoE/SMD	George Nicol, Section Head Inspection and Compliance Section gsnicol@co.pg.md.us 301-883-5976	Kemba Saibou, Planner III Inspection and Compliance Section ksaibou@co.pg.md.us 301-883-5958
Street Sweeping	DPW&T/OHMD	Gwen Clerkley, Associate Director Office of Highway Maintenance gtclerkley@co.pg.md.us 301-499-8522	Michael Brown, Division Chief Special Service Division mobrown@co.pg.md.us 301-499-8520
Storm Drain Maintenance	DPW&T/OHMD	Gwen Clerkley, Associate Director Office of Highway Maintenance gtclerkley@co.pg.md.us 301-499-8522	Vernon Stinnett, Division Chief Storm Drainage Maintenance Division vlstinnett@co.pg.md.us 301-499-8520
Vegetation Management	DPW&T/OHMD	Gwen Clerkley, Associate Director Office of Highway Maintenance gtclerkley@co.pg.md.us 301-499-8522	Michael Brown, Division Chief Special Service Division mobrown@co.pg.md.us 301-499-8522 Vernon Stinnett, Division Chief Storm Drainage Maintenance Division vlstinnett@co.pg.md.us 301-499-8520
Roadside Litter Control	DPW&T/OHMD	Gwen Clerkley, Associate Director Office of Highway Maintenance gtclerkley@co.pg.md.us 301-499-8522	Michael Brown, Division Chief Special Service Division mobrown@co.pg.md.us 301-499-8522
Snow and Ice Control	DPW&T/OHMD	Gwen Clerkley, Associate Director Office of Highway Maintenance gtclerkley@co.pg.md.us 301-499-8522	Vernon Stinnett, Division Chief Storm Drainage Maintenance Division VLstinnett@co.pg.md.us 301-499-8520
Public Education			
Community Outreach and Education	DoE/SID	Deborah Weller, Planner IV Community Outreach Promoting Empowerment dmweller1@co.pg.md.us 301-883-7161	See program manager
	DoE/Director Office	Linda Lowe, Public Information Specialist Communications and Community Engagement Section lmlowe@co.pg.md.us 301-883-5952	See program manager

Permit Condition	Department/ Division	Manager, Title/ E-mail Address, Telephone	Technical Personnel, Title/ E-mail Address, Telephone
<i>Restoration Plans and TMDL</i>			
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
<i>TMDL Compliance</i>			
Water Quality Retrofits	DoE/SMD	Frank Galosi, Section Head Capital Projects Design Section fkgalosi@co.pg.md.us 301-883-5876	See program manager
Construction of SWM Retrofits	DoE/SMD	Dan Rybak, Section Head Capital Projects Construction Section dorybak@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
<i>Assessment of Controls</i>			
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
<i>Program Funding</i>			
	DoE/ASD	Michelle Russell, Associate Director Administrative Services Division mwrussell@co.pg.md.us 301-952-3954	Kara Chernet, 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 (I&CS) 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/SID:	Department of the Environment, Sustainable Initiatives Division (SID) 1801 McCormick Drive, Suite 500, Largo, MD 20774
DoE/SID/ESS:	Department of the Environment, SID, Engineering Services Section (ESS) 1801 McCormick Drive, Suite 500, Largo, MD 20774
DoE/SID/COPE:	Department of the Environment, SID, Community Outreach Promoting Empowerment Section (COPE) 1801 McCormick Drive, Suite 500, Largo, MD 20774
DoE/SID/R&DS:	Department of the Environment, SID, Research & Development Section (R&DS) 1801 McCormick Drive, Suite 500, Largo, MD 20774
DoE/SID/PSS:	Department of the Environment, SID, Program Support Section (PSS) 1801 McCormick Drive, Suite 500, Largo, MD 20774
DoE/WMD:	Department of the Environment, Waste Management Division (WMD) 3500 Brown Station Road, Upper Marlboro, MD 20774
DPW&T:	Department of Public Works and Transportation (DPW&T) 9400 Peppercorn Place, Suite 300, Largo, MD 20774
DPW&T/OEPM:	Department of Public Works and Transportation, Office of Engineering & Project Management (OEPM) 9400 Peppercorn Place, Suite 300, Largo, MD 20774
DPW&T/OHMD:	Department of Public Works and Transportation, Office of Highway Maintenance Division (OHMD) 8400 D'Arcy Road, Forestville, MD 20747
DPIE:	Department of Permitting, Inspections and Enforcement (DPIE) 9400 Peppercorn Place, First Floor, Largo, MD 20774
HD/EHDC:	Health Department, Environmental Health/Disease Control Division 9201 Basil Court, Suite 318, Largo, MD 20774

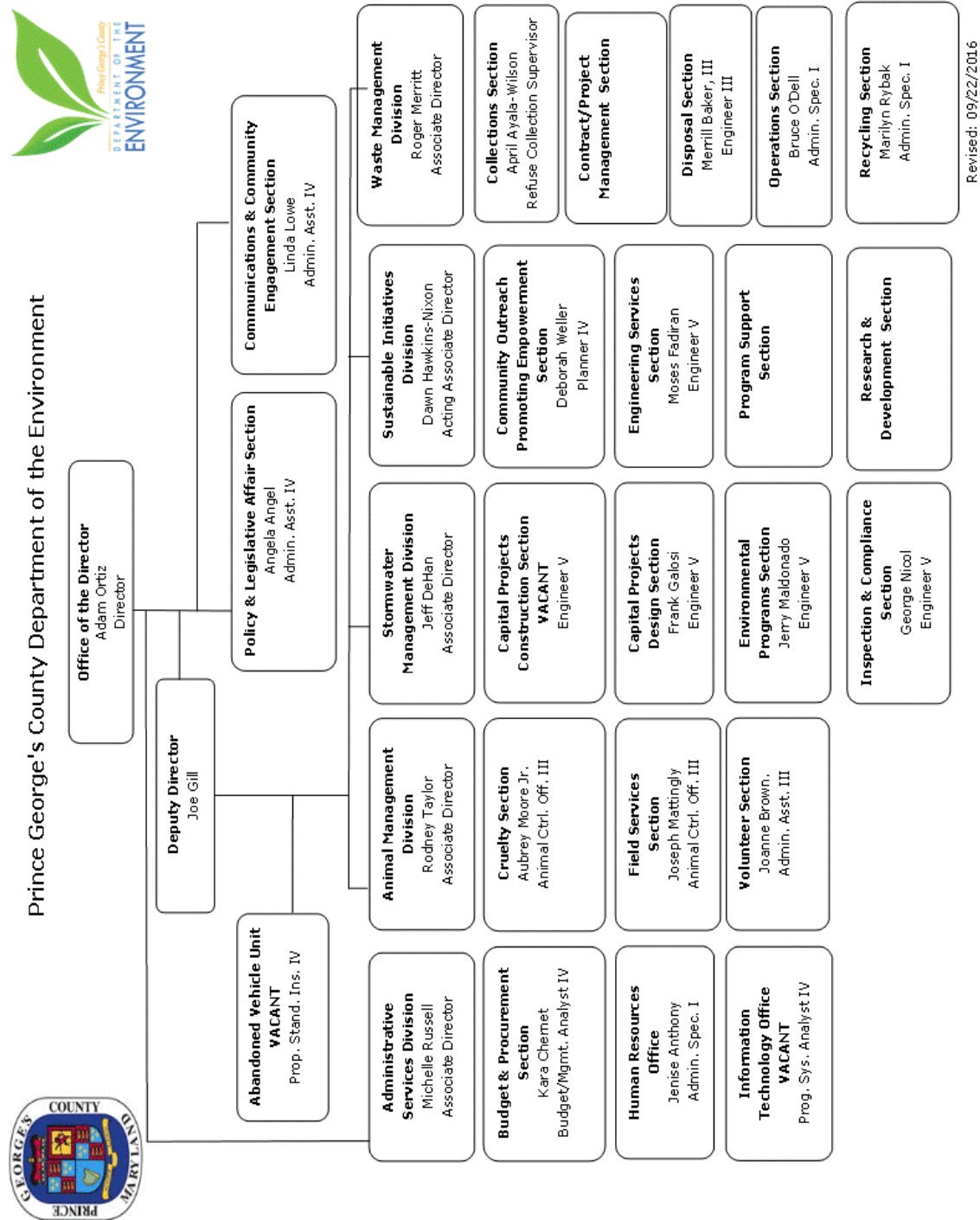
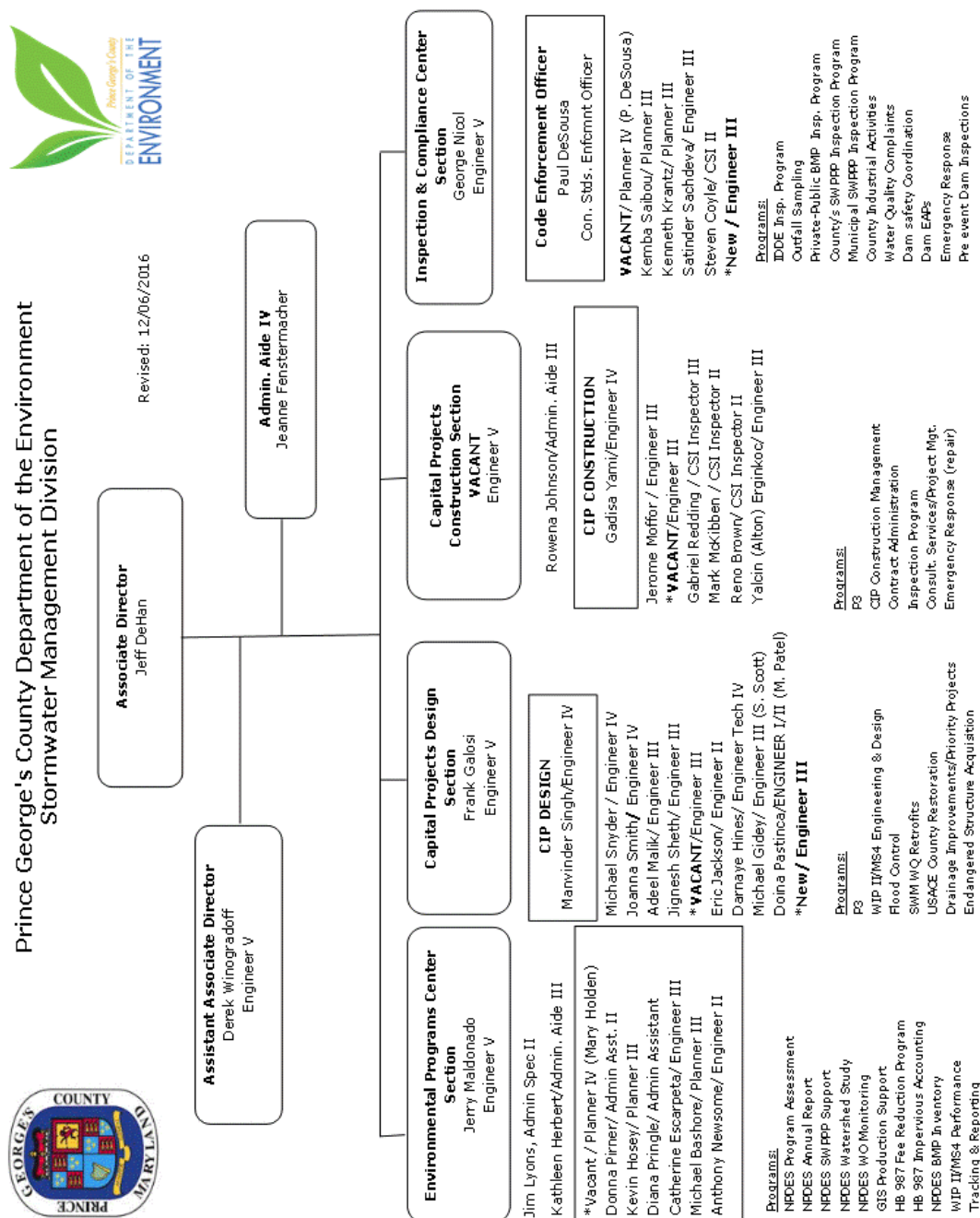


Figure A-1. Department of the Environment - Office of the Director Organizational Chart



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

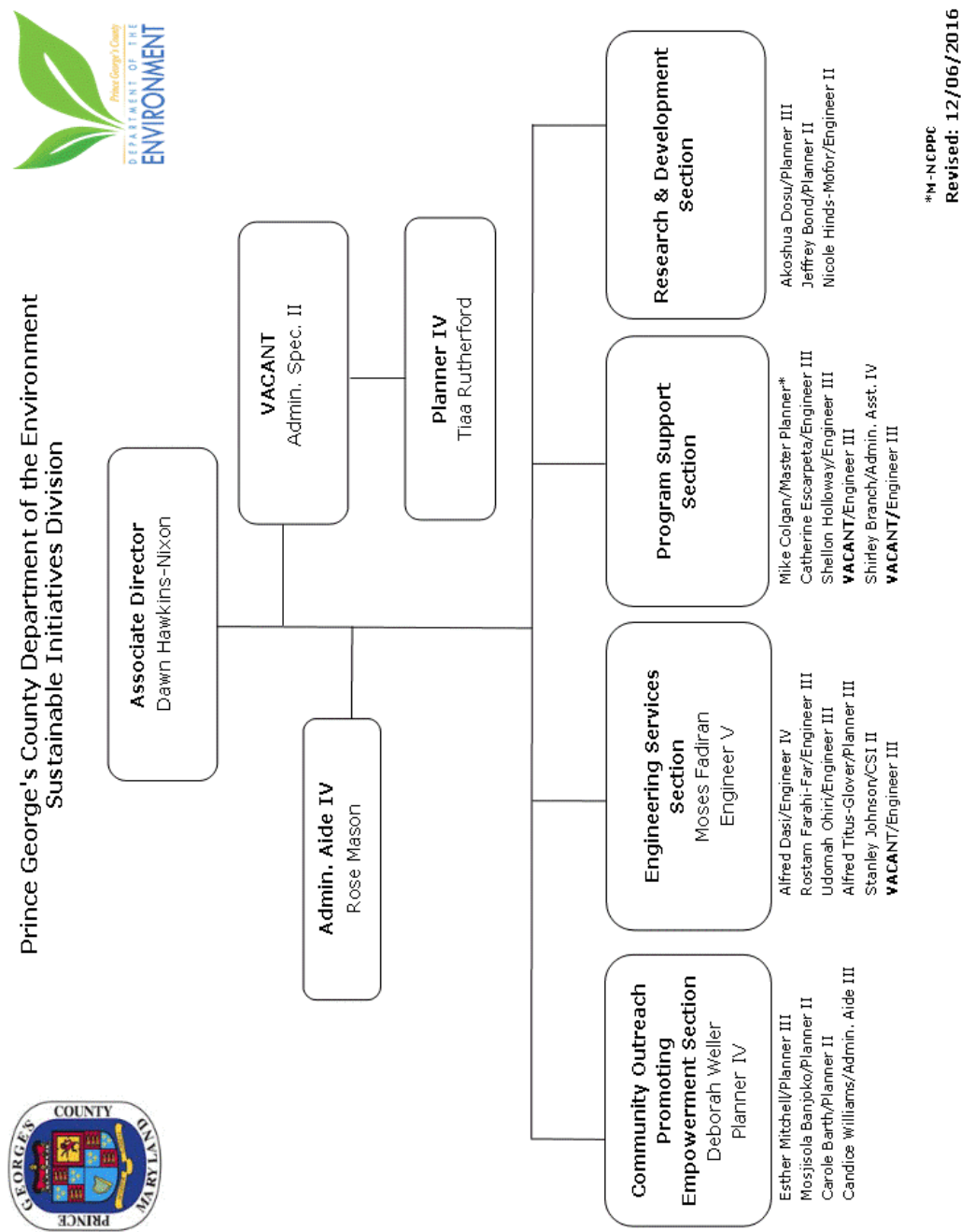


Figure A-3. Department of the Environment - Sustainable Initiatives Division Organizational Chart

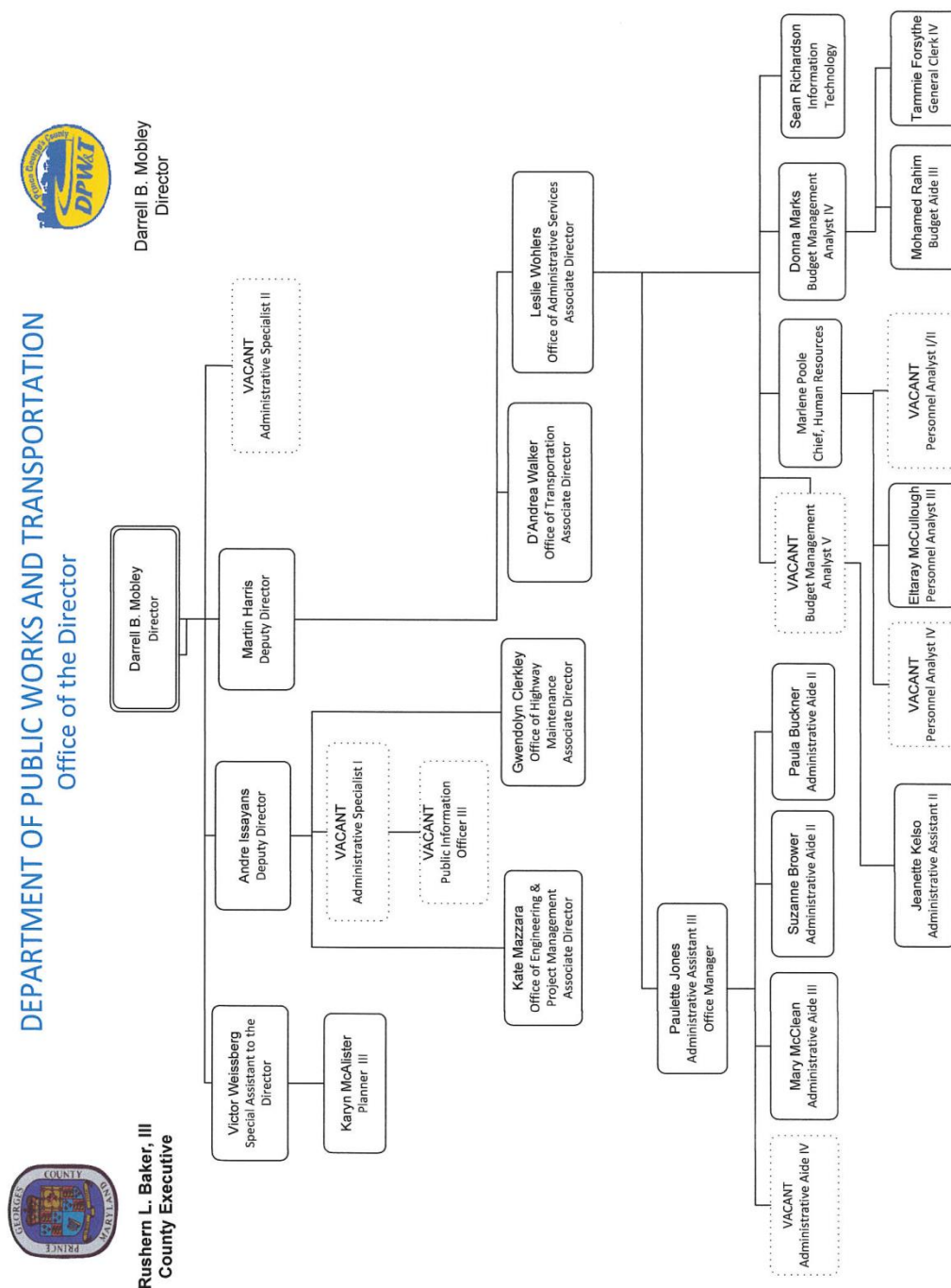


Figure A-4. Department of Public Works and Transportation - Office of the Director Organizational Chart

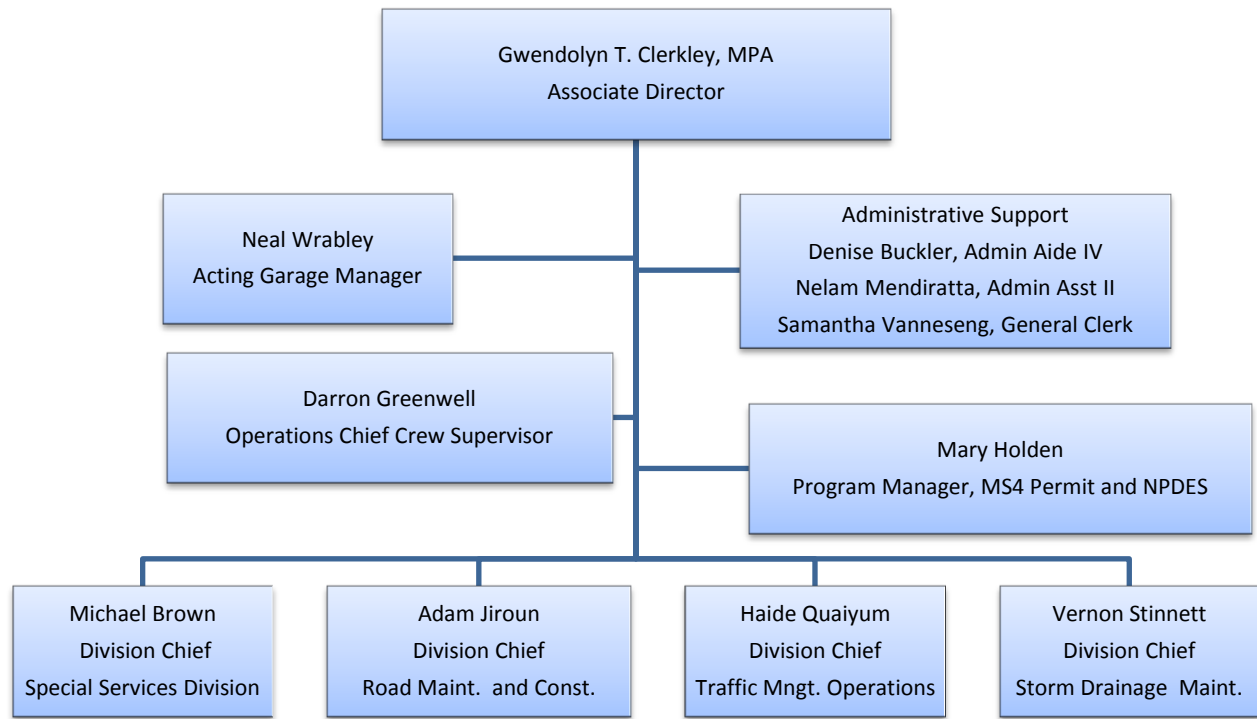


Figure A-5. Department of Public Works and Transportation - Office of Highway Maintenance (OHM) Organizational Chart

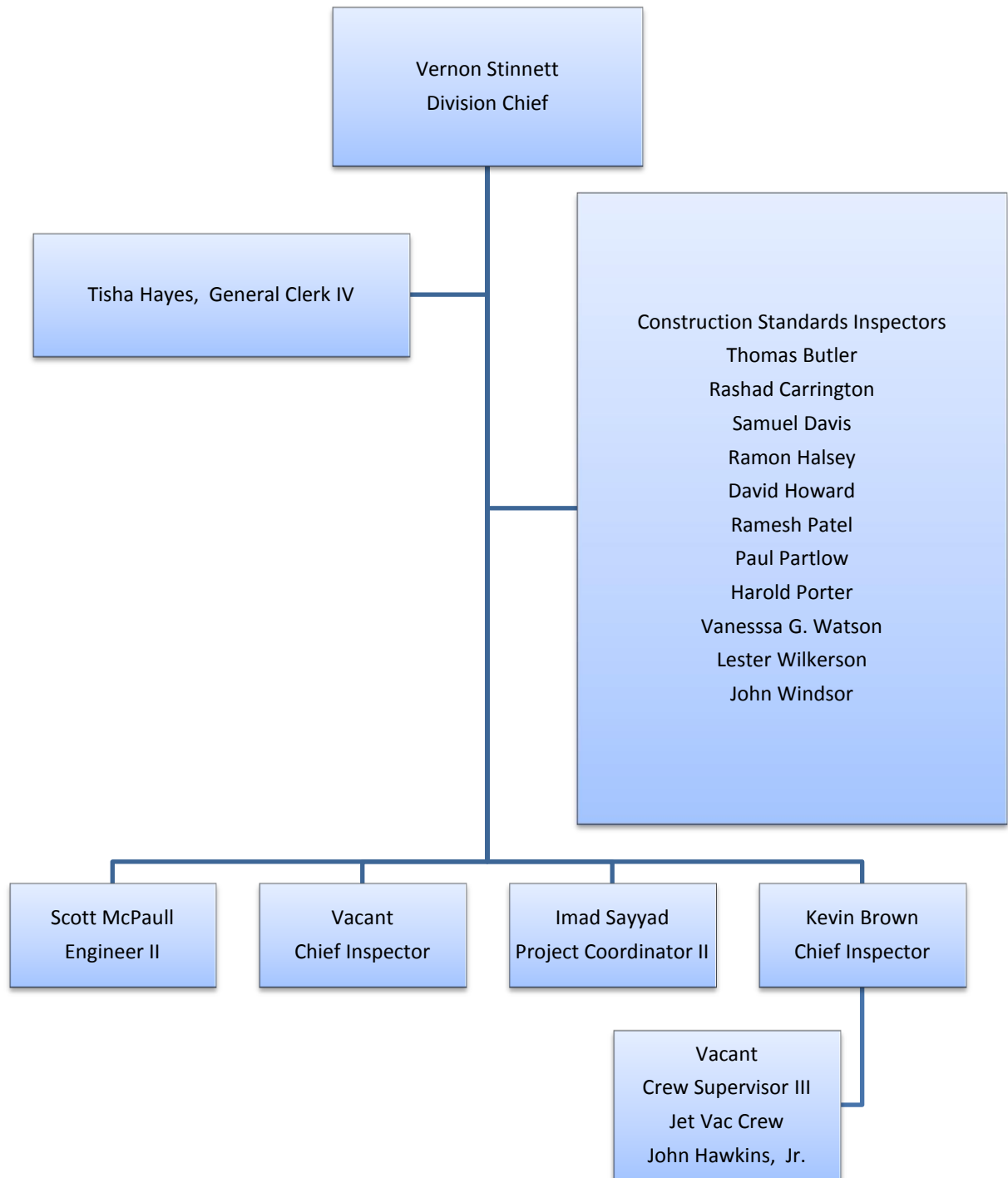


Figure A-6. Department of Public Works and Transportation, OHM - Storm Drain Maintenance Division Organizational Chart

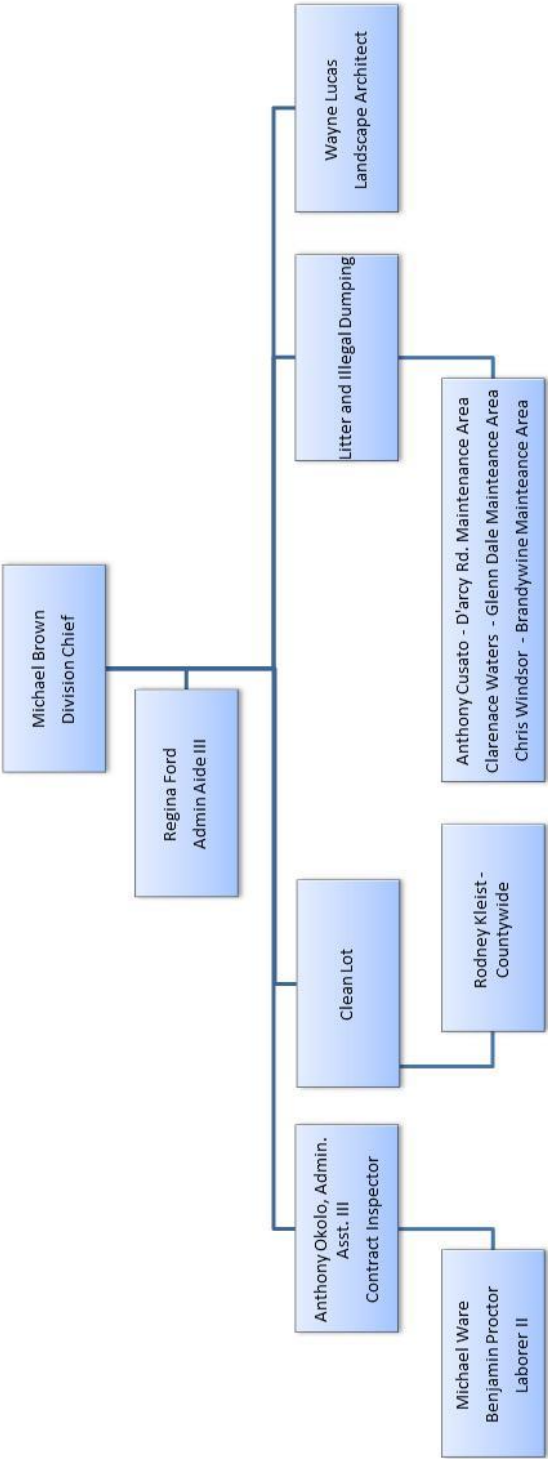


Figure A-7. OHM-Special Services Division

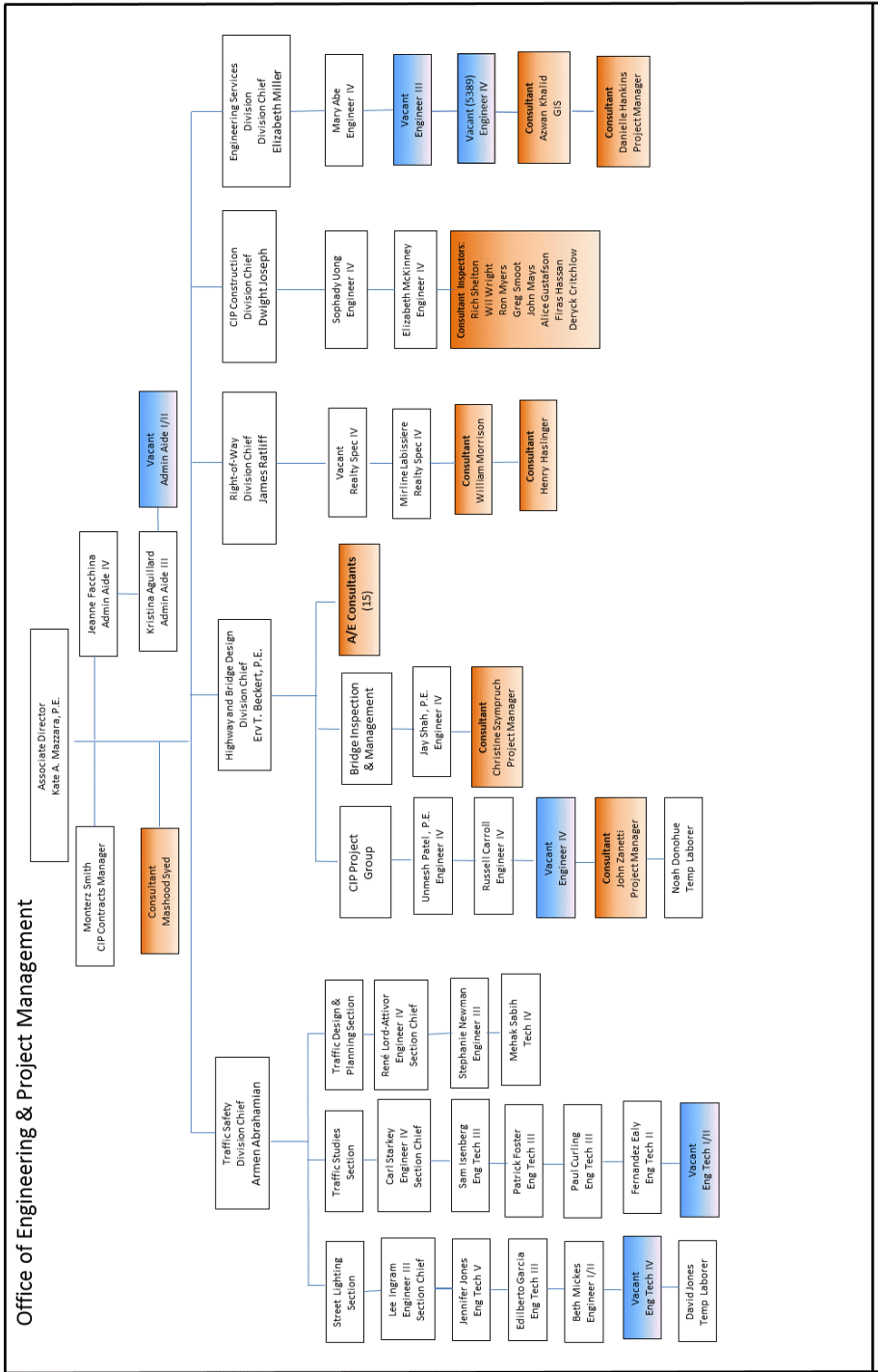


Figure A-8. Department of Public Works and Transportation - Office of Engineering and Project Management Organizational Chart

DPIE - Draft Functional Organization Structure

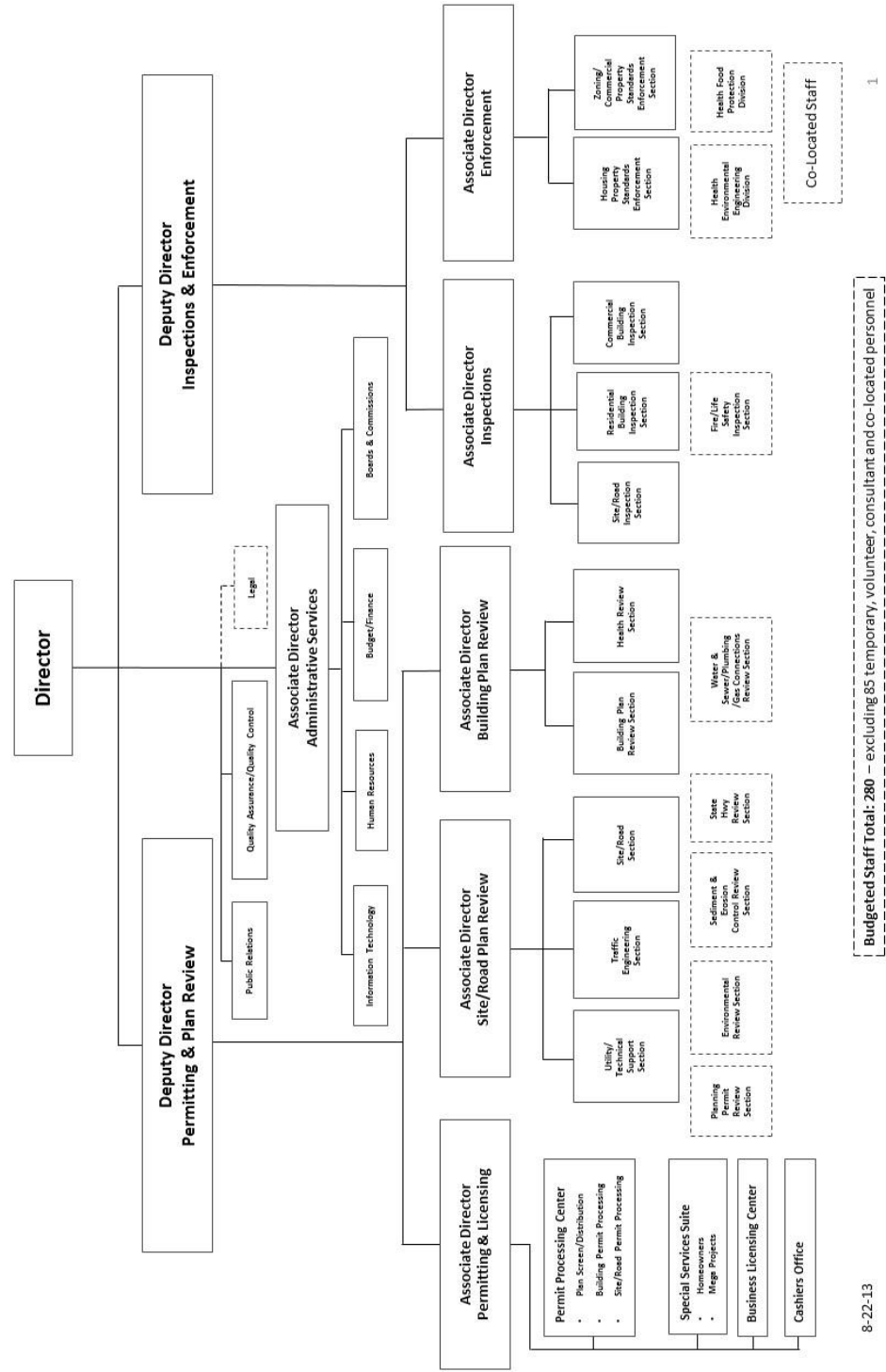


Figure A-9. Draft Functional Organization Structure

DPIE – Organization and Staffing Analysis Summary Office of the Director

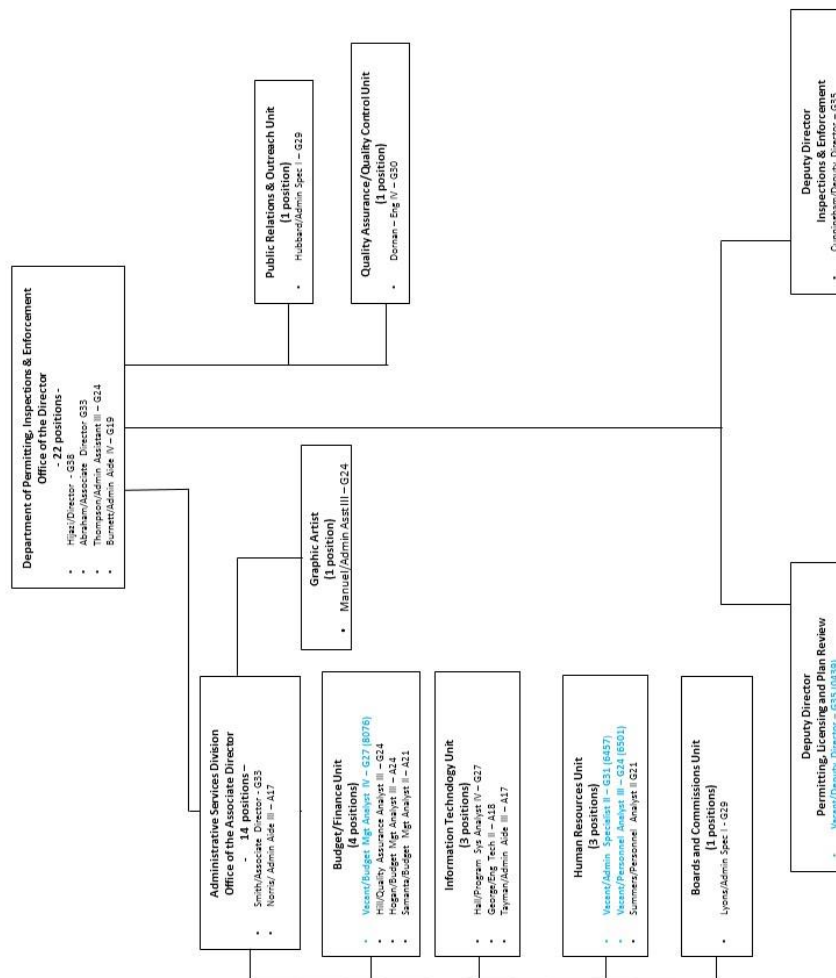
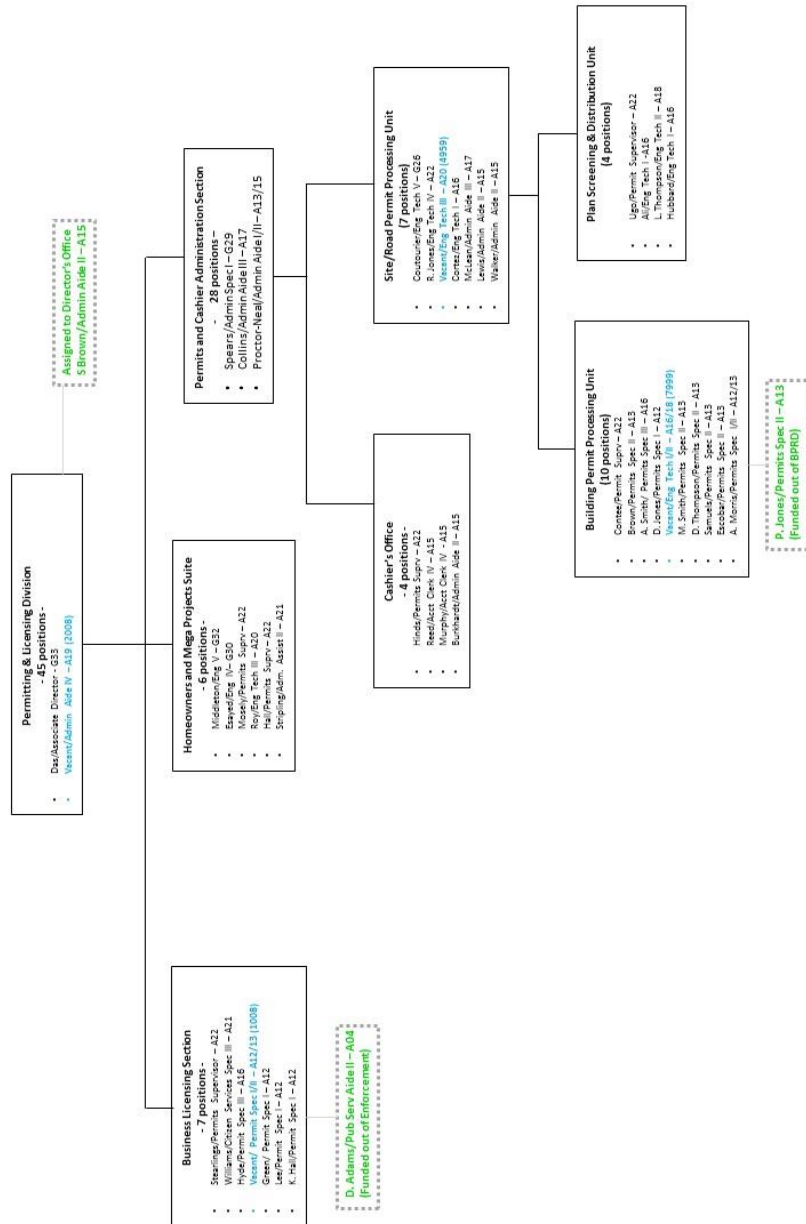


Figure A-10. Department of Permitting, Inspections and Enforcement - Organization and Staffing Analysis Summary, Office of the Director

DPIE – Organization and Staffing Analysis Summary Division of Permitting & Licensing



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

DPIE –Organization and Staffing Analysis Summary
Division of Site/Road Plan Review

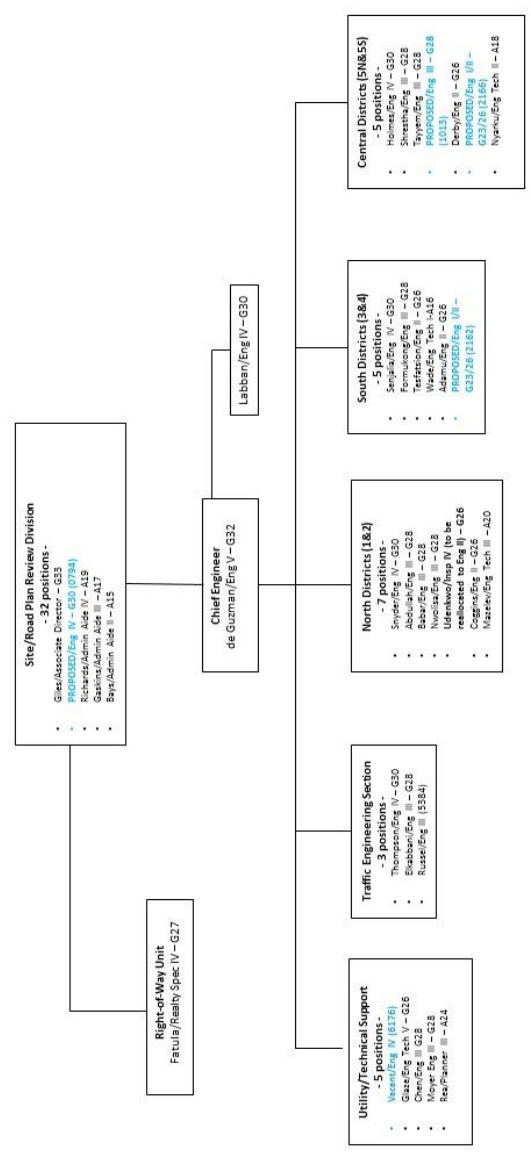


Figure A-12. Department of Permitting, Inspections and Enforcement - Organization and Staffing Analysis Summary, Division of Site/ Road Plan Review



DPIE – Organization and Staffing Analysis Summary Division of Inspections

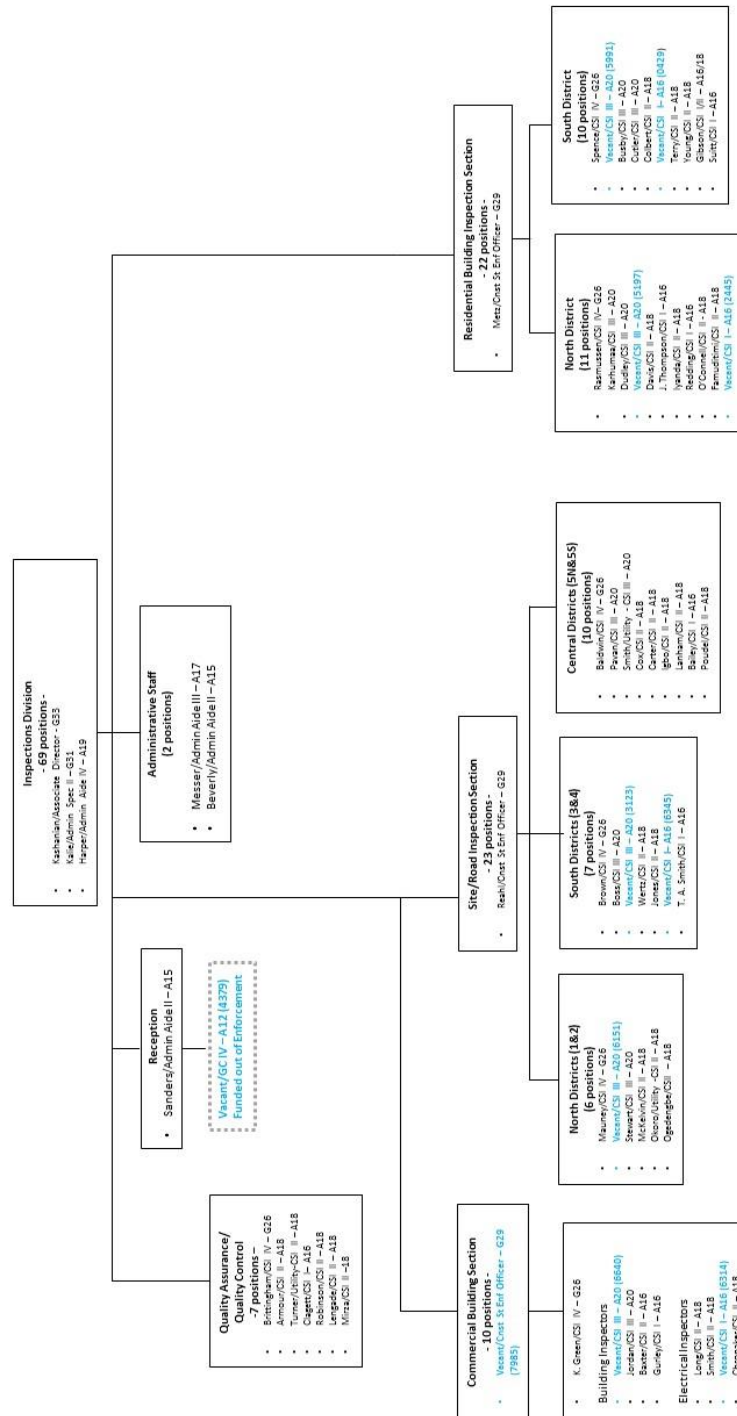


Figure A-14. Department of Permitting, Inspections and Enforcement - Organization and Staffing Analysis Summary, Division of Inspections

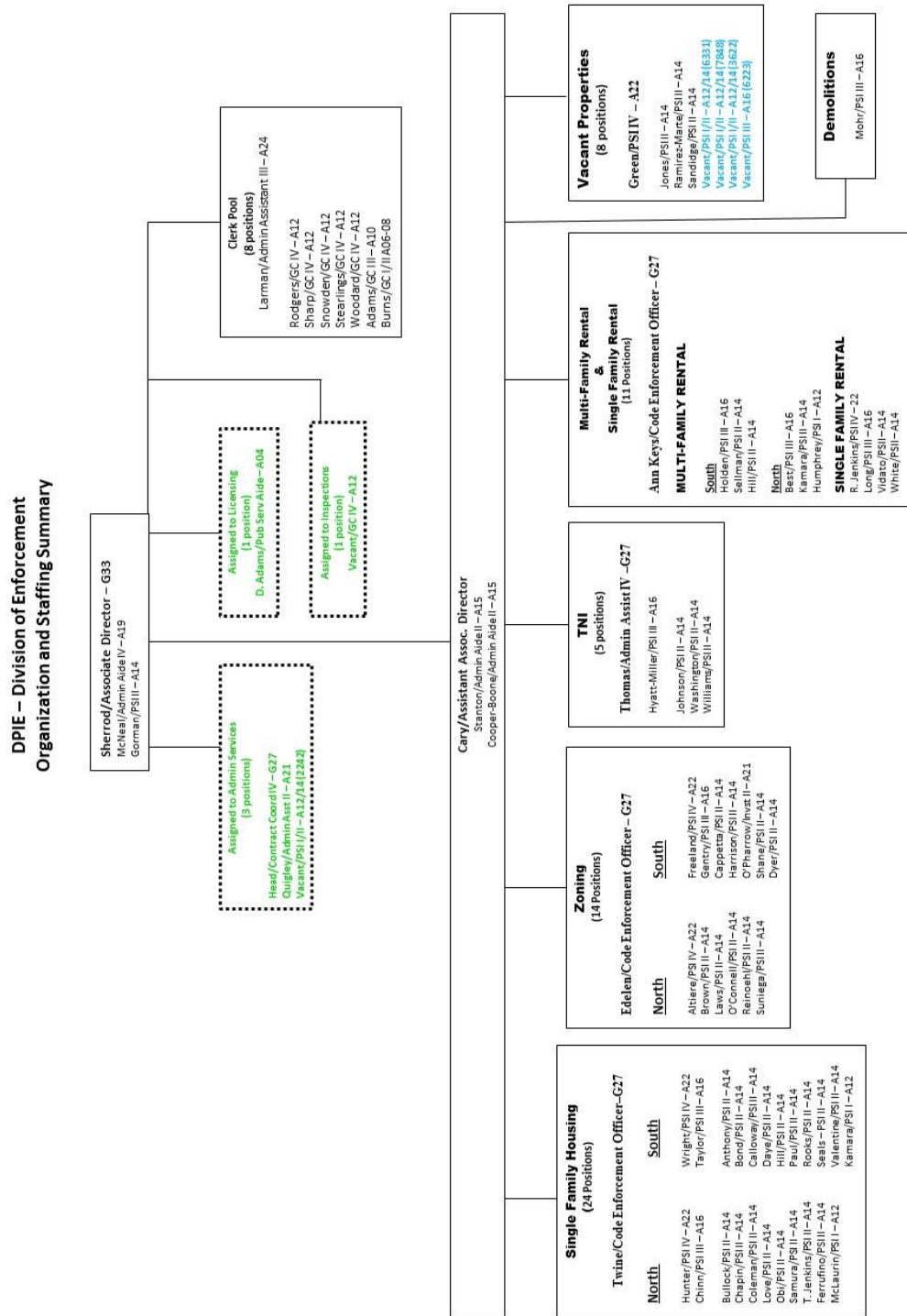


Figure A-15. Department of Permitting, Inspections and enforcement - Organization and Staffing Analysis Summary, Division of Enforcement

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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.

Permit Condition Actions

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 our County Attorney in 1999, and was accepted by MDE.

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



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C. SOURCE IDENTIFICATION

1. STORM DRAIN SYSTEM

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

Permit Condition Actions

For this reporting period the County is reporting 68,256 records for infrastructure (manhole, inlet, and outfall) points. The County is reporting 5,021 outfall drainage areas in FY 2016. The data have been provided in the new MS4 geodatabase on DVD.

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.

Permit Condition Actions

The County has completed its analysis for Industrial and Commercial Source Information. A copy of the analysis along with a geodatabase was submitted to MDE on June 10, 2016.

The County and the Consultant developed a dynamic methodology for identifying and classifying parcels within the County that are used for commercial or industrial purposes and had exposure to stormwater. Property parcels were identified using dynamic queries that incorporate land use, BPRUC Codes, SIC Codes, and aerial imagery. The resulting parcels were then categorized according to the type of activity and whether or not this activity was exposed to stormwater. As of this report, the County and the Consultant have identified 3,112 parcels and included in the inventory.

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.

Permit Condition Actions

A total of 3,070 Urban BMPs (2,947 Developer and 123 CIP) were reported to MDE as part of the FY2015 BMP inventory. For FY2016, this inventory has grown to 3,330 urban BMPs that include 3,113 New Development BMPs, 189 Structural Restoration BMPs (Capital Improvements Projects, Clean Water Partnership, Redevelopment, and Stormwater Stewardship Grants), and 28 Stream Restoration Projects. In addition, 814 Septic Connections to WWTP and 71 De-Nitrification Best Available Technology Systems were included in this year's inventory, 118 and 53 of which occurred within this permit cycle, respectively. These BMPs have been provided on DVD in the new MS4 geodatabase.

4. IMPERVIOUS SURFACES

Permit Condition Part IV. C. 4: The Impervious Surfaces information shall be submitted annually for all County watersheds within the permit area in geographic information system (GIS) format with associated tables as required in PART V of this permit. The Impervious surfaces dataset shall include public and private land use delineated; controlled and uncontrolled impervious areas based on, at a minimum, Maryland's hierarchical eight-digit sub-basins.

Permit Condition Actions

The MS4 regulated permit area and associated impervious area has been completed and a description of the methodology with GIS data have been provided to MDE in the previous reporting's. Per MDE's instruction, this year, the County worked diligently to provide this information in new MS4 geodatabase format. Migrating data into new MS4 geodatabase required additional analysis and data processing to be consistent with the impervious acres reported in previous years. Tracking restoration progress in "RestBMP" became more extensive because MDE Geodatabase distinguished between New Restoration Projects and Conversion of Existing BMP. Unlike a New Restoration Project, the acres restored don't equal the impervious acre's drainage to the structure for the retrofit projects. The difference between the original and addressed PE provides the actual amount of acres restored. The MS4 regulated permit area and associated impervious area have been provided on DVD in the new MS4 geodatabase.

5. MONITORING LOCATIONS

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

Permit Condition Actions

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

6. WATER QUALITY IMPROVEMENT PROJECTS

Permit Condition Part IV. C. 6: The Water Quality Improvement Projects information shall be submitted annually for all County watersheds within the permit area in geographic information system (GIS) format with associated tables as required in PART V of this permit. The information shall include projects proposed, under construction, and completed with associated drainage areas delineated.

Permit Condition Actions

In FY2015, the County reported 42 Water Quality Improvement Projects consisting 123 BMPs through its Capital Improvement Projects (CIP) program by the Department of the Environment. Additional ten Water Quality Improvement projects were implemented by Department of Public Works and Transportation through its Countywide Green/Complete Streets Program, however, were not included as part of the inventory due to unavailability of GIS data. In FY2015, the Department of the Environment initiated an expansion of the Water Quality Improvement Program through addition of Clean Water Partnership (CWP) in FY2015; however, this program was still in its initial phase. Consequently, 42 projects reported in 2015 NPDES report were implemented through CIP only. For

FY2016, the County is reporting an updated list of 299 projects. These projects were implemented through CIP, CWP, Countywide Green/Complete Streets Program, redevelopment projects by the developers, septic system upgrades and septic system removal by collaboration of Health Department and Washington Sanitary Service Commission (WSSC) and Comprehensive Community Cleanup Program by Department of the Environment. BMPs at their various stages of implementation (proposed, under construction, and completed) through these programs/projects including their drainage areas are provided in the new MS4 geodatabase format under the feature classes RestBMP, AltBMP Line, AltBMP Point, AltBMP Polygon, and Impervious Surface Associated Tables on DVD.



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D. MANAGEMENT PROGRAMS

1. STORMWATER MANAGEMENT PROGRAM

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

Permit Condition Actions

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 PGSCD 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.

Permit Condition Actions

As critical decisions on stormwater controls are taken at the Concept Plan approval phase, the County uses a geodatabase to track stormwater implementation policy decisions, maintenance responsibility, watershed location, and types of BMPs at this stage of the development process. The geodatabase has the capacity of tracking new and redevelopment activities to ensure that all projects evaluate ESD practices as a first option in controlling stormwater.

The geodatabase provides the County with a tool to identify development trends and track progress in implementing ESD to the MEP. The County conducted an extensive analysis of stormwater controls approved at the Concept Plan stage of the development process, with a representative example of the type of data analysis possible provided in Table D-1.

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

MDE 8-digit code	Watershed Name	Number of Plans	Disturbed Area (Acres)	Proposed Impervious Area (Acres)
02131103	Western Branch	92	1197.14	654.21
02140205	Anacostia River	98	318.11	186.03
02140201	Potomac River U tidal	33	337.45	76.67
02140203	Piscataway Creek	36	838.73	186.38
02140201	Patuxent River upper	16	48.63	4.77
02140111	Mattawoman Creek	11	286.25	153.14
02140204	Oxon Creek	15	35.53	16.57
02131102	Patuxent River middle	5	23.69	2.11
02131107	Rocky Gorge Dam	2	0.69	0.08
02131101	Patuxent River lower	7	234.02	2.69
02140108	Zekiah Swamp	1	56.13	0

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.

Permit Condition Actions

The 2014 Stormwater Management Manual was introduced on October 14, 2014, to the County Council under Resolution CR-96-2014. This manual was subsequently adopted on November 12, 2014. In addition, 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 MEP. DPW&T will work closely with DPIE, DoE, PGSCD, and M-NCPPC to ensure completeness of the project. The process will also entail legislative review and County Code adjustments. It is anticipated that the revisions will be completed during the FY 2016 reporting year.

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.

Permit Condition Actions

A summary of the stormwater controls approved during the concept plan approval phase in FY 2016 is provided below:

- 317 Concept Plans approved
- BMPs – there are 2,019 BMPs associated with the 318 concepts approvals, of which, 1,798 will be privately maintained, 72 will be publically maintained, and 149 are both privately and publically maintained.
- 94 Site Development Plans reviewed
- 134 Final Plans reviewed
- 67 Redevelopment Projects
- 45 Stormwater Exemptions granted
- Two waivers request received for qualitative control
- Three waivers request received for quantitative control
- 29 waivers request received for qualitative and quantitative control
- No waivers were granted

The development of the geodatabase will also be 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.



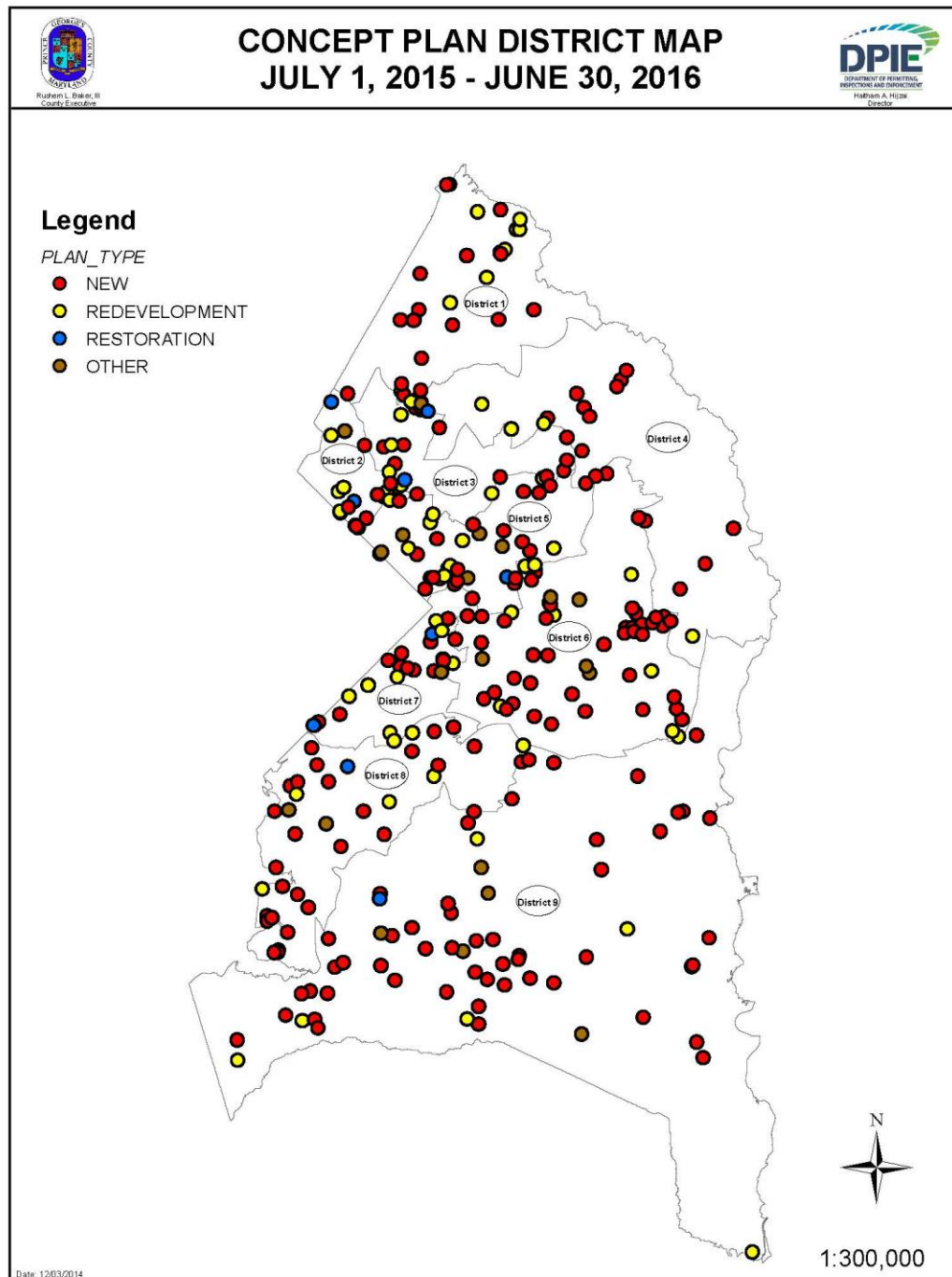


Figure D-1. Stormwater Management Concept Plan Approvals by Councilmanic Districts (July 1, 2015 – June 30, 2016)

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

Permit Condition Actions

Inspections are performed within three districts. The total number of Site/Road inspectors for FY 2016 was 17 and they have performed a total of 7,789 stormwater inspections and have issued 36 violations during this reporting period. Staff within the Site/Road Inspections Section shall continue 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.

Permit Condition Actions

As required in the Source Identification section, the county has concluded its analysis of BMPs inventory and the total number of BMPs in the County has increased from 3,070 to 3,330. This BMP inventory is consisting of private developer BMPs, restoration BMPs, and stream restoration BMPs.

There are 3,113 private developer BMPs of which 2,905 BMPs have recent (within last 3 years) inspection records in FY2016. The restoration BMP inventory includes 189 BMPs of which 89 BMPs have recent inspection records. The stream restoration BMPs inventory includes 28 records. Twenty-one of these BMPs have inspection records.

In FY2015, the County reported 1,544 catch-up BMPs that did not have an inspection records and scheduled to be inspected in next three years. In FY2016, the County exceeded its expectations and completed 1,467 inspections of these BMPs in FY2015 BMP inventory. A total of 186 BMPs were removed after the inspection as either they were not functional or were not found by the inspection crew. Furthermore, 11 BMPs were removed from the inventory because they were not directly managing impervious (identified as conservation areas) or were duplicate. In addition, the County completed 349 regular inspections of BMPs added in 2016 BMP inventory. Based on this pace, the County expects that all BMPs will have a tri-annual inspection records by the end of FY2017.

Table D-2. BMP Inspection performed in FY2016 and schedule for FY2017.

BMPs Category	Total Inspection Records	FY2015 Inventory Not Inspected	Catch-up Inspection Completed in FY16	Catch-up Inspections Scheduled for FY17
Private (Developer BMPs)	2,905	1,275	1,231	44
Restoration BMPs	89	45	18	27
Stream Restoration BMPs	21	27	21	6
BMPs not functional (from all categories)			197	
Total	3,015	1,347	1,467	77

Preventive Maintenance Inspections of Public Facilities

Department of Public Works and Transportation is responsible for maintaining compliance of all the public owned BMPs. For FY 2016, DPW&T utilized a consultant to perform 545 public BMP inspections that include 295 ponds and 250 “other” BMPs. The 250 “other” BMPs were added to DPW&T’s inventory in May of 2015 and are primarily non-ponds.

DPW&T in-house inspection and maintenance staff also inspect ponds at least annually after mowing. At this time these inspection records are maintained as hard copies and the data is not integrated into the BMP geodatabase. As a maintenance agency, DPW&T’s OHM has historically targeted resources to the performance of maintenance work with accomplishments recorded on daily crew logs. Recording maintenance work performed in an automated data format is not currently part of the business process. Automated data collection and reporting has been identified as a significant challenge, not only for the OHM but for the County as a whole. To address MDE’s geodatabase requirements for MS4 reporting, the County conducted a GIS geodatabase requirement gathering and gap analysis workshop with ESRI and the Office of Information Technology. The report identified the need to implement a County-wide MS4 GIS Enterprise System in order to track and document all the program information required by MDE for reporting. This task is under review for budgeting and implementation.

Where significant corrective action is warranted, maintenance of publically owned BMPs is performed by contractors. Routine maintenance work, such as mowing, debris removal from trash racks, outfall repair including minor vegetative and structural stabilization, is performed by in house crews. As stated previously, maintenance records for in-house maintenance activities is recorded on daily crew logs.

Repair work for ponds having moderate or severe problems, as identified through a first round of inspections performed by McCormick Taylor between November 2009 and October 2010, is performed by contractors. The county schedules major repair work under the Deficient Pond Program, for ponds rated as D or E during the first round of inspections. Additionally, the Office of Project Management (OPM) of DPW&T is working in a partnership with the Neighborhood Design Center (NDC) and residential communities in a Pilot Pond community program. The program addresses the limited functionality and poor aesthetics of our older ponds and works to improve water quality and make publicly-maintained SWMFs more of a community amenity. Additional information on the Pilot Pond Program is included on page 98. An annual summary of the ponds that have been rehabilitated under the Deficient Pond and Pilot Pond Programs is included in Table D-3.

Table D-3. Summary of the ponds that have been rehabilitated 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

Calendar Year	Deficient Pond Program	Pilot Pond Program	Total
Total	84	12	96

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;

Permit Condition Actions

In a letter dated April 13, 2015, MDE stated that delegation would be granted once the County has adopted and signed the ordinance updating the County's Erosion and Sediment Control program. The updated ordinance was approved under CB-36-2015 on June 23, 2015. The MDE received a signed copy of the Bill on August 4, 2015, from the County and granted the delegation of authority to the County effective through June 30, 2017.

Inspections are performed within three districts. The total number of Site/Road inspectors for FY 2016 was 17 and they have performed a total of 10,720 sediment control inspections and have issued 157 violations during this reporting period. Staff within the Site/Road Inspections Section shall continue 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.

Permit Condition Actions

"Responsible Personnel Certification" courses were scheduled by the Inspections Division. The advent of the on-line course hosted by the MDE had an effect, which resulted in no students registering for the class. MDE advised the Department, in an April 13, 2015 letter, that the on-line training offered by MDE will satisfy the County's MS4 permit obligations.

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.

Permit Condition Actions

During the 2016 reporting period, Prince George's County reported a total of 97 projects with earth disturbances of one acre or more. The total earth disturbance for these 97 projects was 1,041.63 acres. Copies of the disturbed area databases forwarded to MDE throughout the year are provided on DVD, Management Programs\SEC\Disturbed Area.

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.*

Permit Condition Actions

During the fiscal year 2016, Prince George's County Department of the Environment (County) contracted with KCI Technologies, Inc. (KCI) and AB Consultants, Inc. (AB) to perform field screening of 150 major storm drain outfalls throughout the County. Efforts in 2015 were focused primarily on the Anacostia Watershed; during 2016 the target area was expanded to include the entire County.

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

Outfall screening was conducted at 151 outfalls. A two-person field crew visited each site following 72-hours of dry weather. The physical condition of each site was recorded on the tablet-based field inspection tool. If a dry-weather flow was present, a sample was taken and tested with a Hach chemical test kit. Tests were conducted for temperature, pH, ammonia, dissolved oxygen, turbidity, detergents, chlorine, copper, phenols, and fluoride. When a chemical test was conducted, and the results showed a high concentration for any contaminant, the site was retested after 4 hours but within 24 hours to verify the results.

It is important to note that a dry-weather flow does not indicate an illicit discharge. Groundwater intrusion into storm drains is common; additionally, permitted discharges may be occurring. To determine if an illicit discharge was present, the results of the chemical tests performed were compared with the accepted statewide averages described in Dry Weather Flow and Illicit Discharges in Maryland Storm Drain Systems (MDE, 1997). Using the statewide averages, the 1997 study provides a threshold for each constituent, based on watershed land use. The results from the chemical tests performed during the 2016-reporting year were compared with this threshold to determine which results are considered abnormal for each constituent, and to make recommendations as to which storm drain systems should be investigated further as having possible illicit connections. Numerical thresholds for dissolved oxygen, turbidity, and fluoride are not published. The need for follow-up investigations based on these parameters was determined on a case-by-case basis. The thresholds used for the investigations are as follows:

- pH outside the range 5.5-8.5
- >0.5 ppm Detergents
- >0.4 ppm Chlorine
- >0.17 ppm Phenols

- >0.21 ppm Copper
- >1.0 ppm Ammonia

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

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

The results show that, of the 186 inspections, 74 observed dry-weather flow. Of these, several had minor flow or conditions that did not allow for sampling; 45 chemical tests were performed. During these inspections, it was observed that 5 outfalls had some type of illicit discharge. The Code Enforcement Officer investigated these 5 outfalls to determine the source of the illicit discharge. Table D-4 below shows the details of the investigation and corrective actions taken to eliminate the illicit discharge observed at the 5 outfalls.

Table D-4. Details of the corrective action taken for the illicit discharges

Outfall ID	Corrective Actions
1549	No sewage smell was detected around the outfall or in the water. Further investigation of the upstream structures was conducted. Minor flow and iron flocculent were observed, indicating groundwater flow in the storm drain pipes. However, no illicit discharge was observed. Resolved.
2671	A water test was conducted and no chlorine was detected. To confirm the test results of the first test, a second water test was conducted within 24 hours. Again, no chlorine was detected in the water. No illicit discharge was observed. Resolved.
2671	Sediment laden water was observed at the outfall. It appears the sediment is coming from an active construction site. The case was referred to the Code Enforcement Officer with DPIE's Site/Road Inspection Section to address the sedimentation from an active construction site entering the storm drain system. DPIE issued an inspection notice to the contractor to repair the sediment controls around the inlet structures. The sediment controls were repaired by the contractor. The illicit discharge of sediment was eliminated. Resolved.
3164	Investigated the outfall just off site from WSSC's water treatment facility and backtracked it to upstream structure located on WSSC's property. Meet with the facility manager and inspected a building where it houses the pumping station for treated/clean water. One of the pumps was leaking water excessively into a nearby floor drain, which is connected into a system that dechlorinates the water before being discharged into the storm drain system on the property. During the inspection, the facility manager had the seals tighten and the water leak was addressed. The illicit discharge from WSSC was eliminated. Resolved.
3195	Observed black staining in and around outfall, and submerged leaves at the outfall. There was no smell of sewage detected at the outfall. Also, no evidence of gray water in the storm drain pipes and at the outfall. The sewage like smell and black staining at the outfall be have been caused by the leaf matter decay. No illicit discharge was observed. Resolved.

Response to MDE's comments

In the 2015 NPDES report, it was noted that 5 outfalls had some type of illicit discharge. The Code Enforcement Officer investigated these 5 outfalls to determine the source of the illicit discharge. Table

D-5 below shows the details of the investigation and corrective actions taken to eliminate the illicit discharge observed at the 5 outfalls.

Table D-5. Details of the corrective action taken for the illicit discharges

Outfall ID	Corrective Actions
0104	Observed minor flow and iron flocculent at the outfall, indicating groundwater flow in the storm drain pipes. Investigated the upstream structures and observed the same conditions. No illicit discharge was observed. Resolved.
1199	Sediment laden water was observed at the outfall. The sediment was coming from an active construction site. The case was referred to the Code Enforcement Officer with DPIE's Site/Road Inspection Section to address the sedimentation from an active construction site entering the storm drain system and discharging into the creek. DPIE issued an inspection notice to the contractor to repair the sediment controls around the inlet structures. The sediment controls were repaired by the contractor. The illicit discharge of sediment was eliminated. Resolved.
1464	Observed minor flow at the outfall. Investigated the upstream structures and observed the same conditions. No illicit discharge was observed. Resolved.
1479	Observed minor flow at the outfall. No smell of sewage detected at the outfall. Also, no evidence of gray water in the storm drain pipes and at the outfall. No illicit discharge was observed. Resolved.
Outfall located near the intersection of Cabin Branch and Sheriff Road	This was a water quality complaint. Sediment laden water was observed at the outfall. The sediment was coming from an active construction site. The case was referred to the Code Enforcement Officer with DPIE's Site/Road Inspection Section to address the sedimentation from an active construction site entering the storm drain system and discharging into the creek. DPIE issued an inspection notice to the contractor to repair the sediment controls around the inlet structures. The sediment controls were repaired by the contractor. The illicit discharge of sediment was eliminated. Resolved.

The County also investigated the problems observed during the 2105 illicit discharge screening. Below are the details of are investigation and the actions taken to address these problems.

- **Structural problems:** The cases were referred to the County's DPW&T to investigate the outfall for structural problems. DPW&T investigated the outfalls and addressed the structural problems. Resolved.
- **Sediment Deposits:** The cases were referred to the County's DPW&T to investigate the sediment deposition at the outfall and in the storm drain systems. DPW&T investigated these outfalls and removed the sedimentation. They also investigated the storm drain systems to determine if sedimentation infiltrated the system through cracks in the storm drain pipes or through pipe separation of the joints. No cracks or pipe separation were found during their investigation. Cases with sedimentation coming from an active construction site were referred to the Code Enforcement Officer with DPIE's Site/Road Inspection Section to address the sedimentation. DPIE investigated these sites and issued inspection notices to the contractors to repair the sediment controls around the site to eliminate any sediment from leaving the site. The sediment controls were repaired by the contractor. Resolved.
- **Erosion:** Minor erosion was observed around the outfall structure during the investigation. The cases were referred to the County's DPW&T to investigate the outfall. DPW&T repaired

the erosion and placed rip-rap around the outfalls to eliminate the erosion problem. Resolved.

- Floatables: Some trash observed around the outfalls. Coordinated with the County's Volunteer Cleanup Program to engage surrounding property owners to perform litter pickup at these outfalls. Resolved.
- Odors: No odors were detected during the investigation of the outfalls. Resolved.

Commercial and Industrial Visual Surveys

Concurrent with the development of the field tool, KCI developed a polygon layer for the County that identified commercial and industrial areas. Field crews from AB Consultants visited these polygons within the target area identified for the IDDE field screening, and performed inspections.

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

A total of 80 commercial and industrial complexes were inspected over the course of the inspections. A total of 26 potential water quality concerns were identified, and reported to the County for follow-up investigation and/or enforcement. Of these potential water quality concerns, 24 were pavement staining from restaurant grease waste containers; 1 was sediment; and 1 was equipment washing. The County investigated each site and contacted each property owner to address these potential water quality concerns.

- Sediment: The property owner was required to clean the sedimentation from its parking lot and the property owner complied. Resolved.
- Equipment washing: The property owner was required to halt all future washing of equipment on the property. The property owner complied with the request. Resolved.
- Grease waste containers: The property owners were informed of the grease spills from the waste containers and the potential water quality concerns it poses. The County worked with the property owners to educate them on good housekeeping practices and to eliminate any grease spills when disposing the grease waste. The County will routinely monitor these sites.

Response to MDE Comments

In the 2015 NPDES report, it was noted that 55 potential water quality violations were observed during visual surveys of commercial and industrial areas. Of these potential water quality concerns, 18 were chemical barrels stored without cover; 16 were pavement staining from grease/oil waste containers; 8 were sediment; 2 were water leaks; 3 were car washing; and 8 were pavement staining at fuel stations. The County investigated each site and contacted each property owner to address these potential water quality concerns. Below are the details of the investigation and corrective actions taken to address these potential water quality concerns.

- Storage of Barrels: The property owners were required to place their barrels under a storage cover when stored outdoors or store them indoors. The property owners complied. Resolved.
- Grease/oil waste containers: The property owners were informed of the grease/oil spills from the waste containers and the potential water quality concerns it poses. The County worked with the property owners to educate them on good housekeeping practices and eliminate any spills when disposing the grease/oil waste. The County will routinely monitor these sites.
- Sediment: The property owner was required to clean the sedimentation from its parking lot and the property owners complied. Cases with sedimentation coming from an active construction site were referred to the Code Enforcement Officer with DPIE's Site/Road Inspection Section to address the sedimentation. DPIE investigated these sites and issued inspection notices to the contractors to repair the sediment controls around the site to eliminate any sediment from leaving the site. The sediment controls were repaired by the contractor. Resolved.
- Water leaks: WSSC was contacted to investigate the water leaks and the water lines were repaired. Resolved.
- Car washing: The property owners were required to halt all future car washing activities on the property. The property owner complied with the request. Resolved.
- Fuel Stations: The property owners were informed of the fuel spills and the potential water quality concerns it poses. The County worked with the property owners to educate them on good housekeeping practices to eliminate any fuel spills. Also, required fuel spill kits be placed near the fueling stations. The County will routinely monitor these sites.

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 Subtitle 32. All 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 (HD) in accordance with the On-Site Sewage Disposal Systems regulations and, the control of hazardous chemicals or substances is governed by the Fire Safety Code.

The Inspection and Compliance Section (ICS), within the SMD of DoE, receives complaint referrals through the County's Customer Call Center 311 system and maintains close communications with environmental organizations throughout the County. In this capacity, DoE staff received 8 complaints during this reporting period through the types of communication summarized in Figure D-2. 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.

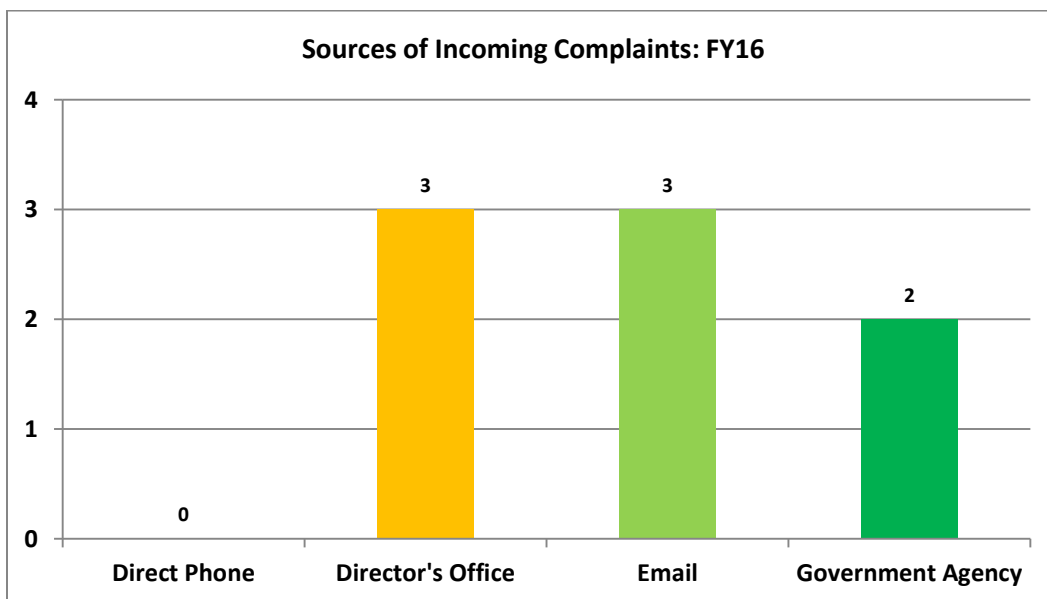


Figure D-2. Source of Incoming Complaints

Water quality infractions were field verified for 3 of the 8 investigations performed by DoE staff. Evidence of an illegal discharge or illicit connection to the storm drain system could not be located for the 5 remaining complaints. Of the 3 valid complaints identified, 2 were referred to MDE for enforcement and 1 was immediately corrected by the responsible party thereby eliminating the need for formal enforcement action. Table D-6 provides a summary of enforcement actions taken by DoE to resolve valid water quality infractions.

Table D-6 summarizes the results of the water quality cases referred to other agencies for enforcement. Details of the complaint including the location of the sites are provided on DVD, Management Programs\ IDDE.

Table D-6. DoE Water Quality Violation Enforcement Actions

Category	No. of Investigations	Unable to Locate Source	No Problem Found	No. of Cases Resolved Voluntary	No. of Cases Referred/Referral Agency
Improper Disposal of Waste	2	0	1	1	N/A
Sediments	1	0	0	0	(1) MDE
Oil Spill	1	0	1	0	N/A
Vehicle Washing	1	0	1	0	N/A
Other	3	0	2	0	(1) MDE
TOTAL	8	0	5	1	2

Table D-7. DoE Water Quality Violations Referred/Resolutions

Category	Cases Referred / Referral Agency	Case ID	Location: Lat, Long	Resolution
Sediments	(1) MDE	253	39.016312, -76.952688	Resolved – DoE’s Code Enforcement Officer e-mailed James Craig, District Manager at MDE to investigate sediment laden water being discharged into the stream channel from a permitted SHA Improvement Project at the I-495 & I-95 Weigh Station and Park & Ride Area. Mr. Craig informed DoE that MDE is working with SHA to address the sediment laden water discharge issue.
Other	(1) MDE	242	38.965778, -76.979487	Resolved – DoE was notified of a fish kill in Sligo Creek by Charles Poukish with MDE. DoE Inspector was sent out to investigate the fish kill. Phong Trieu with WMCOG and Investigators from MDE also investigated. MDE Investigators was not able to find the cause of the fish kill. Staff from MWCOG observed that the water clarity was clear, there was no odor, and there were live fish observed. No cause of the fish kill was found by DoE, MDE, and MWCOG.

Environmental Engineering Program

“The Prince George’s County Health Department Environmental Engineering/Policy Program (EEP) responds to complaints about sanitary sewer overflows, failing septic systems, solid waste and hazardous materials spills/dumping that may impact the waters of the State. During this reporting period, the Health Department has investigated 24 sites to assess threats to local streams and waters of the State from failing septic systems, public sewer overflows and miscellaneous spills and dumping to the environment.

Understanding the need for more comprehensive reporting, and in response to MDE’s IDDE program comments of the County’s 2012 report, the Health Department began to capture and report mandated data to meet the permit conditions for the IDDE Program. In FY 2016, an Access database called NPDES DATA1 continues to be maintained to catalog pertinent information including the nature of the complaint, the response to the complaint and any remedial action that was required. The database also identifies the latitude and longitude of the locations of the sewage overflows, spills and dumping to aid in GIS mapping capabilities in the future. “

Illegal Dumping and Spills

The DPW&T responds to illegal dumping occurring along the public road right-of-way. During FY 2016, the County received 2,283 citizen requests for illegal dumping removal through County’s 311 system. DPW&T responds by removing the debris within five working days of notification. For additional information on the County’s road maintenance litter control programs see page 74.

The Prince George’s County Fire/Emergency Medical Services Department Hazardous Materials Division (HMD) is responsible for handling the initial response to all hazardous material spills within the County. Between July 1, 2015 and June 30, 2016, the Prince George’s County Hazardous Materials Team

(HAZMAT) responded to 288 calls for assistance. The number of responses per month is provided in Table D-8. In the table, the HAZMAT responses have been divided by: Fuel, CO, Hazmat, and Other.

Fuel 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 State Law (COMAR 26.10) by contacting the Maryland Department of the Environment (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 Emergency Response Division. This process provides the necessary notification to begin the regulatory process to ensure that these spills are handled in accordance with Maryland law. HAZMAT do not leave the scene until the hazard has been controlled, removed, or a third party has been contracted with to handle the release.

CO indicates that the incident involves the potential presence of Carbon Monoxide and the possibility of sick persons from 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.

Table D-8. Hazmat Calls per Month

Month	No. of Hazmat responses	No. of Action Taken	Response Types				Resolved	Number of Cases Referred to MDE*
			Fuel	CO	Hazmat	Other		
July 2015	25	25	5	11	8	1	25	5
August 2015	16	16	6	1	9	0	16	6
September 2015	20	20	7	3	9	1	20	7
October 2015	23	23	10	8	5	0	23	10
November 2015	20	20	6	4	8	2	20	6
December 2015	14	14	3	5	6	0	14	3
January 2016	37	37	8	18	11	0	37	8
February 2016	34	34	10	15	9	0	34	10
March 2016	24	24	9	7	8	0	24	9
April 2016	18	18	6	7	5	0	18	6
May 2016	26	26	11	10	5	0	26	11
June 2016	31	31	15	8	8	0	31	8
TOTAL	288	288	96	97	91	4	288	96

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

Hazmat indicates that the incident involves a response to a potential hazardous material other than petroleum. This could include materials from any of the nine DOT 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 do not leave the scene until the hazard has been abated, controlled, removed, or a third party has been contracted with to handle the release.

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 will be strategically placed at locations to decrease response times at high profile events such as sporting events or political events within the County.

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.

Permit Condition Actions

In FY 2016, the County increased efforts to reduce the amount of litter in the Anacostia River. The most significant trash reduction projects in FY 2016 have been 39 community cleanups and stream cleanups in the Anacostia River Watershed. Load reductions associated with these projects are described in more detail later in this report. Prince George's County ban (Council Bill CB-5-2015) on the use and sale of expanded polystyrene took effect in two phases on January 1 and July 1, 2016. This bill supports efforts to reduce litter in the Anacostia River Watershed and countywide.

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

For FY 2016 reporting, the County undertook new and additional measures to help meet the MS4 permit goal to remove 170,682 pounds of trash per year. Such measures include developing an Adopt-A-Stream program, implementing the Clean Sweep Initiative and increasing communities and municipalities participation in the initiative's activities in the Anacostia River Watershed.

Cleanup Activities

Table D.8 outlines the enacted measures and shows the respective accounting for load reductions for the Anacostia River. The County will continue to update and include this table in future MS4 annual reports to be submitted to MDE.

For some cleanup events that occurred in the Anacostia River 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 MS4 permit requirement of reducing 170,628 lb/yr of litter conveyed through the MS4. This factor is reflective of the ratio of the TMDL's MS4 WLA to total trash as follows: $(MS4\ WLA) / (WLA + LA) = 43\%$.

For other clean-up events, bags of litter are collected in 33-gallon bags that equate to 25 pounds of litter removed 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. To account for the

weight of liquid in partially full containers, a discount factor of .917 is applied to weight of bagged items (# of bags X 25 X .917) to give the amount of litter reduced.

The County continued the services of contractors to assist with stream cleanups in FY 2016. These contractors performed cleanups within the banks of streams and in surrounding park areas at various locations in the Anacostia River Watershed. Both point source and non-point source trash were collected. However, the contractors segregated these two types of trash and provided the County accounts of the point source trash collected at each project site. County staff inspected contractor's collections and work sites. No reductions were applied to the reported point source trash as collected by the contractors because such contractors were found to have abided by guidance given County staff on types of trash that is considered point source items and collected bottles were observed to be empty.

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.

Table D-9 summarizes the waste load reduction resulting from litter reductions activities in the Anacostia River Watershed. A total of 119,339 pounds were removed from the watershed at various locations within the County and municipalities. Of the total tonnage collected, 16,360 pounds of litter were collected within municipal jurisdictional boundaries while 119,339 pounds of litter were collected within County jurisdictional boundaries. While the activities that are outlined in Table D-9 are specific to the Anacostia River Watershed, the County and volunteers also performed litter removal and prevention activities in other areas of the County; these activities are highlighted in Table D.11

Table D-9. Anacostia River Watershed Trash TMDL

Activity Category	Activity/Location	Number of bags of trash collected	Tonnage Collected in Roll Off Container (lbs)	Annual Load Reduction Counted (lbs)	Calculation Methodology
Community Cleanups	Central Park Condo		6,020	2,589	Total tonnage X 0.43
	Coral Hills/ Bradbury/ Boulevard Heights		4,660	2,003	
	Riverdale Heights		2,580	1,109	
	Eastpines		5,580	2,399	
	Colmar Manor Park	50		1,146	Total number of bags X 25lbs X 0.917 (accounts for liquid in bottles (glass and plastic) and cans
	Northwest Branch	40		917	
	Wilburn Estates	6		137	
	Kentland/Palmer Park	47		1,077	
	Radiant Valley	16		366	
	Chillum Ray	6		137	
	Millwood/Waterford	25		573	
Parks and	MNCPPC + DPW&T	403		9,238	



Activity Category	Activity/Location	Number of bags of trash collected	Tonnage Collected in Roll Off Container (lbs)	Annual Load Reduction Counted (lbs)	Calculation Methodology
Roadside litter pickup during Clean Sweeps					
Municipal Clean Ups	Town of Cheverly (Beaverdam Stream)	394		9,032	Total number of bags X 25lbs X 0.917 (accounts for liquid in bottles (glass and plastic) and cans
	Town of Bladensburg	27		618	
	City of College Park	138		3,163	
	Fairmont Heights	45		1,031	
	Capital Heights	28		641	
	Brentwood	40		917	
	Riverdale Park	48		1,100	
	University Park	37		848	
Stream Cleaning Services	Add stream names here	34.39	81,398	63,071	Trash weight = (68,780 lbs) x 0.917 For cleaning services, a total of 81,398 lbs of trash was removed but only 68,780 lbs reflect the amount of trash contributing to WLA.
Legislation	Expanded Polyethylene (Styrofoam) Ban	N/A	N/A	CB-5-2015 took effect on July 1, 2016. How best to measure the effectiveness of this bill will be explored in FY 2017.	Legislation
Outreach and Education at Schools	See Table D.12.2	N/A	N/A	7,525.38	Trash load reduction = $0.12 \times (\text{School boundary area}) \times [(\text{Low Density Res\%}) (1.19) + (\text{Medium Density Res\%}) (19.26) + (\text{High Density Res\%}) (7.88)]$
	TOTAL	1,384.39	100,238	109,637.6	

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. $0.43 = (WLA)/(WLA+LA)$]. Results of contractor- performed stream cleanups in FY 2015 revealed that bottles made up approximately 17% of trash by weight collected along streams in Northwest Branch and Lower Beaverdam Creek watersheds. Also, based on in-stream monitoring performed by MWCOG from 2011 to 2014, the County estimated the average percent of total weight that could be attributed to plastic bottles if partially full. The estimated average was determined to be 28%. To discount for weight of bottles that might be partially full of water, only 72 % (i.e. $1-0.28$) of weight of the collected trash is counted.

The results of in-stream monitoring performed by MWCOG from 2011 to 2016, are shown in Table D-10 and Table D-11. The Metropolitan Washington Council of Governments (MWCOG) monitors 15 in stream 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 River Watershed.

Table D-10. Stream Monitoring Data – Plastic Bottle Makeup, 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

(Monitoring data was provided by MWCOG)

Table D-11. Stream Monitoring Data – Plastic Bottle Makeup, by Weight, of Trash Mix

Year	Number of Surveys per Year	Total Weight (g)	Total Plastic Bottle Weight (g)	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

(Monitoring data was provided by MWCOG)

While the activities that are outlined in Table D-9 are specific to the Anacostia River Watershed, the County and volunteers performed litter removal and prevention activities in various 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-12 shows the amount of litter collected through these activities.

Table D-12. Litter Removal and Prevention outside Anacostia Watershed

Activity	Watershed	Weight of collected trash (pounds)
Hard Bargain Farm	Piscataway	-
Oxon Hill Farm	Potomac River	0
Fort Washington Mariner	Potomac River	2,100
National Colonial Farm	Potomac River	5,360
Riverview Estates	Potomac River	4,500

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 their likelihood of illegal dumping and stockpiling litter.

Comprehensive Community Cleanup Program

The Department of the Environment 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 two-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/sampling, roadside litter pick-up, tree trimming, and storm drain maintenance. A list of comprehensive community cleanup achievements during the reporting period is provided in Table D-13. 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 entrances. There are 90 active cleanups in the rotation, hence, a community is scheduled for comprehensive cleanup approximately every 4-years. Over 90 tons of bulky trash/litter was removed from communities in FY 2016 through this program.

Table D-13. Comprehensive Community Cleanup Achievements (07/01/15 - 06/30/16)

Community	Zoning Housing Code Enforcement		Bulky Trash		Vehicle Audit	
	Housing Code Violations Issued (No.)	Zoning Code Violations Issued (No.)	Tires Collected (No.)	Trash Collected (Tonnage)	Violations Issues (No.)	Vehicles Towed (No.)
Tri- Area	18	0	0	4.31	6	3
Calverton (Phase 1)	16	0	0	1.69	4	3
Calverton (Phase 2)	0	0	0	1.50	0	0
Seabrook	29	1	0	7.27	7	4
Columbia Park	22	3	0	6.63	16	2
Willow Hills	47	1	0	1.00	8	2
Apple Grove - Squire Woods	71	0	4	0.25	2	1
Berkshire/ Parkland/ Sansbury Park	60	0	0	1.00	0	0
Glassmanor	0	0	0	0.00	0	0
Kingswood/ Dresden Green	79	3	6	5.50	21	6
West Lanham Hills/ Hanson Oaks	35	0	1	3.11	10	3
South Potomac (Phase 1)	35	0	60	13.16	2	0
South Potomac (Phase 2)	1	0	0	5.45	2	0
Princess Gardens/ Hickory Hill	0	0	3	2.30	7	3
Windbrook	0	0	1	2.27	0	0
Roblee	0	0	8	6.25	1	1

Community	Zoning Housing Code Enforcement		Bulky Trash		Vehicle Audit	
Lynnalán Acres	50	0	3	1.00	2	0
Boulevard Hgts./ Bradbury Hgts. (Phase 1)	20	2	0	2.00	6	0
Boulevard Hgts./ Bradbury Hgts. (Phase 2)	0	0	12	11.70	5	0
Palmer Park (Phase 1)	12	0	4	6.33	6	0
Palmer Park (Phase 2)	0	0	0	13.73	5	0
TOTAL	495	10	102	96.45	110	28

Clean Up, Green Up

This program is sponsored by the County's Department of Public Works and Transportation (DPW&T), 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. 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 Clean Up Green Up activities in FY 2016 is 58.6 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 and volunteers as well as the State Highway Administration (SHA). Roadway collection programs include roadside cleanup on landfill approach roads, removal of litter from the County roadsides, Adopt-a-Road and Adopt-a-Median programs, removal of litter from non-roadside County property by DPW&T, and a community service program by Department of Corrections. In addition, the County is responsible for some non-roadside cleanups of trash, debris (including debris resulting from evictions) and abandoned items from properties and right-of-ways other than roadsides.

During this reporting period approximately 2,904 tons of trash and debris were collected through the street sweeping, litter control and Clean Up Green Up programs. Because this tonnage is a result of a street sweeping and roadside litter removal program having the same frequency that was in effect before the 2010 trash TMDL was established and the types of materials included in the trash mix are not well defined at this point, the estimated tonnage has not been counted towards a reduction in the trash load for the Anacostia River.

The County continues to explore opportunities to integrate street sweeping into our suite of litter control measures. By increasing the number of street miles swept beyond the pre-trash TMDL value, we could remove more litter from roadsides and reduce the amount of litter entering our MS4.

The County is currently running analysis of options for potential stormwater treatment credits that can be earned by the County through the use of street sweeping. The recommendations are based on a review of the recommended techniques and credits for street sweeping from the State (MDE 2014), a review of street sweeping progress and credits in other Maryland jurisdictions, a review of the Bay

Program Expert Panel of Street Sweeping (Donner, 2016), and an analysis of the potential impervious areas that can be swept using the County GIS information.

Street sweeping stormwater treatment credits can be accounted for using the lane mileage approach, the weight approach, or a combination of both. This analysis will show what can be achieved using the most beneficial approach to the county. This includes the potential of sweeping County and Municipal roadways, County and Municipal parking areas, and available privately owned parking lots

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 annually monitor both stream and land-based trash levels so as to better estimate load quantities, as well as implement cost-effective trash reduction measures. COG assists the County in determining stream and land-based trash levels, as well as identifying existing major trash hot spots. Monitoring data helps in the identification of targeted geographic sites. In addition, the identification of trash sources will further enable the County to specifically tailor trash education and outreach programs and better direct limited trash reduction resources to where they are most needed. Long-term monitoring is critical for assessing the effectiveness of both trash reduction and pollution prevention measures and initiatives so as to work towards the County's trash TMDL goals.

COG employs the MDE-approved Anacostia tributary trash surveying field check list for annually surveying 15 stream sites. See Figure D-3. Instream baseline trash surveys are performed twice per year (i.e., late spring/summer and early fall) and upstream/downstream coordinates are provided for each site. As part of the survey, the total number of trash items are recorded and catalogued according to 20 general types. In addition, at five of the sites, COG (twice per year) removes and weighs trash items from the first 250 feet of the survey reach. This task enables COG to develop a very reasonable estimate of general in-stream 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 are mapped using GIS software.

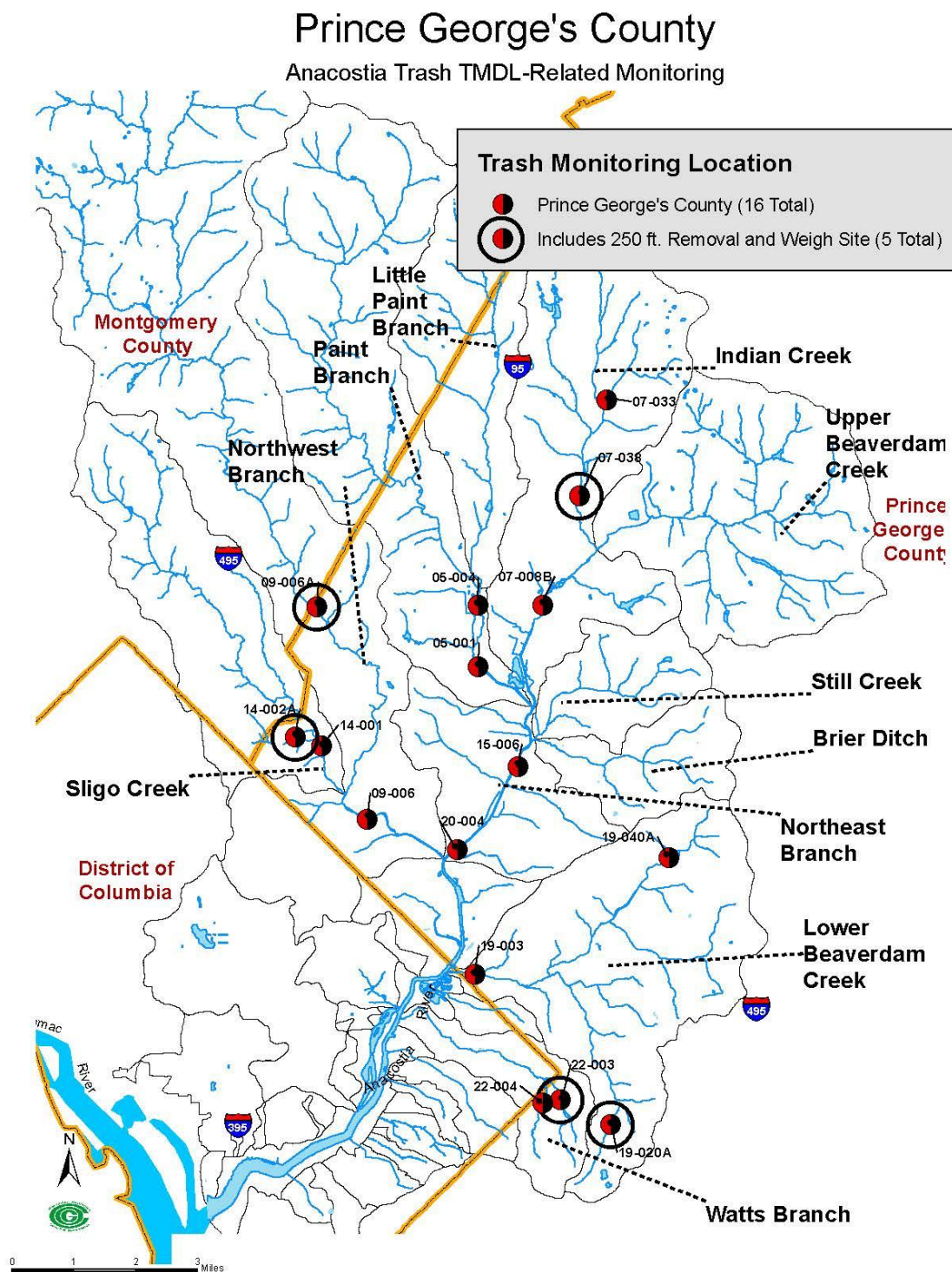


Figure D-3. Anacostia TMDL-Related Trash Monitoring Locations

Education and Outreach on Litter

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

In FY 2016, the County drafted outreach strategies for the seven focus areas required by the County's NPDES-MS4 permit. This includes the Anti-litter strategy. As part of the development of the draft strategies, expanded educational outreach took place at local schools within the Anacostia River Watershed.

Table D-14. Litter reduction per school-based outreach event.

NAME	Trash Load Reduction (lbs) based on school boundary area*
Carole Highlands Elem	155.23
Ports Town Elem	287.87
Langley Park Elem	211.51
Hollywood Elem	169.54
Thomas Johnson Middle	1417.46
High Point High	2,656.37
Univ of MD	2,127.25
Roger Heights Elem	287.87
Ridgecrest Elementary	212.28
Total	7,525.38

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

Storm Drain Stenciling

The Storm Drain Stenciling Program continues to raise community awareness and alert community members of the connection between our storm drains and the Chesapeake Bay. While the County's SWM program requires stenciling on all new developments, this program focuses on stencils as a means of educating the citizens in older communities built prior to stormwater regulations. The County purchases the paint, tools, and stencils used by the volunteers to stencil the "Don't Dump – Chesapeake Bay Drainage" message. In FY 2016, DoE worked with volunteers to stencil stormdrains in 15 areas throughout the County. Table D-15 provides a summary of the volunteer projects completed from July 1, 2015 through June 30, 2016.

Table D-15. Storm Drain Stenciling Summary

Date	Group	Number of Volunteers	Number of Inlets Stenciled
August 8, 2015	City of Greenbelt, Windsor Green	15	50
August 28, 2015	Town of Edmonston	20	26
September 17, 2015	City of Laurel		6
October 10, 2015	Charles Flowers High School	25	12
October 17, 2015	Lavinia Baxter/ Kentland	School Kids	7
October 21, 2015	William Schmidt Environmental Center	School Kids	1
October 20, 2015	Judith P. Montesouri	School Kids	1
October 23, 2015	Largo High School	School Kids	14
October 30, 2015	Oxon Hill High School	School Kids	6
June 8, 2015	Millwood – Waterford Community	Community Group	58
January 3 2016	Thomas Johnson Middle School	9	6
January 16, 2016	Bladensburg High School	8	6
February 22, 2016	Thomas Johnson Middle School	30	15
April 20, 2016	Town of Colmar Manor		66
April 20, 2016	Thomas Johnson Middle School		15
TOTAL		50+	289

Recycling

Recycling campaigns spread information about recycling efforts, benefits of recycling and collection dates. The 2013 survey results show that Berwyn Heights, College Park, City of Greenbelt, M-NCPPC, AFF, KPGCB and DoE have established or assisted with recycling campaigns. These efforts include distribution of information, via flyers or other media, on upcoming events and the benefits of recycling. Efforts also include hosting collection days, disseminating information and educating patrons. Some agencies or groups display information at these events.

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

DoE Recycling Section and KPGCB participate in various environmental committees such as the Metropolitan Council of Government, DoE's Environmental Action and the Environmental Literacy Committee (ELC) among others. The ELC was organized by the William S. Schmidt Outdoor Education Center, a Prince George's County Public School entity which educates students, and supports schools and teachers by promoting Green School Certification. In addition, DoE Recycling Section and KPGCB also assist by arranging speakers on litter management, recycling, and source reduction.

For the reporting period from July 1, 2015, through June 30, 2016, DoE Recycling Section reports residential recycling tonnage at 39,610 tons and commercial recycling tonnage at 27,601 tons. Note that the commercial recycling tonnage is not inclusive of all commercial recycling within the County. It is reflective of what has been received at the Material 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 Public education opportunities also include publications issued to residents and tours of County facilities including the Brown Station Road Landfill and Materials Recycling Facility. The intent of the tours and publications is to provide information about proper solid waste disposal, how and where the County's municipal solid waste is disposed, and the availability of services and convenience centers for disposal of items that might otherwise be illegally dumped. A list of tours to the recycling facility is provided in Table D-16.

Table D-16. Materials Recycling Facility Tours

Name of Participant	Date of Tour
Aj Wilkins	July 2015
Southern Management	July 2015
William Moller High School	July 2015
Prince George's Teachers – Alice Ferguson	July 2015
Tameka Adams	July 2015
DC Summer Interns	July 2015
Parkdale School of Baltimore	July 2015
Chesapeake Beach Towns	August 2015
Fast Fit Kids Camp	August 2015
Joe Cunningham/Home School	October 2015
The Sierra Club	October 2015
Alice Ruggles	October 2015
Community Home School	October 2015
Mark Knopp/Grocery Team	October 2015
Girl Scout/Monique Perry	October 2015
Home School/Erin Josephitis	October 2015
Department of Energy	October 2015
Maxine McRae/Students	October 2015
Special Needs School	December 2015
Howard County School	January 2016
Saras Wathi	February 2016
Panorama Elementary	February 2016
Marlton Elementary	February 2016
Grace Christian Academy	February 2016
Shamila Evans	February 2016
Potomac High School	March 2016

Name of Participant	Date of Tour
Northwestern High School	March 2016
Gwynn park High School	March 2016
Girl Scouts/Cub Scouts	March 2016
National Defense University	April 2016
Bowie High School	April 2016
Surrattsville High School	April 2016
Largo Park Early Learning Center	April 2016
Northwestern High School	April 2016
FSK Elementary School	April 2016
Kelly Barnes	April 2016
High Road Academy	April 2016
New Chapel Christian Academy	April 2016
Patrick Henry Elementary School	May 2016
Bowie High School	May 2016
Chesapeake Charter School	May 2016
National Christian Academy	May 2016
DC Policy Committee	May 2016
DC Interns	June 2016

Enforcement

Illegal Dumping Enforcement

The Enforcement Division of the DPIE conducts on-site inspections of residential, commercial and industrial properties to ensure they are properly maintained and in compliance with the County Code. The Division enforces the Housing and Property Maintenance codes for all residential dwellings, the Anti-Litter and Weed ordinances for undeveloped properties located outside of an incorporated municipality and the Zoning Ordinance for private properties.

Other related functions include:

- Regulating placement of signs on private property, and 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 County Code
- Issuing licenses for all residential single-family rental properties

During FY 2014, the Enforcement Division conducted approximately 111,000 inspections/re-inspections to ensure Code compliance. In FY 2015 the number of inspections/re-inspections increased to 190,000. In FY 2016, number of inspections/re-inspections decreased to 133,200. DPIE issued 25,298 violation notices which included trash related complaints. The Division cleaned 862 vacant properties, through the Clean Lot Programs. The tons of trash from these vacant properties were disposed of by the contractors. The Division issued a total of 1,228 citations.



Alice Ferguson Foundation – Litter Enforcement Month

It is expected that heightened enforcement of littering laws will have a major impact on the reduction of trash accumulation in waterways. AFF has promoted the “Litter and Illegal Dumping Enforcement Month” in April for the past few years, and documented 348 citations, violations and other reports across Maryland, Virginia and the District for April 2014. The Prince George’s County Police Department continues to be an active participant in the annual Litter and Illegal Dumping Enforcement Month program.

Styrofoam Ban Bill

On April 28, 2015, the Prince George’s County Council adopted Council Bill CB-5-2015 which bans expanded polystyrene. Food service businesses will be prohibited from selling, using and providing food in expanded polystyrene food service products. However, the ban would not apply to pre-packaged soup and certain other pre-packaged food in expanded polystyrene containers that would be filled and sealed prior to receipt by a food service business. The ban would not apply to materials used to package raw, uncooked or butchered meat, fish, poultry, or seafood for off-premises consumption. Also, individuals will be prohibited from selling, offering to sell and using polystyrene loose fill packaging in the County. The bill takes effect on July 1, 2016.

As of July 1, 2016, Prince George’s County Government began enforcement of CB-5-2015 which bans polystyrene commonly referred to as Styrofoam. Food service businesses are prohibited from selling, using and providing polystyrene products. Additionally, individuals are prohibited from selling, offering to sell and using polystyrene loose fill packing in Prince George’s County. However, the ban does not apply to pre-packaged soup and certain other pre-packaged food in polystyrene containers which was originally packaged outside of Prince George’s County. Also, the ban does not apply to materials used to package raw, uncooked or butchered meat, fish, poultry or seafood for off-premises consumption.

Expanded polystyrene (Styrofoam) is frequently found in litter in our watersheds. Through the ban on Styrofoam and the bill’s promotion of the use of compostable or recyclable disposable food service ware, the number of Styrofoam products in the trash and litter stream should decline. It is anticipated that CB-5-2015 will contribute to a reduction in the volume of litter that reaches our waterways.

FY 2017 goals

For FY 2017, the County will continue to perform stream cleanups, community cleanups and outreach and education as well as expand programming with new initiatives like Clean Sweep, Adopt-A-Stream and the use of PGCLitterTRAK. In addition to implementing new initiatives, the County anticipates meeting the 2017 benchmark of 125,000 lb/yr for litter reduction rate; updating (or improving) the trash reduction database by enhanced GIS mapping and data management tools to better track anti-litter activities and accomplishments, standardizing metrics used to compute load reduction, etc.; and assessing existing programs to improve our reduction effort. Also, in FY’17, the County is exploring the installation of trash capture devices along tributaries to Anacostia River. Expressions of interest for such installations are currently under review. All new activities and results of such activities will be reported in the next annual report.

Response to MDE Comments on 2015 Annual Report

In the letter dated April 5, 2016, MDE provided a review of the Prince George's County 2015 Annual Report for its National Pollutant Discharge Elimination System (NPDES) municipal stormwater permit 11-DP-3314 (MD0068284). The County has provided a description of the status of trash reduction efforts for meeting goals outlined in the trash total maximum daily load (TMDL) work plan. The County will continue to report on progress toward meeting established milestones in each subsequent annual report.

The County will consider expanding the existing program of Comprehensive Community Clean Up in order to take credit for litter reduction efforts by communities that will aid toward required TMDL goals.

MDE stated that "Table 2.11 of the Implementation Plan states that approximately 142,675 pounds of trash are being removed that can be counted toward the TMDL. However, the 2015 milestone is set at 62,000 pounds. The County should clarify whether the 2015 milestone is in addition to the values stated in the implementation plan on Table 2.11." The County exceeded the milestone reduction of 62,000 pounds of litter in 2015. The 2015 milestone is reflective of litter removal through the stream and community cleanup programs as referenced in Table 2.11. As such, this milestone is not in addition to 142,675 pounds of trash which is also referenced in Table 2.11. Our efforts to reduce litter in this instance are included in the efforts that are expected to result in approximately 142,675 pounds of litter. New programs and partnerships are being developed to reach the goal of 170,628 pounds reduced in the Anacostia River Watershed. The County will continue to work with watershed partners to monitor trash at 15 locations throughout the Anacostia watershed as well as evaluate the success of ongoing trash reduction programs and incorporate adaptive management strategies in order to achieve the annual trash removal targets by permit term.

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.

Permit Condition Actions

The County continues to provide compliance assistance for County and Municipal owned industrial property. Compliance assistance has taken the form of ensuring that each facility is moving towards implementing the permit requirements. This reporting year, through KCI's continued involvement, the contracted firm assisting Prince George's County in meeting the MS4 Permit mandates, the quarterly and annual inspections were conducted. By focusing on improving compliance the County continues to monitor corrective actions identified by KCI and assist facilities in removing corrective actions.

For FY2017 the County continues to meet with the facilities to discuss mechanisms to improve the rate at which corrective actions are removed. Challenges to the facilities range from difficulty accessing the visual monitoring sites to the time needed for repair of drainage channels. Through meeting annually with the facilities operational manager at the time of the comprehensive annual inspection, the facility manager and the County set time lines for corrective action.

Table D-17. County and Municipal owned Industrial Properties

No.	Facilities
<i>DoE</i>	
1	Abandoned Vehicle Impound Lot
2	Brown Station Road Sanitary Landfill
3	Missouri Avenue Convenience Center
4	Material Recycling Facility
5	Prince George's County's Yard Waste Composting Facility
6	Sandy Hill Creative Disposal Project
<i>OCS</i>	
1	Park Central Vehicle Maintenance Facility
<i>DPW&T</i>	
1	Brandywine Facility
2	Ritchie Service Complex
3	Glenn Dale Facility
<i>Municipal</i>	
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

Table D-18 through Table D-37 detail the status of the County owned and municipal owned facilities during the 2016 fiscal year, ending at June 30, 2016. The achievements are a result of the quarterly inspections where the facility meets the compliance control measures. Areas for long term planning will be highlighted in the upcoming facility inspections where the facility managers and DoE discuss any problems, structural and procedural that are preventing meeting the control measure. Reporting items on pollution prevention plan for FY2016 are provided in the new MS4 geodatabase on DVD.

DoE Facilities

Abandoned Vehicle Impound Lot

Staffs at the Abandoned Vehicle Impound Lot demonstrate good pollution prevention knowledge and regularly conduct good housekeeping procedures, facility inspections, and staff training. The Department highlights the Abandon Vehicle Lot for beginning the process to repair the drainage channel. Table D-18 below shows the status of SWPPP implementation for this reporting period.

Table D-18. Abandon Vehicle Impound Lot - 2016 Status

Permit Number	County Contact
12SW0132	Mark Jenkins, Abandon Vehicle Section, DoE

*Fiscal Year 2016 Achievements*Training: Conducted site specific facility trainingGood Housekeeping and Pollution Prevention: Inspection and housekeeping records are well documented. Including Police Department Auto Theft Lot.Material Storage: Improved material storage and spill prevention*Long Term Planning*Discharge Monitoring: Drainage rarely occurring from pond due to lack of significant eventsStormwater Management: Assessed drainage channel to begin solicitation for repairing channel.*Brown Station Road Sanitary Landfill*

The Landfill has accepted municipal waste since 1968. This year the Landfill continues 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. Highlighted improvements from Fiscal Year 2015 include improved maintenance and documentation for the stormwater management facilities. Table D-19 below shows the status of SWPPP implementation for this reporting period.

Table D-19. Brown Station Road Sanitary Landfill - 2016 Status

Permit Number	County Contact
12SW0401	Roger Merritt, Associate Director, WMD, DoE
<i>Fiscal Year 2016 Achievements</i>	
<u>Training:</u> Conducted site specific facility training	
<u>BMP Maintenance:</u> Stormwater Management Facilities 3, 5, and 6 are maintained according to regulations	
<u>Equipment and Vehicle Wash:</u> Reviewing proposals for an environmentally compliant wash rack	
<i>Long Term Planning</i>	
Discharge Monitoring: Begin visual monitoring at all outfalls	

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 is collected and transferred to the Brown Station Road Sanitary Landfill for disposal. The Convenience Center has 1 on site Laborer during all opening hours that is responsible for good housekeeping and assisting customers. Management and oversight of the facility is from the staff at the Brown Station Road Landfill. Highlighted improvements from Fiscal Year 2015 include the upgrading of the Used Oil and Antifreeze Recycling Center. Table D-20 below shows the status of SWPPP implementation for this reporting period.

Table D-20. Missouri Avenue Convenience Center – 2016 status

Permit Number	County Contact
12SW2466	Roger Merritt, Associate Director, WMD, DoE
<i>Fiscal Year 2016 Achievements</i>	
<u>Oil and Antifreeze Recycling:</u> Reduced exposure and risk by installing overhead shelter and improving containment	
<u>Training:</u> Conducted site specific facility training	
<u>BMP Maintenance:</u> Stormwater Management Facility is maintained according to regulations	

Long Term Planning

Discharge Monitoring: Begin visual monitoring at all outfalls

Material Recycling Facility

The County's Materials Recycling Facility (MRF) is currently operated by Waste Management Inc. under their standards for environmental compliance. Continued work with KCI Consultants for inspection support and with the Stormwater Management to monitor SWPPP implementation. Highlighted improvements from Fiscal Year 2015 are the improvements in record keeping and BMP maintenance. Table D-21 below shows the status of SWPPP implementation for this reporting period.

Table D-21. Materials Recycling Facility (DoE Facility) - 2016 Status

Permit Number	County Contact
12SW0132	Desmond Gladden, Contract Manager Recycling Team, Waste Management Division, DoE
<i>Fiscal Year 2016 Achievements</i>	
<u>Training:</u> Conducted site specific training	
<u>BMP Maintenance:</u> Conducting and documenting regular maintenance of Oil Grit Separators in yard.	
<u>Record Keeping:</u> Good SWPPP Records are being kept at the facility.	
<i>Long Term Planning</i>	
Discharge Monitoring: Proper contract personnel needed to conduct discharge sampling	

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 yet is operated by the Maryland Environmental Service who is responsible for environmental compliance. Highlights from Fiscal Year 2015 include the improvements to the Stormwater Management Facility on site. Table D-22 below shows the status of SWPPP implementation for this reporting period.

Table D-22. Prince George's County Yard Waste Composting Facility – 2016 status

Permit Number	County Contact
12SW0121	Roger Merritt, Associate Director, WMD, DoE
<i>Fiscal Year 2016 Achievements</i>	
<u>BMP Maintenance:</u> Stormwater Management Facility maintained according to regulations	
<u>Record Keeping& Inspection:</u> Performed Regular facility inspections without any SWPPP corrective actions since December 2015	
<u>Discharge Monitoring:</u> Continued monitoring under parameters of individual permit	
<u>Training:</u> Site Specific Facility Training Conducted	
<i>Long Term Planning</i>	
SWPPP Compliance: Continue compliance efforts according to permit.	

Sandy Hill Creative Disposal Project

The Sandy Hill Landfill stopped accepting waste in 2000. The landfill currently holds a 12-SW permit where the facility is being monitored for material storage and transfer (including leachate), pond maintenance, spill prevention and countermeasures. As with the other County facilities, KCI Inc. assists in monitoring the facilities progress in 12-SW. The following table presents the fiscal year's status. Table D-23 below shows the status of SWPPP implementation for this reporting period.

Table D-23. Sandy Hill Creative Disposal Project (DoE Facility) - 2016 Status

Permit Number	County Contact
12SW0132	Paula Burr, Administrative Specialist Project Management Section, WMD, DoE
<i>Fiscal Year 2016 Achievements</i>	
<u>Spill Prevention and Control:</u> Contractor has placed appropriate spill kits	
<u>Stormwater Management:</u> Improvements in pond maintenance for all 4 stormwater management ponds.	
<i>Long Term Planning</i>	
<u>Training:</u> Continue planning site specific facility training for consultant staff.	
<u>Discharge Monitoring:</u> Begin utilizing consultant task for discharge monitoring	

OCS Facility - Park Central Vehicle Maintenance Facility

The Office of Central Services is working towards compliance to the 12-SW Permit. Outfall monitoring has begun in coordination with the new SWPPP. Highlights from previous fiscal year include good housekeeping and stormwater management facility maintenance. Table D-24 below shows the status of SWPPP implementation for this reporting period.

Table D-24. Park Central Vehicle Maintenance Facility (OCS Facility) - 2016 Status

Permit Number	County Contact
12SW0132	Richard Hilmer, Fleet Administrator Facilities Operation and Management Division, OCS
<i>Fiscal Year 2016 Achievements</i>	
<u>Staff Education and Training:</u> Performed annual site training. Records kept on site.	
<u>Discharge Monitoring:</u> Conducting quarterly discharge monitoring	
<u>Stormwater Management:</u> Performed maintenance of O/G separator, dry pond maintained and functioning properly	
<u>SWPPP Compliance:</u> No Corrective Actions during Fiscal Year	

DPW&T Facilities

All DPW&T SWPPPs were updated in January 2015, with permit coverage issued by MDE in February of 2015. DPW&T staff has been conducting visual monitoring at all three facilities during this reporting year, as required under the 12-SW permit. Non-structural BMPs, such as a spill prevention and response and good housekeeping programs are well developed and carried out by a team at each facility. The need for structural BMPs has been identified and plans are moving forward to meet the needs. The design for a new vehicle wash facility is nearly complete with an estimated construction date of 2017.

Table D-25. DPW&T Facility Overview

DPW&T Facility Name	Main Function(s)	Usage Duration	Activities
Brandywine Facility	Material Storage/Services for North County	Year Round	Crew Dispatch for South County
Ritchie Service Complex	Snow Event Response Materials Storage Main Maintenance Depot	Year Round	Equipment Maintenance, Road Crew Dispatch, Materials Storage, OHM Headquarters
Glenn Dale Facility	Material Storage/Services for North County	Year Round	Crew Dispatch for North County

Table D-26 through Table D-28 show the status of SWPPP implementation for each DPW&T Facilities.

Brandywine Facility

Table D-26. Brandywine Facility (DPW&T) - 2016 Status

Permit Number	County Contact
12SW1223	Mary Holden, Program Manager Office of Highway Maintenance, DPW&T
<i>2016 Achievements</i>	
<u>Staff Education and Training:</u> Performed annual site training. Records kept on site.	
<u>Discharge Monitoring:</u> Conducting quarterly discharge monitoring with effective use of findings to determine impact of control measures	
<u>SPCC:</u> Good Spill Records for Fiscal Year	
<i>Long Term Planning</i>	
<u>Record Keeping:</u> Improve Inventory for Chemical Storage	

Ritchie Service Complex

Table D-27. Ritchie Service Complex (DPW&T) - 2016 Status

Permit Number	County Contact
12SW0521	Mary Holden, Program Manager Office of Highway Maintenance, DPW&T
<i>2016 Achievements</i>	
<u>Staff Education and Training:</u> Performed annual site training. Records kept on site.	
<u>Discharge Monitoring:</u> Conducting quarterly discharge monitoring with effective use of findings to determine impact of control measures	
<u>Stormwater Management:</u> Restored 3 Bio-retention Ponds to Functionality	
<i>Long Term Planning</i>	
Equipment and Vehicle Wash – Beginning Project for Compliant Vehicle and Equipment Wash at neighboring site	

Glenn Dale Facility

Table D-28. Glenn Dale Facility (DPW&T) - 2016 Status

Permit Number	County Contact
12SW1234	Mary Holden, Program Manager

	Office of Highway Maintenance, DPW&T
<i>2016 Achievements</i>	
<u>Staff Education and Training:</u> Performed annual site training. Records kept on site. <u>Discharge Monitoring:</u> Conducting quarterly discharge monitoring with effective use of findings to determine impact of control measures <u>SPCC:</u> Completed Draft SPCC Plan	
<i>Long Term Planning</i>	
<u>BMP Maintenance:</u> Semi-Annual maintenance for Oil and Grit Separator by DPW&T Personnel scheduled to begin in Fiscal Year 2017	

Municipal NPDES General Industrial Discharge Permit Status

The following list the permit status of the nine Prince George's County municipalities with 12-SW Industrial Permit coverage. Table D-29 through Table D-37 show the status of SWPPP implementation for each municipalities.

Town of Cheverly

Table D-29. Town of Cheverly DPW - 2016 Status

Permit Number	County Contact
12SW0197	Juan Lois Torres, Department of Public Works Director
<i>2016 Fiscal Year Achievements</i>	
<ul style="list-style-type: none"> Regular maintenance of O/G separator Eliminated exposure by constructing a salt storage facility Records kept of inspections and maintenance activities Employee Training Annually Developing a rain garden to reduce off site run on to the yard. 	
<i>Long Term Planning</i>	
<ul style="list-style-type: none"> Improve Housekeeping 	

City of College Park

Table D-30. City of College Park DPW – 2016 Status

Permit Number	County Contact
12SW2148	Steve Halpern, City Engineer
<i>2016 Fiscal Year Achievements</i>	
<ul style="list-style-type: none"> Record's kept of routine facility inspections Placed spill kits at Used Oil Recycling Center Tanks Restored Stormwater Management Facility that treated run off from composting site Completed SWPPP Training 	
<i>Long Term Planning</i>	
<ul style="list-style-type: none"> Quarterly Discharge Monitoring 	



City of District Heights**Table D-31. City of District Heights DPW - 2016 Status**

Permit Number	County Contact
12SW2141	Angela Barnhill-Love, Administrative Assistant
<i>2016 Fiscal Year Achievements</i>	
<ul style="list-style-type: none"> Records kept of routine facility inspections Improved Good Housekeeping 	
<i>Long Term Planning</i>	
<ul style="list-style-type: none"> Improve Material Storage Conduct SWPP Training 	

City of Greenbelt**Table D-32. City of Greenbelt DPW - 2016 Status**

Permit Number	County Contact
12SW2145	Luisa Robles, Sustainability Coordinator
<i>2016 Fiscal Year Achievements</i>	
<ul style="list-style-type: none"> Records kept of routine facility inspections Discharge Monitoring from Outfall #1 resulted in no visible forms of pollution Completed SWPPP Training Improved Material Storage in the Used Oil and Recycling Area Discharge Monitoring for accessible outfall, for second outfall monitoring health of Stormwater Facility 	

City of Hyattsville**Table D-33. City of Hyattsville DPW - 2016 Status**

Permit Number	County Contact
12SW2150	Leslie Riddle, Public Works Director
<i>2016 Fiscal Year Achievements</i>	
<ul style="list-style-type: none"> Maintained SWPPP Compliance without any Corrective Actions 	
<i>Long Term Planning</i>	
<ul style="list-style-type: none"> Planning to Retrofit Facility pending Funding 	

City of Laurel**Table D-34. City of Laurel DPW - 2016 Status**

Permit Number	County Contact
12SW1841	Antonius Hallmark, Project Inspector
<i>2016 Fiscal Year Achievements</i>	
<ul style="list-style-type: none"> Completed SWPPP Training Records kept of routine facility inspections 	

- Spill kit and Improved housekeeping for used oil recycling center
- Maintained Oil Grit Separator

Long Term Planning

- Visual Discharge Monitoring

City of New Carrollton**Table D-35. City of New Carrollton DPW - 2016 Status**

Permit Number	County Contact
12SW2144	Bernard Cochran, Public Works Director
<i>2016 Fiscal Year Achievements</i>	
<ul style="list-style-type: none"> • Records kept of routine facility inspections • Good housekeeping methods employed for salt dome and heavy equipment • Maintenance for the Oil Grit Separator • Labelled Material Storage Drums 	
<i>Long Term Planning</i>	
<ul style="list-style-type: none"> • Researching financial feasibility of vehicle wash connection to sanitary sewer and overhead cover for fueling station • Conduct SWPPP Training • Improve Housekeeping 	

Town of Riverdale Park**Table D-36. Town of Riverdale Park DPW - 2016 Status**

Permit Number	County Contact
12SW2146	Leonard Addison, Public Works Director
<i>2016 Fiscal Year Achievements</i>	
<ul style="list-style-type: none"> • Continued maintenance and functionality of rain garden • Records kept of routine facility inspections • Conducted SWPPP Training 	
<i>Long Term Planning</i>	
<ul style="list-style-type: none"> • Determine Feasibility of Discharge Monitoring at Outfall 2 from Rain Garden • Included Vehicles Trip Records in Facility Inspection Records 	

City of Seat Pleasant**Table D-37. City of Seat Pleasant DPW - 2016 Status**

Permit Number	County Contact
12SW2141	Johnny Thompson, Administrative Assistant
<i>2016 Fiscal Year Achievements</i>	
<ul style="list-style-type: none"> • Good P2 knowledge. • Records kept of routine facility inspections • Removed abandon vehicles and began disposal of unwanted material 	

- Conducted SWPPP Training

Long Term Planning

- Improve perimeter controls.
- Reduce run on from adjacent properties.
- Repair yard inlet
- Proper Spill Prevention techniques

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:

- Street sweeping;*
- Inlet inspection and cleaning;*
- Reducing the use of pesticides, herbicides, fertilizers, and other pollutants associated with vegetation management through increased use of integrated pest management;*
- 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*
- 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.

Permit Condition Actions

Street Sweeping

The County's street sweeping operations are limited to selected arterial, collector, and industrial streets, with service to residential subdivision streets provided on a request only basis. During the reporting period, 1,574.4 curb miles were swept removing 1,237.5 tons of debris from the roadway. The Street Sweeping information for FY2016 is provided in Table D-38 and Figure D-4 .

Table D-38. Street Sweeping

Route No.	Start date	End date	Miles Swept	Tons for disposal
Industrial	6/25/15	7/09/15	96.3	68.2
Industrial	8/31/15	9/4/15	96.3	59.2
Arterial Route -1	7/9/15	7/20/15	170.4	72.0
Arterial Route -1	9/8/15	9/16/15	114.1	100.0
Arterial Route -1	6/9/16	7/7/16	115.1	159.00
Arterial Route -2	7/23/15	8/6/15	170.4	149.0
Arterial Route -2	9/18/15	10/22/15	194.3	225.0
Arterial Route -2	3/10/16	4/18/16	194.3	142.2
Arterial Route -3	8/12/15	8/29/15	117.5	1489.0
Arterial Route -3	10/23/15	11/24/15	150.5	72.2
Arterial Route -3	4/20/16	5/27/15	155.6	118.8
Total			1,574.4	1,237.5

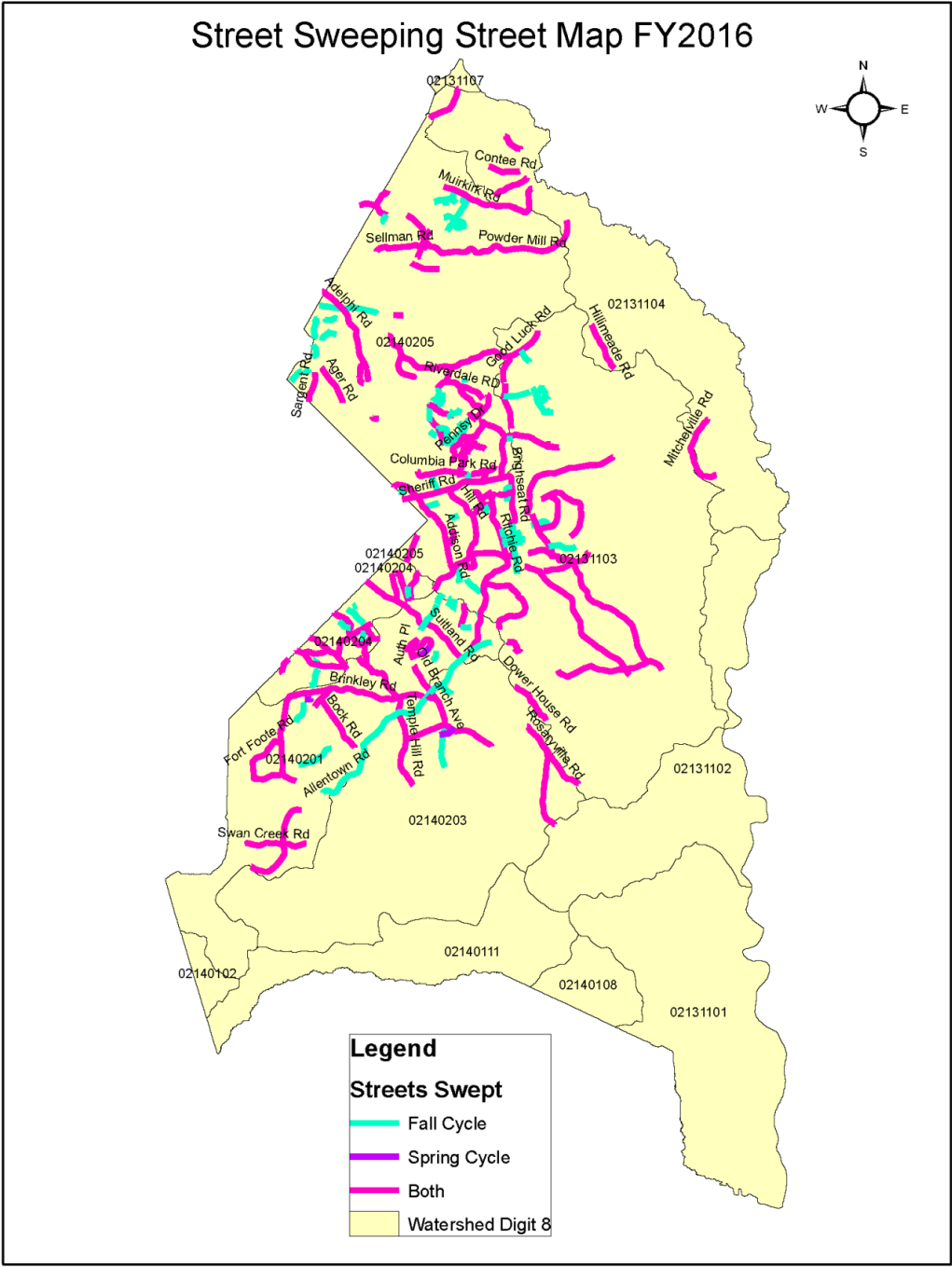


Figure D-4. Roadways Served - Countywide Street Sweeping Program

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

Typically, every storm drainage inlet located within the 21 communities annually served by the Comprehensive Community Cleanup Program (CCCP) is inspected and cleaned. During this reporting period 6,232 storm drain structures and 623,762 linear feet of storm drain network pipes were cleaned. A total of 60 tons of debris were removed through this process.

The SDMD is also responsible for major channel maintenance. There are 69 major channels which were inspected and cleaned/cleared on a three year cycle. During this reporting period, maintenance was performed on 18,679 linear feet of channel.

Unpaved Shoulder Maintenance

The OHMD 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 six-week cycle during the growing season (March 15-October 15). Roadside vegetation is primarily maintained mechanically with herbicide use restricted to the spraying sidewalk joint, monolithic concrete median areas, fence lines, guard rail areas and rip rap areas that cannot be mowed. Herbicide was applied by licensed contractors in accordance with contractual application rates. The contract requires herbicide spraying to be reported in square feet, for large areas and in linear feet for spot treating and guard rail spraying. In the future the OHM will require the contractor to report gallons of herbicide sprayed. Limited herbicide applications have reduced the potential for distillates and toxins to migrate into the aquatic ecosystem.

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-5. During the reporting period, the County received over 3,268 citizen requests for illegal dumping and litter removal through the County's 311 system. Illegal dumping in the right-of-way is removed within five working days of notification. As a result of these efforts, approximately 1,629 tons of debris and solid waste were removed from County roadways during this reporting period.

Snow and Ice Control Program

To determine when the application of de-icing 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 gage pavement temperatures and provide key information used to determine an appropriate treatment for snow and ice control. Additionally, 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 4 times per shift discuss operational goals and challenges and modify, if

necessary operational goals. A map of the snow and ice control routes de-icing application is shown in Figure D-6.

Every year, prior to the Dry Run exercise, the DPW&T, OHM conducts mandatory snow and ice control training for all staff and contractors. Each job classification is provided with specific training for the job duties assigned in the snow operations. Plow operators are provided with equipment training and district foreman 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 will be equipped with newer technology that will better gauge and track the application of salt.

During the reporting year, the County mobilized for 13 snow and ice control events. Salt usage for this winter season was 41,499.25 tons at a cost of \$1,178,850. When conditions are appropriate, pretreatment is utilized in an effort 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 3 of the 19 snow events.

DPW&T implemented the following operational activities to help manage and reduce salt application:

- Replacement of older equipment with newer, better functioning spreaders and hoppers.
- Reinitiated a pretreatment de-icing 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 reevaluate its salt management plan in an effort 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, the 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.



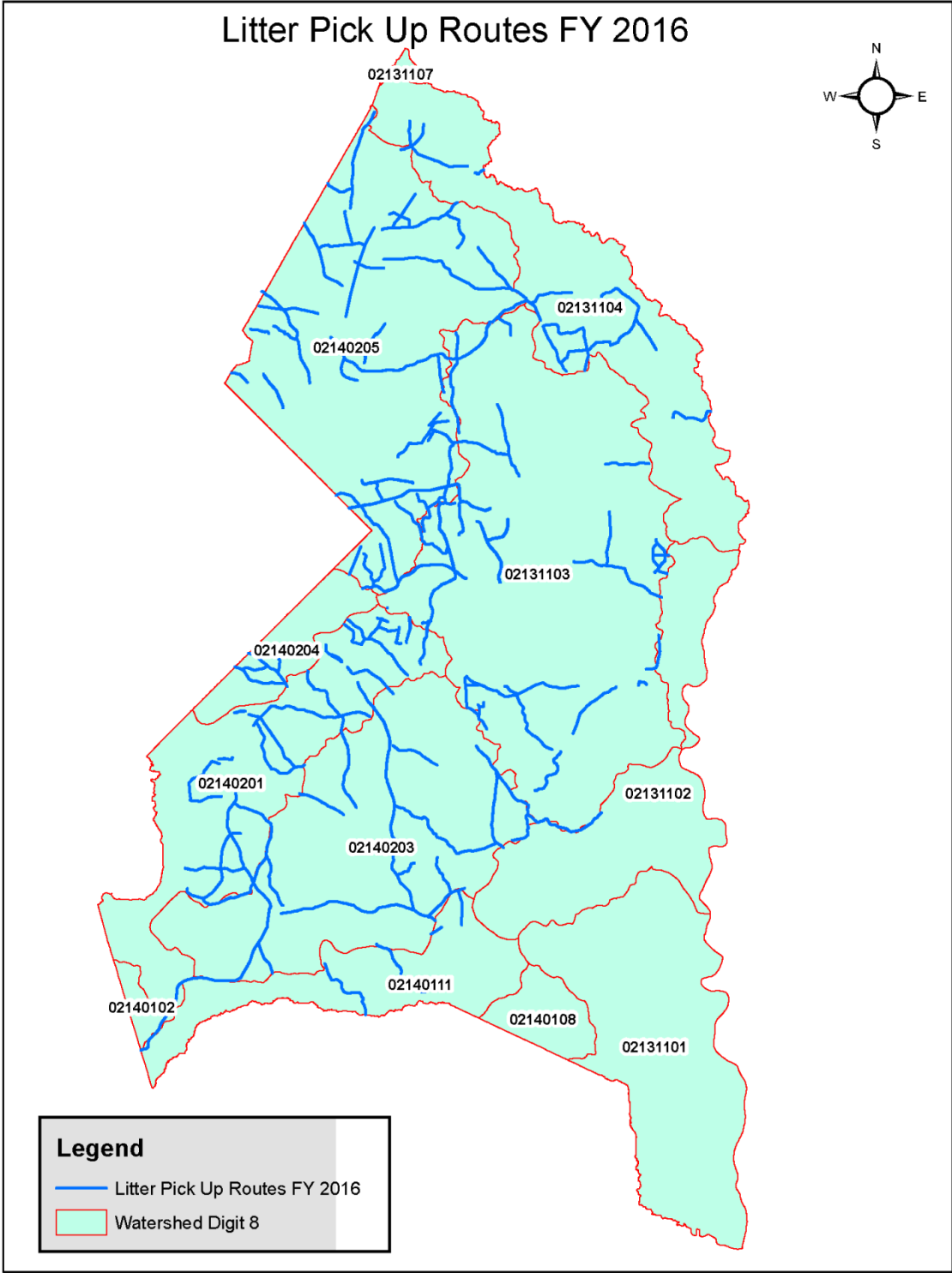


Figure D-5. Litter Pick Up Routes

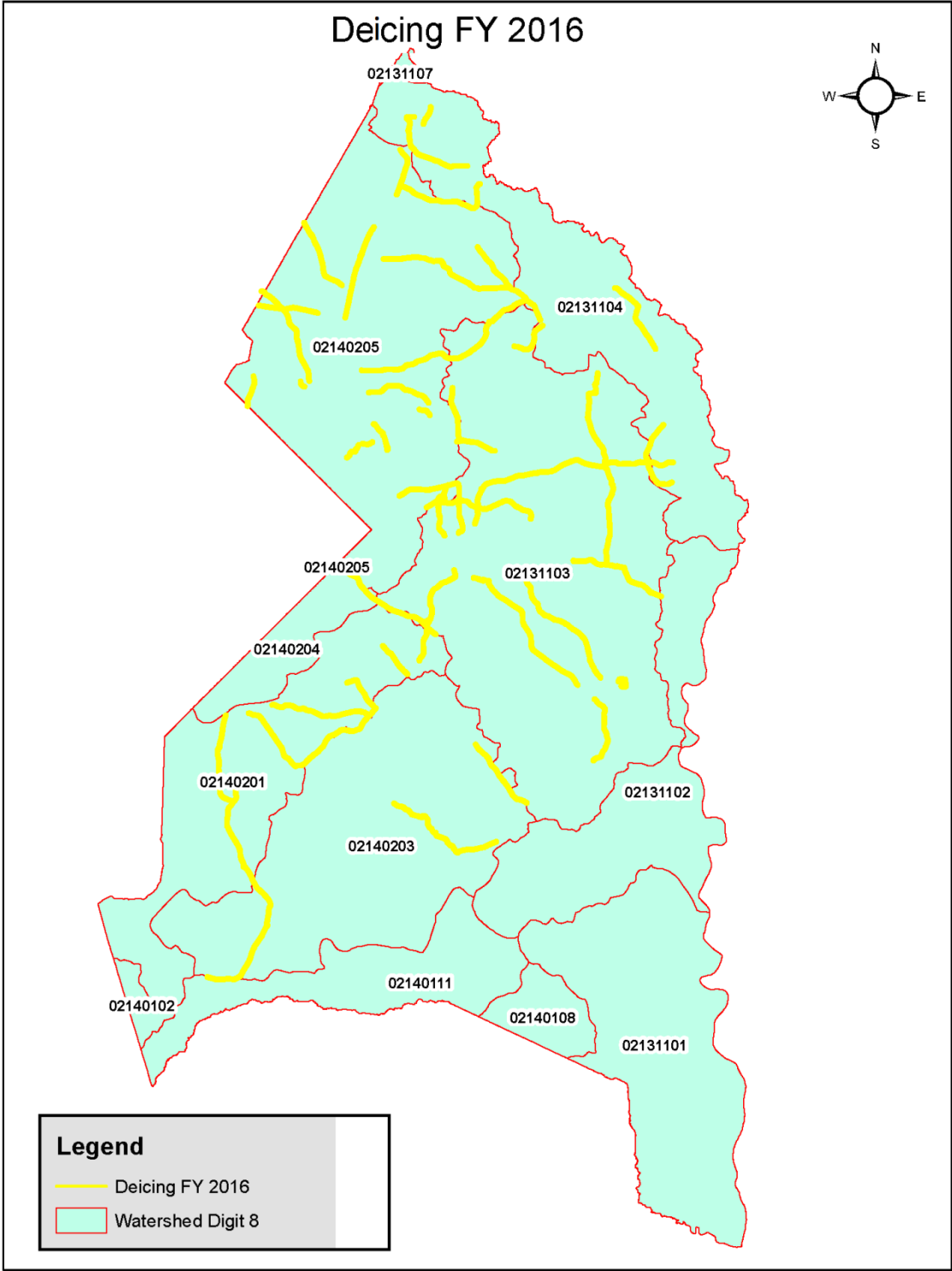


Figure D-6. Snow and Ice Control Program - De-Icing Application Map

6. PUBLIC EDUCATION

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

Permit Condition Actions

CountyClick 311 is Prince George's County's main source of government information and access to non-emergency services through a call center. Citizens may also utilize alternative forms of communication for lodging water quality complaints, such as through email or by direct call. More information regarding the investigation and enforcement actions taken to resolve water quality complaints is provided under Environmental Engineering program on page 48.

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.*

Permit Condition Actions

DoE seeks every opportunity to promote environmental awareness, green initiatives, and community involvement to protect our 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, prevent stormwater pollution, and restore watersheds. The County also integrates water quality outreach as a vital component of watershed restoration projects.

During the reporting year, DoE hosted 317 environmental events that provided information or discussed benefits of one or more categories described in the bulleted items of the permit condition (e.g. A, B, C...) above. In addition to our extensive environmental public participation programs, which are primarily targeted to the County's adult population, DoE is also committed to the environmental education of our youth. An overview of the DoE outreach events and participants are provided in Table D-39.

Table D-39. 2016 DoE Outreach Activities

Activity - Event	Satisfy Permit Condition Type ¹	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Port Towns Elem School Tree Demo	A.B.E.	3/16/2016	SID	1	47
Anacostia Watershed Committee	B.C.D.E.F.	12/3/2015	SID	1	21
Stormwater outreach (SMD)	B.	7/18/2015	SID	1	25
National Night Out	G.	8/4/2015	AMD	2	200

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Activity - Event	Satisfy Permit Condition Type ¹	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Environmental Literacy Meeting	A.B.	7/15/2015	SID	1	9
Reuse, Reduce Recycle Event	D.E.	10/31/2015	WMD	1	24
Water Clean Water Clear Choices	A.B.C.E.	5/21/2016	SID	2	0
Stormwater Audit	B.	6/18/2016	SID	2	25
Mary Harris ES	A.B.E.	1/14/2016	SID	1	2
Arbor Day	A.B.C.E.	4/29/2016	DoE	3	45
Chesapeake Bay Commission	B.	9/11/2015	SID/SMD	1	50
Chesapeake Bay Foundation Adult Education Course	A.B.C.E.	10/26/2015	DoE	1	50
Choose Clean Water Conference	A.B.C.	5/24/2016	SMD	1	60
Greenbuild Host Committee on CE Behalf	A.B.C.D.E.F.G.	7/16/2015	SID	1	50
National Night Out	G.	8/4/2015	AMD	2	200
High Point Envirothon Prep.	A.B.C.E.	11/19/2015	SID	1	6
Speaker	A.B.C.E.	4/2/ 2016	SID	3	50
Environmental Studies Academy Meeting	A.D.E.F.	11/9/2015	SID	1	25
Environmental Studies Academy Meeting	A.D.E.F.	6/20/2016	SID	1	20
Berwyn Heights Green Team	A.B.C.E.	10/21/2015	SID	1	30
AWCAC (Anacostia Watershed Citizens Advisory Committee)	A.B.C.E.	9/8/2015	SID	1	12
Port Towns	A.P.C.E.F.G.	9/19/2015	DoE	2	190
Bladensburg High - Stenciling	A.B.C.E.F.G.	1/3/2016	SID	2	14
Bladensburg High	A.B.C.E.	1/13/2016	SID	1	15
Big Belly Trash Talk	B.D.E.F.	2/18/2016	WMD	1	20
Community Environmental and Health Fair	A.D.E.G.	3/5/2016	SID	2	165
AWCAC (Anacostia Watershed Citizen Advisory Committee)	A.B.C.E.	7/14/2015	SID	1	15
Port Towns Elem School Stenciling	B.S.D.E.F.	10/9/2015	SID	2	28
Speaker Bureau - School	A.C.E.F.G.	5/9/2016	SID	1	39
Supply Drive	A.B.C.E.	8/22/2015	AMD	1	35
Bowie High School	A.B.C.D.E.F.G.	10/14/2015	SID/SMD	1	14
Environmental Literacy	A.B.C.E.	10/15/2015	SID	2	
Tall Oaks Environmental Stewardship		10/28/2015	WMD	2	25
Tall Oaks Environmental Stewardship		10/28/2015	SID	2	25
Humane Education	G.	12/4/2015	AMD	1	40



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Activity - Event	Satisfy Permit Condition Type ¹	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Library Series Rain/garden barrel Series	A.C.E.	4/23/2016	SID	1	10
Adoption	G.	6/16/2016	AMD	2	100
Adoption	G.	6/23/2016	AMD	2	100
Bowie State University C4 Meeting	B.	10/21/2015	DoE	1	25
Bowie Green team meeting	A.B.C.E.F.G.	2/22/2016	DoE	1	20
Bowie State University Earthday Poetry Slam	B.	4/20/2016	DoE	1	50
Bowie State University C4 Meeting	B.	5/4/2016	SID/SMD	1	30
Professional Training		8/4/2015	DoE	1	17
Green School Training	B.E.F.	10/21/2015	SID	2	65
Sustainable Committee	A.B.C.E.	11/13/2015	SOD	1	40
Environmental Studies Academy	A.D.E.F.	9/21/2015	SID	1	20
Community Landscape/Garden Fair	A.C.E.	11/5/2015	SID/SMD	1	12
Stormwater Audit	B.	8/15/2015	SID	1	10
Water - Speaker Bureau - School	A.C.D.E.G.	5/4/2016	SID	1	375
Water - Speaker Bureau - School	A.C.D.E.G.	5/5/2016	SID	1	285
Manchester Estates Civic Association Meeting	D.E.	7/30/2015	OE/WMD	3	20
Camp Spring Sustainable Businesses	A.B.C.D.E.F.G.	10/19/2015	SID	1	10
Volunteer Cleanup	D.E.F.G.	9/12/2015	SID	2	24
Citizen Association Meeting	D.E.	1/11/2016	AMD/WMD	1	35
Humane Education	G.	11/16/2015	AMD	1	100
Tour of MRF	D.	7/1/2015	WMD	1	2
Tour of MRF	D.	7/2/2015	WMD	1	20
Tour of MRF	D.	7/7/2015	WMD	1	1
Tour of MRF	D.	7/9/2015	WMD	1	17
Tour of MRF	D.	7/14/2015	WMD	1	10
Tour of MRF	D.	7/22/2015	WMD	1	
Tour of MRF	D.	10/2/2015	WMD	1	13
Tour of MRF	D.	10/5/2015	WMD	1	22
Tour of MRF	D.	10/6/2015	WMD	1	2
Tour of MRF	D.	10/9/2015	WMD	1	32
Tour of MRF	D.	10/14/2015	WMD	1	4
Tour of MRF	D.	10/16/2015	WMD	1	10
Tour of MRF	D.	10/27/2015	WMD	1	13
Tour of MRF	D.	10/28/2015	WMD	1	11

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Activity - Event	Satisfy Permit Condition Type ¹	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Tour of MRF	D.	10/30/2015	WMD	1	7
Bradbury/Boulevard Heights Community President/Cleanup Event	C.D.E.F.G.	10/31/2015	SID	3	12
tour Lego Group/Saras Remanna	D.	2/5/2016	WMD	1	12
tour Panorama elementary	D.	2/10/2016	WMD	1	35
Tour Marlton elementary	D.	2/17/2016	WMD	1	9
Tour Grace Christian Academy	D.	2/25/2016	WMD	2	7
Tour	D.	2/26/2016	WMD	1	6
Central High School Outreach Enviroscape	A.B.	3/17/2016	SID/SMD	2	41
Speakers Bureau - School -	B.C.D.E.F.	4/21/2016	SID	2	25
Materials Recycling Facility	D.	5/3/2016	SID	1	25
Materials Recycling Facility	D.	5/5/2016	SID	1	30
Materials Recycling Facility	D.	5/13/2016	SID	1	27
Materials Recycling Facility	D.	5/19/2016	SID	1	45
Materials Recycling Facility	D.	5/20/2016	SID	1	45
Materials Recycling Facility	D.	5/23/2016	SID	1	45
Materials Recycling Facility	D.	5/25/2016	SID	1	4
Materials Recycling Facility	D.	6/15/2016	SID	1	8
Materials Recycling Facility	D.	6/24/2016	SID	1	63
Materials Recycling Facility	D.		SID	1	47
Materials Recycling Facility	D.		SID	1	17
Tour of MRF	D.		WMD	1	19
Tour of MRF	D.		WMD	1	20
Tour of MRF	D.		WMD	1	46
Tour of MRF	D.		WMD	1	8
Tour of MRF	D.		WMD		
Senator Besnon Bus Tour	A.B.C.E.F.	9/11/2015	DoE	1	30
202 Coalition Meeting	B.C.D.E.F.	9/28/2015	DoE	1	120
Volunteer Community Clean-Up in Coral Hills	D.E.F.G.	10/31/2015	DoE	1	30
Environmental Studies Academy Meeting	A.D.E.F.	2/22/2016	SID	1	15
Capitol Heights Code Enforcement	A.B.C.E.	3/9/2016	SID/SMD	1	1
Melwood Citizens Association	D.	3/10/2016	DoE/WMD	1	20
Melwood-Waterford Citizens Association	D.	4/11/2016	DoE/WMD	1	15
Hillside Civic Association	D.	4/21/2016	DoE /WMD	1	15
202 Coalition Meeting	B.C.D.E.F.	4/25/2016	DoE	1	150
Chevy Chase Citizen's	E.	12/1/2015	WMD	2	50



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Activity - Event	Satisfy Permit Condition Type ¹	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Group/Smart Waste: An Integrated Approach to Waste Mgmt.					
Adoption	G.	7/25/2015	AMD	3	100
National Nite Out	A.B.C.D.E.F.G.	8/4/2015	SID	1	45
Bunberry Hills/ Canberra Civic Association	A.B.C.D.E.F.G.	8/5/2015	DoE	1	12
Adoption	G.	8/22/2015	AMD	4	100
Adoption	G.	9/26/2015	AMD	4	100
Adoption	G.	10/24/2015	AMD	3	100
Mount Airy Community Mtg	E.	10/26/2015	SID	1	30
Adoption	G.	2/27/2016	AMD	3	100
Clear Choices: Clean Water - Clinton Lawn Clinic	A.B.C.D.	3/12/2016	SID	1	6
Library Series Rain/garden barrel Series	A.C.E.	4/9/2016	SID	1	10
Environmental Engagement	A.B.C.E.	4/18/2016	SID	1	200
Adoption	G.	6/25/2016	AMD	5	100
Bunberry Hill/ Canberra Civic Association Window Tour	A.B.C.D.E.F.G.	8/5/2015	DoE	1	11
District IV Coffee Circle Meeting	A.B.D.C.D.E.F.G.	1/13/2016	DoE	1	55
District IV Coffee Club Meeting	A.B.D.C.D.E.F.G.	3/23/2016	DoE /WMD	1	60
Coffee Circle Meeting District IV	A.B.C.E.F.	6/15/2016	DoE	1	30
DoE programs	A.B.E.	8/13/2015	DoE	1	40
Adoption	G.	9/19/2015	AMD	2	100
Adoption	G.	10/8/2015	AMD	10	1400
National Green Infrastructure Workshop	A.B.E.	10/27/2015	DoE /SMD	1	60
Master Gardner Training	E.	3/7/2016	SID	1	20
North College Park Citizen's Association	A.B.E.	3/10/2016	DoE	1	26
Master Gardner Training	E.	3/21/2016	SID	1	20
Transforming Communities: Trash Free Solutions for Healthy Lives, Clean Land and Safe Water:10th Annual Trash Summit	A.B.C.D.E.F.G.	3/22/2016	SID	1	126
Environmental Engagement	A.B.C.E.	4/2/2016	SID	1	40
Environmental Engagement	A.B.C.E.	4/2/2016	SID	2	300
Environmental Engagement	A.B.C.E.	4/2/2016	SID	1	70
Environmental Stewardship	A.B.	4/4/2016	SID/SMD	1	18
Master Gardener Training	E.	5/2/2016	SID	1	20

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Activity - Event	Satisfy Permit Condition Type ¹	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Trees- Master Gardener Training	A.C.E.	5/9/2016	SID	1	20
Trees Master Gardener Training	A.C.E.	5/18/2016	SID	1	20
DoE 2016 Green Summit	A.B.D.C.D.E.F.G.	5/19/2016	DoE /WMD	1	200
Trash	D.E.F.	5/19/2016	SID	1	15
Trees	A.C.E.	5/19/2016	SID	2	14
Water	A.B.	5/19/2016		1	56
Installing Pervious Pavement for Customers Who Want a Contractor Now	I.A.E.F.	11/14/2015	SMD	1	60
Environmental Engagement	A.B.C.E.	2/20/2016	SMD	1	35
How to care for your fruit and nut trees.	A.C.E.	3/19/2016	SID	1	15
Stormwater Audit	B.	8/22/2015	SID	1	5
Adoption	G.	7/11/2015	AMD	3	100
Good Housekeeping Green Housekeeping	E.	10/22/2015	SID	2	20
Forestville CNG Station Ribbon Cutting Ceremony	A.B.E.	11/20/2015	SID	1	45
Oakcrest Tower National Night Out	A.B.C.D.E.F.G.	8/4/2015	DoE	1	100
Forestville New Redeemer-Celebration Ceremony	B.	10/8/2015	SMD	5	40
Maryland Climate Coalition's Road Show 2015	A.B.E.	10/24/2015	SID	3	150
Oakcrest Snack and Chat	A.B.C.D.E.F.G.	11/19/2015	DoE	1	25
Concord Civic Association Meeting	C.C.E.ANE.R.F.G.	5/26/2016	DoE /WMD	2	50
Adoption	G.	8/23/2015	AMD	4	100
Edmonston Green Streets	A.B.C.E.	7/9/2015	SID	1	1000
Stormwater Audit	B.	8/1/2015	SID	1	11
Town Hall Meeting Stormdrain Stenciling	B.	9/28/2015	SID	2	35
Environmental Engagement	A.B.C.E.	Aoril 2, 2016	SID	2	25
Water Speaker Bureau	A.B.C.E.	5/20/2016	SID	1	25
Turf Valley	A.B.C.E.	6/21 & 6/22/2016	DoE	3	250
Fairmount Heights Workshop	A.D.E.	7/11/2015	SID	1	10
Prince George's County First Passive Housing Open House	P.D.E.F.	12/1/2015	DoE	1	30
Fairmount Heights Ecology Club	A.B.C.D.E.F.G.	12/7/2015	DoE	1	30
National Nite Out	A.B.C.D.E.F.G.	8/4/2015	DoE	1	60
DoE programs	A.D.C.E.F.G.	8/20/2015	DoE	1	21



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Activity - Event	Satisfy Permit Condition Type ¹	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Humane Education	G.	10/2/2015	AMD	1	100
County's 1st Alternative Compliance Retrofit	B.	10/8/2015	SMD	1	50
Clean up Green up	D.E.	10/14/2015	DoE		
PTSA Meeting		7/14/2015	SID	1	3
Forestville Green Team Meeting	A.B.E.	8/17/2015	SID	1	4
Ready for Work: Champions for Career and College Ready Graduates in Prince George's County	A.B.C.D.E.F.	11/4/2015	DoE	1	75
Forestville Green Team Meeting	A.B.D.C.D.E.F.G.	11/6/2015	DoE	1	3
Community Partners Meeting	A.B.C.D.E.F.G.	12/2/2015	DoE	8	100
DoE Community Partners Meeting	A.B.D.C.D.E.F.G.	4/6/2016	DoE	12	200
DuPont Village Neighborhood Watch Meeting	D.	4/14/2016	DOE/WMD	1	10
Community Partners Meeting	A.B.C.D.E.F.G.	9/2/2015	DoE	12	250
County Fair	A.C.C.E.F.G.	9/10/2015	SID	1	30
County Fair	A.C.C.E.F.G.	9/11/2015	DoE	1	48
County Fair	A.C.C.E.F.G.	9/12/2015	SID	1	69
County Fair	A.C.C.E.F.G.	9/13/2015	WMD	6	88
Adoption	G.	10/31/2015	AMD	1	100
Humane Education	G.	11/16/2015	AMD	1	50
District IV Coffee Circle Meeting	A.B.C.E.	2/24/2016	DoE	1	40
Beltway BBQ Showdown	A.B.C.E.F.G.	6/4/2016	DoE	1	125
Fort Washington & Forest Knolls Citizens Association	A.B.E.	9/2/2015	DoE /SMD	1	15
Piscataway Hills Citizens Association	A.B.C.E.	9/22/2015	DoE	1	15
Tantallon Community Meeting	A.B.C.E.	9/30/2015	DoE	1	40
Humane Education	G.	9/21/2015	AMD	1	20
Adoption	G.	7/19/2015	AMD	3	100
Adoption	G.	10/24/2015	AMD	2	100
Adoption	G.	2/21/2016	AMD	3	100
Adoption	G.	3/13/2016	AMD	3	100
Adoption	G.	5/15/2016	AMD	2	100
Humane Education	G.	1/16/2016	AMD	1	20
PG County School Recycling Meeting	PG.C.O.F.	7/23/2015	DoE /WMD	1	1
Coffee Club District IV	A.B.C.E.	9/2/2015	DoE	1	50
District III Coffee Circle Meeting	A.B.C.D.E.F.G.	10/7/2015	DoE	1	40

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Activity - Event	Satisfy Permit Condition Type ¹	Event Date	Host Agency	Number of Volunteers	Number of Attendees
District III Coffee Circle Meeting	A.B.C.D.E.F.G.	1/6/2016	DoE	1	50
Coffee Club Meeting Wegmans	A.B.C.E.	5/4/2016	DoE	1	60
Library Lecture	A.C.E.	10/3/2015	SID	1	6
Greenbelt Rain Garden Series - See Clean Water Clear Choices - Resident/Community	A.B.C.D.E.F	1/30/2016	SID/SMD	2	45
Environmental Engagement	A.B.C.E.	2/27/2016	SMD	2	65
Clear Choices: Clean Water - Rain Gardens Greenbelt	A.B.C.D.	3/19/2016	SID	2	37
Greenbelt Green Team/ Green ACES	A.B.C.E.	8/25/2015	DoE	1	12
Greenbelt Composting Meeting	E.	9/9/2015	SID	2	10
Legislative Priorities Listening Session	A.B.C.E.	10/27/2015	DoE	1	100
Green Team Biannual meeting	B.E.F.	6/2/2016	SID	1	50
WSA Class	A.B.E.	7/9/2015	SMD	1	7
Funders Panel		11/4/2015	DoE	2	50
Watershed Stewards Class	A.B.C.E.	12/16/2015	SID	1	8
Prince George's Green Team Summit		3/3/2016	SID	2	65
Humane Education	G.	5/12/2016	AMD	1	100
Trash	D.E.F.	5/12/2016	SID	2	47
KPGCB - Green Team Meeting	E.	6/2/2016	SID	3	85
Cheverly Community Market Day - Rain Barrels	A.B.	6/4/2016	SID/SMD	2	140
Tree - FTAP	A.C.E.	6/11/2016	SID	1	35
Hispanic Festival	A.B.C.D.E.F.G.	9/20/2015	DoE	4	250
LID/Meet the Grant Makers	A.B.C.D.E.F.G.	11/4/2015	DoE	3	75
Resource Conservation Plan Community Input Session	A.B.C.E.	1/5/2016	DoE/SID	1	30
Chillum Ray Civic Association	D.E.	3/22/2016	WMD	1	40
College Heights Estate Civic Association Meeting	A.B.C.E.	4/18/2016	WMD	2	30
Langley Park TNI Meeting	D.E.	4/28/2016	DoE	1	85
PG Plaza Transit District Redevelopment plan presentation	A.B.C.E.	5/24/2016	SMD	1	30- 35
Clean Sweep	D.E.	8/10/2015	WMD	1	25
University of Maryland	A.B.C.E.		DoE	1	300
training Session Green Team	A.B.C.E.	10/23/2015	SMD	3	90
Prince George's Green Team Meeting	A.B.C.E.	10/23/2015	DoE	1	40
Tri-Area Civic Association Meeting	A.B.C.E.	4/14/2016	DoE	1	25



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Activity - Event	Satisfy Permit Condition Type ¹	Event Date	Host Agency	Number of Volunteers	Number of Attendees
National Night Out	G.	8/25/2015	AMD		100
Radiant Valley Civic Association	D.F.G.	3/17/2016	WMD	1	30
Tri-Area Civic Association Meeting	B.	10/8/2015	SID	2	38
Clean Sweep Orientation Spring 2016	D.E.	3/23/2016	WMD	5	27
Langley Park Back to School Jam	A.B.C.E.	8/15/2015	DoE	1	300
Prince George's Chamber of Commerce, presentation	A.B.C.E.	8/27/2015	SID	1	10
Thomas Johnson Middle School	D.	1/2/2016	WMD	2	15
Humane Education	G.	2/3/2016	AMD		n/a
Storm drain stenciling	A.B.C.E.	2/22/2016	SID	1	66
Environmental Education	A.E.C.E.F.G.	4/19/2016	DoE	1	20
Environmental Engagement	A.B.C.E.	4/20/2016	SID	1	265
Storm Drain Stenciling	B.	4/20/2016	SID	2	15
Tree - Speaker Bureau	A.C.E.	5/1/2016	SID	2	40
Tree Planting Demonstration	A.C.E.	5/1/2016	SID	1	35
Water - Speaker Bureau	A.B.C.E.	5/1/2016	SID	2	90
Trash	D.E.F.	5/12/2016	SID	2	120
Trees	A.C.E.	5/25/2016	SID	1	30
Humane Education	G.	6/1/2016	AMD	2	50
World Environment Day	A.B.C.E.	6/2/2016	SID	1	25
Prince George's County Chamber of Commerce	A.B.C.E.	6/23/2016	SID	1	12
Green Technology & Sustainability- Green & Sexy	B.E.F.	9/24/2015	SID	1	8
DuVal High School (World Environmental Day)	A.B.C.D.E.F.G.	6/2/2016	DoE /WMD	1	30
Trees - Clean Water Clear Choices	A.C.E.	5/7/2016	SID	2	38
Environmental Action Council	A.B.C.E.	7/15/2015	DoE	1	12
Environmental Action Council Mtg.	E.C.C.F.	7/15/2015	DoE	7	35
Prince George's Recycling Office	A.B.C.E.	7/29/2015	WMD	3	7
County Composting Workgroup	A.B.C.E.	9/2/2015	WMD	3	20
Environmental Action Council	A.B.C.E.	9/16/2015	DoE	1	15
Environmental Action Council Mtg.	A.B.C.E.	9/16/2015	DoE	5	15
DOE Various locations	A.B.C.E.	9/21/2015	DoE	4	20
B5 Introductory Meeting	A.B.C.E.	10/2/2015	SMD	4	9
Clean up Green up tree planting training	D.E.	10/8/2015	DoE	1	25

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Activity - Event	Satisfy Permit Condition Type ¹	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Shred Event	A.B.C.E.	10/12/2015	WMD	11	3310
County Agency Green Forum	M.C.O.RIVE.R.F.G.	11/2/2015	DoE /SID	3	150
Kick off Recycles Day	D.E.	11/14/2015	WMD	6	53
Environmental Action Council	A.B.C.E.	11/18/2015	DoE	5	20
Sustainable Schoolyard Forum	A.B.C.E.	12/8/2015	SID	3	31
Community Engagement Meeting	A.B.C.E.	1/6/2016	DoE	1	13
Environmental Action Council Mtg.	A.B.C.E.	1/20/2016	DoE	4	30
Humane Education	G.	1/31/2016	AMD	1	
Environmental Engagement - Schools	A.B.C.E.	2/3/2016	SID	1	35
Environmental Engagement - Schools	A.B.C.E.	2/4/2016	SID	1	35
EAC Members	D.	2/25/2016	DoE /WMD	3	25
Humane Education	G.	3/5/2016	AMD	1	10
Cleansweep Partners Meeting	D.E.	4/7/2016	DoE /WMD	2	6
Tree - EAC	A.C.E.	6/15/2016	DoE		25
Inspection & Maintenance of LID Practices Workshop		10/7/2016	SMD	2	53
Environmental Action Council	A.B.C.E.	7/15/2015	DoE	5	13
Keep Prince Georges County Beautiful Board Meeting	D.	7/29/2015	WMD	1	10
Community Engagement Meeting	A.B.C.E.	8/4/2015	DoE	5	20
DoE programs	A.B.E.	8/4/2015	DoE	1	121
Corvias Community Engagement Meeting	C.C.O.F.	8/19/2015	DoE /SMD	2	3
Community Shred		9/12/2015	WMD		2500
Community Engagement Meeting	A.B.C.E.	10/2/2015	DoE	1	26
Environmental Literacy Framework Meeting	A.B.	10/14/2015	SID	1	7
Community Engagement Committee Meeting	A.B.C.E.	11/3/2015	DoE	1	26
Communications Meeting w/ Leonard Robinson "Enviro Bro"	A.B.C.E.	11/10/2015	DoE	3	1
Environmental Action Council Meeting	A.B.C.E.	11/18/2015	DoE	5	17
Community Engagement Meeting	A.B.C.E.	12/9/2015	DoE	1	9
Robotics Meeting (Lego Pros)	D.	12/17/2015	DoE/WMD	6	30
Polystyrene Ban	P.C.A.F.	2/8/2016	DoE	1	7
Frederick Douglass High School	A.B.C.D.E.F.G.	2/17/2016	DoE	1	20



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PTSA					
E-Works Meeting (Green Scene)	A.D.E.F.	3/3/2016	SID/WMD	2	1
Community Engagement Meeting	A.B.C.E.	3/7/2016	DoE	1	6
DoE Latino Community Relations Meeting	A.B.C.E.	3/8/2016	DoE	3	2
Environmental Action Council Meeting	A.B.C.E.	3/16/2016	DoE	3	20
PR Plan/ Waste and Alternative Energy Processing	A.B.C.E.	4/8/2016	WMD	3	6
Community Engagement Meeting	A.B.C.E.	4/13/2016	DoE	1	8
TCAP Restoration Grant Webinar	B.	6/9/2016	DoE	2	25
Community Engagement Meeting	A.B.C.E.	6/14/2016	DoE	1	13
Environmental Action Council Meeting	A.B.C.E.	6/15/2016	DoE	1	25
Village of Oak Grove Community Meeting	A.C.E.	10/13/2015	SID	1	20
Adoption	G.	7/25/2015	AMD	6	100
Adoption	G.	8/1/2015	AMD	2	100
Adoption	G.	8/30/2015	AMD	6	100
Adoption	G.	9/5/2015	AMD	3	100
Storm Drain Stenciling		9/17/2015	SID	2	10
Adoption	G.	2/13/2016	AMD	2	100
Humane Education	G.	3/3/2016	AMD	1	50
Adoption	G.	3/5/2016	AMD	3	100
Adoption	G.	5/7/2016	AMD	3	100
Adoption	G.	6/4/2016	AMD	3	100
HOA Meeting Rain Barrels	A.C.E.	6/20/2016	SID/SMD	1	15
Coffee Club Meeting Laurel	A.B.C.E.	5/5/2016	DoE	1	30
Library Series Rain/garden barrel Series	A.B.E.	4/23/2016	SID	1	15
Humane Education	G.	10/27/2015	AMD	1	60
Humane Education	G.	10/21/2015	AMD	1	100
District IV Coffee Roundtable	A.B.C.D.E.F.G.	7/22/2015	DoE	1	35
Library Lecture	A.C.E.	10/17/2015	SID	1	12
District IV Coffee Roundtable	A.B.C.D.E.F.G.	10/28/2015	DoE	1	50
Oxon Hill High School Stenciling	A.B.E.	10/30/2015	SID	2	11
Joint District 3,5,7 Coffee Circle Meeting	A.B.C.D.E.F.G.	4/13/2016	DoE /WMD	1	70
John Hanson Montessori Earth		4/22/2016	SMD	1	100

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Activity - Event	Satisfy Permit Condition Type ¹	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Day					
School - Environmental Engagement	A.S.C.E.F.G.	4/22/2016	SID	1	240
School - Environmental Engagement	A.S.C.E.F.G.	4/22/2016	SID	1	240
Kentland-Palmer Park TNI Town Hall	A.B.C.E.	3/15/2016	WMD	3	60
Green Cities	A.B.F.	9/16/2015	DoE	1	50
Volunteer Clean Up	D.E.F.G.	9/26/2015	SID	2	33
Education	A.B.C.E.	9/24/2015	SID	1	5
CE Legislative Listening Session	A.B.C.E.	11/9/2015	DoE	1	75
Parkdale Program Admin Meeting	G.P.E.D.N.F.G.	11/18/2015	DoE /SMD	1	35
TNI Bladensburg East Riverdale Meeting	A.B.C.D.E.F.G.	4/5/2016	DoE /WMD	1	25
Volunteer Neighborhood Cleanup at CASA (Court Appointed Special Advocate for PG County)	D.E.F.G.	6/10/2016	AMD	2	75
Volunteer Cleanup at William Worth Middle School	D.E.F.G.	9/26/2015	SID	2	31
Sustainability presentation	A.B.C.E.	7/23/2015	SID	1	29
Riverdale Farmers Market	A.B.C.E.	9/24/2015	SID	1	35
Environmental Engagement - Schools	A.B.C.E.	2/9/2016	SID	1	40
Environmental Engagement - Schools	A.B.C.E.	2/23/2016	SID	1	30
Anti-Litter - Stream Clean up	B.C.D.E.F.	4/16/2016	SID	1	60
Tree Planting Demonstration	A.C.E.	5/9/2016	SID	1	26
Speaker Bureau		5/14/2016	SID	1	110
COPE Speakers Bureau -	A.COPE.C.E.F.G.	2/8/2016	SID	1	37
Green Infrastructure Research and Incentives Workshop at Watershed	A.B.	6/9/2016	SID	1	55
Presented on Clean Sweep Initiative	A.P.C.E.F.G.	9/1/2015	SID	1	40
Adoption	G.	7/18/2015	AMD	4	100
Adoption	G.	10/17/2015	AMD	2	100
Humane Education	G.	11/13/2015	AMD	1	50
Rain Barrel Presentation to City Council	A.B.C.E.	10/5/2015	SID	1	20
Adoption	G.	All Month	AMD		100
Tree Planting Demonstration	A.C.E.	5/10/2016	SID	1	15
National Night Out	A.B.C.D.E.F.G.	8/4/2015	DoE	1	150



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Activity - Event	Satisfy Permit Condition Type ¹	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Suitland Community Center	A.C.D.E.G.	10/24/2015	DoE	2	24
Green Building Tour of Net Zero House	E.	11/20/2015	DoE	1	55
COPE Speakers Bureau -	COPE.L.P.F.	2/4/2016	SID	1	32
Carole Highlands Elementary School Back2School Night	A.C.C.E.F.G.	9/3/2015	SID	1	40
Branch Av In Bloom	A.B.C.E.	8/15/2015	SID	1	88
Henderson Road Neighborhood Watch	D.E.F.	11/10/2015	SID	1	25
Humane Education	G.	10/27/2015	AMD	1	100
Legislative Priorities Listening Session	A.B.C.D.E.F.G.	10/27/2015	DoE	1	31
Humane Education	G.	6/1/2016	AMD	1	100
Hillcrest Marlow Heights Civic Association	A.B.C.E.	9/17/2015	DoE	1	60
Karen Toles Senior Luncheon & Fish Fry	D.	10/9/2015	DoE /WMD	1	150
Henderson Road Neighborhood Watch	A.B.C.E.	11/10/2015	DoE	1	15
Balmoral Lawn Care Clinic	A.B.C.E.	7/9/2015	SID	1	10
Volunteer Meeting	G.	7/9/2015	AMD		15
Volunteer Orientation	G.	7/11/2015	AMD		6
Volunteer Orientation	G.	7/11/2015	AMD		11
TNI Internal Meeting	A.B.	7/21/2015	DoE /SID	1	30
YMCA Thingamajig	E.	7/25/2015	SID	17	2000
Cleansweep Initiative	D.E.	7/30/2015	DoE /WMD	4	15
DCAO Meeting Clean Sweep	D.E.	7/30/2015	DoE /SID	1	18
National Night Out	G.	8/4/2015	AMD	2	250
Volunteer Orientation	G.	8/8/2015	AMD	1	7
Adoption - Clear the Shelter Event	G.	8/15/2015	AMD	19	500+
TNI Internal Meeting	A.B.	8/18/2015	DoE /SID	1	40
Volunteer Orientation	G.	8/19/2015	AMD	1	11
Mel Franklin's Family & Friends Funday	G.	8/30/2015	AMD	4	100
Volunteer Meeting	G.	9/3/2015	AMD	12	13
Volunteer Orientation	G.	9/8/2015	AMD	1	14
Volunteer Event	G.	9/13/2015	AMD	9	9
Tour of Yard Waste Composting Facility	E.	9/15/2015	WMD	1	7
E-Works Tour (Melwood)	D.E.	9/23/2015	WMD	1	6
Tour of Yard Waste Composting Facility	E.	9/24/2015	WMD	1	2
Volunteer Event	G.	9/26/2015	AMD	6	7

Annual NPDES MS4 Report **2016**

Activity - Event	Satisfy Permit Condition Type ¹	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Volunteer Orientation	G.	9/26/2015	AMD	1	6
Volunteer Orientation	G.	10/7/2015	AMD	1	6
:Mt. Airy Clay Breakers Garden Club	A.B.C.E.	10/8/2015	SID	1	20
Humane Education	G.	10/11/2015	AMD	1	n/a
Humane Education	G.	10/15/2015	AMD	2	100
Adoption	G.	10/18/2015	AMD	34	
Humane Education	G.	10/21/2015	AMD	1	100
Tour of Yard Waste Composting Facility	E.	10/21/2015	WMD	1	6
Tour of Yard Waste Composting Facility	E.	10/23/2015	WMD	2	12
Tour of Yard Waste Composting Facility	E.	10/23/2015	WMD	1	24
Tour of Yard Waste Composting Facility	E.	10/23/2015	WMD	1	2
Humane Education	G.	10/24/2015	AMD	6	n/a
Volunteer Orientation	G.	10/24/2015	AMD	1	10
Humane Education	G.	10/25/2015	AMD	1	n/a
Tour of Yard Waste Composting Facility	E.	10/27/2015	WMD	2	35
Humane Education	G.	11/8/2015	AMD	15	
Volunteer Orientation	G.	11/9/2015	AMD	1	9
Tour of Yard Waste Composting Facility	E.	11/13/2015	WMD	2	17
Humane Education	G.	11/15/2015	AMD	1	18
DoE Compost Education Bus Tour	E.	11/20/2015	WMD	1	7
Tour of Yard Waste Composting Facility	E.	11/20/2015	WMD	2	20
Humane Education	G.	11/21/2015	AMD	1	8
Volunteer Orientation	G.	11/21/2015	AMD	1	2
Tour of Yard Waste Composting Facility	E.	11/23/2015	WMD	2	14
Tour of Yard Waste Composting Facility	E.	11/23/2015	WMD	2	12
Tour of Yard Waste Composting Facility	E.	11/27/2015	WMD	1	8
Volunteer Orientation	G.	12/1/2015	AMD	1	4
Collective Empowerment Group 20th Anniversary Platinum Celebration	A.B.C.E.	12/3/2015	SMD	1	250
Tour	E.	12/18/2015	WMD	2	15
Volunteer Orientation	G.	12/19/2015	AMD	1	6



Annual NPDES MS4 Report **2016**

Activity - Event	Satisfy Permit Condition Type ¹	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Volunteer Orientation	G.	1/6/2016	AMD	1	15
District II Coffee Circle Meeting	A.B.C.D.E.F.G.	1/15/2016	DOE	1	35
Western Branch Facility	E.	1/15/2016	WMD	3	10
Milk Disposal	D.	1/29/2016	DoE/WMD	1	10
Volunteer Orientation	G.	1/30/2016	AMD	1	21
Adoption	G.	2/3/2016	AMD	1	n/a
Humane Education	G.	2/4/2016	AMD	13	15
Milk Disposal Recycling Meeting	D.	2/8/2016	DoE/WMD	1	8
Adoption	G.	2/10/2016	AMD	1	n/a
Volunteer Orientation	G.	2/20/2016	AMD	14	15
Humane Education	G.	2/27/2016	AMD		9
Volunteer Orientation	G.	3/3/2016	AMD	1	6
Adoption	G.	3/10/2016	AMD	1	n/a
Humane Education	G.	3/10/2016	AMD	15	
Humane Education	G.	3/12/2016	AMD	15	
Humane Education	G.	3/12/2016	AMD	15	
Humane Education	G.	3/15/2016	AMD	1	10
Adoption	G.	3/16/2016	AMD	1	n/a
Volunteer Orientation	G.	3/19/2016	AMD	1	10
Western Branch	E.	3/22/2016	WMD	2	7
Adoption	G.	3/23/2016	AMD	1	n/a
Humane Education	G.	3/24/2016	AMD	15	
Western Branch	E.	3/29/2016	WMD	1	7
Adoption	G.	3/30/2016	AMD	1	n/a
Volunteer Meeting	G.	3/31/2016	AMD	9	
Western Branch	E.	4/8/2016	WMD	2	13
Western Branch	E.	4/14/2016	WMD	2	4
Glassmanor/Oxon Hill TNI Meeting	A.B.C.D.E.F.G.	4/19/2016	DoE	1	20
Western Branch	E.	4/23/2016	WMD	663	7
Western Branch	E.	4/27/2016	WMD	2	27
Arbor Day Celebration/32nd Annual Tree City USA Award	A.B.C.E.	4/29/2016	SID	5	40
Humane Education	G.	5/3/2016	AMD	1	9
Humane Education	G.	5/5/2016	AMD	1	14
Humane Education	G.	5/7/2016	AMD	1	15
Volunteer Orientation	G.	5/7/2016	AMD	1	8
Humane Education	G.	5/9/2016	AMD	1	18
Humane Education	G.	5/10/2016	AMD	1	5
Humane Education	G.	5/12/2016	AMD	3	80+
Adoption	G.	5/22/2016	AMD	4	100
Volunteer Orientation	G.	5/31/2016	AMD	1	5

Annual NPDES MS4 Report **2016**

Activity - Event	Satisfy Permit Condition Type ¹	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Humane Education	G.	6/4/2016	AMD	1	16
Humane Education	G.	6/4/2016	AMD	2	
Volunteer Orientation	G.	6/8/2016	AMD	1	4
Humane Education	G.	6/9/2016	AMD	1	2
Western Branch	E.	6/9/2016	WMD	2	6
Humane Education	G.	6/25/2016	AMD	2	100
Volunteer Orientation	G.	6/25/2016	AMD	1	5
Humane Education	G.	6/26/2016	AMD	1	15
Western Branch	E.	6/30/2016	WMD	1	8
Tour of Yard Waste Composting Facility	E.	10/16/2025	WMD	1	5
Adoptions	G.	4/30 - 5/31/2016	AMD		100
Adoptions	G.	4/30 - 5/31/2016	AMD		100
Adoption	G.	All Month	AMD		100
Adoption	G.	All Month	AMD	1	100
Adoption	G.	All Month	AMD	1	100
Adoption	G.	All Month	AMD	1	100
Adoption	G.	All Month	AMD	1	n/a
Adoption	G.	All Month	AMD	1	n/a
Adoption	G.	All Month	AMD	1	n/a
Adoption	G.	All Month	AMD	1	n/a
Adoptions	G.	Entire Month of June	AMD	4	100
Tour of Yard Waste Composting Facility	E.	7/7/2015	WMD	2	25
Montpelier Farms	D.	7/14/2015	WMD	1	15
Tour of Yard Waste Composting Facility	E.	7/17/2015	WMD	1	1
Tour of Yard Waste Composting Facility	E.	7/31/2015	WMD	2	30
Tour of Yard Waste Composting Facility	E.	7/31/2015	WMD	1	5
Tour of Yard Waste Composting Facility	E.	8/6/2015	WMD	2	6
Public School work session	A.P.C.E.F.G.	8/8/2015	SID	1	400
Tour of Yard Waste Composting Facility	E.	8/11/2015	WMD	1	1
Tour of Yard Waste Composting Facility	E.	8/12/2015	WMD	2	11
Tour of Yard Waste Composting Facility	E.	8/13/2015	WMD	1	4
Green Festival Expo	A.B.C.D.E.F.G.	5/7/2016	DoE	1	



Activity - Event	Satisfy Permit Condition Type ¹	Event Date	Host Agency	Number of Volunteers	Number of Attendees
Women's National Democratic Club	A.B.C.D.E.F.	11/3/2015	DoE	1	70
Adoption	G.	7/30/2015	AMD	2 volunteers & 4 Summer Youth Employee Participants	25
Humane Education	G.	10/21/2015	AMD	2	100
Adoption	G.	2/12/2016	AMD	2	100
Campfire	A.B.C.D.E.F.G.	9/26/2015	SID	1	175
Community Clean up	D.E.G.	4/23/2016	SID	4	35
Water - Speaker Bureau	A.B.C.E.	5/2/2016	SID	1	19
County Fair	A.B.C.E.		SMD	2	30
Total				1,635	31,860

¹Permit 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, the information was provided to the general public and interested parties about various incentive based programs that are designed to reduce storm water pollution through direct or indirect means. These programs are discussed below in details.

Community Outreach Promoting Empowerment (COPE)

DoE through the Sustainable Initiatives Division/COPE has held 159 events reaching 9,830 people to engage communities and individuals in restoration, promoting sustainable solutions and leveraging community action. The key focus areas were trees, stormwater and trash. In addition, enhancements were made to existing programs and several new programs to improve water quality and green the County's communities were launched. Clean Water: Clear Choices training builds on the Stormwater Audits established last year. This program provides interested communities, nonprofits, municipalities and watershed groups with opportunities to host workshops that will give community members the tools to install rain gardens, rain barrels, green roofs, and more. The series combines classroom instruction with site visits and in house design opportunities. The series can be one class or up to three.

In addition, SID/COPE in partnership with Ports Towns Community Health Partnership launched a Clean Water Clear Choice Contractor Training Program to help local businesses get the skills that they



need to help expand the County's rebate program as well as help our community protect the water quality of the Chesapeake Bay. Two workshops targeting businesses and contractors interested in rain gardens and pervious pavement were held to increase the capacity of local businesses to support the County's Rain Check Rebate Program. In addition, in partnership with the Forestry Board a CBT mini-grant was received to do a series of workshops for businesses to increase the capacity of local businesses to support the County's Rain Check Rebate Program.



Stormwater Audits was launched to help educate and promote active participation in reducing stormwater impacts. It is hands-on training to educate homeowners on how to evaluate their own homes to utilize green practices to beautify their yards, save money, and reduce the impact of stormwater. Staff walks the chosen properties with homeowners and makes suggestions on the types and potential locations for stormwater BMPs. They learn about which of the Rain Check Rebate Program practices may be applicable to their properties and how to apply. Participants receive field sheets they can use to perform their own home audit. This year a "virtual audit" option was created for presentation at night meetings or in the case of inclement weather. As part of the development of the draft strategies, slogans

were developed for the key NPDES outreach areas (See table). In addition, strategies were drafted and should be finalized in early fall.

Table D-40. Slogans for NPDES Outreach Focus Areas

Focus Area	Slogan	Audience
Hazardous Waste Slogans	Too Toxic to Trash? Call County Click 311 to find out.	DIYers and people that often use or dispose of cleaners and lawn products
Anti-litter	Slam dunk the junk. Put trash in the can.	Millennials
Anti-litter	Bin there. Done that. Have you? Put trash in the bin, not on the ground.	General
Anti-litter	Slam dunk the junk. Put trash in the can, not on the ground.	Children
Lawn Care	A little goes a long way. Fertilize sparingly and caringly.	Homeowners
Lawn Care	Cultivate a better environment. Fertilize sparingly and caringly.	Gardeners
Trees	Branch out! Plant a tree to green your community.	Homeowners
Trees	Pretty properties have higher price points. Plant trees to make your property shine.	Landlords
Stormwater	Slow it down. Spread it out. Soak it in. Hold your stormwater on your property.	Homeowners
Car Care	What happens in your driveway DoEsn't stay in your driveway. Fix that leak.	DIYers



Focus Area	Slogan	Audience
Car Care	Lose that leak. Practice good car care.	Car Owners

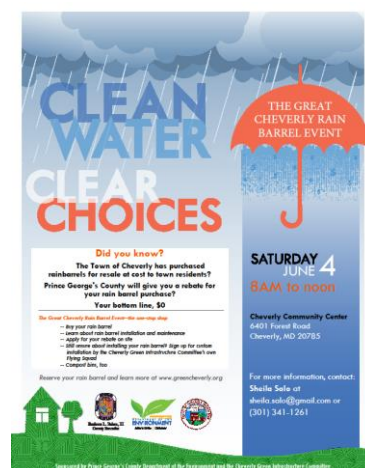
Rain Check Rebate Program

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 Rain Check approved stormwater management practices. Homeowners, businesses, and nonprofit entities (including housing cooperatives and churches) can recoup some of the costs of installing 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, non-profit 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 partnership with Cheverly Green Infrastructure Committee and Cheverly, a Rain Barrel Event was held in conjunction with the June 4 Market Day. This gave residents the opportunity to slow down the rain water coming off the roof, cool it off, spread it out, and soak it in. Residents brought a rain barrel from the town for \$50 and were able to sign for their rebate from Prince George's County all in one stop with no cost to them. Over 75 rain barrels were sold and applications for rebates submitted. This event will serve as a prototype for events in FY 17.

The County has continued to use the brochures listed below to promote the *Rain Check Rebate Program* to raise stormwater pollution awareness and 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 Prince George'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 also include links to resources for audiences seeking additional information or more detailed advice.



Green Roofs: Benefit You & Your Community

Cisterns: Benefit You & Your Community

Pavement Removal: Benefit You & Your Community

Rain Barrels: Benefit You & Your Community

Permeable Pavement: Benefit You & Your Community

Rain Gardens: Benefit You & Your Community

Urban Tree Canopy: Benefit You & Your Community

Rain Check Rebate Program

M-NCPPC Environmental Outreach and Education

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

M-NCPPC also offers on-site programs, so that classes can visit one of their nature centers or waterfront parks. Programs at these sites include river ecology boat tours, nature hikes and other hands-on activities.

M-NCPPC has a very strong volunteer program. They have thousands of volunteers each year who give their time towards environmental projects. These projects include river clean-ups, pond clean-ups, park/trail clean-ups, 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 program. Local schools, churches, groups and families make a two-year commitment to taking care of their section of trail or park. Many of the trail sections run parallel to stream beds, and so by adopting the trail, many of these groups also clean the streams.

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

Total numbers July 1, 2015 - June 30, 2016:

- Total Programs: 2,569
- Total Program Participants: 82,705
- Total Special Event: 39
- Total Special Event participation: 25,616
- Total participants in environmental education/outreach programs: 108,321

Annual Children's Water Festival and Watershed Fair and Family Campfire

DoE participated in WSSC's Annual Children's Water Festival and Watershed Fair and Family Campfire on May 4 and 5, 2016. Each year 660 fourth-graders from public and private schools as well as homeschool students from Prince George's and Montgomery Counties attend the two-day event. Each day, the students learn about environmental stewardship with approximately 12 hands-on learning activities focused on water, the Chesapeake Bay, wetlands, human health, and aquatic life. This event was held on the



grounds of Brighton Dam. Using the EnviroScope and the trash game, DoE staff engaged 175 students in activities that help improve our land and water resources.

Adopt-A-Road

The 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 4 times per year, but the frequency and dedication to quarterly cleanups varies. Currently there are 52 associations/community groups participating in the program and approximately 200 events are supported annually. Trash collected during the cleanup is left along the roadway, usually in the vicinity of the Adopt-a-Road sign. DPW&T crews pick up the trash collected by the communities as part of routine road maintenance. Tonnage collected is captured under the achievements of the Litter Control Program.

Stormwater Management Facility Maintenance

Pilot Pond Community Program

The Office of Project Management (OPM) of DPW&T 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 Surface Water Management Facilities (SWMFs) with storm drain maintenance being the Department's largest operational function. Recognizing the opportunity to leverage limited resources and improve the overall management of County ponds. The program addresses the limited functionality and poor aesthetics of our 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 would perform a detailed inspection of the existing facility and perform all required functional improvements to bring the facility to design standards and, as part of the program, retain this responsibility.
- DPW&T would provide 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 would both contract for and pay for these aesthetic improvements.
- Community would execute a binding agreement/memorandum of understanding (MOU) 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 program was started in 2010. The 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 included in Table D-41.

Table D-41. Number of SWMF projects completed.

Calendar Year	Number of SWMF Completed
2011	2
2012	4
2013	3
2014	0
2015	3
2016	0
Total	12

BMP Inspection Program for Private SWMF

The County is cognizant that the successful implementation of the Preventative 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 or their representative during the inspection process. To further emphasize the need for compliance, the County provides property owners and on-site managers with a written assessment of the inspection results and a compliance schedule.

Household Hazardous Waste

The *Household Hazardous Waste and Electronics Recycling brochure* promotes the proper disposal of chemicals and hazardous waste and eCycling opportunities available to County residents. The brochure, both in English and Spanish, stresses the importance of safe disposal of hazardous waste and opportunities for recycling unwanted electronic devices. The County maintains a permanent Household Hazardous Waste Acceptance Site, open and free-of-charge to County residents, at the Brown Station Road Sanitary Landfill (BSR) 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 8,574 vehicles dropped off hazardous and electronic waste this reporting year. A summary of the materials collected are listed below:

- 226.19 tons of electronics;
- 59,985 gallons of liquid household hazardous waste; and
- 23.14 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 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 40-50 hours



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

Prince George's Master Gardeners are a part of the Maryland Bay-Wise Program offered by the UMES. This program takes a holistic approach to cleaning the Bay and promotes better water quality through smarter gardening with stormwater management, composting, water efficiently, fertilize wisely, mulching and composting, recycle yard waste, Integrated Pest Management, emphasize native plantings, and protect the waterfront. The County's Master Gardeners teach citizens and residents ways to decrease the amount of toxins, nutrients, and sediments that flow into our 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 and manage the volunteer activities of 150 Master Gardeners and 25 interns. A list of the lectures and workshops related to stormwater management and water quality are listed below for this permit year:

- Instruction to 17 Master Gardener Interns on Basic Bay-Wise Landscape Management Program on April 8th
- Three Master Gardener's residential homes received the Bay-Wise Landscape Certification
- BayWise Presentation at Community Forklift Garden Party on March 26th
- Instruction to 20 Master Gardeners on sustainable gardening including waterwise gardening.
- One Library lectures on Rain Gardens at South Bowie Library on April 23rd, 2016 with 15 attendees
- Library lectures on Rain Barrels at Laurel Library on May 28th, 2016 with 5 attendees
- Library Lecture on Rain Barrels at Surratts-Clinton Library on April 9th 2016 with 7 attendees

Edible Demonstration Garden at Prince George's DPW&T D'Arcy Road Facility

The Edible Demonstration Garden located at the DPW&T 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. As gardeners we 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 (IPM)
- Protect the soil with mulch or cover crops
- Control stormwater runoff

Prince George's County: Department of Public Works and Transportation (Right Tree, Right Place Program [Bradford Pear Tree Replacement Program])

The Right Tree, Right Place (RTRP) program is an urban risk management tree program developed by the DPW&T to systematically remove and replace dead, dying, and high risk street trees; many of which were Bradford Pears and Ash trees killed by the Emerald Ash Borer, and 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 field's dozens of calls each week with requests for trees, tree removal, and clarification of work being performed in communities. During this reporting period approximately 820 high risk or dying trees were removed and 3,300 trees were planted. (See Table D-42 for trees replaced within TNI areas, Figure D-7 for project area locations, and Table D-43 for number of trees planted since program inception).

Table D-42. FY 2016 Right Tree Right Place in TNI areas

TNI	Removals	New trees
Glass Manor	2	90
Kentland	1	113
Palmer Park	1	75
Total FY 2016	4	278

Table D-43. Right Tree, Right Place Program Tree Replaced (2011-2016, Includes TNI Areas)

NPDES Year	Trees Planted (approximate)
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
Total	23,899

Prince George's County: Department of Public Works and Transportation (Clean Up Green Up)

This one-day, county-wide landscape beautification effort of the County Executive in Prince George's County, Maryland, has been bringing communities together for over ten 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.

Homeowners associations, schools, civic associations, municipalities, and other neighborhood groups can register via an application on the DPW&T or 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 (usually mid-October), as well as complete weeding, mulching, and general cleaning projects for outdoor areas.

The Neighborhood Design Center (NDC) partners with DPW&T, and other agencies, by providing design and technical assistance to any interested groups. Last year, NDC provided outreach, education and design services to over 90 groups throughout the County through DPWT's Clean Up Green Up program. The 2015 Clean Up Green Up event was held on Saturday October 17, 2015. Achievement realized through this partnership is provided in Table D-44.

Table D-44. Clean Up Green Up Achievements

Achievement	Number
Sites	231
Volunteers	3,413
Trees installed	975
Shrubs installed	600
Perennials/ ornamental grasses/ spring flowering bulbs	18,000
Landscape designs by the NDC	91
Litter and debris collected	38.4 tons



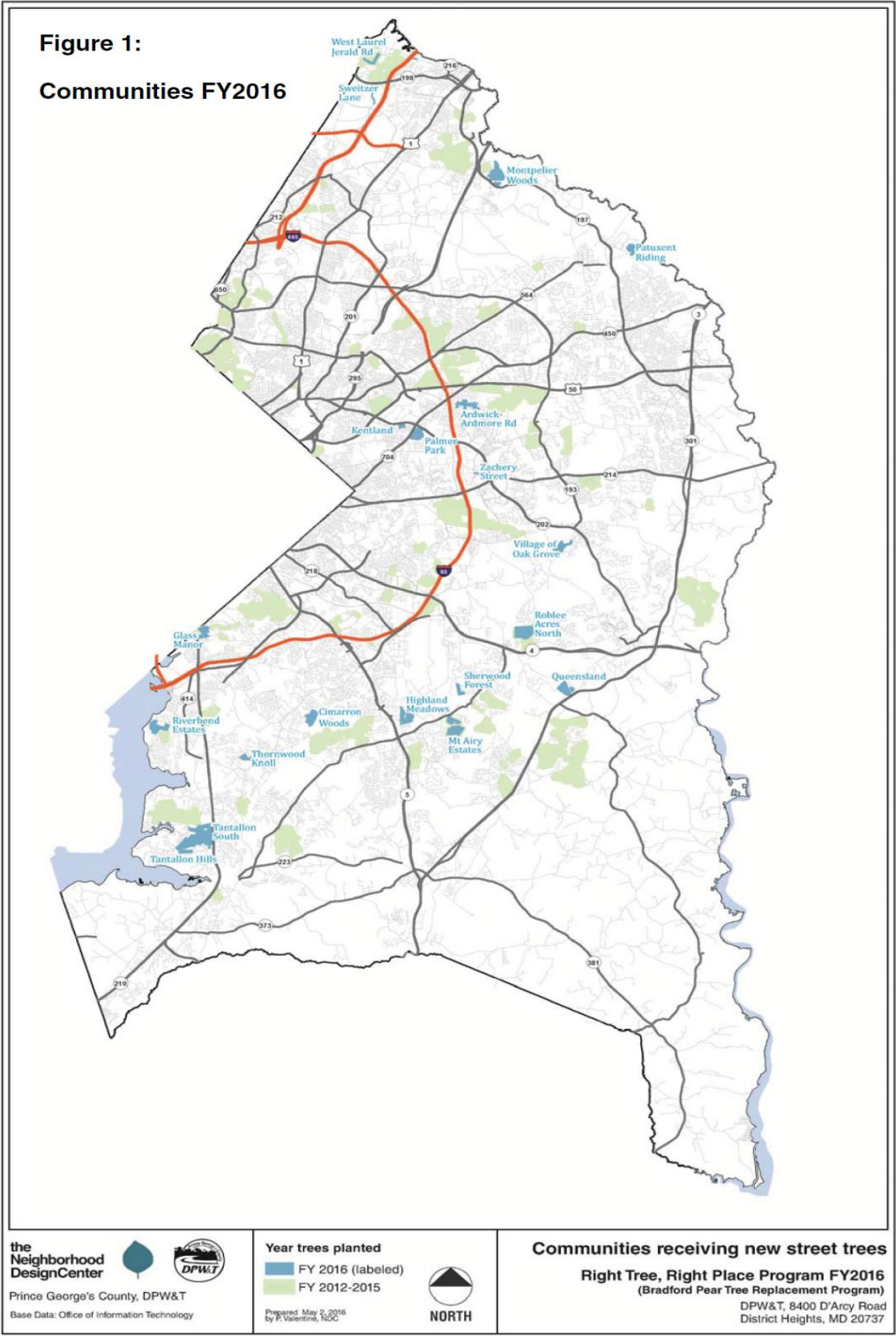


Figure D-7. Right Tree, Right Place Program Project Areas

Arbor Day

DoE in partnership with the Beautification Committee held Annual Arbor Day at the Prince George's County Soil Conservation District Office. This year, Arbor Day was celebrated on April 29th where six native trees were planted. The partnership details are presented in Figure D-8.



Figure D-8. Arbor Day

Prince George's Beautification Committee

This year marked the 46th anniversary of the Prince George's County Beautification Committee, an all-volunteer organization dedicated to honoring the landscaping efforts of those in the community who make a difference. It also marks the 32nd consecutive year of receiving Tree City USA. 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, rating on first impression, suitability of design to purpose, design, implementation, sustained maintenance, and final impression. This year the Committee recognized over 66 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, 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. This planting season (October 1, 2015 to May 1, 2016) a total of 8 projects were completed resulting in 203 native trees being planted at a cost of \$21,844.65 (see Table D-45). Based on the National Tree Benefit Calculator these trees will intercept 13,650 gallons of stormwater runoff per year and reduce atmospheric carbon by 1,560 pounds per year.

In addition, DoE provided supplies (mulch, stakes and gator bags) to the Family Tree Adoption Program (FTAP) to plant trees on private property and provide training. A total of 109 native trees were planted through this effort. The FTAP is a grassroots program to provide free native trees or shrubs to private homeowners in Prince George's County, Maryland. The program was founded through DoE's Stormwater Stewardship Grants.

Table D-45. 2015-2016 Tree ReLeaf Program

Applicant	Number of Trees
City of Bowie	35
Town of Edmonston	54
Collington Episcopal Life Care Committee	11
Lake Arbor HOA	20
Town of Hyattsville	35
Alternative Development, Inc	23
Cinnamon Ridge Condo Association	25

Arbor Day Every Day

In the spring of 2015, DoE launched Arbor Day Every Day (ADED). The ADED 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/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 two years and recruiting staff to dig holes and plant. Schools interested in applying to the ADED program should: (1) submit Intent to Apply form; (2) schedule a consultation with DoE staff; and (3) submit a Program Application. DoE works with the schools to develop the planting plan and post-planting maintenance plan. A total of 395 native trees and shrubs were planted in FY16 (Table D-46).

Table D-46. 2015-2016 Native Trees and Shrubs Planting.

School	Trees
Capital Heights	41
John Hansen French I	23
Dwight Eisenhower Middle School	47
Oxon Hill High School	10

School	Trees
Wheatley Early Childhood Center	10
Schmidt Center Ormer Building	1
Francis Scott Key	38
Ridgecrest Elementary	24
Port Towns Elementary	39
Parkdale High School	78
Bladensburg High	33
Thomas Johnson Middle	25
Central High	6
Robert Gray	20

Tree Planting Demo

In FY16, 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 ADED or Tree ReLeaf project or independently. A presenter from DoE/COPE will through a hands-on demonstration, show the group how to properly plant 1 to 3 trees as well as discuss the benefits of native trees and the long term care to ensure survival. Information on the tree planting programs (ADED, Tree ReLeaf, Rain Check Rebate) will be available to assist the groups in planting trees. A total of eight demonstrations were done resulting in 13 trees being planted.

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.*

Permit Condition Actions

In early spring 2015, DoE initiated the publication of the Clean Water Program Guidebook series for the regulated communities 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. The guidebook provides information on following:

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



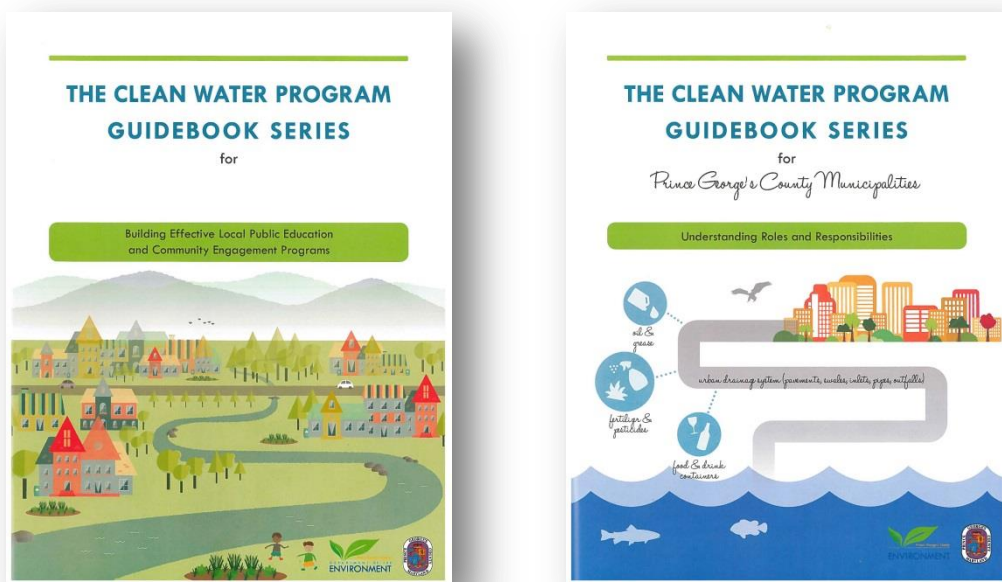


Figure D-9. The Clean Water Program Guidebook Series
Litter Control, Recycling, and Composting

Litter Control

Storm Drain Stenciling

This information has been provided on page 58.

Neighborhood/Community Cleanups

The 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 community participation projects and an estimate of the tonnage of trash collected is provided in Table D-47.

Table D-47. Volunteer Neighborhood Cleanup Summary (July 01, 2015 - June 30, 2016)

Project Date	Volunteer Group	Tons of Trash
11/14/15	Town of Berwyn Heights	0.27
12/19/15	Central Park Condominiums, Capitol Heights	3.01
3/17/16	Leaders Forever College Students from Midwest Town of Cheverly	4.93
4/9/16	Kentland Palmer Park (TNI)	0.20
4/9/16	Town of University Park	0.46
4/9/16	Alice Ferguson Potomac Watershed Cleanup	15.40

Project Date	Volunteer Group	Tons of Trash
4/14/16	Millwood – Waterford Community Cap. Hgts.	0.13
4/16/16	Arbor Park HOA	0.17
4/16/16	Town of Bladensburg	0.34
4/23/16	Anacostia Watershed Society Earth Day Cln Up	18.18
5/12/16	Thomas Johnson Middle School	0.50
6/10/16	CASA – Court Appointed Special Advocate	0.50
TOTAL		44.094

Comprehensive Community Cleanup Program (CCCP)

This information has been provided on page 54.

Recycling

The WMD of DoE administers County services and programs to reduce solid waste, including recycling, composting, and hazardous materials recovery and disposal. The County continues to host countywide recycling events, as listed in Table D-48, to shred documents and dispense free mulch recycled from Christmas trees. These events offer residents of the County an opportunity to conserve natural resources, save energy, and reduce the amount of waste going to the landfill, all positive actions that help to protect the environment.

Table D-48. Countywide Waste Reduction Participation Events (July 01, 2015 - June 30, 2016)

Name of Event (Participant)	Date of Event	No. of Participants
MRF Tour	July 1, 2015	2
MRF Tour	July 2, 2015	20
MRF Tour	July 7, 2015	1
Tour of Western Branch	July 7, 2015	25
MRF Tour	July 9, 2015	15
MRF Tour	July 14, 2015	10
Montpelier Farms	July 14, 2015	15
Tour of Western Branch	July 17, 2015	1
MRF Tour	July 22, 2015	
Prince George's Recycling Office	July 29, 2015	7
Tour of Western Branch	July 29, 2015	30
Tour of Western Branch	July 29, 2015	5
Tour of Western Branch	August 6, 2015	6
Prince George's Sports Arena	August 8, 2015	400
Tour of Western Branch	August 11, 2015	1
Tour of Western Branch	August 12, 2015	11
Tour of Western Branch	August 13, 2015	4
Prince George's Chamber of Commerce	August 27, 2015	10
Shredding Event	September 6, 2015	2775
E-cycling Event	September 12, 2015	3110
Tour of Western Branch	September 15, 2015	7
Tour of Western Branch	September 24, 2015	2
MRF Tour	October 2, 2015	13

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Name of Event (Participant)	Date of Event	No. of Participants
MRF Tour	October 2, 2015	22
MRF Tour	October 2, 2015	2
Prince George's County Government	October 2, 2015	25
MRF Tour	October 2, 2015	32
Shredding Event	October 12, 2015	3310
MRF Tour	October 14, 2015	4
DPW&T	October 14, 2015	17
Comfort Inn Conference Center	October 15, 2015	
MRF Tour	October 16, 2015	10
Western Branch Tour	October 16, 2015	5
Clean Up Green Up	October 17, 2015	665
Western Branch Tour	October 21, 2015	6
Western Branch Tour	October 23, 2015	12
Western Branch Tour	October 23, 2015	24
Prince George's Ballroom	October 23, 2015	90
Western Branch Tour	October 23, 2015	2
Western Branch Tour	October 27, 2015	35
MRF Tour	October 27, 2015	13
MRF Tour	October 28, 2015	11
MRF Tour	October 30, 2015	7
Romano Winery	November 13, 2015	40
Western Branch	November 13, 2015	17
Prince George's County Recycling	November 14, 2015	53
Western Branch	November 20, 2015	20
Western Branch	November 23, 2015	12
Western Branch	November 27, 2015	8
MRF Tour	December 12, 2015	30
MRF Tour	December 18, 2015	15
Tour of MRF	January 12, 2016	7
Tour of MRF	January 15, 2016	19
MRF Tour	January 15, 2016	7
MRF Tour	January 20, 2016	4
MRF Tour	February 5, 2016	2
MRF Tour	February 10, 2016	6
MRF Tour	February 17, 2016	250
Western Branch	February 22, 2016	4
MRF Tour	February 25, 2016	7
MRF Tour	February 26, 2016	6
MRF Tour	March 4, 2016	19
MRF Tour	March 11, 2016	6
Tour of Western Branch	March 22, 2015	7
MRF Tour	March 22, 2015	23
Mulch Giveaway	March 23, 2015	605
Tour of Western Branch	March 16, 2015	1
Tour of Western Branch	March 25, 2015	7



Name of Event (Participant)	Date of Event	No. of Participants
MRF Tour	March 29, 2015	17
MRF Tour	April 5, 2016	1
MRF Tour	April 8, 2016	1
Tour of Western Branch	April 8, 2016	2
MRF Tour	April 8, 2016	1
MRF Tour	April 13, 2016	22
MRF Tour	April 13, 2016	
Tour of Western Branch	April 14, 2016	4
MRF Tour	April 19, 2016	39
MRF Tour	April 22, 2016	40
Tour of Western Branch	April 23, 2016	663
MRF Tour	April 26, 2016	4
Tour of Western Branch	April 27, 2016	27
MRF Tour	April 28, 2016	18
MRF Tour	April 29, 2016	35
MRF Tour	May 3, 2016	25
Tour of Western Branch	May 5, 2016	3
MRF Tour	May 3, 2016	30
Comfort Inn	May 11, 2016	125
MRF Tour	May 13, 2016	27
Tour of Western Branch	May 17, 2016	17
County Administration Building	May 17, 2016	75
MRF Tour	May 19, 2016	45
MRF Tour	May 20, 2016	45
MRF Tour	May 23, 2016	45
MRF Tour	May 25, 2016	4
Tour of Western Branch	May 31, 2016	1
Green Team Meeting	June 2, 2016	85
Tour of Western Branch	June 9, 2016	6
MRF Tour	June 15, 2016	8
Turf Valley	June 21 – June 22, 2016	250
MRF Tour	June 23, 2016	63
Prince George's Chamber of Commerce	June 24, 2016	12
Tour of Western Branch	June 30, 2016	8

Single-Stream Recycling

The County's single-stream recycling program is promoted through direct mail, press releases, newspaper advertisements, displays, and speaking engagements. The County's MRF processes glass bottles and jars, plastic containers, aluminum, steel and bi-metal cans, paper, aseptic containers, and newspaper from 172,631 residences served by the residential curbside single-stream recycling program and merchants (commercial sector). Today, the County's MRF is operating with the latest state-of-the-art equipment to accommodate single-stream recycling, processing over 65,000 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 2,000 individuals annually.

County Office Recycling Program (CORP)

On October 1, 2011, the CORP began single-stream recycling in County offices. An outreach campaign was developed to educate employees on the transition from dual-stream to single-stream collection and increase the amount of recycling collected from County offices. The CORP, which has been in existence since 1990, now serves 89 local County offices; all locations are serviced on a regular pickup schedule. All forms of paper and commingled materials are collected from these facilities by a County contractor. On average 20 tons of recyclables are collected monthly with 10 locations also recycling toner cartridges. Nearly 1 ton of toner cartridges are recycled annually through a contract with Recycling Ink.

Source Reduction & Recycling

The *Source Reduction – Stop Waste Before it Starts* brochure, available in English and Spanish, provides tips for reducing waste at home, in the yard, and in the office. The brochure also promotes the use of reusable bags rather than non-biodegradable plastic shopping bags. In order to reinforce their recycling and source reduction message, Recycling Section (RS) staff regularly distributes outreach materials, gives presentations, and offers giveaways at community and other special events. Additionally, plastic bags are now banned from yard waste collection. Instead, the public will utilize paper yard waste bags, which can be composted or re-used. Furthermore, plastic bags other than transparent clear liners are banned from the recycling program as this material is not captured through or by the Materials Recycling Facilities processing equipment. A public outreach campaign was conducted to inform the public to return plastic bags to participating stores for recycling and to utilize reusable bags to avoid plastic disposal bags altogether.

Business Recycling and Source Reduction

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

RS staff assists in the development and implementation of successful source reduction plans and recycling programs. The types of assistance may include site visits for identifying waste that can be recycled, matching interested businesses with local mentors who have successful recycling programs, or providing technical assistance needed to start up a recycling program. Additionally, DoE has hired three inspectors to enforce CB-87-2012 recycling mandates.

Composting

Food Scraps

During this reporting period, the County has transitioned from the pilot phase to the project phase of food scrap composting utilizing the GORE® Cover System technology, diverting more than 5096.2 tons of food scraps from the landfill into 100% organic compost.

Yard Waste

The Prince George's County Organics Composting Facility (aka Western Branch), operated by the Maryland Environmental Service (MES), accepts yard waste from approximately 172,631 households in the County. The yard waste composting program, including the Christmas tree recycling, diverts a significant tonnage of materials from our solid waste stream, as shown in Figure D-10. Leafgro® is sold to the nursery trade, with the revenue generated from the sale returned to the County to offset the cost of the composting operation. A new product derived from food and yard waste has been trademarked and is being sold as LeafGro Gold.

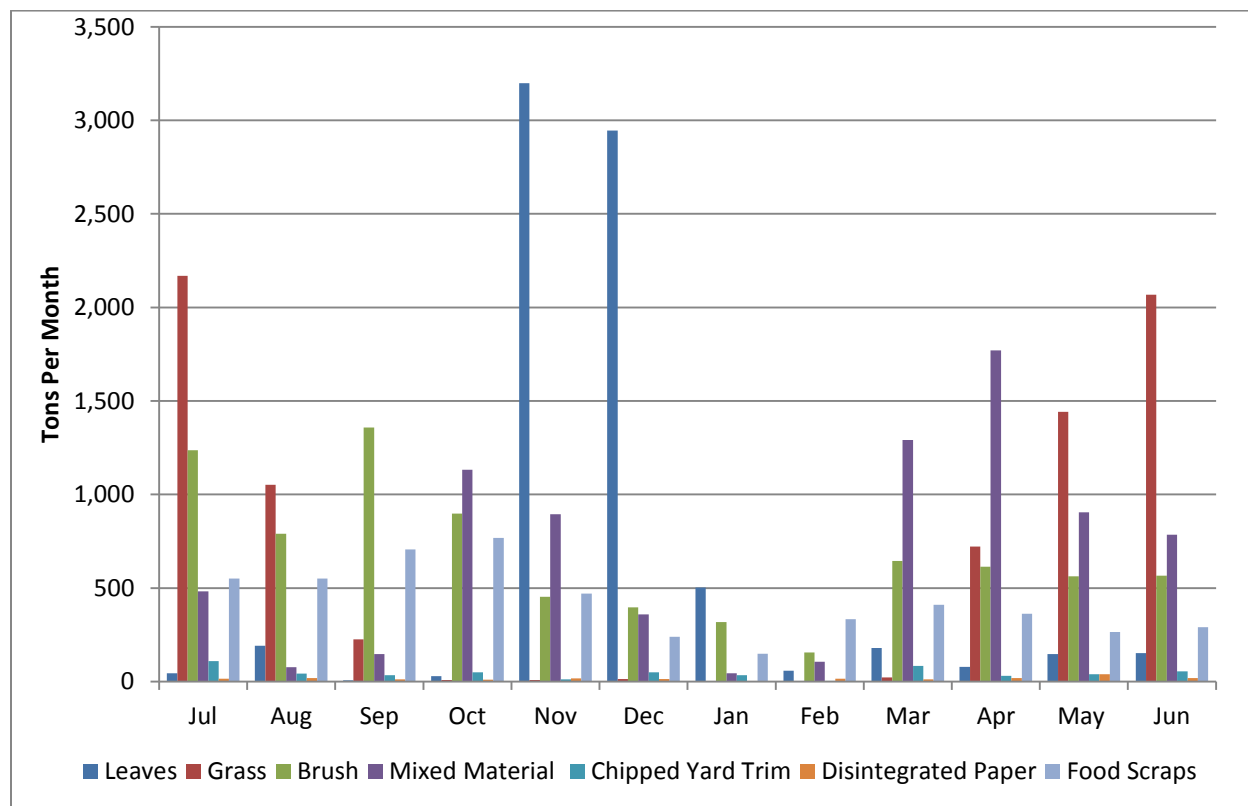


Figure D-10. Yard Waste Composting - Fiscal Year 2016

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 Ride Smart Commuter website, a service of DPW&T, is designed to provide commuters and employers in Prince George's 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/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 Metropolitan Washington Council of Governments (MWCOC).

Biking to Work

Literature on biking to work in the Washington Metropolitan Area is produced by Commuter Connections and the Washington Area Bicyclist Association. This guide, written for employers and employees, promotes cycling as a healthy, clean, quiet, economical, and fun way to get to work. The County annually participates in the regional "Bike to Work Day" activities. In Spring 2015, the County installed bicycle racks on all of TheBus fixed-route vehicles to continue supporting residents, visitors and employees who choose to bike in the County.

Prince George's County 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% of the first month's vehicle rental fee (not to exceed \$700), 50% of the second month's vehicle rental fee (not to exceed \$350), and 25% 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

Prince George's County in partnership with the state of Maryland and private parking lot owners maintains 13 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 13 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. Capital Plaza Mall: MD Route 450 and Baltimore-Washington Parkway
13. 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 convenient to all County residents. The County is one of WMATA's Compact Jurisdictions and subsidizes the cost of all WMATA Bus and Rail service provided in Prince George's County. County Transportation staff work cooperatively with WMATA to plan and enhances existing and future public transit services to complement the County Executive's and Council Member goals to meet the transportation needs of Prince George's County residents, visitors and employees.

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

TheBus is Prince George's County's public transit system. Schedule information is available through the Internet at www.princegeorgescountymd.gov or www.NextBus.com. Area specific transit guides offer comprehensive information on public transportation, including transit options. As a part of a Washington Metropolitan Area TIGER Grant, our regional partners have installed several real-time information displays at bus stops in the region. In Prince George's County CEIDS technology was installed at bus shelters along Walker Mill Road, Silver Hill Road, and Iverson Street in December 2014 as a part of a regional effort. Ridership for the 28 fixed-routes of transit service provided by TheBus for FY 2016 is approximately 3.2 million passengers. Patrons are now able to see all of TheBus transit stops on Google® Maps.

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 over 2,036 taxicab operators to provide fee-based services to residents and visitors in the County. A subsidy service provided by the County via Maryland state grants is the Call-A-Cab coupon service for seniors and disabled patrons. This program enables seniors and disabled patrons to purchased reduced-price taxicab coupons.

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.*

Permit Condition Actions

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 and, with the exception of the Western Branch watershed. A map of the County's major watersheds is shown in Figure E-1.

As required by the permit, the County will continue to evaluate its watersheds and will include the following,

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

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

2. RESTORATION PLANS

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

Permit Condition Actions

The County revised its Impervious 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, the MDE approved the Impervious Area Baseline Assessment.

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.

Permit Condition Actions

The county has put forth a plan to restore 6,105 acres by the end of the permit term. In this effort, the County has already restored 225 acres from the beginning of the permit until June 30, 2016. Approximately 2,805 impervious acres of restoration is either in active planning (concept plan)/design or construction and anticipated to be completed by the end of the permit term. Also, the County has advanced its efforts for implementation of a street sweeping program.

In the 2015 NPDES MS4 reporting and in the subsequent submittal of County's FY2016 Financial Assurance Plan, the County provided its strategy to treat 2,000 acres through an enhanced street sweeping program; however, this strategy has been revised per MDE's comments on County's street sweeping credit calculation methodology. The revised strategy includes 700 impervious acres of treatment through the enhanced street sweeping program (Please see Table E-1). It is estimated that the County will achieve around 500 impervious acres' credits through its various ongoing other restoration activities. For the remaining 1, 875 acres, sites identified in the Anacostia River Plan are being investigated for suitability of installing structural BMPs.

Table E-1. Revised Strategy to Achieve its Twenty Percent of Baseline Impervious Acres

Programs	Impervious Acreage (acres) FY2015 Strategy	Impervious Acreage (acres) Revised Strategy
Clean Water Partnership (CWP)	2,006	2,006
Capital Improvement Projects (CIP)	2,099	2,899
Street Sweeping	2,000	700
Other Credits*	0	500
TOTAL	6,105	6,105

**Unlike the planned BMPs such as CWP, CIP, or Street Sweeping programs, other Credits are based on the anticipated impervious acres credits that may become available through ongoing process of redevelopment, septic system upgrades, septic disconnections, storm drain cleaning and septic pumping. Some additional credits may be achieved through County's tree planting and replacement efforts. Currently, potential for achieving these credits are being investigated.*

Other Credits

It is estimated that around 500 acres of restoration will be met through redevelopment projects and various alternative BMPs. The County's Stormwater Management Ordinance (Approved by the state) for Redevelopment has raised the amount of existing impervious to be treated from 50% to 75%. Although the tangible effects of the ordinance will not be quantifiable until the 2017 annual report, the County

expects that it will play a significant role in restoring older urbanized areas that currently have no storm water management.

The County has not been able to take impervious acres' credits from the alternative BMPs such as septic pumping. Currently, the County is working to update the septic system inventory. County estimates around 5,000 septic systems within County and plan to track the septic pumping activity to claim impervious acres' credits. The County has also made it a requirement for all failing septic systems to connect to the closest feasible sewer line. Also, as new and redevelopment continue to occur within the County's sewer envelope, Septic systems are being removed as part of 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.

The County worked with WSSC to verify instances where septic systems were connected to public waste water treatment between 2000 and 2016. Approximately 695 of these instances occurred between the year 2000 and 2014. The County would like the MDE to acknowledge that these were not accounted for in the 2015 approved baseline. However, the County will incorporate this data to establish the next permit Baseline.

At this point, the analysis of septic systems connection to waste water treatment and septic pumping are still in process. In addition, potential credits from tree planting are being evaluated. By the end of FY2017 reporting, the County will have a better assessment/estimate on what impervious acres' credits are achieved through these alternative BMPs. If it is determined after the analysis that not enough impervious credits can be achieved through these practices, the County will proceed with additional structural BMP implementation from the sites of Anacostia River Plan for the deficit. The potential sites from Anacostia River Plan have already been submitted to MDE in FY2015 NPDES annual reporting.

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.*

Permit Condition Actions

The restoration plans were developed and submitted to MDE in December 2015.

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.*

Permit Condition Actions

DoE is partnering with the CBT to leverage CBT's experience and expertise with public education and outreach, administration and operation of grant-funded stormwater management water quality improvement projects, and dedicated resources for applicant guidance and support on applications, BMP selection and installation practices. DoE looks to guide CBT efforts to increase program participation through continued emphasis on residential property owners and focused outreach and participation with our commercial, industrial, municipal, and non-profit property owners. DoE will also evaluate Rain Check Rebate integration opportunities with the Public Private Partnership (P3) contract. Opportunities may include communitywide outreach to install eligible rebate practices, perform energy audits, and install green energy practices (i.e., solar systems) and maintenance operations.

Additionally, DoE is partnering with the Low Impact Design Center to implement a Contractors Certification Program. The program will provide opportunity for professional landscapers and other green businesses to attend and complete a non-credit training program in non-structural BMP selection, installation, and maintenance practices. DoE is working with the Low Impact Design Center and Prince George's County Community College to implement the course during the fall of 2014. This program will 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 First Act in developing and promoting local business development and job growth.

To enhance the program, promote increased participation, and expanded opportunities to community oriented projects, DoE is considering the following program enhancements:

- Increased rebate rates (promote stronger incentive for higher cost/higher yield practices such as pavement removal, and permeable pavement installation);
- Increased residential rebate ceilings (promote multiple single property project installations); and
- Allow "common area" properties (homeowner and civic associations to participate with Rebate Program) to take advantage of larger scale treatment opportunities. DoE will work with Council on legislative amendments as necessary to implement recommended revisions.

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;

Permit Condition Actions

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/build water quality restoration projects. Similarly, the County is continuing to implement projects throughout the County and has retrofit projects in the various stages that cover over 2,800 acres of impervious area (see Table E-20). The County has also begun the process of identifying suitable streets for initiating an enhanced street sweeping program that meets MDE established minimum requirements for pollutant load reductions and impervious acre credits. The County intends to begin operation of this program in 2017 and the performance (pollutant load reduction credits) will be based on the mass load approach. Table E-2 through Table E-6 show the pollutant load reductions for the local TMDLs from all completed projects.

Table E-2. Anacostia River – Current Achieved Reductions.

Pollutant	TN (lbs/yr)	TP (lbs/yr)	TSS (lbs/yr)	BOD (lbs/yr)	Bacteria (MPN B/yr)
TMDL	Local	Local	Local	Local	Local
Baseline Year	1997	1997	1997	1997	2003
Target Load Reduction ¹	219,305	30,087	46,058,000	644,470	1,730,100
BMP Reduction - Up to 2013 ²	497	351	230,103	12,423	6,293
BMP Reduction - FY 2014 ³	46	6	3,128	262	945
BMP Reduction - FY 2015	112	96	63,841	51	181
BMP Reduction - FY 2016	294	53	20,034	803	3,097
Total BMP Reduction	950	506	317,106	13,539	10,516
% Reduction of Target	0.43%	1.68%	0.69%	2.10%	0.61%

¹ - TMDL required load reduction for MS4 areas

² - Reductions achieved since 2009 till 2014 (start of Permit term)

³ - Only covers half of FY 2014 (January to June)

Table E-3. Mattawoman Creek – Current Achieved Reductions.

Pollutant	TN (lbs/yr)	TP (lbs/yr)
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

Pollutant	TN (lbs/yr)	TP (lbs/yr)
BMP Reduction - 2015	0.3	0
BMP Reduction - 2016	0	0
Total BMP Reduction	0.3	0
% Reduction of Target	0.00%	0.00%

¹ - TMDL required load reduction for MS4 areas

² - Reductions achieved since 2009 till 2014 (start of Permit term)

³ - Only covers half of FY 2014 (January to June)

Table E-4. Patuxent River Upper – Current Achieved Reductions.

Pollutant	TSS (lbs/yr)	Bacteria (MPN B/yr)
TMDL	Local	Local
Baseline Year	2005	2009
Target Load Reduction ¹	384,000	59,397
BMP Reduction - Up to 2013 ²	176,869	642
BMP Reduction - 2014 ³	0	0
BMP Reduction - 2015	6,081	0
BMP Reduction - 2016	0	0
Total BMP Reduction	182,949	642
% Reduction of Target	47.64%	1.08%

¹ - TMDL required load reduction for MS4 areas

² - Reductions achieved since 2009 till 2014 (start of Permit term)

³ - Only covers half of FY 2014 (January to June)

Table E-5. Piscataway Creek – Current Achieved Reductions.

Pollutant	Bacteria (MPN B/yr)
TMDL	Local
Baseline Year	2003
Target Load Reduction ¹	22,265.00
BMP Reduction - Up to 2013 ²	0
BMP Reduction - 2014 ³	0
BMP Reduction - 2015	0
BMP Reduction - 2016	517
Total BMP Reduction	517
% Reduction of Target	2.32%

¹ - TMDL required load reduction for MS4 areas

² - Reductions achieved since 2009 till 2014 (start of Permit term)

³ - Only covers half of FY 2014 (January to June)

Table E-6. Rocky Gorge Reservoir – Current Achieved Reductions.

Pollutant	TP (lbs/yr)
TMDL	Local
Baseline Year	2000
Target Load Reduction ¹	27.00
BMP Reduction - Up to 2013 ²	0
BMP Reduction - 2014 ³	0
BMP Reduction - 2015	0
BMP Reduction - 2016	0
Total BMP Reduction	0
% Reduction of Target	0.00%

¹ - TMDL required load reduction for MS4 areas

² - Reductions achieved since 2009 till 2014 (start of Permit term)

³ - Only covers half of FY 2014 (January to June)

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;

Permit Condition Actions

The following tables show the revised County's 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-7. Revised annual load reduction targets for Anacostia River TMDLs.

Fiscal Year	Total Nitrogen (lb/year)	Total Phosphorus (lb/year)	TSS (ton/year)	BOD (lb/year)	Fecal Coliform Bacteria (MPN B/year)	Status
2016 (Actual)	294.08	53.43	10.02	802.52	3,096.56	Achieved
2017	9,750.00	1,989.80	1,163.00	54,528.30	192,814.00	Projected
2018	10,897.10	2,223.90	1,299.80	60,943.40	215,498.00	Projected
2019	11,282.90	2,302.70	1,345.80	63,101.00	223,127.20	Projected
2020	11,282.90	2,302.70	1,345.80	63,101.00	223,127.20	Projected
2021	11,282.90	2,302.70	1,345.80	63,101.00	223,127.20	Projected
2022	11,282.90	2,302.70	1,345.80	63,101.00	223,127.20	Projected
2023	11,282.90	2,302.70	1,345.80	63,101.00	223,127.20	Projected
2024	11,282.90	2,302.70	1,345.80	63,101.00	223,127.20	Projected
2025	11,282.90	2,302.70	1,345.80	63,101.00	223,127.20	Projected
2026	11,282.90	2,302.70	1,345.80	63,101.00	223,127.20	Projected
2027	11,282.90	2,302.70	1,345.80	63,101.00	223,127.20	Projected
2028	10,718.70	2,187.50	1,278.50	59,946.00	211,970.80	Projected



Fiscal Year	Total Nitrogen (lb/year)	Total Phosphorus (lb/year)	TSS (ton/year)	BOD (lb/year)	Fecal Coliform Bacteria (MPN B/year)	Status
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	8,308.92	1,702.27	1,016.18	47,310.68	167,033.44	Projected
Total	154,919	31,617	18,479	866,404	3,063,632	

Table E-8. Revised annual load reduction targets for Mattawoman Creek TMDLs.

Fiscal Year	Total Nitrogen (lb/year)	Total Phosphorus (lb/year)	Status
2016 (Actual)	0	0	<i>Achieved</i>
2017	385	71	Projected
2018	431	79	Projected
2019	446	82	Projected
2020	446	82	Projected
2021	446	82	Projected
2022	446	82	Projected
2023	446	82	Projected
2024	446	82	Projected
2025	446	82	Projected
2026	446	82	Projected
2027	446	82	Projected
2028	424	78	Projected
2029	357	66	Projected
2030	173	32	Projected
2031	340	63	Projected
Total	6,124	1,126	

Table E-9. Revised annual load reduction targets for Patuxent Upper and Rocky Gorge TMDLs

Fiscal Year	Total Phosphorus (lb/year)	TSS (ton/year)	Fecal Coliform Bacteria (MPN B/year)	Status
2016 (actual)	0	0	0	<i>Achieved</i>
2017	0.9	7.2	1,314	Projected
2018	1	8.1	1,469	Projected
2019	1	8.4	1,521	Projected
2020	1	8.4	1,521	Projected

Fiscal Year	Total Phosphorus (lb/year)	TSS (ton/year)	Fecal Coliform Bacteria (MPN B/year)	Status
2021	1	8.4	1,521	Projected
2022	1	8.4	1,521	Projected
2023	1	8.4	1,521	Projected
2024	1	8.4	1,521	Projected
2025	1	8.4	1,521	Projected
2026	1	8.4	1,521	Projected
2027	1	8.4	1,521	Projected
2028	0.9	7.9	1,445	Projected
2029	0.8	6.7	1,217	Projected
2030	0.4	3.2	590	Projected
2031	0.8	6.4	1159	Projected
Total	13.7	114.8	20,879	

Table E-10. Revised annual load reduction targets for Piscataway TMDL

Fiscal Year	Fecal Coliform Bacteria (MPN B/year)	Status
<i>2016 (actual)</i>	<i>517</i>	<i>Achieved</i>
2017	18,176	Projected
2018	18,819	Projected
2019	18,819	Projected
2020	18,819	Projected
2021	18,819	Projected
2022	18,819	Projected
2023	18,819	Projected
2024	18,819	Projected
2025	18,819	Projected
2026	18,819	Projected
2027	17,878	Projected
2028	15,055	Projected
2029	7,302	Projected
2030	14,349	Projected
2031	15,745	Projected
Total	258,394	



County progress towards the Bay TMDL

Table E-11 through Table E-18 below show the County's restoration efforts progress towards the Chesapeake Bay TMDL (WIP II – 2025 target year) for each of the 8-digit MDE watersheds in the County.

Table E-11. Anacostia River Watershed

Pollutant	TN (lbs/yr)	TP (lbs/yr)	TSS (lbs/yr)
TMDL	Bay	Bay	Bay
Baseline Year	2009	2009	2009
Target Load Reduction ¹	50,177	9,118	1,752,709
BMP Reduction - up to 2013 ²	497	351	230,103
BMP Reduction - FY 2014 ³	46	6	3,128
BMP Reduction - FY 2015	112	96	63,841
BMP Reduction - FY 2016	294	53	20,034
Total BMP Reduction	950	506	317,106
% Reduction of Target	1.89%	5.55%	18.09%

¹ - TMDL required load reduction for MS4 areas

² - Reductions achieved since Baseline year till 2014 (start of Permit term)

³ - Only covers half of FY 2014 (January to June)

Table E-12. Mattawoman Creek Watershed

Pollutant	TN (lbs/yr)	TP (lbs/yr)	TSS (lbs/yr)
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	0.3	0	25
BMP Reduction - 2016	0	0	0
Total BMP Reduction	0.3	0	25
% Reduction of Target	0.03%	0.01%	0.02%

¹ - TMDL required load reduction for MS4 areas

² - Reductions achieved since Baseline year till 2014 (start of Permit term)

³ - Only covers half of FY 2014 (January to June)

Table E-13. Patuxent River Lower Watershed

Pollutant	TN (lbs/yr)	TP (lbs/yr)	TSS (lbs/yr)
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

Pollutant	TN (lbs/yr)	TP (lbs/yr)	TSS (lbs/yr)
BMP Reduction - 2014 ³	0	0	0
BMP Reduction - 2015	0	0	0
BMP Reduction - 2016	0	0	0
Total BMP Reduction	0	0	0
% Reduction of Target	0.00%	0.00%	0.00%

¹ - TMDL required load reduction for MS4 areas

² - Reductions achieved since Baseline year till 2014 (start of Permit term)

³ - Only covers half of FY 2014 (January to June)

Table E-14. Patuxent River Middle Watershed

Pollutant	TN (lbs/yr)	TP (lbs/yr)	TSS (lbs/yr)
TMDL	Bay	Bay	Bay
Baseline Year	2009	2009	2009
Target Load Reduction ¹	2,315	344	64,273
BMP Reduction – Up to 2013 ²	0	0	0
BMP Reduction - 2014 ³	0	0	0
BMP Reduction - 2015	0	0	0
BMP Reduction - 2016	0	0	0
Total BMP Reduction	0	0	0
% Reduction of Target	0.00%	0.00%	0.00%

¹ - TMDL required load reduction for MS4 areas

² - Reductions achieved since Baseline year till 2014 (start of Permit term)

³ - Only covers half of FY 2014 (January to June)

Table E-15. Patuxent River Upper Watershed

Pollutant	TN (lbs/yr)	TP (lbs/yr)	TSS (lbs/yr)
TMDL	Bay	Bay	Bay
Baseline Year	2009	2009	2009
Target Load Reduction ¹	24,817	3,472	977,670
BMP Reduction – Up to 2013 ²	333	269	176,869
BMP Reduction - 2014 ³	0	0	0
BMP Reduction - 2015	10	9	6,081
BMP Reduction - 2016	0	0	0
Total BMP Reduction	343	278	182,949
% Reduction of Target	1.38%	8.01%	18.71%

¹ - TMDL required load reduction for MS4 areas

² - Reductions achieved since Baseline year till 2014 (start of Permit term)

³ - Only covers half of FY 2014 (January to June)



Table E-16. Piscataway Creek Watershed

Pollutant	TN (lbs/yr)	TP (lbs/yr)	TSS (lbs/yr)
TMDL	Bay	Bay	Bay
Baseline Year	2009	2009	2009
Target Load Reduction ¹	18,606.00	3,329.00	640,225.00
BMP Reduction – Up to 2013 ²	199	180	119,062
BMP Reduction - 2014 ³	0	0	0
BMP Reduction - 2015	15	14	9,215
BMP Reduction - 2016	28	3	1,621
Total BMP Reduction	243	197	129,898
% Reduction of Target	1.30%	5.93%	20.29%

¹ - TMDL required load reduction for MS4 areas² - Reductions achieved since Baseline year till 2014 (start of Permit term)³ - Only covers half of FY 2014 (January to June)**Table E-17. Potomac River Watershed (includes multiple watersheds⁴)**

Pollutant	TN (lbs/yr)	TP (lbs/yr)	TSS (lbs/yr)
TMDL	Bay	Bay	Bay
Baseline Year	2009	2009	2009
Target Load Reduction ¹	30,793.00	5,038.00	1,307,785.00
BMP Reduction – Up to 2013 ²	3	2	1,910
BMP Reduction - 2014 ³	8	1	503
BMP Reduction - 2015	21	16	10,344
BMP Reduction - 2016	168	93	49,826
Total BMP Reduction	199	112	62,583
% Reduction of Target	0.65%	2.22%	4.79%

¹ - TMDL required load reduction for MS4 areas² - Reductions achieved since Baseline year till 2014 (start of Permit term)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**Table E-18. Western Branch Watershed**

Pollutant	TN (lbs/yr)	TP (lbs/yr)	TSS (lbs/yr)
TMDL	Bay	Bay	Bay
Baseline Year	2009	2009	2009
Target Load Reduction ¹	34,656.00	5,978.00	1,362,322.00
BMP Reduction – Up to 2013 ²	57	42	27,715
BMP Reduction - 2014 ³	0	0	0
BMP Reduction - 2015	101	90	59,414

Pollutant	TN (lbs/yr)	TP (lbs/yr)	TSS (lbs/yr)
BMP Reduction - 2016	56	20	6,179
Total BMP Reduction	214	152	93,308
% Reduction of Target	0.62%	2.54%	6.85%

¹ - TMDL required load reduction for MS4 areas

² - Reductions achieved since Baseline year till 2014 (start of Permit term)

³ - Only covers half of FY 2014 (January to June)

Permit Condition Part IV. E. 4:

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

Permit Condition Actions

A summary of the completed projects, programs, and initiatives to meet established pollutant reduction is provided in Table E-19 below. The County is reporting completed restoration activities itemized in the MDE Geodatabase format under the feature classes RestBMP, AltBMP Line, AltBMP Point, AltBMP Polygon, and Impervious Surface Associated Table. The County is Reporting 225 acres restored from the beginning of the permit term until June 30, 2016.

In addition to programmatic restoration activities being implemented through the CIP and CWP, the County has been able to track creditable restoration through Redevelopment, Connection of Septic Systems to Waste Water Treatment, Septic Denitrification, and Inlet Cleaning.

The County worked with WSSC to verify instances where septic systems were connected to waste water treatment between 2000 and 2016. Approximately 695 of these instances occurred between the year 2000 and 2014. The County would like the MDE to acknowledge that these were not accounted for in the 2015 approved baseline. However, the County will incorporate this data to establish the next permit Baseline.

Table E-19. Summary of Completed Projects as of June 30, 2016 - Cumulative Permit Term

Watershed Code	Watershed Name	Number of Projects	Impervious Acres Restored (Impervious Acres)	Cost (\$) *K
CIP, Redevelopment, and CWP				
2131103	Western Branch	4	14.36	\$484
2140201	Potomac River Upper Tidal	6	25.66	\$1,276
2140205	Anacostia River	14	34	\$1,478
02140203	Piscataway Creek	3	5.43	
02131104	Patuxent River upper	1	.2	TBD
02140111	Mattawoman Creek	1	.02	TBD
02140204	Oxon Creek	1	.56	TBD
Septic System Upgrade				

Watershed Code	Watershed Name	Number of Projects	Impervious Acres Restored (Impervious Acres)	Cost (\$) *K
02140111	Mattawoman Creek	1	.26	14
02131101	Patuxent River lower	5	1.3	70
02131102	Patuxent River middle	10	2.6	140
02131104	Patuxent River upper	7	1.82	98
02140203	Piscataway Creek	7	1.82	98
02140201	Potomac River U tidal	1	.26	14
02131103	Western Branch	26	6.76	364
Septic System Removal				
02140205	Anacostia River	1	20.4	
02140111	Mattawoman Creek	1	11.6	
02140204	Oxon Creek	1	2	
02131102	Patuxent River middle	1	.4	
02131104	Patuxent River upper	1	2.8	
02140203	Piscataway Creek	1	5.6	
02140201	Potomac River U tidal	1	7.5	
02131107	Rocky Gorge Dam	1	1.6	
02131103	Western Branch	1	54	
Storm Drain – Inlet Cleaning				
02140205	Anacostia River	1	8.7	
02140204	Oxon Creek	1	6.6	
02140201	Potomac River U tidal	1	2.2	
02131103	Western Branch	1	6.5	
TOTAL		100	225	\$4,036

Permit Condition Part IV. E. 4:

d. Cost estimates for completing all projects, programs, and alternatives necessary for meeting applicable stormwater WLAs; and

Permit Condition Actions

A summary of the implementation cost for completing all projects in planning, design, or under construction is provided in Table E-20. The County's current planned project list includes CIP, CWP, and Redevelopment. Retrofitting ponds that currently have minimal or no water quality is a significant part of planned restoration activities. In addition, the County is implementing ESD BMPs, Stream Restoration, Shoreline Stabilization, and various other BMP types to satisfy restoration goals.

In addition to planned restoration, the County's Stormwater Management Ordinance (Approved by the state) for Redevelopment has raised the amount of existing impervious to be treated from 50% to 75%. Although the tangible effects of the ordinance will not be quantifiable until the 2017 annual report, the County expects that it will play a significant role in restoring older urbanized areas that currently have no storm water management.

The County has also made it a requirement for all failing septic systems to connect to the closest feasible sewer line. Also, as new and redevelopment continue to occur within the County's sewer envelope, Septic systems are being removed as part of 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-20. Summary of the Project under Planning, Design, or Construction during FY 2016

Watershed Code	Watershed Name	Number of Projects	Impervious Acres Restored (Impervious Acres)	Cost (\$) *K
2131103	Western Branch	52	947	\$66,290
2131104	Patuxent River Upper	17	49.5	\$4,602
02131102	Patuxent River middle	2	85	\$3,465
	Patuxent River lower	1	32	\$2,240
2140201	Potomac River Upper Tidal	15	367	\$25,690
2140203	Piscataway Creek	21	146	\$10,220
2140204	Oxon Creek	9	41	\$2,870
02140111	Mattawoman Creek	2	4	\$280
2140205	Anacostia River	85	1134	\$79,380
TOTAL		204	2805.5	\$195,037.00

*K (cost in thousands of dollars)

In addition to the projects mentioned above, the County is reevaluating its implementation strategies to adjust the deficit from its street sweeping strategy. The County is planning to treat 700 acres instead of initially planned 2,000 acres through its street sweeping program. For the rest 2,375 acres, the County is proposing to implement the water quality practices identified in the Anacostia Restoration Plan (ARP) through its Clean Water Partnership. Currently, these site locations are being investigated for suitability of installation. Table E-21 is a summary of projects from the ARP report, and their expected impervious acres for potential contribution to the restoration program and their associated costs. Note that only 2,375 acres from these candidate projects from ARP can be selected for restoration within the permit term. Some of the criteria for selection include implementation cost, location, and potential for quick turnaround. A list of planned projects from ARP and their expected implementation cost were provided in County's 2016 Financial Assurance Plan submittal. The county will update this list of projects and provide in the 2018 Financial Assurance Plan.

Table E-21. Projected Impervious Acres Restoration per Watershed for Meeting the 20-percent Restoration Goal by the End of Permit Term.

Watershed Code	Watershed Name	Number of Projects	Expected Impervious Acres Restoration (Impervious Acres)	Cost (\$) *K
2131103	Western Branch	12	60	\$5,384
2131104	Patuxent River Upper	1	1	\$122.5
2140205	Anacostia River	1,305	8,274	\$929,380
TOTAL		1,318	8,335	\$934,886.50

*K (cost in thousands of dollars)

In addition to the projects listed above, approximately 13 acres of impervious area restoration is expected through Prince George's County Stormwater Stewardship grant program. Details of this program are provided on page 138.

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.*

Permit Condition Actions

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 practices such as permeable pavements, disconnection of rooftop runoff, and micro-bioretenion, 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 exist in the County that are utilized to install structural BMPs on both public and private lands. Some of these programs are:

- Stormwater Management Program,
- Clean Water Partnership (CWP) program,
- Rain Check Rebate Program,
- Countywide Green/Complete Streets 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 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 key revenue sources that will provide funding for the restoration programs are from the County's CIP, 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.

Stormwater Management Program

Restoration activities under Stormwater Management Program within this reporting year are discussed in details on page 35.

Clean Water Partnership (CWP) Program

FY2016 has been a momentous year for the Clean Water Partnership (CWP) and for the entire team working on this transformative project. Celebrating its first-full year in operation, we couldn't be more proud of the tremendous progress we have been able to achieve together these last 12 months. Let's take a look at some of this year's many highlights:

The year commenced with the partnership's continuation of detailed program and planning; including leading the collaborative efforts with the CWP teaming partners to meet the goals and objectives of the program.

In February, the CWP launched the CWP Mentor-Protégé Program (MPP); an important application of the partnership's economic development requirements. The program is designed to create a new ecosystem of locally-based companies with the capacity to perform high-quality work. Through this initiative, each of the companies received customized business development support designed in accordance with current levels of expertise to better prepare them to bid on work for the CWP and other stormwater projects in Prince George's County and neighboring regions. The eight Protégés in this year's inaugural class included: Clean Sweep Trucking & Refuse; Estimé Enterprises, Inc.; Faulkner Lawn Care & Landscaping; Grace Management & Construction, LLC; Green Forever; Kirila Earthworks; M & G Services, Inc.; and Phoenix Infrastructure. All of the Protégés are County-based and local small businesses and represent a diverse mix of capabilities, expertise and qualifications in order to maximize the impact of local capacity growth in the County.

Entering into the summer months, June welcomed multiple opportunities for the CWP to connect with Prince George's County youth, educators and local workforce, beginning with the opportunity to perform stormwater retrofits at the Junior Achievement Finance Park Prince George's County in Landover, MD. Through the partnership, a total of three bio-retention devices were installed on the site, and one in the back that was revitalized to improve its performance and appearance. These stormwater retrofits inspire students to understand both the environmental and financial implications of future choices, and give them a look at ways they can help to ensure a brighter, cleaner future in our region. The project's design and construction was completed by Prince George's minority business enterprises, Bradley Site Design and Green Forever Landscaping, furthermore showcasing the CWP's commitment to working with the small, minority business community.

June also presented an opportunity for the CWP to participate in this year's Clinton Global Initiative (CGI) America Conference, where leaders in business, government, and nonprofits are brought together to develop and discuss solutions for economic growth, long-term competitiveness, and social mobility in the United States. The CWP was invited to discuss the progress of the partnership, project updates, and the CWP benchmarking process with more than 1,000 conference attendees, as well as many more watching the event live on the internet. The CWP's commitment to action, which addresses the water quality of the Chesapeake Bay, while simultaneously emphasizing the needs of county residents and



local, disadvantaged, women- and minority-owned businesses, was one of five commitments from the private, public, and nonprofit sectors highlighted on stage with former President Bill Clinton.

In FY2016, the CWP launched the CWP Schools Program – a pilot program designed to assist Prince George’s County Public Schools (PGCPS) with treating stormwater runoff by utilizing best management practices. During the initial phases, the school system selected 18 schools in Prince George’s County to be evaluated by the CWP, to receive new, green stormwater retrofits to help with managing untreated runoff from impervious areas, and reduce the impact of sediments and pollution that flows into our natural waterways. The initial schools that participated in this year’s program included a combination of elementary, middle and high schools across Prince George’s County. In addition to the stormwater work performed on these sites, student-volunteer tree planting sessions and educational signage helped to provide a hands-on learning component to the program, as well as an educational legacy of future generations committed to managing the water quality in our communities. As work on the first cohort of schools begin to wind down this month, the CWP is already preparing for next year’s construction season, with approximately 40 additional schools in the pipeline to receive stormwater retrofits between 2017 and 2018. Over the course of this three-year partnership, the outside grounds of 58 schools will be retrofitted, and used as teaching tools to more than 15,000 students in Prince George’s County. Click [here](#) for a list of schools participating in the program or to learn more.

During FY2016, detailed planning, design, and construction commenced for the retrofit of Greenbelt Lake Forebays. This project at completion, which is expected in fall 2016, will treat approximately 337 acres of impervious area. Scope of work for the retrofit includes expanding the forebays to increase capacity to provide more efficient sediment and pollutant removal capacity, such as nitrogen and phosphorus from fertilizers that enters into Greenbelt Lake and clouds the water and causes algae growth.

The impact that the CWP has made in Prince George’s County in its first full year of production has been tremendous, and would not have been a success without the help from our partners, stakeholders and members of the community. Thank you to everyone who has engaged with us through the CWP in 2016. We’ve enjoyed a wonderful year with the County and look forward to an even greater 2017!

To learn more about the Clean Water Partnership, visit www.thecleanwaterpartnership.com.

Progress Highlights for FY2016

During FY2016 the following activities and accomplishments were made during the period as described below.

Detailed Planning, Design, Construction and Site Selection: The Program continued with the progress of the planning efforts that were developed during the initial phase of the Program. During FY2016 processes were refined to manage the Program including developing a site selection process and methodology that would define, articulate, quantify, and prioritize sites to achieve the goals and objectives of the Program of retrofitting 2,000 acres. These steps will carry-forward through-out the program’s subsequent planning phases for the development of detailed scope, requirements, and design for the execution of construction in future months. Moreover, these activities included facilitated workshops/program implementation meetings with subject matter experts and stakeholders to discuss and define requirements including defining functional and performance requirements for

BMPs; quality requirements; assumptions and constraints; business rules; and development of acceptance criteria.

Community Outreach

Alternative Compliance & Faith Based Community – Engagement with the Faith based community has been best exhibited through our work of the Alternative Compliance Program, an elective partnership between Prince George’s County and qualified 501(c) nonprofit organizations and tax-exempt faith-based organizations to improve County water quality by reducing and treating stormwater runoff.

- Presented the CWP ACP Program to attendees at the Prince George’s County 2016 Department of the Environment Green Summit
- Provided education and training on aesthetic maintenance to grounds keepers at Forestville New Redeemer Baptist Church
- Created a one-page program/project overview to help St. Ambrose Parish communicate project to congregation

Community Volunteer Engagement - The CWP team members participated in the 2016 Annual Anacostia Watershed Society’s (AWS) Earth Day Clean-up. Corvias employees, alongside teaming partners, Maryland Environmental Services and Soltesz, worked with students, business leaders and other members of the community cleaning neighborhoods, parks, streams, and the Anacostia River. For the third year in a row, the team strapped up their mud boots and trampled through the wooded trails seeking and removing buried trash and other harmful debris.

Students Enrichment – End Time Harvest Ministries (ETHM), a Prince George’s County based non-profit, was built on empowering youth through various educational, social and economic life skills. In summer 2016, the Clean Water Partnership continued its support of ETHM student summer program. ETHM students learned of the importance of stormwater management and were trained in its various components. Over the course of 6 weeks, 50 students participated in 2016. These students not only learned about the work processes of stormwater management but also how the environment impacts the health of their communities.

Non-profits, County agencies and Local Business Outreach – The Clean Water Partnership initiated its efforts to “formally meet the community” and therefore participated in various in and around the County including conducting program overview presentations, speaking on panels, and networking, and local and regional conferences to engage the community.

Junior Achievement (JA) – During May 2016, the CWP completed a project at the Prince George’s County Junior Achievement Finance Project. The facility received retrofits to three bio-retention facilities on the campus. Enhancements include a massive bed of native plants that process stormwater and provide habitats and food for nearby wildlife, plants that include pollinators to feed butterflies and hummingbirds and a walkway consisting of permeable pavers. Highlights of the outreach efforts are as follows:

- CWP team worked closely with the JA partners, to create a concept that was not only functional, but aesthetically pleasing.
- The CWP team arranged for JA to be visited on the County’s “Get on the Bus” Tour, which provided officials a sneak peek look at ground breaking projects and upcoming development in the County.



- In October 2016, CWP team members and program partners, will spend the day volunteering and teaching financial literacy to an eager group of 8th graders

PGC Schools Program – The CWP partnered with the PGC Public School System to retrofit 18 schools encompassing six types of Green Infrastructure/Low Impact Developments practices. In conjunction with installing functional Best Management Practices (BMPs) installed, the CWP is also providing each school with a green infrastructure concept plan that can be used to apply for grant funding for outdoor class rooms.

- Worked closely with the Low Impact Development Center (LID) to create permanent educational signage to be installed at each site location
- Participated in the following school events: Edward M. Fledgy Elementary School's Career Day, Parkdale High School, Summer Youth Employment Program Intern Kick-Off Meeting, District Heights Elementary Back-to-School Night

Municipalities

City of Greenbelt – The CWP is retrofitting Greenbelt Lake by dredging 3 forebays that will yield treatment of over 330 with a planned completion date of November 2016

- Conducted meeting with Green ACES, PRABB and to share overview of program and gain buy-in from the community
- Collaborated with City Manager to host a Forebay Dredging information session to discuss construction plans and timelines; CWP team members gave tour of Forebays and answered questions, providing complete transparency on the project
- Received high praises from Mayor of Greenbelt regarding the level of care and dedication provided to the community of the Greenbelt Lake
- Currently working with the city's outreach manager to plan a celebratory event to commensurate the completion of the project

Town of Cheverly

- Conducted several meetings with the Cheverly Green Infrastructure and the Friends of Sligo Creek to gain buy-in on proposed Cheverly project locations
- Enlisted assistance from BioHabitats to create a design for Cheverly utilizing ecological concepts with tremendous respect to all species surrounding proposed project
- Conducted tours of natural areas of Cheverly natural with lifelong residents to address stormwater management issues and assess viable options for treatment of run-off

City of College Park

- Presented a series of concepts to City Council
- Worked with City Engineer to present CWP conceptual plans to North College Park Civic Association

Transforming Neighborhood Initiative (TNI)

CWP team members have been working diligently to communicate information regarding the program with residents and businesses within the TNI neighborhoods. The team has presented program overviews to the following TNIs:

- Oxon Hill/Glass Manor
- Kentland/Palmer Park
- East Riverdale/Bladensburg
- Langley Park

The CWP is in the early planning stage for the construction of a Green street for each of the nine TNIs.

- Working with the Low Impact Development Center to identify potential project locations
- Coordinating with County agencies and departments such as DPWT and Parks and Planning to ensure projects are vetted and permitted efficiently
- Creating collateral that explains the benefits of Green Streets and to educate TNIs on complementing practices to assist their neighborhoods

Contractor Outreach Efforts

- Working with Prince Georges County Community College for the creation of a “Plans” room
- Various local and regional contractor outreach efforts

Mentor Protégée Program (MPP): The CWP is continuing its efforts with the eight firms enrolled in the MPP Program. In the spring a blue print read seminar was conducted to assist the firms participating in the program in reading construction documents for BMP designs. A cost estimating seminar is planned for late September for the Program.

Contractor Outreach: To capture the interests of those businesses outside of Prince George’s County seeking to relocate, the CWP has also participated in events with the Blue Book Building and Construction Network stretching as far as Baltimore City. These events attracted hundreds of businesses from the Maryland and surrounding area, providing more exposure of work being performed within the CWP.

Local General Contractors: While traditional procurement projects encompass of the services of nationally recognized companies, the CWP’s efforts have been focused on building up local businesses of diverse backgrounds, various skillsets and an array of sizes. In January 2016, the CWP selected Essex Construction LLC, D& F Construction Inc. and NARDI to serve as the general contractors for the CWP. These firms are tasked with sub-contracting smaller opportunities to other local businesses and are an agreement with all CWP utilization goals.

Workforce development

The CWP is initiated a plan to address near and long term workforce development requirements with the development of a workforce training program that is being developed in partnership with CMT.

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 this County are interested in helping to minimize stormwater runoff and prevent stormwater pollution in our waterways, but lacked the funding to install BMP practices on their property to help with stormwater runoff and stormwater pollution. The program provides eligible applicants the opportunity to receive rebates for



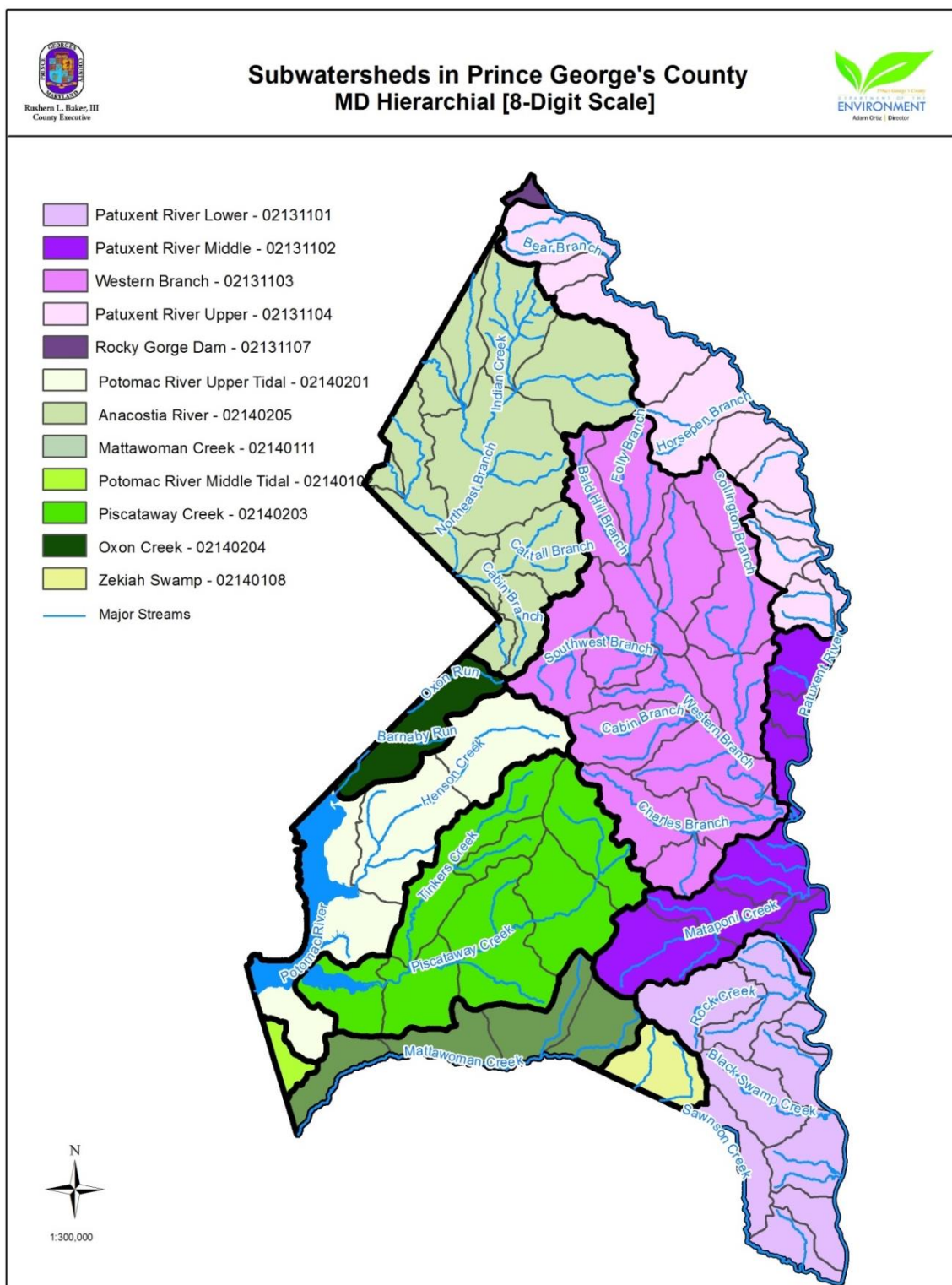
installing approved stormwater management practices. Homeowners, businesses, homeowner associations, condominium associations, multi-family dwellings, and nonprofit entities (including housing cooperatives and faith-based institutions) can recoup some of the costs of installing practices covered by the program. To ensure the continued success of this program, public outreach events are conducted to promote the adoption of endorsed stormwater management practices and gain maximum participation by the property owners in the County. Another incentive for property owners to participate in the Rain Check Rebate Program is they are eligible for a fee reduction credit on the Clean Water Act Fee located on their tax bill for installing stormwater management practices on their property. Table E-22 identifies the overall performance of the program in FY16.

In July of 2014, DOE partnered with the Chesapeake Bay Trust (CBT) to begin administering the functions of public education and outreach, administration and operation of grant-funded stormwater management water quality improvement projects, and dedicated resources for applicant guidance and support on applications, BMP selection and installation practices. With CBT's efforts, DoE has seen an increase in the programs participation by property owners.

DoE also partnered with the Low Impact Design Center and conducted a Contractors Certification Program. The program provided an opportunity for professional landscapers and other green businesses to attend and complete a non-credit training program in non-structural BMP selection, installation, and maintenance practices. The training course was held in the 2016 spring semester at the Prince George's County Community College. The program provides 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 First Act in developing and promoting local business development and job growth. More information on the Rain Check Rebate program is provided on DVD, Restoration Plans and TMDL\Rain Check Rebate.

Table E-22. Rain Check Rebate Performance

Projects	Number of Applications Received	Number of Applications Denied	Number of Applications Approved	Total Amount of Rebate Approved
Rain Barrels	43	9	34	\$7,254.55
Rain Gardens	19	4	15	\$51,366.71
Permeable Pavement	16	5	11	\$39,237.17
Pavement Removal	18	7	11	\$16,197.54
Urban Tree Canopy	14	2	12	\$10,462.46
Cisterns	2	1	1	\$1,200.00
TOTAL	112	28	84	\$125,718.43



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 Improvement Projects. The types of enhancements that are being evaluated include low impact design, tree shading, ESD in the right-of-way, energy efficient lighting, and the utilization of recycled materials. The County is developing a document that allows for green infrastructure incorporation into street retrofits and newly designed roadways. The document proposes techniques for a “road diet,” including reducing the right-of-way width and existing impervious surfaces, roadway grade changes to allow center flow to medians, and BMPs to improve water quality.

An evaluation of the County’s standard roadway cross-sections and details was also conducted to identify where existing roadway standards could be modified. DPW&T has initiated the process of examining where the Standard Street Section and Standard Details need revision and updating to increase the opportunity for water quality BMP incorporation within the right-of-way. DPIE is spearheading a committee to determine how new development can manage the stormwater generated from roadway areas within the right-of-way and remove impediments.

The first Green/Complete Street project to be constructed is the Ager Road project. This project will use vegetated swales (bio-swales and bio-filtration), inlet filtration devices, modular wetlands, outfall protection, and stream restoration within the right-of-way to address TMDL load reductions. In addition to the green components of the project, the design incorporates linked pathways for pedestrians, bus shelters, street furniture, light-emitting diode (LED) lighting, and integrated bike lanes, making this a true Green/Complete Street. DPW&T’s OEPM has incorporated Green/Complete Street design elements into additional highway and bridge projects. A spreadsheet of Green/Complete Streets currently in various stages of development is provided on DVD, Restoration Plans and TMDL.

The Green/Complete Street projects are 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 project, the projected timeframe for completion from inception to construction may take 5 years. Wherever feasible, projects will incorporate new SWM BMPs to provide treatment for legacy roadways when roadway maintenance includes major reconstruction.

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 one or more of the following options:

Option 1: Provide Easement – (50% fee reduction)

Property owner agrees to provide to the County a Temporary Right-of-Entry Agreement and Temporary Construction Easement for the County to install stormwater best management practices (BMPs) on the property owned by the organization.

AND

To continue receiving the 50% impervious area fee reduction credit, property owner is required to sign a Maintenance Agreement and continuously maintain the installed BMPs which are subjected to a tri-annual inspection by the Department of the Environment.

Option 2: Outreach and Education – (25% fee reduction)

Property owner agrees to take part in the County's education and outreach campaign to encourage other property owners as well as members of their organization to participate in the County's Rain Check Rebate Program to contribute toward the restoration and protection of the County watersheds.

AND/OR

Property owner agrees to host County's representative to organize and/or conduct annually one (1) of the following activities.

- On-site trash Pick-up event
- On-site recycling and better waste management
- Host a Rain Check Rebate Program
- Plant at least five (5) trees on site (*trees provided through the county "Rain Check Program"*)

Option 3: Green Care and Good Housekeeping - (25% fee reduction)

Property owner agrees to use lawn management companies* that are certified in the proper use and application of fertilizers in connection with their landscaping and lawns.

* Companies must be listed in the Maryland Department of Agriculture's searchable pesticide database under the appropriate license category (<http://www.kellysolutions.com/md/pesticideindex.htm>)

AND/OR

Property owner agrees to good house-keeping practices for ensuring clean lots and pledges at least three (3) of the following activities

- Reduce or eliminate fertilizer and pesticide use and application.
- Conserve water and use water-saving landscape practices.
- Establish and maintain healthy vegetative cover on the grounds of their property.
- Keep their site clean by regularly sweeping up trash and debris.
- Responsibly manage common chemicals used and stored on their property, and to properly dispose of hazardous products or materials.
- Practice proper pollution prevention measures.

Note: Under options 2 and 3, the organization agrees to conduct the selected activity on an annual basis in order to continue reduction the fee reduction credit

As of June 30, 2016, DoE have received and processed 163 applications from qualified Faith Based Organizations and 60 Projects are completed or under construction, treating 41 acres of impervious. The Clean Water Partnership (CPW) between the DoE with Corvias and many local firms to



implement Option 1, has so far been very successful in building and maintaining these BMP facilities. DoE has also given grants to various reputable nonprofit organizations such as Interfaith Partnership (IP), and Peoples for Change Coalition (PCC) 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/event that they have undertaken in order to for DoE to keep monitoring and accessing the impact theses activity on the environment and to keep engaging and educating the community about clean water issues.

Prince George's County Stormwater Stewardship

The Prince George's County Department of the Environment (DoE) and the Chesapeake Bay Trust (Trust) provided the Prince George's County Stormwater Stewardship grant program in FY 16. The collaborative Stormwater Stewardship Grant Program encouraged on-the-ground restoration activities that reduce nutrient and sediment pollution and community education activities that engage Prince George's County neighborhoods, faith-based organizations, non-profits, and residents in the restoration and protection of local rivers, streams, parks, and other natural resources. This grant program is funded by the Clean Water Act Fee and administered by the Chesapeake Bay Trust.

The Stormwater Stewardship Grant Program sought proposals in two specifics areas: water quality projects that achieve nutrient and/or sediment reduction (funding from \$20,000 - \$200,000 was available for each project); and engagement projects that aim to involve residents in efforts to improve local watersheds (\$5,000 - \$50,000 was available per project). Non-profit organizations, community associations, civic groups, and faith-based organizations were encouraged to apply, as well as municipalities, higher educational institutions, and public agencies.

The Request for Proposal was announced in May 2015, the deadline for applications was July 30, 2015, the applications were reviewed and recommended to fund or decline by the Technical Review Committee, and awards were announced in October 2016. The grant program received 32 applications that requested \$3,545,839. In total, \$1,350,000 was awarded through 20 projects. The projects that were funded in the FY 16 grant program include on-the-ground efforts such as rain gardens, bioretention practices, and impervious pavement removal as well as outreach campaigns related to schools, faith based organizations, community engagement, and technical assistance for the community. Finally, the FY 16 grants included nine water quality projects (many of these incorporate citizen engagement aspects also) and eleven citizen engagement projects that focus on education and outreach efforts.

The FY 16 grants are underway and on track to meet the outreach and restoration outcomes proposed. The Trust works with each grantee throughout the process and provides quarterly status reports to DoE that detail each grantee's progress and funds expended. A few examples of project progress include:

- The Interstate Commission on the Potomac River Basin will provide 400 students and their teachers with watershed investigations and training to select the Student Sustainable Stormwater Action Project at each of the three schools (\$61,938).
- Union Bethel AME Church will develop and implement all three requirements of the Prince George's Alternative Compliance Program. To do this, they will design and construct two stormwater practices, conduct outreach workshops, and develop a good housekeeping plan.

This will be a model project for faith based groups to clean water runoff at their site, educate the community, and reduce their Clean Water Act Fee (\$128,381).

- University of Maryland College Park Foundation will remove impervious cover and construct several rain gardens to treat parking lot stormwater runoff. The golf course site is a highly visible demonstration and teaching site. Also, this effort will use the University staff to design, build, and maintain the practice, resulting in enhanced staff skillsets (\$124,770).

Table E-23 includes the FY 2016 grant program awarded. Also, a brief description for each grant award is provided in the bulleted list below Table E-23.

Table E-23. Grant Awarded Through the First Solicitation (FY 2016) of the Stormwater Stewardship Grant Program

Grant #	Title	Applicant	Type of Grant	Proposed Impervious Acreage Treated (acres)	Award Amount
13295	Track 2 Citizen Engagement	Interstate Commission on the Potomac River Basin	Outreach	NA	\$ 61,938
13315	Track 2 Citizen Engagement: Residential Outreach and Behavior Change Campaign for Central Prince George's County	Clean Water Fund	Outreach	NA	\$ 25,257
13288	Track 1 Water Quality: Trees for Sacred Places	Alliance for the Chesapeake Bay, Inc.	Outreach/Trees	Trees	\$ 131,926
13300	University of Maryland Golf Course Stormwater Stewardship Demonstration Project	University of Maryland College Park Foundation	Outreach/Water Quality	1.65	\$ 124,770
13296	Water Quality NHA Parking Lot 1	New Hope Educational Institute	Water Quality	1.91	\$ 125,000
13317	Tracks 1 Water Quality & Track 2 Citizen Engagement: Uncaptured Stormwater is a Missed Opportunity: Water Stewardship for Urban Farming	ECO City Farms	Outreach/Water Quality	0.5	\$ 45,000
13291	Track 2 Citizen Engagement Rain Check Rebate Resource Center at Behnke Nurseries	The Low Impact Development Center, Inc.	Outreach	NA	\$ 8,423



Grant #	Title	Applicant	Type of Grant	Proposed Impervious Acreage Treated (acres)	Award Amount
13310	Water Quality - Melrose Trail Rain Gardens	City of Hyattsville	Water Quality	0.08	\$ 20,431
13303	Track I Water Quality Clean Water for Union Bethel AME Church	Union Bethel AME Church	Water Quality/Outreach	1.24	\$ 128,381
13290	Track 2 Citizen Engagement: Providing Technical Assistance to Prince George's County Stormwater Stewardship Grant Applicants	Neighborhood Design Center	Outreach	NA	\$ 24,432
13316	Track 1 Water Quality Stormwater Stewardship Education at the BAIB Urban Farm	University of Maryland College Park	Water Quality/Outreach	0.13	\$ 80,000
13305	Water Quality: Community-Based Restoration Implementation at Faith based locations In Prince George's County	Anacostia Riverkeeper	Outreach/Cisterns	Cisterns	\$ 27,715
13312	Citizen Engagement-Latino Outreach in the Prince Georges County Watershed	Maryland League of Conservation Voters Education Fund	Outreach	NA	\$ 22,500
13289	Track 2 Citizen Engagement: Community Design and Engagement through Continuation of NDC's Stormwater Savvy Program	Neighborhood Design Center	Outreach	NA	\$ 50,000
13313	Suitland Rain Barrel Project	Suitland Civic Association	Outreach/Rain Barrels	Rain Barrels	\$ 35,000
13299	Track 1 Water Quality: Creating Green Infrastructure for the Parkdale Community	Parkdale High School	Outreach/Water Quality	4.24	\$ 200,000
13311	TRACK 1 WATER QUALITY - Clean Water Works for Quincy Run Vicinity	Friends of Lower Beaverdam Creek	Water Quality/Outreach	0.73	\$ 114,227

Grant #	Title	Applicant	Type of Grant	Proposed Impervious Acreage Treated (acres)	Award Amount
13304	Track I Water Quality Clean Water for Accokeek First Church of God	Accokeek First Church of God	Water Quality/Outreach	0.19	\$ 75,000
13307	Faith-Based Technical Assistance	People for Change Coalition	Outreach	NA	\$ 35,000
13286	Track 1 & Track 2: Community Partnerships for Environmental Action and Sustainability (COPEAS)	Global Health and Education Projects, Inc.	Outreach/Trees	Trees	\$ 15,000
TOTAL				10.67	\$1,350,000.00

Grants approved in FY2016 include:

- *ECO City Farms, \$45,000*: This grant funds stormwater management practices at this urban farm and for citizen engagement in the activities for the nearby residents.
- *University of Maryland College Park, \$80,000*: This grant will support the stormwater management practices at this urban farm and for citizen engagement in the activities to the nearby residents.
- *Clean Water Fund, \$22,257*: This project will provide a social marketing campaign in and around the Town of Capital Heights, Maryland, to promote residential watershed and stormwater practices. Funds will be provided for the field canvasser outreach and social marketing strategy, to canvas the pilot community, to evaluate initial results and adjust the program, to expand the program to another community, and to summarize the results.
- *Suitland Civic Association, \$35,000*: This grant will for citizen engagement in the Suitland community about clean water initiatives, existing programs to support the residents, such as work force development, and to provide Prince George's County Rain Check Rebate Program education.
- *Maryland League of Conservation Voters Education Fund, \$22,500*: for Latino outreach in Prince George's County, Maryland, to connect stormwater management with environmental health, economic and environmental justice, and community participation.
- *Friends of Lower Beaverdam Creek, \$114,227*: This project funds design, implementation, and construction of stormwater implementation projects, to provide citizen engagement for the residents in the Quincy Run area, and to provide the Prince George's County Alternative Compliance for faith based organizations.
- *City of Hyattsville, \$20,431*: This project funds a rain garden and bioretention installation at the Melrose Park Trail in Hyattsville, Maryland.
- *People for Change Coalition, \$35,000*: This grant will support faith-based technical assistance to provide training and assistance for up to five faith based organizations in Prince George's County.

- *Anacostia Riverkeeper, \$27,715*: This initiative will support faith based community watershed and stormwater outreach and citizen engagement and to install three cisterns at three congregations in Prince George's County.
- *Accokeek First Church of God, \$75,000*: This grant will provide funds for the design, implementation, and construction of two stormwater implementation projects and an education program to implement an Alternative Compliance Program at the Accokeek First Church of God Church.
- *Union Bethel AME Church, \$128,381*: Funding will support design and implementation of four stormwater management practices to treat the parking lot runoff, to design and install interpretive signs, and to engage students.
- *Parkdale High School, \$200,000*: This grant funds the design, implementation, and construction of stormwater implementation projects and to provide hands-on education and mentorship to the students of Parkdale High School and the surrounding community members.
- *New Hope Educational Institute, \$125,000*: This grant funds the design and implementation of stormwater management practices to treat the parking lot runoff, to design and install interpretive signage, and to engage students in the process.
- *Interstate Commission on the Potomac River Basin, \$61,938*: This grant funds the Score Four Students, Schools, Streams and the Bay program implementation that will encompass 400 students and five teachers from Northwestern High School (Adelphia), Parkdale High School (Riverdale), and the Academy of Health Sciences (Largo) schools located in Prince George's County.
- *The Low Impact Development Center, Inc., \$8,423*: This grant funds a Rain Check Rebate Resource Center at Behnke's Nurseries located in Beltsville, Maryland, to engage residents in the rebate program.
- *Neighborhood Design Center, \$24,432*: This grant funds the design, implementation, and construction of stormwater implementation projects and to provide hands-on education and mentorship to the students of Parkdale High School and the surrounding community members.
- *Parkdale High School, \$200,000*: This grant provides technical assistance services that support future applicants in year 3 of the Prince George's Stormwater Stewardship grant program.
- *Neighborhood Design Center, \$50,000*: This grant funds a Stormwater Savvy program supporting activities such as master plan design and environmental engagement to result in action-oriented design plans.
- *Alliance for the Chesapeake Bay, Inc., \$131,926*: This grant will plant 450 trees on congregation property and to plant another 300 trees with the congregations on off-site properties
- *Global Health and Education Projects, Inc., \$15,000*: This grant funds the Family Tree Adoption Program to include site assessments, trees, and the education and assistance for the families that adopt the trees.

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.

Permit Condition Actions

As part of its stormwater management activities, Prince George's County (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 (BBW) 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 DVD, Assessment of Controls.

1. WATERSHED RESTORATION ASSESSMENT

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

Permit Condition Actions

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



Figure F-1. Bear Branch Monitoring Locations

Chemical Monitoring

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

Permit Condition Actions

Chemical monitoring was performed at monitoring stations listed in Table F-1 below:

Table F-1. Chemical Monitoring Locations

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

Sampling events at each monitoring stations are provided in Table F-2 below. During the FY2016, automatic storm samples were collected in 11 months. Because of weather constraints automatic storm samples were not collected during August. In addition, six manual storm samples were not collected because of weather and timing constraints. In addition to the four quarterly baseflows, one baseflow sample was taken in lieu of a storm sample for the automatic sampling parameters and five baseflow samples for the manual sampling parameters in lieu of storm samples.

Table F-2. Chemical Monitoring Sampling Events

Sample month	Station 003 (in-stream)				Station 005 (in-stream)			
	Wet weather		Dry weather		Wet weather		Dry weather	
	Param. set 1	Param. set 2	In lieu of storm samples	Qtr'ly	Param. set 1	Param. set 2	In lieu of storm samples	Qtr'ly
July	X		B2					
August			B1, B2	Q				
September	X		B2					
October	X	X						
November	X							
December	X	X		Q				
January	X		B2					
February	X	X						
March	X		B2	Q				
April	X	X		Q				
May	X	X			X	X		
June	X	X			X	X		

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

Permit Condition Actions

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 relocated to the Bear Branch watershed.

Permit Condition F1 a. (iii): At least three (3) samples determined to be representative of each storm event shall be submitted to a laboratory for analysis according to methods listed under 40 CFR Part 136 and event mean concentrations (EMC) shall be calculated for:

Biochemical Oxygen Demand (BOD₅)
Total Kjeldahl Nitrogen (TKN)
Nitrate plus Nitrite
Total Suspended Solids
Total Petroleum Hydrocarbons (TPH)

Total Lead
Total Copper
Total Zinc
Total Phosphorus
Hardness

*E. coli or enterococcus***Permit Condition Actions**

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 (BOD₅), nitrate plus nitrite (NO₃/NO₂), 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 are collected for another storm event that same month.

Table F-3 presents the required parameters analyzed and the analytical procedure. Microbac Laboratories, Inc., in Baltimore, Maryland, analyzed the samples. Hardness was added for the 2013–2014 monitoring year because it is expected to be a required monitoring parameter in the next MS4 permit for the County. Please see results of the analysis on page 18 in the report titled “Prince George’s County, Maryland—Long-Term Stormwater Monitoring Program—Bear Branch” saved on DVD, Assessment of Controls\Bear Branch.

Table F-3. Monitoring Parameters

Parameter	EPA method	Holding time at 4 °C	Project reporting limit	Units
Copper (Cu)	EPA 200.8/6020	6 months	1	µg/L
Lead (Pb)	EPA 200.8/6020	6 months	1	µg/L
Zinc (Zn)	EPA 200.8/6020	6 months	5	µg/L
BOD ₅	SM (20) 5210B	48 hours	2–5	mg/L
NO ₃ /NO ₂	EPA 353.2	28 days	0.05–0.1	mg/L
TKN	SM (20) 4500N-org/NH3-G	28 days	0.1	mg/L
TP	EPA 365.1	28 days	0.01	mg/L
TSS	SM (20) 2540D	7 days	2	mg/L
<i>E. coli</i>	SM (20) 9221F	6 hours	2	MPN/100 mL
TPH	EPA 1664A	28 days	5	mg/L
Hardness	SM (20) 2340 C	28 days	1.0	mg CaCO ₃ /L
pH	EPA 150.1	In-stream measurement	--	
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.

Permit Condition Actions

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

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

Stage data are analyzed to determine total baseflow and stormflow volumes during the monitoring period. Stage is recorded at 5-minute intervals. Stage-to-flow rate conversions are made using rating curves. The curves involve power functions, developed through regression analysis, that relate measured stage-to-flow relationships. To date, 48 stage-to-flow measurements have been taken at station 003 and 42 measurements at station 005. It should be noted that there were less stage relationships taken in 2015 at station 005 due to the downstream dam and the dredging operation. The data are plotted, and a relationship between stage and flow is determined. That relationship is then used to calculate the flow at the monitoring stations for subsequent use in determining EMCs.

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

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

Where,

C is the concentration of each sampled parameter;

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

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

Biological Monitoring

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

Permit Condition Actions

Monitoring was performed in spring 2016 in the Bear Branch watershed. Two assessment locations were surveyed as listed in the Table F-4 below. One station is upstream of station 005 (station 06-006C)

and about 90 feet upstream of the confluence of Bear Branch and Laurel Lake. The newer station (station 06-008B) is on the mainstem of Bear Branch northeast of the end of Bonnet Lane, upstream of Contee Road, and approximately 250 meters downstream of I-95.

Table F-4. Locations of Sampling Stations

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

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

Permit Condition Actions

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

Benthic macroinvertebrate samples collected in the spring were assessed using the Maryland Department of Natural Resources MBSS' 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 of 1–5. A higher score is closer to reference conditions, and a lower score is indicative of impairment (Table F-5).

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

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

Physical Monitoring

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

Permit Condition Actions

Stream physical condition is assessed using longitudinal profile data, cross-section analysis, and geomorphic characterization. These assessments are completed each year in the fall. August 2015 was the ninth year the County performed a geomorphologic assessment in the Bear Branch watershed. The next assessment will be in August 2016.

A longitudinal profile was measured from just downstream of station 005 to approximately 6,480 feet upstream, as it was in FY2015. A benchmark was established in 2007 and used as a common reference datum to relate elevation data collected previously to this year's measurements. Throughout the profile, the elevations and locations of the thalweg were surveyed using a total station data collector.

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

Table F-6. Location of Five Monumented Cross Sections

Cross section	Longitude				Latitude			
	Deg.	Min.	Sec.		Deg.	Min.	Sec.	
XS-1	76	53	14.774	W	39	5	23.021	N
XS-2	76	53	1.609	W	39	5	24.333	N
XS-3 ^a	76	52	40.440	W	39	5	29.820	N
XS-4	76	52	26.601	W	39	5	27.835	N
XS-5	76	52	15.293	W	39	5	25.806	N

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

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

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

Permit Condition Actions

Concurrent with biological sample collection, a qualitative, visual-based assessment of habitat quality was performed in the assessment reach. Habitat scores were from the USEPA Rapid Bioassessment Protocols (RBPs) (Barbour et al. 1999) for low-gradient streams. The assessment consisted of ten physical habitat parameters visually assessed and assigned scores of 0–20. The resultant value (0–200) was then compared to the reference condition (168) and assigned a narrative description (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 0-10 scale separately for each bank of the stream. The three parameters that look at each bank are bank stability, vegetative protection, and riparian vegetative zone width. Collectively, the combined scores for the metrics yield a total score for the reach that allows for comparison to optimal habitat conditions in the same physiographic region.

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

Permit Condition Actions

As required by the permit, a hydrologic and/or hydraulic model will be used in the fourth year of the permit 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.*

Permit Condition Actions

A full analysis of the monitoring protocol and results are provided in the Bear Branch monitoring report, *Prince George's County, Maryland—Long-Term Stormwater Monitoring Program —Bear Branch Annual Report 2016*, included on DVD, Assessment of Controls\Bear Branch. This report and the attached chemical long-term monitoring database meet the reporting requirements. Please review the sections of the report that meets the permit conditions as described below in the Table F-8.

Table F-8. Permit Condition Compliance Summary List

Condition	Report section	Page
1(a)(i) Storm Event Sampling Frequency	3.1.2	7
1(a)(ii) Storm Event Sampling Procedure	3.1.2	7
1(a)(iii) Parameters Requiring EMC Calculations	3.1.3	8
1(a)(iv) Continuous Flow Monitoring	3.1.4	9
1(b)(i) Biological Sampling Locations	3.2.1	12
1(b)(ii) Biological Sampling Method	3.2.1	12
1(c)(i) Geomorphological Stream Assessment Location and Methods	3.3.2	14

Condition	Report section	Page
1(c)(ii) Stream Habitat Assessment	3.2.2	14
1(c)(iii) Hydrologic and Hydraulic Modeling	--	--
1(d)(i) Reporting EMCs on MDE's Database	--	--
1(d)(ii) Results and Analysis of Monitoring Data	4.0	18
1(d)(iii) Proposed Modifications to the Monitoring Program	--	--

2. STORMWATER MANAGEMENT ASSESSMENT

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

Permit Condition Actions

Prince George's County began monitoring the Black Branch Watershed (BBW) and a small tributary of the BBW (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. The County continued with its physical monitoring at the Black Branch Watershed (BBW) 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;

Permit Condition Actions

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 (Figure F-2). The entire Black Branch mainstem was surveyed from its confluence with Collington Branch for approximately 2.2 miles upstream to slightly beyond the uppermost cross sections. The overall channel slope of the Black Branch mainstem was 0.30 % and has not changed over 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 4 cross sections in the tributary). Type G channels are relatively narrow entrenched channels (i.e., entrenchment ratio less than 1.4 and width-to-depth ratio less than 12). It should be noted that cross-section MS1 has been scoured so much that it cannot be used for the classification.

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

Permit Condition Actions

Each year since 2001, the BBW was evaluated to determine whether any significant changes to the physical conditions of the BBW had occurred since conducting the baseline evaluation. The mainstem and Tributary 1 in the BBW were evaluated in 2015 to determine whether any significant changes to the physical conditions of the BBW had occurred since it was last evaluated in 2014. The results are

presented in 2015 Black Branch Geomorphic Report for 2014 and 2015 with comparison to the base year of 2001. The report is provided on DVD, Assessment of Control\ Black Branch.





Figure F-2. Locations of Cross Sections in BBW and Tributary 1 Watershed

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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.*

Permit Condition Actions

Fiscal Analysis

This information is provided in the new MS4 geodatabase on DVD.

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

Permit Condition Actions

The Financial Assurance Plan (FAP) that shows County meets its 75% requirement of the projected expenses for next two years was submitted to MDE on June 30, 2016. This FAP was approved by the County Council on October 27, 2016.

