U.S. ARMY GARRISON
ABERDEEN PROVING GROUND (MARYLAND)
MUNICIPAL SEPARATE STORM
SEWER SYSTEM (MS4) PROGRAM
INSPECTION REPORT

SUSQUEHANNA ROAD, BUILDING 4304
3rd FLOOR, WING B
ABERDEEN PROVING GROUND, MD 21005

Final Report Date: May 2014

Field Activity Date: December 11, 2013

U.S. Environmental Protection Agency, Region III
Water Protection Division
Office of NPDES Enforcement (3WP42)
1650 Arch Street
Philadelphia, PA 19103

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DOCUMENTS CITED IN REPORT

Shortened Name	Document Title and Date
EPA Records Request	List of documents the EPA Inspection Team requested from APG on December 3, 2013
Permit or MS4 Permit	*National Pollutant Discharge Elimination System General Permit for Discharges from State and Federal Small Municipal Separate Storm Sewer Systems, General Discharge Permit No. 05-SF-5501 (General NPDES Permit No. MDR05501), effective November 12, 2004*
Industrial General Permit	MDE's *General Discharge Permit for Stormwater Associated with Industrial Activities* (General Permit No. 02-SW)
Sediment Control Subtitle	Maryland Environment Article, Title 4, Subtitle 1, *Annotated Code of Maryland*
Stormwater Management Subtitle	Maryland Environment Article, Title 4, Subtitle 2, *Annotated Code of Maryland*

ACRONYMS AND ABBREVIATIONS USED IN REPORT

Acronym or Abbreviation	Corresponding Term
AEC	Activity Environmental Coordinator
ABST	above-ground storage tank
ARL	Army Research Laboratory
ATC	Army Test Command
BMP	best management practice
BRAC	Base Realignment and Closure
COMAR	Code of Maryland Regulations
COR	Contract Officer Representative
DPW	Department of Public Works
EISA	2007 Energy Independence and Security Act
EPA	[United States] Environmental Protection Agency
ESD	environmental site design
GIS	geographic information system
GPS	global positioning system
IDDE	illicit discharge detection and elimination
LEED	Leadership in Energy and Environmental Design
LID	low-impact design
MDE	Maryland Department of the Environment
MEP	maximum extent practicable
MS4	municipal separate storm sewer system
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
POC	point of contact
SOP	standard operating procedure
SWPPP	stormwater pollution prevention plan
TMDL	total maximum daily load
USACE	United States Army Corps of Engineers
USAPHC	U.S. Army Public Health Command
WIP	Watershed Implementation Plan

EXECUTIVE SUMMARY

On December 11, 2013, a compliance inspection team comprised of staff from U.S. Environmental Protection Agency (EPA) Region III and EPA's contractor, PG Environmental, LLC (collectively, the EPA Inspection Team), inspected the municipal separate storm sewer system (MS4) program of the U.S. Army Garrison at Aberdeen Proving Ground (hereinafter, APG or Permittee) in Aberdeen, Maryland.

Discharges from APG's MS4 are regulated by the Maryland Department of Environment (MDE) *General Permit for Discharges from State and Federal Small Municipal Separate Storm Sewer Systems*, General National Pollutant Discharge Elimination System (NPDES) Permit No. MDR055501 (the MS4 Permit), effective November 12, 2004. The Permit was set to expire on November 12, 2009, but has been administratively extended by MDE.

The purpose of this inspection was to obtain information to assist EPA in assessing APG's compliance with the requirements of the Permit, as well as the implementation status of its current MS4 program.

Based on the information obtained and reviewed, the EPA Inspection Team made several observations concerning APG's MS4 program related to the specific Permit requirements evaluated. Table 1 below summarizes the permit requirements and the observations made by the inspection team.

Table 1. Summary of Permit Requirements and Inspection Observations

Permit Requirement	Observations	
Permit Part III.C (Illicit Discharge Detection and Elimination Program)	Observation 1.	It appears that the extent of APG's storm sewer system had not been mapped in its geographic information system (GIS).
	Observation 2.	At the time of the inspection, APG had not developed and implemented procedures for routine field screening of storm drain outfalls.
	Observation 3.	At the time of the inspection, APG had not developed inspection procedures for identifying the source of suspected illicit discharges to the MS4 or corresponding enforcement procedures.
	Observation 4.	The EPA Inspection Team identified a source of a suspected illicit discharge at ARL Facility – Building No. 1101-AST.
Permit Part III.D (Construction Site Stormwater Runoff Control Program)	Observation 5.	APG has not been delegated authority for enforcement of the state's erosion and sediment control program.
	Observation 6.	Although APG has not been delegated enforcement of the State's erosion and sediment control program, the APG Environmental Protection Specialist explained that she has received MDE's "green card" certification for erosion and sediment control, as well as the Maryland State Highway Authority (MDSHA) "yellow card" training.

Permit Requirement	Observations
	Observation 7. The EPA Inspection Team observed several erosion and sediment control related issues at the Bayside Village Construction Project.
Permit Part III.E (Post-Construction Stormwater Management Program)	Observation 8. APG staff members explained APG construction projects must adhere to APG's Low Impact Design (LID) Policy as well as other Federal guidelines to meet MDE's ESD requirements. Observation 9. At the time of the inspection, APG did not have an inventory of post-construction BMPs for the installation. Observation 10. At the time of the inspection and according to APG staff, APG did not have a post-construction BMP maintenance program. Further, APG explained that it did not have dedicated funding for post-construction BMP maintenance. Observation 11.At the time of the inspection, APG was not inspecting stormwater management systems. Inspections had not occurred during the first year of operation or at least once every 3 years after that. Observation 12.The EPA Inspection Team observed maintenance issues at the APG Test Evaluation Command Building Post-Construction Stormwater Management Facility.
Permit Part III.F (Pollution Prevention and Good Housekeeping)	Observation 13.Based on discussions with APG staff and the field activities conducted during the on-site inspection, the EPA Inspection Team was unable to determine whether APG's current SWPPP covered all facilities with the potential to contribute pollutants to stormwater. Observation 14.At the time of the inspection, APG had not clearly defined responsible parties should noncompliance become an issue. Observation 15.It is not clear whether APG's employee training materials prevent and reduce pollutant discharges to the storm drain system. Observation 16-19. The EPA Inspection Team observed issues related to pollution prevention and good housekeeping at the following sites: ATC Facility – Building No. 338; ATC Facility – Building No. 407; ATC Facility – Building No. 402; and, ARL Facility – Building No. 1171 – "NERF" Building.
Permit Part V.C (Reporting)	Observation 20. At the time of the inspection, APG had not submitted any annual reports to MDE since permit coverage was authorized in 2005.

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Appendix 2: Original APG NOI for MS4 Program (dated January 13, 2005) and MDE's Review

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INTRODUCTION

On December 11, 2013, a compliance inspection team comprised of staff from the U.S. Environmental Protection Agency (EPA) Region III and EPA's contractor, PG Environmental, LLC, (collectively, the EPA Inspection Team) inspected the municipal separate storm sewer system (MS4) program of the United States Army Garrison at Aberdeen Proving Ground (hereinafter, APG or Permittee) in Aberdeen, Maryland.

The onsite inspection was scheduled for December 10 and 11, 2013; however, due to inclement weather in the area, the APG facility was closed to non-essential personnel on December 10, 2013. Due to this closure, the EPA Inspection Team was unable to perform the onsite inspection on December 10, 2013. The EPA Inspection Team modified the agenda to accommodate this change and onsite discussions and field activities were conducted on December 11, 2013. Dry weather conditions were experienced throughout the inspection activities, though some snow remained on the ground surface from precipitation events prior to the onsite inspection.

The purpose of this inspection was to obtain information that will assist EPA in assessing the City's compliance with the requirements of the MS4 Permit, as well as the implementation status of its current MS4 program.

A copy of the current MS4 Permit is included as Appendix 1. A copy of APG's original MS4 Notice of Intent (NOI) submitted to MDE in 2005, which contains descriptions of measures for program compliance, and MDE's review of the NOI (hereinafter, NOI Review) is included as Appendix 2. The inspection schedule is presented in Appendix 3.

It should be noted that APG is covered under MDE's *General Discharge Permit for Stormwater Associated with Industrial Activities* (General Permit No. 02-SW; hereinafter, Industrial General Permit) and has an individual NPDES discharge permit (State Permit No. 06-DP-2517; NPDES No. MD0003565).

Referenced documentation used as supporting evidence is provided in Appendix 5, Exhibit Log and photograph documentation is provided in Appendix 6, Photograph Log. A list of documents obtained is provided in Appendix 7, Document Log.
The EPA Inspection Team obtained the enclosed information through a series of interviews with APG representatives, along with a series of building visits, record reviews, and field verification activities.

The primary representatives involved in the inspection were the following:

APG Representatives:	Mr. Tom Kouchar, Director, Directorate of Public Works (DPW)
	Mr. Vance Hobbs, Environmental Division Chief, DPW
	Mr. Janmichael Graine, Compliance Branch Chief, DPW
	Mr. Richard Wiggins, Water Program Manager, DPW
	Ms. Terry Bartley, Environmental Protection Specialist, DPW
	Ms. Karen Jobes, Environmental Protection Specialist, DPW
	Mr. Steve Aust, Resident Engineer, DPW
	Mr. Dan Wheeler, GIS Consultant
EPA Representatives:	Ms. Kyle Zieba, EPA Region III
	Ms. Allison Graham, EPA Region III
EPA Contractors:	Mr. Bobby Jacobsen, PG Environmental, LLC
	Mr. Kort Kirkeby, PG Environmental, LLC

A sign-in sheet from the onsite inspection is included as Appendix 4.

ABERDEEN PROVING GROUND BACKGROUND

APG was established in 1917 and is primarily a research and development installation for artillery, rolling stock, weapons, and communications for the U.S. Department of Defense. The installation also provides support to military staff and administers some solider training. APG encompasses an area of about 76,000 acres along the Chesapeake Bay in Aberdeen, Maryland and Edgewood, Maryland. According to APG staff, APG is located within five sub-watersheds of the Chesapeake Bay and water quality goals for APG were established in Maryland's Watershed Implementation Plan (WIP) in order to meet the requirements of the Chesapeake Bay Total Maximum Daily Load (TMDL).

According to APG staff, approximately 22,000 people, the majority of which are civilian staff, work and live at the installation. APG staff further explained that the 2005 Base Realignment and Closure (BRAC) process reassigned many of the military personnel; however, APG gained in total land area and population overall due to an increase in the size of civilian agencies and staff. At the time of the inspection, APG staff explained there were 50 employees in the DPW Environmental Division: 45 employees are responsible for all aspects of environmental compliance including, but limited to, solid waste recycling, toxic chemicals, oil tanks, air/radiation, pollution prevention and water. The other 5 employees are responsible for hazardous waste restoration activities. Of the 45 employees, APG had two (2) full-time employees to directly support APG's water programs (i.e., wastewater, stormwater, drinking water). An additional employee, the Compliance Branch Chief, provided oversight and partial support to these programs.

The DPW Environmental Division Chief and Compliance Branch Chief explained that private contractor support for water program activities has been more difficult to secure in the past few years due to lack of available funding. APG staff explained they recently ended a private contract with EA Engineering, who provided support to the stormwater program in 2012 and 2013. Subsequently, APG has initiated a contract with the U.S. Army Public Health Command (USAPHC) to carry out some of the duties previously conducted by the private contractor. APG staff explained that it had been increasingly difficult to use private contractors due to uncertainty with the federal government's budget.

APG staff explained for fiscal year 2014 approximately $465,000 was requested in contractor support for all of APG's water programs (i.e., wastewater, stormwater, drinking water). Approximately $213,000 was requested for drinking water and $125,000 for implementation of APG's stormwater pollution prevention plan (SWPPP) for compliance with the requirements of the Industrial General Permit and APG's individual NPDES permit. Sequestration and other fiscal austerity programs have caused continuity issues with developing and implementing and installation wide MS4 program.

INFORMATION OBTAINED RELATIVE TO PERMIT REQUIREMENTS

APG submitted a Notice of Intent (NOI) for coverage under the MS4 Permit on January 13, 2005 and MDE authorized coverage on September 28, 2005 (see Appendix 2). Prior to the onsite inspection, APG staff explained that they were not aware APG had submitted an NOI and was permitted as a small MS4. As a result, APG had not implemented the minimum control measures

(MCMs) in the area served by their small MS4. However, aspects of the MCMs were being implemented on portions of the installation applicable to the other aforementioned stormwater permits.

Based on EPA staff discussions with MDE prior to the on-site inspection, MDE confirmed that APG was permitted as an MS4. MDE's Regulatory Compliance Officer in its Water Management Administration, emailed the DPW Environmental Division Chief on February 17, 2012 referencing a phone conversation and confirming he was the contact at APG for the Permit (see Exhibit 3 in Appendix 5). Furthermore, MDE's Regulatory Compliance Officer attached APG's 2005 NOI to the email.

The EPA Inspection Team obtained documentation and other supporting information to evaluate compliance with the MS4 Permit prior to, during, and after meeting with APG staff during the onsite inspection. Observations regarding the APG's implementation of the MS4 Permit requirements are presented in this report. The EPA Inspection Team's ability to gather information during the on-site inspection was limited due to the nature of the activities on APG. APG staff did not allow photographs to include fence lines or identifying signs. In addition, the EPA Inspection Team was not allowed to record GPS locations during the site visit.

On December 3, 2013, the EPA Inspection Team formally provided APG with a written list of requested records (hereinafter, EPA Records Request; see Appendix 5, Exhibit 1), some of which APG provided to the EPA Inspection Team prior to and during the onsite inspection. Following onsite discussions, the EPA Inspection Team requested additional program documentation via electronic mail on December 19, 2013. APG provided some, but not all of the additional documents in response to the request between the end of the onsite inspection and February 7, 2014.

This report describes and outlines MS4 Permit requirements with specific sections cited, the related requirements, and observations made during the inspection. The format of the report follows the numeric system used in the Permit and is sequential. Sections of the Permit are restated with the observations concerning those requirements listed below. The Permit incorporates state regulations by reference under the construction and post-construction minimum control measures; therefore, in these sections of the report, the EPA Inspection Team also provides applicable regulatory requirements from the *Code of Maryland Regulations* (COMAR).

MINIMUM CONTROL MEASURE 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE) PROGRAM

Permit Part III.C (Illicit Discharge Detection and Elimination) – Permittees shall develop, implement, and maintain a program to identify and eliminate illicit storm drain system connections and non-stormwater discharges to the maximum extent practicable. The program developed to satisfy this minimum control measure shall contain elements to field screen storm drain system outfalls, inspect the storm drain system for the purpose of identifying the source of any illicit discharges, eliminate any illegal connection or illicit discharge to the storm drain system, and enforce penalties where appropriate. The illicit discharge program shall also contain components to address illegal dumping and spills.

Permit Part III.C.1 (Storm Sewer System Map) – At a minimum, a program developed to implement illicit discharge detection and elimination to satisfy this control measure shall contain the following: 1. A map showing the extent of the storm drain system.

Observation 1: It appears that the extent of APG's storm sewer system has not been mapped in its geographic information system (GIS).The EPA Inspection Team observed multiple assets in the field that were not included in APG's GIS-based map. Specifically, two storm drain inlets observed at Army Test Command (ATC) Building No. 338-E3 and an outfall to the north of the fueling station at Army Research Laboratory (ARL) Building No. 1101-AST were not identified in APG's GIS. Appendix 5, Exhibit 2 is a screenshot from APG's GIS showing the area that includes Building No. 338-E3.

APG's GIS Consultant explained that the maps included in APG's SWPPP are from APG's GIS database and that the storm drain pipes and catch basins should be identified in the GIS for the entire installation. He further explained that as-built construction drawings provided by registered surveyors for construction projects are given to APG's GIS department for updating the information; however, it appeared that approximately five construction projects were not incorporated into APG's GIS at the time of the inspection. He stated there may be about six locations off of the main installation which are a part of APG but have not been detailed in GIS yet (e.g., Churchville tank testing area).

Permit Parts III.C.3–4 (Field Screening and Source Identification) – At a minimum, a program developed to implement illicit discharge detection and elimination to satisfy this control measure shall develop and implement procedures to field screen storm drain outfalls on a consistent basis, and identify the source of any suspected illicit discharges to the storm drain system.

Observation 2: At the time of the inspection, APG had not developed and implemented procedures for routine field screening of storm drain outfalls. APG staff explained outfall observations are occasionally made during tenant organization facility inspections (i.e., industrial facility site inspections); however, the outfall observations made are not necessarily aimed at identifying illicit discharges.

The APG Water Program Manager explained USAPHC has been contracted to conduct monthly sampling at APG's industrial outfalls (about six distinct outfalls) under APG's individual NPDES permit. USAPHC also has been contracted to make observations at outfalls located at other APG facilities during a separate visual inspection of the facility, which occurs annually. This annual outfall observation activity is not necessarily aimed at identifying illicit discharges, and outfall

observations would have only been documented as a component of the overall facility visual inspection.

Observation 3: At the time of the inspection, APG had not developed inspection procedures for identifying the source of suspected illicit discharges to the MS4 or corresponding enforcement procedures. APG staff interviewed at facilities stated they notify their supervisors if they observe something other than stormwater entering a storm drain inlet.

Observation 4: **ARL Facility – Building No. 1101-AST**

The EPA Inspection Team requested certain photographs be taken by ARL staff and transmitted to EPA subsequent to the onsite inspection. Photographs were provided by APG on February 7, 2014 and are included in the Photo Log.

a. The facility included a fueling area with two side-by-side, double-walled AGSTs—a 700-gallon diesel tank and 300-gallon gas tank—used for smaller equipment such as forklifts and lawn mowers (see Appendix 6, Photograph 44). Each fueling tank has an emergency shutoff mechanism; however, ARL staff explained the electrical line for the shutoff had been severed about three weeks prior to the site visit, so it was no longer functional and needed to be repaired. A spill kit was present adjacent to the fueling tanks.
b. The ARL "hazmed" contractor present for the site visit explained there is often oil staining on the ground surface near the fueling station; however, it was not visible to the EPA Inspection Team during the site visit due to snow and ice cover.
c. An area of ponded water and ice was observed directly to the north of the fueling tanks (see Appendix 6, Photograph 45), and a drainage ditch leading to a storm drain inlet was observed downgradient to the west (see Appendix 6, Photographs 46 and 47). An outfall to the Chesapeake Bay was observed on the north side of Spesutie Island Road about 150 feet north of the fueling tanks (see Appendix 6, Photograph 48). ARL and APG staff were unsure if this outfall received stormwater runoff from the fueling area. Further, during a review of APG's GIS with APG's GIS Consultant, the EPA Inspection Team noted that this outfall was not identified.
d. The ARL "hazmed" contractor explained inspections of the facility occur quarterly.

MINIMUM CONTROL MEASURE 4: CONSTRUCTION SITE STORMWATER RUNOFF CONTROL PROGRAM

Permit Part III.D – The Environment Article, Title 4, Subtitle 1, Annotated Code of Maryland establishes a statewide erosion and sediment control program to control construction site runoff. This statute, coupled with the Code of Maryland Regulations (COMAR), specifies the requirements for any construction activity that disturbs five thousand (5,000) square feet or more of earth or involves

100 cubic yards or more of earth movement. Because Maryland has an erosion and sediment control program in place that regulates more earth disturbing activities than the NPDES stormwater program, MDE considers compliance with the State statute to be compliance with this minimum control measure, this general permit, and CFR.

COMAR 26.17.01.02 (General Provisions) states that an acceptable erosion and sediment control program will include:

1. *An effective erosion and sediment control ordinance (or an effective set of erosion and sediment control regulations) which has been approved by MDE.*
2. *Review and approval of erosion and sediment control plans in accordance with the "2011 Maryland Standards and Specification for Soil Erosion and Sediment Control."*
3. *Requirements for erosion and sediment control plans to provide effective erosion and sediment control strategies (i.e., BMPs* [*best management practices*]*)) and information necessary to enable the proper installation and maintenance of these strategies.*
4. *In delegated jurisdictions, inspection and enforcement procedures that ensure compliance with the approved erosion and sediment control plan, as well as provide for timely response to citizen complaints.*

COMAR 26.17.01.11 states that the *2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control* shall serve as the official guide for erosion and sediment control principles, methods, and practices.

Observation 5: APG has not been delegated authority for inspection or enforcement of the state's erosion and sediment control program. APG staff explained that because of this, MDE conducts erosion and sediment control plan reviews for APG construction projects. APG contractors develop the construction design plans, including erosion and sediment control, which are submitted to MDE for review. APG maintains a set of approved erosion and sediment control plan sets at APG that can be referenced during MDE inspections, in which APG staff participate.

According to the DPW Resident Engineer, APG submits an NOI for coverage under MDE's construction general stormwater permit for projects with a disturbance greater than one acre. Coverage is then transferred to the contractor for the duration of the construction project. APG staff explained this process has been in place for about one or two years—prior to that, APG would be the permit holder for construction projects.

The APG Environmental Protection Specialist and MDE staff coordinate to administer a pre-construction meeting with the construction contractor to review erosion and sediment control requirements and to ensure that contractor staff have the appropriate personnel with MDE "green card" certification.

COMAR 26.17.01.06 (Staff Training and Certification) – This regulation states the following concerning staff training and certification under the erosion and sediment control program:

1. *The Administration shall require certification of responsible personnel as established by the Sediment Control Subtitle and in accordance with this regulation.*
2. *Certification is obtained by completing an Administration-approved training program.*
3. *Certification is valid for 3 years and is automatically renewed unless the Administration notifies the certificate holder that additional training is required.*

Observation 6: Although APG has not been delegated enforcement of the State's erosion and sediment control program, the APG Environmental Protection Specialist has received MDE's "green card" certification for erosion and sediment control, as well as the Maryland State Highway Authority (MDSHA) "yellow card" training. She added that at least two other staff members have the "green card" certification and one other has the "yellow card" certification. Construction contractors working on APG projects must have "green card" certification from MDE to conduct weekly and post-storm inspections. During the pre-construction meeting with the construction contractor, APG staff and MDE representatives review erosion and sediment control requirements and ensure that appropriate contractor staff members have the appropriate personnel with MDE "green card" certification.

APG staff explained that there were approximately 10 active construction sites on the installation at the time of the inspection. Each construction project is not necessarily inspected by MDE every week. The APG Environmental Protection Specialist explained she accompanies the MDE inspector on the construction site inspections. During these inspections, the MDE inspector and APG Environmental Protection Specialist review the contractor's inspection records.

The APG Environmental Protection Specialist explained she can conduct an inspection of a construction site in response to complaints, if needed. She explained she does not use a specific checklist to document inspections but takes notes in a field notebook. An example of field notes provided by APG is included as Appendix 5, Exhibit 3. APG maintains documentation of MDE's construction site inspections conducted at the installation and keeps records of the timelines for enforcement. The APG Environmental Protection Specialist stated that APG does not necessarily keep a record of actual enforcement documents issued by MDE.

The APG Environmental Protection Specialist explained that MDE staff typically tells the contractor directly what issues must be corrected; however, she can recommend corrective actions to the onsite contractor,

APG's onsite construction inspector (Contract Officer Representative (COR)), or the project's Contracting Officer (KO).

The APG COR has direct authority to stop work on a project. If the contractor and APG's COR do not take necessary actions to comply with erosion and sediment control requirements, APG's Environmental Protection Specialist can refer the issue directly to MDE staff for enforcement. APG representatives were able to recall one construction project which was shut down by MDE due to erosion and sediment control issues.

Observation 7: **Bayside Village Construction Project**

The Bayside Village construction project is located on the Aberdeen side of the Garrison (Bayside Drive) in Aberdeen Proving Ground, Maryland. The project is a family housing development for APG, and the phase of the project active at the time of the site visit involved the construction of a community center, swimming pool, and adjacent landscaping. According to APG's Environmental Protection Specialist, the project is expected to be completed by April 2014. Corvias Management, LLC is the prime contractor for the construction project. At the time of the inspection, the new community center building exterior structure was substantially complete. According to the Corvias project manager on site, the disturbed area of the site is approximately 89 acres.

According to APG's Environmental Protection Specialist as well as the Corvias project manager onsite, the Bayside Village project included four stormwater retention ponds, one of which had been filled in. The project's "Erosion and Sediment Control Drainage Area Map" showed that stormwater from the site enters storm drain inlets, which discharge to either Sediment Basin 1A, Sediment Basin 1B, or Sediment Basin 2. The EPA Inspection Team observed Sediment Basin 1A and Sediment Basin 1B during the site visit. According to the project's "Erosion and Sediment Control Drainage Area Map," Sediment Basin 1B discharges into Sediment Basin 1A (see Appendix 6, Photograph 1), and Sediment Basin 1A discharges to the south and through a rock-lined ditch which ultimately discharges under Harford Blvd. and into APG's MS4 (see Appendix 6, Photograph 2).

a. The contractor did not have onsite documentation to demonstrate that weekly and post-storm event inspections were being conducted for compliance with MDE's Construction General Permit. The Corvias project manager stated that the weekly and post-storm inspections were previously conducted by a third party consultant; however, he was unsure of the last time the consultant had been to the site for a stormwater inspection. Subsequent to the onsite inspection, APG provided copies of the contractor's inspections from August 8, 2013 to December 27, 2013.

b. BMPs were not implemented to prevent unstabilized areas upgradient of Sediment Basin 1A from conveying sediment into the sediment basin (see Appendix 6, Photograph 3). Rills and evidence of erosion were observed in the unstabilized areas upgradient of the sediment basin and leading into Sediment Basin 1A. The Corvias project manager stated that the pond's construction was complete, and the contractor's landscape company was responsible for maintaining the area around the pond.
c. A silt fence was observed in the rock-lined ditch leading from Sediment Basin 1A to APG's MS4 (see Appendix 6, Photographs 4 and 5). The APG Environmental Protection Specialist stated that the silt fence was supposed to be removed by the contractor after construction of Sediment Basin 1A, and she was unsure why the silt fence had not been removed.
d. An area of silt fence along the southeastern border of Sediment Basin 1B had collapsed (see Appendix 6, Photographs 6 and 7). APG's Environmental Protection Specialist stated that construction of Sediment Basin 1B was complete and the contractor should have removed the silt fence.
e. A section was observed to be missing from an area of silt fence located on the east side of the community center parking lot (see Appendix 6, Photographs 8, 9, and 10). APG's Environmental Protection Specialist stated that the silt fence is located in the community center construction area, adjacent to a storm drain inlet, and the silt fence had been previously run over by construction equipment. She stated that the section of missing silt fence had been noted in previous MDE inspections, and MDE submitted a noncompliance report to the contractor on January 7, 2014 based on this issue. The EPA Inspection Team reviewed MDE's weekly inspection reports and noted that needed repairs to the silt fence on the east side of the parking lot had been noted as far back as August 13, 2013; however, the silt fence had not been repaired. The Corvias project manager stated he was aware of the issue with the silt fence, and he would notify the construction superintendent that the silt fence needed to be repaired per MDE specifications.

MINIMUM CONTROL MEASURE 5: POST-CONSTRUCTION STORMWATER MANAGEMENT PROGRAM

Permit Part III.E - The Environment Article, Title 4, Subtitle 2, Annotated Code of Maryland establishes a statewide stormwater management program. This statute, coupled with COMAR, requires that stormwater management for new development and redevelopment be addressed for any proposed project that disturbs five thousand (5,000) square feet or more of earth. Because Maryland has a stormwater management program in place that regulates new and redevelopment projects, MDE considers compliance with the State statute to be compliance with this minimum control measure, this general permit, and CFR.

COMAR contains procedures for approving proposed construction drawings and stormwater management plans prior to the start of any development. State regulations also define stormwater management plan review and enforcement responsibilities. Typically, stormwater management plans are reviewed and approved by MDE for State and federal construction projects. Enforcement of approved stormwater management plans statewide is MDE's responsibility.

Permittees shall comply with all State and federal laws, regulations, ordinances, and procedures relating to stormwater management. Additionally, permittees must implement and comply with the principles, methods, and practices found in the "2000 Maryland Stormwater Design Manual, Volumes I & II."

COMAR 26.17.02.03 states that an acceptable stormwater management program will include:

1. *A Water Management Administration-approved* [MDE-approved] *stormwater management ordinance.*
2. *Stormwater management planning and approval processes that provide stormwater management for every land development subject to COMAR 26.17.02, implementation of environmental site design (ESD) to the maximum extent practicable (MEP), and the ability and the information necessary to review adequately proposed installation and maintenance measures for stormwater management.*
3. *Inspection and enforcement procedures that ensure the proper construction and maintenance of approved stormwater management measures.*

Observation 8: In addition to meeting COMAR, APG staff members explained APG construction projects must adhere to APG's Low Impact Design (LID) Policy (see Appendix 5, Exhibit 4) as well as MDE's ESD requirements. APG staff also stated projects must comply with Section 438 of the 2007 Energy Independence and Security Act (EISA), which includes requirements comparable to MDE's ESD program. Further, projects are required to be built to Leadership in Energy and Environmental Design (LEED) silver standards. APG staff stated that they were not certain whether all of these projects are then LEED-certified, or if they are just built to LEED specifications.

COMAR 26.17.02.11 (Inspection and Maintenance) – This regulation states the following concerning post-construction stormwater management facility maintenance and routine inspections:

> *Maintenance requirements established in this regulation shall be contained in all county and municipal ordinances and shall provide for inspection and maintenance. The owner shall perform or cause to be performed preventive maintenance of all completed ESD treatment practices and structural stormwater management measures to ensure proper functioning. The responsible agency of the county or municipality shall ensure preventive maintenance through inspection of all stormwater management systems. The inspection shall occur during the first year of operation and then at least once every 3 years after that.*

Observation 9: At the time of the inspection, APG did not have an inventory of post-construction BMPs for the installation. APG staff explained APG contracted the United States Army Corps of Engineers (USACE) to conduct an on-the-ground investigation to identify and inventory post-construction BMPs at the installation. The inventorying effort included acquisition of GPS location data for post-construction BMPs to be incorporated into APG's GIS. At the time of the inspection, the inventory or database of post-construction BMPs was still in final review by USACE and was therefore not available for the EPA Inspection Team's review. According to APG staff, the effort was initiated in July 2011 and groundtruthing field activities were conducted in early 2013. These activities were funded by Installation Management Command (IMC) within the APG organization.

The APG Environmental Protection Specialist explained that she would add post-construction BMPs for construction projects greater than one acre to the inventory of BMPs that she inspects with MDE staff. She explained that she does not necessarily know about post-construction BMPs for projects less than one acre, and these BMPs would likely not be entered into an inventory. APG did not have a process to add post-construction BMPs to its GIS during the project design process.

According to APG representatives, APG reported a total of 271 post-construction BMPs, mostly dry and wet ponds, for the 2012–2013 Chesapeake Bay TMDL WIP milestones. APG staff stated there were 24 LID or ESD practices installed at APG at the time of the onsite inspection.

Observation 10: At the time of the inspection, APG did not have a post-construction BMP maintenance program. It was stated that APG does not currently have staff or dedicated funding for post-construction BMP maintenance if an issue was found during an inspection. The APG Environmental Protection Specialist explained that DPW will only perform emergency maintenance on post-construction BMPs. The APG Environmental Division Chief explained that once a post-construction BMP is installed it becomes a physical APG asset (i.e., Garrison "real property") and should be maintained by DPW Maintenance Division. He added that maintenance has been challenging at APG because APG uses its own staff for operation and maintenance activities rather than contracting the work. APG staff stated that dry ponds and wet ponds are the typical post-construction BMPs installed at APG. The DPW Resident Engineer explained that APG has tried to incorporate low-maintenance post-construction BMPs into projects.

Observation 11: At the time of the inspection, APG was not inspecting stormwater management systems. Inspections had not occurred during the first year of operation or at least once every 3 years after that. APG's Environmental Protection Specialist explained that she and other staff had been working

on a post-construction BMP manual for inspection and maintenance which includes standard operating procedures (SOPs) for the maintenance of various BMPs. A copy of the draft provided by APG is provided as Appendix 5, Exhibit 5. APG staff was awaiting the final draft of the post-construction BMP inventory from USACE before completing the post-construction BMP inspection and maintenance manual. APG representatives stated that it is working on obtaining a contract in order to contract out routine maintenance activities for post-construction BMPs.

The DPW Resident Engineer explained that APG did not receive as-built construction drawings for all construction projects, which would include post-construction BMPs and associated maintenance requirements. He stated that the size of a project often influenced whether as-built construction drawings were required; however, it was not clear to the EPA Inspection Team what the actual process was because the DPW Resident Engineer also stated some larger USACE projects did not provide as-built construction drawings but rather provided the original design drawings.

APG representatives stated that an APG contractor initiated efforts on an impervious surface cover modeling tool toward the end of 2012. The model is designed to identify which locations at the installation would be most effective for BMP placement and function. The model will be able to calculate nitrogen and sediment loads from areas and determine theoretical removal rates based on the application of various BMPs. APG representatives stated they were unsure when this model would be completed and available for use by APG staff. The cost of the modeling was $56,479.

Observation 12: Post-Construction Stormwater Management Facility – APG Test Evaluation Command Building

The EPA Inspection Team conducted a site visit to observe post-construction BMPs at the APG Test Evaluation Command Building. The APG Test Evaluation Command Building is located within the APG installation off of Aberdeen Boulevard and Belair Street (2202 Aberdeen Boulevard). The facility consists of a building and an employee parking lot. The APG Environmental Protection Specialist stated construction of the building and stormwater features was completed in early 2013.

According to the APG Environmental Protection Specialist, stormwater enters storm drain inlets along the roof of the building and other storm drain inlets around the parking lot. These storm drains lead to one of two infiltration basins (referred to as rain gardens by APG staff) located to the north of the building (see Appendix 6, Photographs 13 and 14). Stormwater from the infiltration basins discharges to a stormwater pipe that leads to a retention basin (see Appendix 6, Photographs 15 and 16). The retention basin has a primary outfall structure that discharges to a

rock-lined ditch located on the east side of Sidney Park Drive and ultimately to the upper Chesapeake Bay (see Appendix 6, Photograph 17).

The EPA Inspection Team observed significant algal growth within the interior of the retention pond (see Appendix 6, Photographs 18, 19, and 20). The algal growth had matted over some of the vegetation in the pond from a previous high water event. The APG Environmental Protection Specialist stated that APG does not have a program or mechanism to maintain or clean out the algae in the retention pond.

MINIMUM CONTROL MEASURE 6: POLLUTION PREVENTION AND GOOD HOUSEKEEPING

Permit Part III.F – Permittees shall implement and maintain pollution prevention and good housekeeping techniques and procedures to reduce pollutants from all facility operations. Components of this minimum control measure shall include employee training materials to prevent and reduce pollutant discharges to the storm drain system, runoff controls geared toward fleet yard and building maintenance activities, and ensuring all facility activities are properly permitted under NPDES or any other appropriate State or federal water pollution control program. Permittees shall develop pollution prevention or good housekeeping procedures themselves or rely on another responsible entity to comply with this minimum control measure. If an entity other than the permittee is to be responsible for this component of the stormwater management program, MDE recommends that an MOU or other binding contract be executed between the two parties. This will clearly define responsible parties should noncompliance become an issue.

Observation 13: Based on discussions with APG staff and the field activities conducted during the onsite inspection, the EPA Inspection Team was unable to determine whether APG's current SWPPP covered all facilities with the potential to contribute pollutants to stormwater. According to APG staff, EA Engineering developed an SWPPP for the APG installation under the requirements of APG's individual NPDES discharge permit (State Permit No. 06-DP-2517; NPDES No. MD0003565). The SWPPP was updated by EA Engineering in early 2013. APG provided the EPA Inspection Team with an electronic copy of the SWPPP during the onsite inspection; a copy of the narrative portion of the SWPPP is included as Appendix 5, Exhibit 6.

According to APG's SWPPP, the entire APG installation was classified as an industrial facility in 1992 due to the activities performed at the installation. It further states any facilities engaged in vehicle maintenance, washing, or fueling were included in the SWPPP. In addition, facilities conducting light industrial activities were included regardless of actual exposure to stormwater. During the onsite inspection, APG representatives estimated there were about 85 tenant organizations at APG included in the SWPPP program. Table 4-3 of APG's SWPPP identifies about 137 facilities and assigns quarterly, semi-annual, or annual inspection frequencies for each facility based on potential pollution impact ratings.

Observation 14: At the time of the inspection, APG had not clearly defined responsible parties should noncompliance become an issue. APG staff explained the APG Environmental Division staff administers "subcommittee tenant meetings" with tenant organization staff to review environmental issues, such as wastewater, stormwater, and drinking water. APG staff explained this is typically done on a quarterly basis, but the most recent meeting had been conducted about nine months prior to the inspection. APG staff explained that each tenant organization has a staff member, called the Activity Environmental Coordinator (AEC), who participates in these meeting. Two of the largest tenant organizations at APG are ATC and ARL. APG staff explained that typically the larger tenant organizations have their own internal environmental departments. The ATC AEC stated 50 to 60 ATC buildings at the installation receive stormwater facility inspections. The ARL "hazmed" contractor stated there were 14 ARL building or facilities at the installation that receive stormwater facility inspections

APG staff explained APG hired a contractor to conduct inspections of tenant facilities for compliance with the SWPPP and to identify pollution prevention and good housekeeping issues. Facilities are inspected on quarterly, semi-annual, or annual inspection frequencies based on the facility's potential pollution impact rating. APG staff explained that previously a private contractor, EA Engineering, conducted these inspections; however, APG now has an agreement with USAPHC to provide these services from here on out. Inspections for 2013 were set to start at the ATC sites the week after EPA's on-site inspection.

APG staff explained an inspection report is prepared to document site issues observed during tenant inspections, and if an issue is found, the facility has one year to correct the issue (i.e., prior to the next annual visual inspection). APG Environmental Division staff explained that each tenant organization is responsible for correcting its own issues as soon as possible. However, the APG Environmental Division does not have a set program or procedures to follow up on stormwater related noncompliance identified from the inspections regardless of their priority.

APG staff explained that there is a point of contact (POC) for stormwater at each facility building. The ATC NPDES program support contractor explained that she receives a copy of the facility inspection report from APG's contractor (previously EA Engineering, currently USAPHC) and shares that with the facility POC. It is then the POC's responsibility to correct the issue. The ATC NPDES program support contractor maintains an electronic database to track observed issues and corrective actions. The APG Water Program Manager explained that he reviews the facility inspection reports and responds to significant issues directly. If an issue is significant enough, a letter is sent to the Garrison Commander to ensure corrective action is taken.

Observation 15: It is not clear whether APG's employee training materials prevent and reduce pollutant discharges to the storm drain system. APG has initiated an Environmental Officer Training program that addresses environmental compliance and natural resources issues with staff for topics such as water and air. The APG Water Program Manager stated that about 95 percent of staff on the installation receives some level of stormwater training, either through an online course, a "train the trainer" activity, or onsite in-person training. Subsequent to the onsite inspection, APG provided sign-in sheets from Environmental Officer Training activities conducted June 19, 2013, June 26, 2013, October 10, 2013, and November 7, 2013.

Observation 16: **ATC Facility – Building No. 338**

a. Three drums without coverage or secondary containment were located adjacent to a covered containment structure on the northeast side of Building No. 338-E2 (see Appendix 6, Photographs 21, 22, and 23). Two of the drums were labeled as both lubricating oil and hull mix (i.e., a mixture of anti-freeze, oil, and water from the hull of tanks). APG representatives stated that the drums contained hull mix and that the labels stating "lubricating oil" should be removed. The third drum was unlabeled and its contents were unknown at the time of the site visit.
b. Facility staff explained that the facility entrance gate was broken and awaiting repair; therefore, the facility has been accessible to other personnel when this facility was unmanned. They explained staff from about 15 other facilities at the installation have been bringing drums of hull mix and other waste fluids to this facility and leaving them onsite for disposal.
c. There are above-ground storage tanks (AGSTs) at the facility for hull mix, waste oil, and fuel (see Appendix 6, Photographs 24 and 25). ATC facility staff explained a contractor, Safety Kleen, collects and disposes of the waste material as needed.
d. Multiple full or partially full drums without coverage or secondary containment were observed in the area directly to the southeast of Building No. 338-E3 (see Appendix 6, Photographs 26, 27, and 28). Facility staff explained that the area was only to be used for storing empty drums. They stated that the drums containing fluid had likely been dropped off by staff from other facilities.
e. There were two onsite storm drain inlets adjacent to on the north side of Building No. 338-E3 (see Appendix 6, Photographs 29 and 30). These storm drain inlets were not depicted in APG's GIS-based map.
f. A hose was entering a storm drain inlet at the facility (see Appendix 6, Photographs 31 and 32). ATC facility staff explained the hose is used to convey boiler condensation across the impervious surface to the storm drain, rather than allowing the condensation to flow freely over the surface. They added that an item needs to be fixed with the boiler

system, and they have been requesting the fix for the past four to five years from the installation.

Observation 17: ATC Facility – Building No. 407

a. The facility had an indoor wash rack for vehicles coming from APG's test track (see Appendix 6, Photograph 33). The wash rack discharges to an adjacent vegetated sediment pond (see Appendix 6, Photograph 34) and then through an oil-water separator, before being pumped back into the closed-loop wash system (see Appendix 6, Photograph 35). The previous year's stormwater facility inspection report identified that the sediment pond should be cleaned of accumulated sediment. Facility staff stated the pond was cleaned about three weeks prior to the EPA Inspection Team's site visit; however, although documentation was requested, it was not provided to EPA.
b. The ATC NPDES program support contractor and ATC AEC explained that ATC has a program in place to select one of its largest facilities each month and conduct a comprehensive inspection to identify any environmental issues. This effort includes observation of post-construction BMPs. The ATC NPDES program support contractor stated the observations were based on best professional judgment and that she had not been given specific training on conducting post-construction BMP inspections. The monthly inspection reports are given to the ATC Commander to provide an overview of ATC's environmental efforts and conditions.

Observation 18: ATC Facility – Building No. 402

Absorbent material and staining was present beneath and adjacent to an AGST which stored used oil. The AGST was adjacent to the northwest corner of the building and upgradient of a nearby storm drain inlet (see Appendix 6, Photographs 36, 37, and 38). A facility representative stated that a facility staff member had emptied oil into the AGST but some had spilled down the side and underneath the tank. Absorbent material had been applied to the spill area but had not been cleaned up. He further stated that the spill occurred sometime during the week prior to the EPA Inspection Team's site visit.

Observation 19: ARL Facility – Building No. 1171 – "NERF" Building

Explosives formulation activities are conducted at the building. ARL staff informed the EPA Inspection Team they were not allowed to take photographs at this site. Per APG and ARL staff members' suggestion, the EPA Inspection Team requested certain photographs be taken by ARL staff and transmitted to EPA subsequent to the onsite inspection. Photographs were provided by APG on February 7, 2014 and are included in the Photo Log.

a. The last facility inspection was conducted by EA Engineering in October 2012 that noted stormwater related issues. The ARL "hazmed" contractor stated he typically accompanied EA Engineering staff on the inspections. Issues observed in the previous inspection report, such as stockpile storage locations, appeared to have been addressed.
b. The ARL "hazmed" contractor explained that the facility's stormwater basin was installed about two years prior the EPA Inspection Team's site visit and that it had been "re-done" several times. He stated that the stormwater basin was installed because a recent construction project for the creation of new storage sheds at the facility increased the site's impervious area. APG provided several photographs of the basin per the EPA Inspection Team's request (see Appendix 6, Photographs 39 through 43).
c. The EPA Inspection Team observed stacks upon stacks of bags filled with soil located directly above the stormwater basin. According to ARL staff at this site, the large bags were filled with radioactive soil and had been stored in that location for as long as they could recall.

Observation 20: At the time of the inspection, APG had not submitted any annual reports to MDE since its permit coverage was authorized in 2005.

CITY OF ANNAPOLIS, MARYLAND MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROGRAM INSPECTION REPORT

DEPARTMENT OF NEIGHBORHOOD AND
ENVIRONMENTAL PROGRAMS
160 DUKE OF GLOUCESTER STREET
ANNAPOLIS, MD 21401

Report Date: May 2014

Field Activity Dates: December 12–13, 2013

U.S. Environmental Protection Agency, Region III
Water Protection Division
Office of NPDES Enforcement (3WP42)
1650 Arch Street
Philadelphia, PA 19103

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DOCUMENTS CITED IN REPORT

Shortened Name	Document Title and Date
City Code	City of Annapolis Municipal Code
EPA Records Request	List of documents that the EPA Inspection Team requested from the City on November 27, 2013
Permit	*National Pollutant Discharge Elimination System General Permit for Discharges from Small Municipal Separate Storm Sewer Systems, General Discharge Permit No. 03-IM-5500 (General NPDES Permit No. MDR05500),* effective April 14, 2003
City Response Inventory	Inventory of documents provided by the City in response to the EPA Records Request
2003 NOI Review	MDE's review of the City's Notice of Intent
Sediment Control Subtitle	Maryland Environment Article, Title 4, Subtitle 1, *Annotated Code of Maryland*
Erosion and Sediment Control Ordinance	City Code, *Chapter 17.08, Grading, Erosion, and Sediment Control*
Stormwater Management Subtitle	Maryland Environment Article, Title 4, Subtitle 2, *Annotated Code of Maryland*
Industrial General Permit	MDE's *General Discharge Permit for Stormwater Associated with Industrial Activities* (Discharge Permit No. 02-SW)

ACRONYMS AND ABBREVIATIONS USED IN REPORT

Abbreviation	Corresponding Term
AACPS	Anne Arundel County Public Schools
ABC	alcoholic beverage control
ADOT	Annapolis Department of Transportation
BMP	best management practice
CIP	capital improvement plan
COMAR	Code of Maryland Regulations
DNEP	Department of Neighborhood and Environmental Programs
DPW	Department of Public Works
EPA	[United States] Environmental Protection Agency
ESC	erosion and sediment control
ESD	environmental site design
GIS	geographic information system
HOA	homeowners' association
IDDE	illicit discharge detection and elimination
MDE	Maryland Department of the Environment
MEP	maximum extent practicable
MS4	municipal separate storm sewer system
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
SCD	Soil Conservation District
SOP	standard operating procedures
SWM	stormwater management
SWPPP	stormwater pollution prevention plan

EXECUTIVE SUMMARY

From December 12 through 13, 2013, a compliance inspection team comprised of staff from the U.S. Environmental Protection Agency (EPA) Region III and EPA's contractor, PG Environmental, LLC (collectively the EPA Inspection Team), inspected the municipal separate storm sewer system (MS4) program of the City of Annapolis, Maryland (the City).

Discharges from the City's MS4 are regulated by the Maryland Department of Environment (MDE) National Pollutant Discharge Elimination System (NPDES) *General Permit for Discharges from Small Municipal Separate Storm Sewer Systems,* General Discharge Permit No. 03-IM-5500, General NPDES Permit No. MDR055500 (the Permit), effective April 14, 2003. The Permit was set to expire on April 14, 2008, but was administratively extended by MDE until a new permit is issued.

The purpose of this inspection was to obtain information to assist EPA in assessing the City's compliance with the requirements of the Permit, as well as the implementation status of its current MS4 program.

Based on the information obtained and reviewed, the EPA Inspection Team made several observations concerning the City's MS4 program related to the specific Permit requirements evaluated. Table 1 summarizes the Permit requirements and the observations made by the inspection team.

Table 1. Summary of Permit Requirements and Inspection Observations

Permit Requirement	Observations	
Permit Part III.C.1 (MS4 Mapping)	Observation 1.	At the time of the inspection, multiple assets observed in the field during the onsite inspection were not included in the City's GIS-based map.
Permit Parts III.C.3–4 (Field Screening and Source Identification)	Observation 2.	It appears that the City had not developed procedures for field screening storm drain outfalls on a consistent basis.
	Observation 3.	It appears that the City had not developed inspection procedures for identifying the source of observed illicit discharges to the MS4.
Permit Part III.C.5 (Enforcement)	Observation 4.	It appears that the City does not have IDDE enforcement and penalty procedures in the event of a prohibited non-stormwater discharge to the MS4.
Permit Part III.C.8 (Non-Stormwater Discharges)	Observation 5.	The EPA Inspection Team observed a discharge of vehicle wash water to a storm drain inlet at the Annapolis Department of Transportation (ADOT) Facility during a site visit conducted on December 12, 2013.

Table 1. Summary of Permit Requirements and Inspection Observations

Permit Requirement	Observations
Permit Part III.D – COMAR 26.17.01.09 (Inspection and Enforcement)	Observation 6. It appears that the City is not inspecting sites with approved erosion and sediment control plans an average of once every two weeks. Observation 7. At the time of the inspection, the City was not preparing written inspection reports or notifying the on-site personnel and the owner/developer in writing when violations were observed at construction sites. Observation 8. At the time of the inspection, the City did not have an enforcement response plan or other procedural document describing when and how enforcement is to be escalated and how penalties are to be assessed. Observations 9-12. The EPA Inspection Team observed issues related to construction site stormwater runoff at the following sites: (1) Annapolis Elementary School, (2) 1109 Boucher Place, (3) Village Green Development, (4) 801 Banneker Lane, (5) Mills-Parole Elementary School, and (6) East Port Fire Station.
Permit Part III.E – COMAR 26.17.02.11 (Inspection and Maintenance)	Observation 13. At the time of the inspection, the City was not ensuring preventive maintenance through inspection of all stormwater management systems during the first year of operation and then at least once every 3 years after. Observations 14-17. The EPA inspection team observed issues related to post-construction stormwater management at the following sites: (1) Taylor Avenue Stormwater Management Pond; (2) Truxtun Park BMPs; (3) Harness Creek View Stormwater Management Pond; (4) 1292 Spa Road Rain Garden; and (5) Kneseth Israel and Aleph Bet School BMPs.

Table 1. Summary of Permit Requirements and Inspection Observations

Permit Requirement	Observations
Permit Part III.F (Pollution Prevention/Good Housekeeping for Municipal Operations)	Observation 18. At the time of the inspection, the City had not developed employee training materials that explain how to prevent and reduce pollutant discharges to the storm drain system from the DPW Operations Facility and ADOT Facility. Observation 19. It appears that the City had not developed pollution prevention or good housekeeping procedures for each of its municipal operations facilities. Observation 20. At the time of the inspection, the City had not ensured that all municipally owned activities are properly permitted under NPDES or other state or federal water pollution control programs. Observations 21-22. The EPA inspection team observed issues related to pollution prevention and good housekeeping at the following sites: (1) Spa Road Maintenance Facility Yard (DPW Operations); (2) Annapolis Department of Transportation Facility (ADOT).

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Appendix 3: Inspection Schedule
Appendix 4: Inspection Sign-In Sheets
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INTRODUCTION

From December 12 through 13, 2013, a compliance inspection team comprised of staff from U.S. Environmental Protection Agency (EPA) Region III and EPA's contractor, PG Environmental, LLC, (collectively the EPA Inspection Team) inspected the municipal separate storm sewer system (MS4) program of the City of Annapolis, Maryland (the City). The purpose of this inspection was to obtain information that will assist EPA in assessing the City's compliance with the requirements of the Permit, as well as the implementation status of its current MS4 program. Dry weather conditions were experienced throughout the inspection activities, though some snow remained on the ground surface from precipitation events prior to the onsite inspection.

A copy of the Permit is included as Appendix 1. A copy of the City's original MS4 Notice of Intent (NOI) submitted to MDE in 2003, which contains descriptions of measures for program compliance, and MDE's review of the NOI (hereinafter, 2003 NOI Review) is included as Appendix 2.

The EPA Inspection Team obtained its information through a series of interviews with representatives from the City, along with a series of site visits, record reviews, and field verification activities. The inspection schedule is presented in Appendix 3. The primary representatives involved in the inspection were the following:

City Representatives:	Mr. Frank Biba, Chief of Environmental Programs, Department of Neighborhood and Environmental Programs (DNEP)
	Ms. Maria Broadbent, Director, DNEP
	Mr. David Jarrell, Director, Department of Public Works (DPW)
	Ms. Marcia Patrick, Assistant Director, DPW
	Mr. Mike Bunker, Superintendent of Utilities, DPW
	Mr. Robert Couchenour, Services Superintendent, DPW
	Ms. Cindy Tact, Analyst, DPW
	Mr. Matthew Waters, Stormwater Engineer, DNEP
	Mr. Rob Savidge, Environmental Compliance Inspector, DNEP
	Mr. Charlie Brown, Lead Stormwater Inspector, DPW
	Mr. Josh Sturgill, GIS Technician
	Mr. Iain Banks, Transportation Planner, Annapolis Department of Transportation (ADOT)
	Mr. Tony Spencer, Superintendent, ADOT
EPA Representatives:	Ms. Kyle Zieba, EPA Region III
	Ms. Allison Graham, EPA Region III
EPA Contractors:	Mr. Bobby Jacobsen, PG Environmental, LLC
	Mr. Kort Kirkeby, PG Environmental, LLC

A sign-in sheet from the onsite inspection is included as Appendix 4.

CITY OF ANNAPOLIS BACKGROUND

The City encompasses less than 8 square miles, and according the 2010 U.S. Census, the total population of the City was 38,394. The City's MS4 discharges to multiple watersheds within the City, including Weems Creek, Spa Creek, College Creek, Back Creek, Harness Creek, Church Creek, Crab Creek and the South River.

City staff explained that its stormwater program is primarily implemented by two departments within the City: (1) Department of Neighborhood and Environmental Programs (DNEP), and (2) Department of Public Works (DPW). According to City representatives, the City's stormwater program is funded through a stormwater utility fee which was implemented approximately five years prior to the inspection. City staff stated that the utility fee was doubled within the past two years. The fee for private residential property owners is fixed at $40 per year; however, a private residential landowner can qualify for a 50 percent fee reduction in the stormwater utility fee by installing a stormwater management feature on its property. The fee for commercial properties is based on the amount of impervious area. Commercial property owners can also qualify for a fee reduction with the installation of a stormwater management feature that is in accordance with state specifications.

INFORMATION OBTAINED RELATIVE TO PERMIT REQUIREMENTS

The EPA Inspection Team obtained documentation and other supporting information to evaluate compliance with the Permit prior to, during, and after meeting with City staff during the onsite inspection. Observations regarding the City's implementation of Permit requirements are presented in this report.

Referenced documentation used as supporting information is provided in Appendix 5, Exhibit Log and photograph documentation is provided in Appendix 6, Photograph Log. A complete list of documents obtained is provided in Appendix 7, Document Log.

On November 27, 2013, the EPA Inspection Team formally provided the City with a written list of requested records (hereinafter, EPA Records Request; see Appendix 5, Exhibit 1), some of which were made available to the EPA Inspection Team prior to and during the onsite inspection. Following onsite discussions, the EPA Inspection Team requested additional program documentation via electronic mail on December 19, 2013. The City provided some, but not all of the additional documents in response to the request between the end of the onsite inspection and January 15, 2014. A follow-up email was sent to the City on January 23, 2014 to identify those items not provided, but the City was unresponsive to the follow-up email.

This report describes and outlines specific Permit requirements and associated observations made during the inspection. The format of the report follows the numeric system used in the Permit and is sequential. Sections of the Permit are restated with the observations concerning those requirements listed below. The Permit incorporates State regulations by reference under the construction and post-construction minimum control measures; therefore, in these sections of the report, the EPA Inspection Team also provides applicable regulatory requirements from the *Code of Maryland Regulations* (COMAR).

MINIMUM CONTROL MEASURE 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE) PROGRAM

Permit Part III.C (Illicit Discharge Detection and Elimination) – Permittees shall develop, implement, and maintain a program to identify and eliminate illicit storm drain system connections and non-stormwater discharges to the maximum extent practicable. The program developed to satisfy this minimum control measure shall contain elements to field screen storm drain system outfalls, inspect the storm drain system for the purpose of identifying the source of any illicit discharges, eliminate any illegal connection or illicit discharge to the storm drain system, and enforce penalties where appropriate. The illicit discharge program shall also contain components to address illegal dumping and spills.

Permit Part III.C.1 (Storm Sewer System Map) – At a minimum, a program developed to implement IDDE to satisfy this control measure shall contain a map showing the extent of the storm drain system.

Observation 1: At the time of the inspection, multiple assets observed in the field during the onsite inspection were not included in the City's GIS-based map. The City had developed a GIS-based map which includes multiple MS4 assets (e.g. storm drain inlets, outfalls, storm sewer pipes and post construction BMPs). The City's GIS Technician explained that MS4 outfalls are generally represented on the map as the end of pipe segments and that the City has not assigned unique identifiers to individual assets within the GIS or "iWorQ" maintenance management system. Rather, assets are identified by a nearby street address. City staff stated that the GIS includes public infrastructure but does not include all infrastructure on private property. In addition, City staff stated that it maintains copies of as-built plans and design drawings for private construction, which could be accessed if needed.

Two storm drain inlets observed at the City's Spa Road Maintenance Facility were not included in the City's GIS (see Appendix 6, Photographs 1 and 2, and Appendix 5, Exhibit 2). In addition, the EPA Inspection Team observed two outfalls to College Creek which were not mapped (see Appendix X, Photographs 3 and 4, and Appendix 5, Exhibit 3).

City representatives stated they were aware that the map was incomplete, and updating the GIS system to include all stormwater assets had been identified as part of the City's capital improvement plan (CIP). At the time of the inspection, a timeline had not been set on its completion.

Permit Parts III.C.3–4 (Field Screening and Source Identification) – At a minimum, a program developed to implement IDDE to satisfy this control measure shall contain procedures to field screen storm drain outfalls on a consistent basis as well as inspection procedures for identifying the source of any suspected illicit discharges to the storm drain system.

Observation 2: It appears that the City had not developed procedures for field screening storm drain outfalls on a consistent basis. The City had not identified each outfall to be included in the City's outfall screening activities. The two unmapped outfalls to College Creek from Observation 1 were not included in the rotational field screening of storm drain outfalls. The City's Lead Stormwater Inspector stated that he was aware of the outfalls' existence, but was unsure the last time the outfalls had been screened.

City representatives explained that the City conducts outfall screening at approximately 35 of its public outfalls approximately every three to six months; however, it appeared that there was not a set schedule for conducting outfall inspections. Further, the City had not implemented a schedule or standard operating procedure (SOP) for the timing of the outfall inspections.

The City's Lead Stormwater Inspector explained that outfall screening activities have been conducted during dry and wet weather and primarily focused on inspecting outfalls for structural integrity and identifying maintenance needs rather than identifying potential illicit discharges. He explained that outfall screening activities were documented with the City's *Storm Water Management Information Report* form (see Appendix 5, Exhibit 4); however, the form did not include a location to denote weather conditions, status of the outfalls (i.e., dry or flowing), odors, or other observations.

Observation 3: It appears that the City had not developed inspection procedures for identifying the source of observed illicit discharges to the MS4. The EPA Inspection Team formally requested the City's written procedures to detect and address non-stormwater discharges, but the City did not provide the requested information (see Appendix 5, Exhibit 1, Item No. 12). The City's Lead Stormwater Inspector explained that if he observed an illicit discharge he would attempt to identify the source, try to eliminate the discharge if possible, and report the observed illicit discharge to his supervisor for additional follow up.

Permit Part III.C.5 (Enforcement) – At a minimum, a program developed to implement IDDE to satisfy this control measure shall contain enforcement and penalty procedures.

Observation 4: It appears that the City does not have IDDE enforcement and penalty procedures in the event of a prohibited non-stormwater discharge to the MS4. In 2004 the City updated Section 17.08.260 of the City of Annapolis Municipal Code (City Code) to include a prohibition of non-stormwater discharges to public areas and infrastructure. Specifically, City Code *Chapter 17 (Building and Construction), Ordinance No. O-27-13, Section 17.08.180, Prohibited Discharges*, states that no debris, sediment, wastewater, landscaping/yard waste, refuse, or other pollutant

materials shall be deposited in floodplains, watercourses, public streets, highways, sidewalks, storm drains, or other public thoroughfares.

DNEP has enforcement authority for this ordinance. City staff explained that DNEP staff members typically respond to complaints or notifications of spills in the City, and DPW is involved if needed. In addition, the City would notify the State of an issue if warranted. City staff explained that because the City is relatively small, DNEP staff members are typically able to respond to complaints within one hour, and almost always within four hours. City staff explained that violations and penalties can be assessed by the City for illicit discharges to the MS4 and would be issued on a case-by-case basis, depending on the nature of the violation. It did not appear that the City had tracking procedures or a mechanism to ensure records of the illicit discharge observation and corrective action were generated and maintained.

Permit Part III.C.8 (Non-Stormwater Discharges) – At a minimum, a program developed to implement IDDE to satisfy this control measure shall contain any other components deemed necessary to ensure that non-stormwater discharges to the MS4 are either permitted by MDE under NPDES or eliminated.

Observation 5: The EPA Inspection Team observed a discharge of vehicle wash water to a storm drain inlet at the Annapolis Department of Transportation (ADOT) Facility during a site visit conducted on December 12, 2013. Additional details regarding the site visit and the observed discharge to the MS4 are included in Observation 39 of this inspection report.

MINIMUM CONTROL MEASURE 4: CONSTRUCTION SITE STORMWATER RUNOFF CONTROL PROGRAM

Permit Part III.D (Construction Site Stormwater Runoff Control) - The Maryland Environment Article, Title 4, Subtitle 1, *Annotated Code of Maryland* establishes a statewide erosion and sediment control program to control construction site stormwater runoff. This statute, coupled with the COMAR, specifies the requirements for any construction activity that disturbs 5,000 square feet or more of earth.

COMAR 26.17.01.02 (General Provisions) states that an acceptable erosion and sediment control program will include:

1. *An effective erosion and sediment control ordinance (or an effective set of erosion and sediment control regulations) which has been approved by MDE.*
2. *Review and approval of erosion and sediment control plans in accordance with the "2011 Maryland Standards and Specification for Soil Erosion and Sediment Control."*
3. *Requirements for erosion and sediment control plans to provide effective erosion and sediment control strategies (i.e., BMPs) and information necessary to enable the proper installation and maintenance of these strategies.*

4. *In delegated jurisdictions, inspection and enforcement procedures that ensure compliance with the approved erosion and sediment control plan, as well as provide for timely response to citizen complaints.*

COMAR 26.17.01.11 states that the *2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control* shall serve as the official guide for erosion and sediment control principles, methods, and practices.

COMAR 26.17.01.09 (Inspection and Enforcement) – This regulation requires the appropriate enforcement authority to inspect sites with an approved erosion and sediment control plan an average of once every two weeks for compliance with the approved plan. Further, this regulation states the following concerning erosion and sediment control inspection and enforcement:

When conducting an inspection, the appropriate enforcement authority shall:

1. *Ensure that an approved erosion and sediment control plan and permits are on the site as required;*
2. *Conduct a complete inspection of the site unless otherwise indicated;*
3. *Prepare a written inspection report that includes:*
    a. *The date and location of this site inspection;*
    b. *Whether the approved plan has been properly implemented and maintained;*
    c. *Practice deficiencies or erosion and sediment control plan deficiencies;*
    d. *If a violation exists, the type of enforcement action taken; and*
    e. *If applicable, a description of minor or major modifications as described in this regulation; and*
4. *Notify the on-site personnel and the owner/developer in writing when violations are observed, describing the:*
    a. *Nature of the violation;*
    b. *Required corrective action; and*
    c. *Time period in which to have the violation corrected.*

COMAR 26.17.01.09 further requires the appropriate enforcement authority to accept and investigate complaints regarding erosion and sediment control concerns from any interested party. The enforcement authority is to conduct an initial investigation within three working days of receipt of the complaint; notify the complainant of the initial investigation and findings within seven days of receipt of the complaint; and take appropriate action when violations are discovered during the course of the complaint investigation.

Observation 6: It appears that the City is not inspecting sites with approved erosion and sediment control plans an average of once every two weeks. City staff explained that when grading permits are active, the City attempts to conduct ESC inspections at construction sites at least once every two weeks, and approximately once per month when grading permits are inactive. However, multiple instances were noted where inspections were conducted more than two weeks apart.

The City had one dedicated erosion and sediment control inspector (i.e., the City's Environmental Compliance Inspector) to conduct inspections at active construction sites. City staff explained that there were between 20 and 30 active construction sites in the City at the time of the onsite inspection. City staff stated that they have recently had about 10 to 12 sites with active grading operations at any given time.

During the onsite inspection, City staff provided the EPA Inspection Team with information from the City's TrakIt system displaying the dates on which the City conducted inspections at construction sites within its purview (see Appendix 5, Exhibit 7). The EPA Inspection Team reviewed the information for the Annapolis Elementary School and Mills-Parole Elementary School construction projects to compare the dates of erosion and sediment controls inspections with the City's stated two-week, average inspection frequency. Multiple instances were noted where inspections were conducted more than two weeks apart. Tables 2 and 3 provide a summary of the review.

Table 2. Annapolis Elementary School – ESC Inspection Dates and Frequency

Inspection Date	Days between Inspections
8/27/2012	-
9/20/2012	24
10/2/2012	12
10/19/2012	17
10/26/2012	7
10/31/2012	5
12/18/2012	48
1/30/2013	43
2/4/2013	5
2/26/2013	22
3/6/2013	8
5/10/2013	65
7/2/2013	53
7/31/2013	29
8/16/2013	16
9/6/2013	21
9/19/2013	13
10/25/2013	36
11/7/2013	13
11/14/2013	7
11/25/2013	11
Average	**22.8 days**

Table 3. Mills-Parole Elementary School – ESC Inspection Dates and Frequency

Inspection Date	Days between Inspections
6/7/2013	-
6/18/2013	11
6/24/2013	6
7/12/2013	18
7/31/2013	19
8/9/2013	9
8/22/2013	13
9/5/2013	14
9/19/2013	14
10/14/2013	25
10/25/2013	11
11/1/2013	7
11/14/2013	13
11/26/2013	12
Average	**13.2**

Observation 7: At the time of the inspection, the City was not preparing written inspection reports or notifying the on-site personnel and the owner/developer in writing when violations are observed at construction sites. During the onsite inspection, the City's Environmental Compliance Inspector explained the following to the EPA Inspection Team regarding his inspection and enforcement process:

a. Construction projects can either "pass" or "fail" erosion and sediment control inspections. If there are any ESC issues, then the project fails the inspection. If there is a repeat violation or discharge of sediment from a site, then the project fails the inspection and will likely be assessed a fine.
b. The contractor's erosion and sediment control inspection records are not typically reviewed unless there is a significant issue at the project.
c. The City's Environmental Compliance Inspector can authorize several minor modifications for ESC plans, rather than requiring the project to obtain authorization from the Anne Arundel SCD. Appendix 5, Exhibit 6 includes a list of those items as provided by the City's Environmental Compliance Inspector.
d. The City's Environmental Compliance Inspector maintains an electronic spreadsheet to keep track of his inspections and documented or outstanding issues requiring correction. Inspections are also entered into the City's electronic TrakIt system.

Multiple site deficiencies were observed during the site visits, and in response, the City's Environmental Compliance Inspector documented these issues. He stated that he uses a log to track inspection and sometimes notifies the site owners or operators verbally on-site or by phone when violations are observed as well as to require corrective action. A spreadsheet generated by the City's Environmental Compliance Inspector which identifies some deficiencies and follow-up actions is included as Appendix 5, Exhibit 8. Copies of additional documentation from the City (e.g., citations, transmittal letters, and photographs) are included as Appendix 5, Exhibit 9.

Observation 8: The City does not have an enforcement response plan or other procedural document describing when and how enforcement is to be escalated and how penalties are to be assessed. According to City staff, the municipality's Erosion and Sediment Control Ordinance provides enforcement tools to authorized City staff. It did not appear that the City had an enforcement response plan or other procedural document describing when and how enforcement is to be escalated and how penalties are to be assessed. City staff explained the City's Environmental Compliance Inspector had authority to issue citations for issues related to erosion and sediment control. The City's Environmental Compliance Inspector explained that he escalates enforcement with "field correction notices" and "citations" with fines on a case-by-case basis, depending on the nature of the violation and history of a particular project.

Observation 9: **Private Construction Site – Annapolis Elementary School**

City staff explained the Annapolis Elementary School is owned by Anne Arundel County Public Schools (AACPS). The school is located in the downtown area to the northwest of the intersection of Compromise Street and Newman Street. Jacobs Engineering was the construction manager for AACPS and Urban Zink was the prime contractor for the project. The project consisted of renovation of and addition to the existing school building and had a disturbed area of 1.73 acres. The Site Manager stated that construction activities commenced in September 2012 and were expected to be complete by August 2014. The project's erosion sediment control plan was originally approved by the Anne Arundel SCD on June 6, 2012, and the project had obtained coverage under MDE's *General Permit for Stormwater Associated with Construction Activity* (NPDES Permit No. MDR10; State Permit No. 09GP; Registration No. 12AA0053) on August 6, 2012.

During the onsite inspection, the City's Environmental Compliance Inspector explained his process for conducting a typical erosion and sediment control inspection. The EPA Inspection Team and City staff discussed site observations during the site visit. The following was

observed with regard to erosion and sediment controls at the construction site:

a. Perimeter control BMPs were not present along an area of disturbed soil on the northwestern edge of the site (see Appendix 6, Photograph 5). Adjacent to this area was a fiber roll BMP on which sediment had accumulated to a height greater than one half the height of the fiber roll (see Appendix 6, Photographs 6, 7, and 8). The Site Manager explained that this area had been disturbed the day prior to the EPA Inspection Team's site visit, and stated they would install additional fiber roll BMPs for the corner area and clean the accumulated sediment from the adjacent length of fiber roll.
b. Sediment from vehicle tracking was present on the impervious ground surface on the interior of the site, upgradient of the main construction site entrance (see Appendix 6, Photographs 9 and 10). Unstabilized areas upgradient of the interior impervious area were being used for vehicle and equipment access at the time of the site visit (see Appendix 6, Photographs 11 and 12). The City's Environmental Compliance Inspector discussed this observation with the Site Manager and explained the upgradient access areas should be temporarily stabilized, with rock or otherwise. There were no storm drain inlets observed in this immediate area, however, accumulated sediment was observed within the rock-lined construction entrance (see Appendix 6, Photographs 13 and 14). The construction entrance was equipped with a grated area and hose for spraying off vehicle tires before vehicles exit the site. Further, the Site Manager stated that the project had a street sweeper which sweeps the interior of the site and the three streets adjacent to the site every day.
c. Filter fabric installed on a storm drain inlet approximately 100 feet to the northwest of the construction entrance did not entirely cover the storm drain inlet (see Appendix 6, Photographs 15 and 16). The City's Environmental Compliance Inspector discussed this with the Site Manager who stated the filter fabric would be replaced.

Observation 10: Private Construction Site – 1109 Boucher Place

The overall Boucher Place construction project consisted of multiple units in a common plan of development; construction started in 2009 or 2010. At the time of the site visit, Lot 8, located at 1109 Boucher Place, was under active construction (see Appendix 6, Photograph 17). The City's Environmental Compliance Inspector stated that the project was owned by Basheer, Edgemoore, Lonergan, LLC.

The EPA Inspection Team and City staff discussed site observations during the site visit. The following was observed with regard to erosion and sediment controls at the construction site:

a. A length of super silt fence along the northern perimeter of the site on Boucher Place had collapsed (see Appendix 6, Photographs 18, 19,

and 20). The City's Environmental Compliance Inspector stated that it appeared to him that a vehicle or piece of equipment had driven over the silt fence.

b. Accumulated sediment was present around a storm drain inlet equipped with filter fabric for inlet protection in the alley along the southeastern boundary of the lot (see Appendix 6, Photograph 21). The City's Environmental Compliance Inspector explained he thought sediment needed to be removed and the filter fabric inlet protection needed to be replaced. In addition, an unsecured portable toilet was located close to the storm drain inlet (see Appendix 6, Photograph 22).

c. Sediment was present on the impervious alley surface along the southeastern boundary of the lot (see Appendix 6, Photograph 23). The City's Environmental Compliance Inspector noted that this area should be swept to remove the sediment.

Observation 11: Private Construction Site – Mills-Parole Elementary School

City staff explained the Mills-Parole Elementary School is owned by AACPS. The school is located at 103 Chinquapin Round Road, Annapolis, Maryland. The project consisted of renovation of and addition to the existing school building and had a disturbed area of 9.0 acres. Oak Contracting, LLC was the construction manager for AACPS for the project. The Project Superintendent (Mr. Eric Green, Oak Contracting, LLC) stated that there are 16 contractors on the project and Dirt Express Company was the site work contractor. The Project Superintendent stated the first of five phases of construction work on the project started in June 2013. The project was expected to be complete by the end of 2014. A copy of the project's erosion and sediment control plan was maintained onsite and had a "green stamp" approval from Anne Arundel SCD dated April 26, 2013.

During the onsite inspection, the City's Environmental Compliance Inspector explained his process for conducting a typical erosion and sediment control inspection. The EPA Inspection Team and City staff discussed site observations during the site visit. The following was observed with regard to erosion and sediment controls at the construction site:

a. A soil stockpile in the southern portion of the site was uncovered (see Appendix 6, Photograph 24).

b. Plastic sheeting material used to prevent stormwater run-on from the adjacent property in the southern portion of the site was deteriorated and pieces of the material were present on the ground surface (see Appendix 6, Photographs 25, 26, and 27).

c. Construction dewatering activities, in the area of the generator room in the northern portion of the site, had occurred without filtering the water before discharging it offsite (see Appendix 6, Photographs 28,

29, and 30). The Project Superintendent stated that a filter bag should have been used and he contacted the staff member responsible for the dewatering while the EPA Inspection Team and City staff were present during the site visit.

d. Rills and evidence of erosion were present underneath erosion control matting installed on the slopes of a sedimentation basin near the southwestern corner of the site (see Appendix 6, Photographs 31, 32, and 33). In addition, there were several areas of disturbed ground surface which had not been stabilized along the slopes of the basin (see Appendix 6, Photograph 34). Accumulated sediment was observed in the rock-lined drainage channel leading into the basin on its northern side (see Appendix 6, Photographs 35 and 36).

Observation 12: Public Construction Site – East Port Fire Station

The East Port Fire Station is located at 914 Bay Ridge Avenue, Annapolis, Maryland. It is owned by the City and the construction project included the construction of a new storage structure and installation of rain gardens for permanent stormwater management. The project had a disturbed area of 0.59 acre and construction was complete at the time of the site visit. The City's Environmental Compliance Inspector stated that the final stabilization inspection had not been conducted as of the time of the site visit. During the site visit he identified the following issues that the City would need to address:

a. Several disturbed areas had inadequate coverage and needed further application of grass seed and straw (see Appendix 6, Photographs 37 and 38).
b. The silt fence should be extended on the southeastern side of the rain garden in the southern portion of the site (see Appendix 6, Photographs 39 and 40).
c. Rock used for storm drain inlet protection in the impervious parking area should be removed once additional straw and seed are applied at the site (see Appendix 6, Photograph 41).
d. Silt fence around a soil stockpile should be entrenched or the stockpile should be removed and the disturbed area should be stabilized (see Appendix 6, Photographs 42 and 43).
e. Erosion matting should be installed upgradient of the rain garden on the northern side of the new storage structure (see Appendix 6, Photograph 44).

MINIMUM CONTROL MEASURE 5: POST-CONSTRUCTION STORMWATER MANAGEMENT PROGRAM

Permit Part III.E (Post-Construction Stormwater Management) – The Maryland Environment Article, Title 4, Subtitle 2, *Annotated Code of Maryland* (hereinafter, Stormwater Management Subtitle) which establishes a statewide stormwater management program. This statute, coupled with COMAR, requires that stormwater management for new development and

redevelopment be addressed for any proposed project that disturbs 5,000 square feet or more of earth.

COMAR 26.17.02.03 states that an acceptable stormwater management program will include:

1. *A Water Management Administration-approved* [MDE-approved] *stormwater management ordinance.*
2. *Stormwater management planning and approval processes that provide stormwater management for every land development subject to COMAR 26.17.02, implementation of environmental site design (ESD) to the maximum extent practicable (MEP), and the ability and the information necessary to review adequately proposed installation and maintenance measures for stormwater management.*
3. *Inspection and enforcement procedures that ensure the proper construction and maintenance of approved stormwater management measures.*

COMAR 26.17.02.11 (Inspection and Maintenance) – This regulation states the following concerning post-construction stormwater management facility maintenance and routine inspections:

> *Maintenance requirements established in this regulation shall be contained in all county and municipal ordinances and shall provide for inspection and maintenance. The owner shall perform or cause to be performed preventive maintenance of all completed ESD treatment practices and structural stormwater management measures to ensure proper functioning. The responsible agency of the county or municipality shall ensure preventive maintenance through inspection of all stormwater management systems. The inspection shall occur during the first year of operation and then at least once every 3 years after that.*

Observation 13: At the time of the inspection, the City was not ensuring preventive maintenance through inspection of all stormwater management systems during the first year of operation and then at least once every 3 years after. City management and staff explained that the City did not have an inventory of all post-construction BMPs within the City in order to inspect all systems. Post-construction BMPs may be identified in the City's electronic iWorQ maintenance management system or the City's TrakIt system. In addition, smaller post-construction BMPs which have been installed on private residential properties may be captured in the City's inventory. City staff estimated there were about 36 public post-construction BMPs in the City. The City's DNEP Director explained that DNEP has requested funding through the City's CIP budget to electronically inventory and track the location and status of post-construction BMPs. The City's Chief of Environmental Programs added that this is mostly driven by the state's nutrient reduction goals and keeping track of those BMPs for nutrient reduction credit.

The City's Stormwater Engineer explained that the City primarily conducts post-construction BMP inspections in response to complaints or to reduce or release the property owner's construction surety bond. The

City's Stormwater Engineer was in the process of developing a system for evaluating and ensuring the proper function of post-construction BMPs. He also explained that the maintenance of private stormwater management facilities is the responsibility of the BMP owner.

In addition, City management and staff stated that inspection and maintenance of City-owned stormwater management facilities located on the properties operated by those different City agencies are the responsibility of that agency. DNEP staff are available for consult. The City conducts maintenance on some public post-construction BMPs in the City (e.g., rain gardens) while DPW is responsible for maintenance on other City-owned BMPs, such as stormwater management ponds. The City's Lead Stormwater Inspector from DPW stated he conducts inspections of the City's stormwater management ponds. He explained that during the pond inspection he looks for issues such as erosion and illegal dumping, but he had not been provided with formal training on how to assess the functionality and condition of the ponds.

At the time of the inspection, the City Parks Division did not have an inventory of the BMPs on their properties and were not conducting inspections. During a site visit to the Truxtun Park BMPs, the City's Director of Parks and Recreation explained that his staff responsible for maintaining rain gardens at City parks had not been provided with formal training on how to perform inspections or maintenance on rain garden BMPs and they did not have access to the as-built plans, design specifications or operation and maintenance requirements.

Observation 14: Public Stormwater Management Facility – Taylor Avenue Stormwater Management Pond

City staff explained the stormwater management pond was installed more than 10 years prior to the inspection and discharges to an unnamed tributary to College Creek.

The EPA Inspection Team observed the following at the stormwater management facility:

a. Accumulated sediment and an eroded channel were observed near the northern inlet to the stormwater water management pond (see Appendix 6, Photographs 45, 46, and 47).
b. Significant vegetation was observed within the interior of the pond (see Appendix 6, Photographs 48 and 49).
c. The pond's primary outfall structure was to an adjacent channel, which flowed to College Creek (see Appendix 6, Photograph 50).

Observation 15: Public Stormwater Management Facility – Truxtun Park BMPs

Two landscape infiltration basins (also referred to as "rain gardens" by City staff; see Appendix 6, Photographs 51 and 52) were located at the City's Pip Moyer Recreation Center at Truxtun Park. City staff stated the recreation center was built in about 2009 and the stormwater management facilities were installed as part of that construction project. During the site visit, the EPA Inspection Team noted a drainage channel along the north side of the baseball field had been disturbed and sediment was present in and around the channel, upgradient of one of the landscape infiltration basins (see Appendix 6, Photographs 53 and 54). City staff explained sediment from the baseball field had accumulated in the drainage channel and City maintenance staff dug it out in October 2013. City staff stated that they planned to re-grade the baseball field, which should help reduce the transport of sediment in this area.

Observation 16: Private Stormwater Management Facility – Harness Creek View Stormwater Management Pond

City staff explained the stormwater management pond (see Appendix 6, Photograph 55) was installed about 10 to 15 years prior to the inspection and serves about 28 homes in the development. The pond is owned by the homeowner's association (HOA). The City's Stormwater Engineer (Mr. Matthew Waters) identified the following potential issues with the stormwater management pond:

a. Rip rap was not present at the inlet to the stormwater management pond and may need to be added (see Appendix 6, Photograph 56).
b. The "baffle" structure near the inlet to the pond may need to be extended (see Appendix 6, Photograph 57).
c. Trees had been planted and established on the eastern bank of the pond. These trees may add additional debris (i.e., leaves and branches) to the pond and their roots could compromise the structural integrity of the bank (see Appendix 6, Photograph 58).

Observation 17: Private Stormwater Management Facility – 1292 Spa Road Rain Garden

The City's Stormwater Engineer (Mr. Matthew Waters) explained he had conducted an inspection at this facility (see Appendix 6, Photograph 59) about four months prior to the EPA Inspection Team's site visit. During the site visit with the EPA Inspection Team, he used a cleanout access and a ruler to gauge the depth of standing water beneath the ground surface in the rain garden. He noted there was about six inches of standing water in the cleanout, which may indicate there is an issue with the BMP holding water and not allowing proper infiltration. It should be noted that snow was still present on the ground surface at the time of the site visit.

MINIMUM CONTROL MEASURE 6: POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

Permit Part III.F (Pollution Prevention and Good Housekeeping) – Permittees shall implement and maintain pollution prevention and good housekeeping techniques and procedures to reduce pollutants from all municipal operations. Components of this minimum control measure shall include municipal employee training materials to prevent and reduce pollutant discharges to the storm drain system, runoff controls geared toward fleet yard and building maintenance activities, and ensuring all municipally owned activities are properly permitted under NPDES or any other state or federal water pollution control programs. Permittees shall develop pollution prevention or good housekeeping procedures themselves or rely on another responsible entity to comply with this minimum control measure.

Observation 18: At the time of the inspection, the City had not developed employee training materials that explain how to prevent and reduce pollutant discharges to the storm drain system from the DPW Operations Facility and ADOT Facility. The DPW Services Superintendent stated that the Spa Road Facility (DPW Operations) has not provided training to its employees for stormwater or pollution prevention and good housekeeping at the facility. He further stated that training for City operations and maintenance staff was primarily "on-the-job." The City's DPW Services Superintendent, Superintendent of Utilities, and Lead Stormwater Inspector stated that they had not received stormwater or pollution prevention and good housekeeping training. The ADOT Transportation Planner stated that ADOT had not provided stormwater or pollution prevention and good housekeeping training to its employees.

Observation 19: It appears that the City had not developed pollution prevention or good housekeeping procedures for each of its municipal operations facilities. The City's DPW Services Superintendent explained that the City institutes general good housekeeping practices at its municipal operations facilities, but the City had not developed written plans for each of the facilities or a manual for pollution prevention and good housekeeping BMP implementation.

Observation 20: At the time of the inspection, the City had not ensured that all municipally owned activities are properly permitted under NPDES or other state or federal water pollution control programs. The DNEP Director stated that she was unaware whether an NPDES general permit or a stormwater pollution prevention plan (SWPPP) was required for any municipal facilities owned and managed by the City; therefore, the City had not obtained coverage for its facilities under MDE's *General Discharge Permit for Stormwater Associated with Industrial Activities* (Discharge Permit No. 02-SW; hereinafter, Industrial General Permit).

Observation 21: **Spa Road Maintenance Facility**

The Spa Road Maintenance Facility is located within the City, and includes both 932 Spa Road (located on the west side of Spa Road) and 935 Spa Road (located on the east side of Spa Road; collectively hereinafter, Spa Road Facility). City staff explained that public works operations for the City are based out of the Spa Road Maintenance Facility.

The EPA Inspection Team observed the following with regard to overall pollution prevention and good housekeeping at the facility:

a. The City had not developed a SWPPP or obtained covered under MDE's *General Discharge Permit for Stormwater Associated with Industrial Activities*.

b. According to staff, training occurs as on-the-job training. Training is not provided to the staff or superintendents specifically for stormwater pollution prevention/good housekeeping techniques.

c. The City's GIS map identifies major storm drain pipes outside of the facility, but does not contain all of the storm drain inlets and pipes within the facility (see Appendix 5, Exhibit 3).

d. The City was not able to produce a map or schematic displaying the drainage system of the facility during the onsite inspection. Stormwater appeared to drain from the 932 Spa Road Facility to either an open swale that leads ultimately to Spa Creek, or to a number of storm drain inlets located on the southeast side of the facility. The City's Superintendent of Utilities stated that stormwater primarily drains from the 935 Spa Road Facility to three interceptors located on the southern portion of the site. The back storage yard at 935 Spa Road contains the City's Vactor® truck decant storage area, with a drain that is connected to the sanitary sewer system. Stormwater from the back storage yard flows to two storm drain inlets located at the southeast corner and ultimately to Spa Creek located immediately to the south of the Spa Road Facility (see Appendix 6, Photographs 60 through 64).

e. The City did not appear to have a set schedule to maintain the three interceptors or BMPs used for the storm drain inlet protection (e.g., absorbent rolls, straw bales, fabric inlet protectors). City staff explained the interceptors are inspected and cleaned on a rotational basis.

932 Spa Road to the West of Spa Road

Types of activities conducted at 932 Spa Road include fleet maintenance, traffic control equipment storage and maintenance, vehicle equipment storage, salt storage, used oil and antifreeze storage, and employee vehicle parking.

The EPA Inspection Team observed the following with regard to pollution prevention and good housekeeping at the 932 Spa Road Facility and discussed the observations with the City representatives during the site visit.

f. Inlet protection located in the southeast corner of the facility did not encompass the entire grate on the upstream side of the storm drain inlet; consequently stormwater from the material storage and equipment storage yards could bypass the BMPs (see Appendix 6, Photographs 65, 66, and 67).

g. A 55-gallon drum labeled as containing used antifreeze was stored outdoors and without coverage or containment (see Appendix 6, Photograph 68).

h. A drainage swale down gradient of the facility's materials stockpile area, salt dome, and vehicle storage area contained sediment and turbid water (see Appendix 6, Photograph 69).

935 Spa Road to the East of Spa Road

Types of activities at 935 Spa Road include vehicle washing, vehicle fueling, and recycled materials storage. The facility also houses offices, City equipment, Vactor® decant, and street sweeping and trash storage located in an area known as the "back storage yard" at the southeast corner of the property.

The EPA Inspection Team observed the following with regard to pollution prevention and good housekeeping at the 935 Spa Road Facility and discussed the observations with the City representatives during the site visit.

i. The Facility did not contain a spill kit for hazardous materials. City staff explained that spill cleanup materials such as spill stay-dry and absorbent pads are stored at the 932 Spa Road Facility, and are brought over on an as-needed basis. It should be noted that the DPW Services had ordered spill cleanup kits for the 935 Spa Road Facility, as well as for many of the City maintenance vehicles, prior to the end of the EPA inspection.

j. Waste from the City's street sweepers was sorted in the back storage yard located at the southeast side of the facility (see Appendix 6, Photograph 70). City staff explained that from November to January of each year, street sweeping waste is sorted for leaves and trash. Leaves are stored at the facility, and the trash from the street sweepers is disposed of as waste in a dumpster. The EPA Inspection Team observed that the street sweeping sorting activity occurs near a storm drain inlet, and City staff explained that the street sweeping vehicles are also rinsed out with water near this storm drain inlet (see Appendix 6, Photograph 71). Accumulated sediment was observed in the outfall

from this storm drain inlet, and sediment had accumulated downstream of the outfall leading to Spa Creek (see Appendix 6, Photograph 72). City staff stated that they would begin rinsing the street sweepers in the designated vehicle wash area located inside of the facility.

k. Material stockpiles were located throughout the back storage yard area located along the southeast side of the facility (see Appendix 6, Photographs 73 and 74). City DPW staff stated the stockpiles consisted mostly of sand and soil with some woody materials and debris from City maintenance activities. Stormwater runoff from this area appeared to drain to the southeast to a stormwater drain inlet and ultimately to an outfall leading to Spa Creek.

Observation 22: Annapolis Department of Transportation Facility (ADOT)

The ADOT Facility is located at 308 Chinquapin Round Road, Annapolis, Maryland. The Facility consists of a bus maintenance shop, bus wash station, administrative offices, transit vehicle parking areas, waste disposal and storage area, and areas for visitor and employee parking.

The ADOT Transportation Planner stated that the facility maintains one oil-water separator from the bus washing facility that conveys flow to the sanitary sewer system. Stormwater runoff from the facility is ultimately discharged to the storm sewer system on Chinquapin Round Road. Appendix 5, Exhibit 11 is a schematic of the facility identifying drainage provided by the City subsequent to the onsite inspection.

The EPA Inspection Team observed the following with regard to pollution prevention and good housekeeping at the ADOT Facility and discussed the observations with the City representatives during the site visit.

a. The City had not developed an SWPPP or obtained coverage under MDE's *General Discharge Permit for Stormwater Associated with Industrial Activities.*

b. The City's GIS system contains the major storm sewers outside of the facility, but does not contain all of the storm drains the EPA Inspection Team observed within the facility.

c. At the time of the site visit, ADOT Facility staff members were washing some of the facility's vehicles outside of the designated bus wash building on an impervious surface leading to a storm drain inlet (see Appendix 6, Photographs 75 and 76). Soapy water was observed entering the storm drain inlet. The ADOT Transportation Planner explained that approximately 20 percent of the City's buses are washed outside of the designated bus washing building because some of the new buses are too large for the current bus wash building. Salt residue in the area where bus washing occurred was observed on the impervious surface, which led to the storm drain inlet located immediately west of the bus wash building (see Appendix 6,

Photograph 77). City staff explained that plans were being developed under the City's CIP for upgrading the bus wash building to allow for the larger vehicles. It did not appear that a timeline had been set on the completion of the bus wash building upgrade.

d. Three 55-gallon drums labeled as containing petroleum products were stored without coverage or containment located to the east of the bus maintenance building (see Appendix 6, Photograph 78). One drum was stored upside down and the EPA Inspection Team observed evidence of material leaking from the drum (see Appendix 6, Photograph 79). The EPA inspection team observed staining on the impervious surface at the location of the drum to a down gradient storm drain inlet (see Appendix 6, Photographs 80, 81, and 82). ADOT Facility staff explained that used oil drums were sometimes stored outside of the bus maintenance building prior to pick up by an outside contractor. They were unsure why the barrel was placed upside down and leaking, or how long the barrel had been leaking.

e. The ADOT Facility did not have a schedule to maintain the bus wash building interceptor. The ADOT Transportation Planner explained that a contractor maintains the interceptor, and it is inspected and cleaned when the contractor determines it is necessary.

f. Absorbent material applied in the waste oil disposal and storage area had not been cleaned up and staining was present on the impervious surface (see Appendix 6, Photograph 83). ADOT staff explained that one of the 55-gallon drums had leaked a week or so ago, and it appeared that the bus maintenance staff did not clean up the absorbent pads or the spilled material residue on the asphalt. The leaking 55-gallon drum had been placed in a metal drum tote that was sealed so no additional leaking would occur. Absorbent material was present around the waste oil storage structure and a container labeled as containing used antifreeze was stored outside and without coverage or containment (see Appendix 6, Photograph 84).

ANNE ARUNDEL COUNTY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) COMPLIANCE INSPECTION

FINAL

JUNE 2009

Office of Compliance and Enforcement
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

U.S. Environmental Protection Agency, Region III
Water Protection Division
Office of NPDES Enforcement (3WP42)
1650 Arch Street
Philadelphia, PA 19103

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EXECUTIVE SUMMARY

Municipal Separate Storm Sewer System (MS4) Compliance Inspection Anne Arundel County, Maryland

On December 9-10, 2008, a compliance inspection team comprising staff from EPA Headquarters, EPA Region 3, EPA's contractor, Eastern Research Group, Inc. (ERG), and ERG's subcontractor, PG Environmental, LLC, inspected the Anne Arundel County, Maryland municipal separate storm sewer system (MS4) program. Discharges from the County's MS4 are regulated by Maryland Department of the Environment (MDE) National Pollution Discharge Elimination System (NPDES) Permit Number MD0068306, effective November 8, 2004. The purpose of this inspection was to evaluate compliance with the County's Permit MD0068306, which is included in Attachment 1. The inspection focused specifically on the following sections of the Permit in relation to the County's MS4 program: (1) Stormwater Management; (2) Illicit Discharge Detection and Elimination; (3) County Property Management; (4) Public Education; and (5) Assessment of Controls.

EPA's compliance inspection team identified several inconsistencies between the Permit and the County's actual MS4 program. Table 1 summarizes the Permit requirements and the inconsistencies noted by the inspection team.

Table 1. Concerns Identified During Anne Arundel County Inspection (12/9/08 – 12/10/08)

Maryland Permit Number MD0068306 Requirement	Inconsistencies
III.E.1 – Stormwater Management	Finding 1. Failure to conduct preventative maintenance inspections of all stormwater management facilities on a triennial basis
III.E.3 – Illicit Discharge Detection and Elimination	Finding 2. Failure to maintain a program to address illegal dumping and spills Finding 3. Failure to use appropriate follow-up and enforcement procedures for investigating and eliminating illicit discharges, illegal dumping, and spills Finding 4. Failure to develop a standard operating procedure for documenting, reporting, tracking, and conducting adequate follow-up of potential illicit discharges or other pollutant sources
III.E.4 – County Property Management	Finding 5. Failure to track the status of pollution prevention plan development and implementation Finding 6. Failure to develop and implement adequate pollution prevention plans
III.E.6 – Public Education	No inconsistencies noted with this portion of the Permit, however, the inspection team recommends further outreach regarding reporting of illicit discharges, illegal dumping, and spills; also additional public outreach materials regarding the water quality issues identified in the Permit should be developed and included in subsequent annual reports
III.H – Assessment of Controls	No inconsistencies noted with this portion of the Permit

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Attachment 2: Organization Chart and Sign-In Sheets
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Attachment 4: Exhibit Log
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I. INTRODUCTION

On December 9-10, 2008, a compliance inspection team comprising staff from EPA Headquarters, EPA Region 3, EPA's contractor, Eastern Research Group, Inc. (ERG), and ERG's subcontractor, PG Environmental, LLC, inspected the Anne Arundel County, Maryland (hereafter, the County) municipal separate storm sewer system (MS4) program. The purpose of this inspection was to evaluate compliance with the County's National Pollutant Discharge Elimination System (NPDES) Permit Number MD0068306 (hereafter, the Permit), which is included in Attachment 1. The following personnel participated in this inspection:

Anne Arundel County Department of Public Works Representatives[1]:	Ms. Ginger D. Klingelhoefer-Ellis, Environmental Planning Administrator Ms. Janis Markusic, Program Manager Mr. John Peacock, Environmental Code Administrator Ms. Elizabeth Burton, Engineer Manager
EPA Representatives:	Ms. Kelly Brantner, EPA Headquarters Mr. Andrew Dinsmore, EPA Region 3 Ms. Meredith Carr , EPA Region 3 Ms. Allison Graham, EPA Region 3 Mr. Reggie Parrish, EPA Chesapeake Bay Program
EPA Contractors:	Ms. Lisa Biddle, ERG Mr. Max Kuker, PG Environmental, LLC

The inspection focused specifically on the following sections of the Permit in relation to the County's MS4 program: (1) Stormwater Management; (2) Illicit Discharge Detection and Elimination; (3) County Property Management; (4) Public Education; and (5) Assessment of Controls. During the inspection (office interviews and field visits), other sections of the Permit were briefly reviewed but were not completely evaluated.

Section II of this report presents background information on Anne Arundel County's MS4 program. Section III presents detailed information on the concerns regarding permit, and Section IV identifies additional concerns noted during the inspection.

II. ANNE ARUNDEL COUNTY BACKGROUND

Anne Arundel County is located to the south of the city of Baltimore, Maryland. As of 2006, the County's population was 509,300. According to the U.S. Census Bureau, the county has a total area of 588 square miles, of which 416 square miles (70.75%) is land and 172 square miles (29.25%) is water. The County is located on the western side of Chesapeake Bay and has 533 miles of tidal shoreline, 12 major watersheds, and 1,780 miles of nontidal stream. The County's land cover primarily consists of wooded land (43%) and medium density residential (24%). All of the major drainage basins within the County are designated as 303(d) listed waters for at least two impairment categories per basin (impairment categories include biological, nutrients, sediment, toxics, bacteria, and metals).

1 County organizational charts and a copy of sign-sheets containing the names of all county participants in the inspection are included as Attachments 2 and 3.

Anne Arundel County's MS4 program is administered primarily by three departments:

- Department of Public Works (DPW);
- Department of Inspections and Permits (I&P); and
- Office of Planning and Zoning.

During the inspection, County personnel provided a table identifying which department is responsible for each permit condition (see Attachment 3).

III. ASSESSMENT OF COMPLIANCE WITH PERMIT REQUIREMENTS

The EPA inspection team evaluated Anne Arundel County's compliance with the requirements of the Permit, under which the County's MS4 system is covered. The Permit, included in Attachment 1, has an effective date of 8 November 2004 and an expiration date of 8 November 2009. The EPA inspection team evaluated five permit components and identified several concerns regarding the County's compliance with these components, as detailed in the sections below. The concerns regarding each permit component are identified as findings within each section. Attachment 4, the Exhibit Log, contains all referenced exhibits, and Attachment 5, the Photograph Log, contains all photographs.

A. Requirement III.E.1 – Stormwater Management

The Stormwater Management program is implemented by two groups in Anne Arundel County: the Office of Planning and Zoning and the Department of I&P. The program is administered according to Article 16 of the Anne Arundel County Code, *Floodplain Management, Sediment Control, and Stormwater Management* (2005); Exhibit A includes a copy of Article 16.

Design Review

The Office of Planning and Zoning reviews new projects in the County for stormwater drainage and stormwater management using a checklist for both reviews. Copies of the *Storm Drainage Design Checklist* and *Stormwater Management Checklist* are provided as Exhibits B and C, respectively. Reviews are executed by 10 to 15 design reviewers (there were 10 at the time of the inspection) who are divided into the following four teams:

- North team – reviews non-large projects[2] in the north half of the County;
- South team – reviews non-large projects in the south half of the County;
- Regional team – reviews large projects in both the North and South parts of the County; and
- Critical area team – reviews all projects within the "critical area" (defined as the area located 1,000 feet landward from mean high tide or the edge of tidal wetlands, as designated on the State Tidal Wetland maps, and all waters of and lands under the Chesapeake Bay and its tributaries).

Projects are submitted to the County at the Permit Application Center, where they are logged into a tracking database and assigned a number and a "review-by" date. "Review-by" dates are set for 45 days from submission. Design review teams meet on a weekly basis to discuss review tasking and maintain consistency in the review process. The four design review team leaders track project reviews in the

2 The County defined large projects as 50,000 square feet of commercial or industrial construction or 100 residential units, mixed use projects, town center projects, and projects of importance to the Economic Development Corporation.

database. County staff provided an example from this database during the inspection (see Exhibit D); it lists all projects scheduled for review in December 2008.

All reviewers complete the checklists during reviews. If a design does not meet the criteria on the checklists, the designer is asked to meet with the County in person to discuss the necessary revisions. The meeting is not mandatory, but the County indicated that approximately 60% of the requested meetings occur. For all cases of insufficient design, a letter is sent to the owner and designer containing the County's comments and required revisions. These letters are all reviewed by the Engineer Manager within the Office of Planning and Zoning to maintain consistency with design review feedback. Designs must be revised per the requirements outlined in the letters and resubmitted for review.

In addition to its design review meetings, the County conducts monthly meetings with the homebuilders association and meetings every three months with the County's design engineering community.

The County is in the process of developing stormwater management design specifications. The County stated the design specifications are 95% complete and will be provided to MDE for approval in the near future. The County currently relies on the Maryland Stormwater Design Manual, the revised design specifications will be equal to, or more stringent than, the MDE requirements.

At construction completion, As-Built drawings must be submitted to the County. The County's I&P Department reviews these drawings for compliance with design requirements. A stormwater design performance bond is collected and retained by the County until design and performance approval is established. If the final design is not in compliance, the County will withhold the stormwater bond until compliance is reached. If compliance is not achieved, the County will use the stormwater bond money to finance the necessary modifications to the project to achieve compliance.

BMP Tracking

Stormwater management facilities (also referred to by the County as stormwater management devices and best management practices (BMPs)) in Anne Arundel County may be publicly or privately owned and maintained. Private stormwater management facilities are subject to a Stormwater Inspection and Maintenance Agreement, which is recorded on the property deed, making the property owner responsible for long-term maintenance. Public stormwater management devices are either located on County-owned property or within a maintenance easement and are maintained by DPW, the Department of Recreation and Parks, the Department of Central Services, or the Anne Arundel County School Board. Once construction of the public or private stormwater control device is complete, the I&P Department performs a final inspection and notifies the appropriate public agency of their responsibility for long-term maintenance. The County has additional procedures associated with the turnover of stormwater management facilities that will be maintained by DPW; these procedures are outlined in an Interoffice Memo, provided as Exhibit E.

The County maintains a database of stormwater management BMPs on both public and private properties. At the time of the inspection, the County had 10,278 BMPs. The database contains records of 7,800 private stormwater management agreements. During the inspection, County staff provided an example of a stormwater management BMP record from the database (see Exhibit F). Table 1 summarizes the BMP records in the database by ownership. The County explained that the database is web-based and can be accessed by the public, though write-access is reserved for County employees. The Environmental Code Administrator, who is responsible for maintaining the database, indicated that between 700 and 1,000 new stormwater facilities are added to the database each year.

Table 1. Anne Arundel County Stormwater BMP Database Summary (By Ownership)

Ownership Code	Ownership	Number of BMPs
A	Anne Arundel Community College	8
B	Board of Education	42
C	Central Services	24
I	DPW - Infrastructure Management	135
O	DPW - Road Operations	26
P	Recreation and Parks	40
R	Private Owner	8,507
S	DPW - Solid Waste	8
U	DPW – Utilities	22
W	Public Works	1,152
(blank)	(no code entered)	314
Total		**9,964**

DPW keeps additional records for the BMPs they are responsible for maintaining and inspecting in a geospatial Public Works database (those represented by ownership code "W" in Table 1). At the time of the inspection, there were 750 BMPs in the Public Works database; this included 391 ponds and 265 infiltration trenches. DPW indicated that this database is still being developed and not all BMPs are currently represented in it. The Public Works Maintenance Project Manager indicated that they take on approximately 40 new facilities each year.

Compliance Hotline

The County operates a 24-hour hotline for environmental complaints, which is one of the ways the County becomes aware of failed BMPs. The hotline is answered by the I&P Department during the day and by an answering service during nonbusiness hours. The answering service contacts the Environmental Code Administrator, who evaluates the complaint and determines if it must be addressed during off hours (in which case he addresses it) or if it can be addressed on the following business day. The Environmental Code Administrator indicated that those complaints that relate to critical area violations or activities that may have further environmental impact if not addressed immediately would be taken care of during off hours. All complaints are logged on a "Request for Investigation" form and entered in the Internet-based compliance database, where they are tracked through complaint close-out; Exhibit G includes an example Request for Investigation Form and Exhibit H includes an excerpt from the Inspections and Permits Compliance Database. The Environmental Code Administrator provided two interoffice memoranda that outline complaint processing procedures; they are included in Exhibit I. Refer to section D for additional details regarding the publicized compliance hotline.

Post-Construction Inspections

The County has two separate teams that conduct stormwater facility preventative maintenance inspections. DPW inspects and maintains publicly owned facilities while the Department of I&P inspects private facilities, as well as public facilities not under the jurisdiction of the DPW. There is currently one inspector in the Department of I&P who performs triennial inspections. There is one DPW inspections supervisor who works with contractors (KCI) that perform the majority of DWP's triennial inspections. Legal authority to enforce deficiencies found during inspections is documented in Article 16 of the Anne Arundel County Code (Exhibit A).

On December 10, 2008, the EPA inspection team shadowed a Department of I&P inspector and a Public Works inspector on routine site visits. Two private and one public BMP were visited; below are descriptions of these visits.

Site: Private BMP at Riva Festival

Photographs 1 through 5 in Attachment 5 were taken at this private commercial site, which consisted of a large stormwater management pond for control and treatment of runoff from a shopping center and parking lots. The Department of I&P inspector had noted a failure of the overflow structure previously and was following up to review construction progress on the repair. The site included a stormwater management pond with a barrel riser as the overflow mechanism. When the water level in the pond exceeded the design height of the overflow riser, water would flow through the riser into the two outfall pipes that transported the water from the pond to the nearby creek. An insufficient amount of soil surrounding the base of the riser was allowing water to flow directly into the overflow pipe before the water level reached the riser height. Repair of this failure was underway during the inspection. The Department of I&P inspector noted that a medium size tree was growing along the bank near the outfall structure (refer to Photograph 2); he indicated that he would have this tree removed because the County prefers to not have any large vegetation growing within 25 feet of outfall structures. This tree had not been noted in previous inspections. It appeared that proper erosion and sediment controls were in place at the construction site; however, the EPA inspection team observed a soil stock pile and a partially open bag of flowable fill upstream of the pond, which have the potential to contaminate the pond during a heavy rain (refer to Photographs 4 and 5). The Department of I&P inspector did not appear to be concerned with these items.

Site: Private BMP at River Oaks

Photographs 6 through 9 in Attachment 5 were taken at this private residential complex that manages stormwater runoff from roof tops, lawns, roadways, and parking through a series of stormwater inlets, pipes, and dry extended detention stormwater management ponds. The Department of I&P inspector indicated that he focuses only on the stormwater ponds and surrounding fences and does not inspect the surrounding infrastructure, which included several stormwater inlet structures, connected downspouts, and a natural rain garden near one of the ponds. The Department of I&P inspector indicated that he specifically reviews the following features when performing a triennial inspection of a stormwater pond:

- Fence – checks the lock and fence structure for good repair;
- Headwall – reviews for debris and structural integrity;
- Stone dewatering device – checks for presence of infiltration trench or dewatering device within the pond and checks for debris or repair needs; and
- Riprap apron surrounding the pond and outfall structure(s) – checks for good repair (has there been significant washout) and makes sure that mowing or trimming has occurred so that he can clearly see influent and outfall structures (and that all larger trees have been removed).

The inspector noted that when deficiencies are observed, the County will issue a correction notice to the owner (often a homeowners association) and return to the site at a later date to verify that the necessary repairs were made. During this site visit the inspector noted yard waste that had been dumped inside the BMP fencing and a few areas of the fence that were in need of repair. The Inspector indicated

that he would issue a correction notice to the owner and conduct a follow-up site visit to verify that repairs were made.[3]

Site: Public BMP at Yorktown Manor

Photographs 10 through 14 were taken at the publicly owned stormwater management pond in a residential subdivision. This was a follow-up inspection; the DPW inspector indicated that the triennial inspections are typically performed by a contractor, though he will conduct a follow-up inspection after the contractor on occasion to verify their findings. During this inspection, the DPW inspector verified the security of the fence surrounding the pond, checked the inlet and outlet structures for debris, and ensured that the vegetation in the pond had been recently mowed. He did not raise any concerns during the inspection. Photograph 13 shows significant build up of debris around the outlet structure, which was not noted by the DPW inspector.

Finding 1. Failure to conduct preventative maintenance inspections of *all* stormwater management facilities at least on a triennial basis

Part III.E.1.a of the Permit requires that the County "conduct preventative maintenance inspections of all stormwater management facilities at least on a triennial basis." During the inspection, County representatives stated that they do not inspect "all" stormwater management facilities on a triennial basis. They explained that only devices of a certain scale (large community-scale private ponds and public facilities not under the jurisdiction of DPW) are scheduled for inspections. The County indicated that they do not have the resources to inspect all 7,800 BMPs that are covered by Stormwater Inspection and Maintenance Agreements, instead inspections are only scheduled for those smaller scale BMPs if a complaint is received about the device. The Department of I&P indicated that approximately 3,000 of the 8,812 non-DPW facilities are inspected over three years as part of their triennial inspection program. The 3,000 facilities inspected by the Department of I&P over the past three years include private facilities and all public facilities that are not maintained by DPW. Approximately one-third of the BMP inspections that the Department of I&P is responsible for conducting on a triennial basis are currently being performed. Table 1 summarizes the BMP facilities, by ownership, currently in the County's database. The Environmental Code Administrator indicated that the number of inspectors on staff was one, which was not sufficient to meet this requirement. He explained that prior to 2003 the County had two maintenance inspectors that performed the triennial inspections and four inspectors that performed the initial post-construction BMP inspections and the one year follow-up inspections.

B. Requirement III.E.3 – Illicit Discharge Detection and Elimination

The County's Illicit Discharge Detection and Elimination (IDDE) program is implemented by several County departments and a County contractor. The County's DPW, Watershed and Ecosystem Services, and its contractor, KCI Technologies (KCI), are responsible for conducting field screening of at least 150 outfalls annually, conducting an annual survey of commercial and industrial watersheds, and reporting to MDE on all activities.

According to County representatives, Anne Arundel County's I&P Department maintains an inspection and enforcement program for the discharge of "non-natural stormwater" into the County storm drain system. Such "non-natural" stormwater includes illicit discharges, illegal dumping, and spills. This program is based on complaints filed by the public, by other Department inspectors, and by the contractor hired by the County to perform the outfall monitoring (KCI). The County's I&P Department is responsible for maintaining an illicit discharge reporting hotline. In the County's 2007 Annual Report, the

3 The EPA inspection team has requested copies of follow-up documentation from the County regarding the findings and corrective actions at River Oaks; documentation will be appended to the report when it is received.

Department reported that the County had received no public complaints of any illegal dumping or spills during the reporting period.

KCI conducts the permit-required comprehensive field screening of outfalls and commercial/ industrial surveys, and it provides the County detailed documentation of suspected illicit discharges and evidence of illegal activities or storage in the upland areas. The County's Watershed and Ecosystem Services Division reviews the documentation provided by KCI and refers the results to the County's I&P Department for follow-up.

Anne Arundel County Code (2005), Article 16, Title 3 (Stormwater Management) (Exhibit A), appears to provide the County with adequate legal authority to control illicit discharges, illegal dumping, and spills and to enforce the County's stormwater management policies.

In 2007, field screening and the commercial/industrial surveys were focused on four major commercial and industrial areas in the County. Based on documentation and interviews with field staff, the County appeared to follow commonly accepted field-screening methods, including field analytical monitoring of suspected illicit discharges. Of the 150 outfalls screened, 48 were reported to have dry-weather flow. Through further investigation and field analytical sampling, KCI identified two outfalls with illicit discharges and six sites with evidence of illegal activities or storage (referred to by the County as "Upland Pollutant Sources"), for a total of eight cases.

The EPA inspection team accompanied County and KCI personnel to two locations identified as having illicit discharges or illegal activities or storage during the 2007 field-screening and routine commercial/industrial survey activities. These site visits included a physical review of the site, a review of the field-screening procedures (conducted by KCI), and a review of the documentation completed during the screening and survey process. The following sections describe observations made during the site visits.

Site: Shoreline Seafood – 1034 Route 3 North, Gambrills, MD 21054

Shoreline Seafood is a seafood processing company and seafood market. On September 4, 2007, while performing field screening, KCI identified an illicit discharge to a storm drain that was connected to an ephemeral stream. KCI discovered "a very turbid, foul smelling, fly infested outfall draining the back parking lot of the seafood company, in which a dumpster was found leaking into the inlet and other sources of fluids and rotting seafood in delivery/trash containers." KCI also noted, "A greenish/brown flow was present in the ephemeral stream channel downstream of the outfall…." KCI's documentation indicated that a field sample was not collected because of the foul smell and obvious nature of the discharge.

The County's I&P Department conducted a follow-up investigation at the facility on November 11, 2007 (over 2 months later) and discovered conditions similar to those which KCI had noted during the original field-screening activities. Upon further investigation, the County referred the facility to the Anne Arundel County Department of Health for enforcement under the County Food Service Code. A County representative stated that the case had been closed because of the referral to the County Department of Health. Exhibit J provides documentation of the events provided by the County, including the original KCI report and documentation by the County's I&P Department.

The EPA inspection team visited the facility on December 9, 2008, and noted site conditions similar to those found during the previous two visits by KCI and the County; however, the greenish-brown flow noted by KCI was not apparent. The EPA inspection team noted that general housekeeping was poor. Specifically, the team observed several open containers of shucked oyster shells, full containers

of canola oil, full gasoline containers, general debris, and several empty seafood and trash storage containers located throughout the area that drained directly to the on-site storm drain and subsequently to an ephemeral stream behind the facility (Photographs 15 through 23). In addition, a hose that originated inside the building and ended in the parking area was evident. Because the facility was closed the day of the visit, the EPA inspection team could not obtain access to the building or an explanation of the purpose of the hose. It appeared that the poor housekeeping had resulted in a strong odor coming from the site, stains on the pavement (Photograph 19), and an apparent sheen on the standing water inside the storm drain inlet (Photograph 21).

Site: Patuxent Companies – 2124 Priest Bridge Road, Crofton, MD 21054

Patuxent Companies provides services such as aggregate hauling, roll-off service, solid waste and recycling services, low-boy and truck fleet service, rubble recycling, an aggregate retail yard, and an aggregate stone quarry. On August 14, 2007, while performing field screening, KCI discovered runoff going into an inlet in the Patuxent Company's maintenance facility parking lot. KCI noted that "…the pavement around the inlet was wet with a foamy residue on the blacktop. There was also a trail of fluids leading to the inlet from a heavy equipment repair garage adjacent to the inlet. There appeared to be hoses, buckets, vacuums, and other supplies necessary to wash or rinse vehicles at this location into the inlet." Documentation provided to the EPA inspection team indicated that KCI had subsequently conducted field sampling for detergents for storm sewer outfalls in the area, but detected no detergents.

The County's I&P Department conducted a follow-up investigation at the facility on November 15, 2007 (over 3 months later). The documentation provided to the EPA inspection team indicated that the I&P inspector met with a facility representative, who provided information regarding the facility's newly installed "McHenry Equipment water purification system" (Photograph 28). The facility representative stated during the visit that the system had been in use for approximately one month at the time of the County's visit. It was not clear from documentation provided to the EPA inspection team whether the purification system was connected to the storm sewer or to the sanitary sewer. Exhibit J provides documentation of the events provided by the County, including the original KCI report and documentation by the County's I&P Department.

The EPA inspection team visited the facility on December 9, 2008, and confirmed that the facility's purification system was in place, that it appeared to be operating, and that general housekeeping appeared adequate (Photographs 24 through 28). No facility representative was available during the site visit.

Finding 2. Failure to maintain a program to address illegal dumping and spills

Part III.E.3.c of the Permit requires the County to "maintain a program to address illegal dumping and spills." Based on conversations with County representatives, it appears that the County does not have an effective program to address illegal dumping and spills that result in a discharge to the County's MS4, due to the fact that only eight illicit discharges and upland pollution sources were documented and the fact that there were zero public reports of illegal dumping and spills during the 2007 reporting period. The County maintains a public hotline, but representatives reported that no public notification of illegal dumping or spills was received during 2007. The complaints received by the hotline were related primarily to erosion and sediment control violations and "Critical Area" complaints. Although the lack of any calls regarding illegal dumping and spills to the MS4 might indicate that there are no issues related to this program component, it could also be the result of a lack of proper public education regarding the identification of illegal activities, the importance of reporting such activities, and the existence of the hotline. The EPA inspection team strongly recommends that the County evaluate why no public reports of illegal dumping or spills were received and initiate a corrective action plan based on the results. The EPA

inspection team also strongly recommends that the County conduct community outreach regarding public identification and reporting of illicit discharges, illegal dumping, and spills.

The County stated that the spills occurring on roadways are typically handled by the County fire department and that the State Office of Emergency Management is contacted in the event of large-scale spills. According to County representatives, reports of roadway spills that enter the County's MS4 are not provided to DPW by either agency for reporting purposes under the permit. County representatives stated that the County firefighters are trained on hazardous materials and spill management every two years to heighten their awareness of water quality issues and potential pollutant discharges to surface waters. The EPA inspection team recommends that the County DPW coordinate with the County fire department and State Office of Emergency Management to ensure that all reports of spills that enter the County's MS4 are provided to DPW. The reports should, at a minimum, include the size, type, and amount of material that entered the MS4 during the spills. The EPA inspection team also recommends that DPW review the County fire department's spill response procedures and training topics on a biennial basis (possibly coinciding with the firefighter training) to ensure adequate protection of the MS4.

Finding 3. Failure to use appropriate follow-up and enforcement procedures for investigating and eliminating illicit discharges, illegal dumping, and spills

Part III.E.3.d of the Permit requires the County to use appropriate enforcement procedures for investigating and eliminating illicit dischargers, illegal dumping, and spills. Based on the site visit to Shoreline Seafood, review of documentation provided by the County, and interviews of County staff and MDE contacts, it appeared that the County is not adequately addressing and enforcing illicit discharges. The County appears to be effectively meeting the requirements for field-screening 150 outfalls and conducting routine commercial/industrial surveys to identify illicit discharges and activities, but it is slow to conduct follow-up inspections (typically waiting 2 to 3 months) and relies predominantly on MDE and other agencies (e.g., Anne Arundel County Department of Health) to remedy situations. In addition, according to the County representatives, the County has yet to pursue enforcement on illicit discharges or "Upland Pollutant Sources" even though it appears to have adequate legal authority to do so.

During the 2007 annual reporting period, the County identified a total of only eight illicit discharges and upland pollutant sources. The County incorrectly referred at least three of the eight identified illicit discharges or illegal activities to MDE (three for vehicle-washing activities, discussed further below) and the County's Department of Health (one for a leaking dumpster and general housekeeping). Of the four remaining cases, one case was determined not to be an illicit discharge; one facility voluntarily implemented a corrective action; one case had no additional information provided, and one case was correctly referred to MDE for apparent violation of NPDES permit requirements, although no follow-up documentation was provided for the case. Table 2 summarizes all the 2007 cases and Exhibit J provides full documentation of the cases.

According to an MDE representative, the State does not permit vehicle-washing activities to discharge to storm sewers or waters of the State. In addition, the County identified the MDE-referred facilities as automobile dealerships (SIC Code 5511), which is not an industry regulated by the State's NPDES Industrial Stormwater Permit. Therefore, it appears that the County referred the facilities to MDE for follow-up based on an incorrect understanding that the facilities are regulated by the State's NPDES Industrial Stormwater Permit. Furthermore, based on the site conditions observed at Shoreline Seafood, it did not appear that the County's Department of Health had adequately addressed the discharge of pollutants to the on-site storm drain.

The site visits and documentation provided by the County indicated that the County had not appropriately followed up for a large percentage of the cases provided by KCI. It also did not appear that

the referral process had been effective because the County considered referred cases "closed" upon their referral to MDE and other agencies. In addition, the County did not take any interim actions to terminate discharges referred to other organizations, nor did it conduct any additional follow-up to ensure that the discharges to the MS4 were terminated after referral.

The County is strongly encouraged to review the cases that it has referred to other agencies for the past several years and to contact MDE regarding which types of cases should be referred to the State and which should be handled by the County.

Table 2. 2007 Illicit Discharge Case Information

Report Type	Facility/ Location	Original (KCI) Discovery Date	KCI-Reported Issue	I&P Response/Action	I&P Response Date
Upland Pollutant Source #1	Patuxent Companies	8/15/2007	Vehicle/equipment washing with no stormwater BMPs	Issues voluntarily corrected	11/15/2007
Upland Pollutant Source #2	Aggregate Industries	8/15/2007	Issue with stormwater BMP, apparent violation of NPDES permit	Referred to MDE for NPDES Industrial Permit violation	11/14/2007
Upland Pollutant Source #3	Capital Raceway Complex	9/4/2007	Erosion around outfall	No illicit connection found	11/15/2007
Upland Pollutant Source #4	Tischer Acura	9/17/2007	Vehicle/equipment washing with no stormwater BMPs	Referred to MDE (has coverage under NPDES Industrial Permit; not in compliance with SWPPP)	11/15/2007
Upland Pollutant Source #5	Tischer Nissan	10/16/2007	Vehicle/equipment washing with no stormwater BMPs	Referred to MDE for NPDES Industrial Permit Violation	11/15/2007
Upland Pollutant Source #6	Atlas Container	8/15/07	Vehicle/equipment washing with no stormwater BMPs	No information provided	No information provided
Illicit Connection #1	Shoreline Seafood	9/24/2007	Leaking dumpster and visible discharge	Referred to Anne Arundel County Department of Health (Standard Industrial Classification (SIC) Code 2092)	11/14/2007
Illicit Connection #2	Ourisman Honda	9/24/2007	Vehicle/equipment washing with no stormwater BMPs	Referred to MDE for coverage under MD NPDES Industrial Permit (SIC Code 5511)	11/15/2007

Finding 4. The County has not developed a standard operating procedure for documenting, reporting, tracking, and conducting adequate follow-up of potential illicit discharges or other pollutant sources

The County has not developed a standard operating procedure for documenting, reporting, tracking, and adequately following up on potential illicit discharges, "Upland Pollutant Sources," or other pollutant sources identified by KCI, the public, or County representatives. Based on conversations with the County representatives and a review of follow-up activities, the EPA inspection team recommends

that the County develop a standard operating procedure to ensure that all potential illicit discharges and pollution sources are documented, tracked, and reported and that adequate follow-up is conducted to eliminate discharges to the MS4. The procedure should include, at a minimum, requirements for documenting, reporting, and tracking responses to reports of potential illicit discharges; a time frame within which the response should occur; a clear description of the process needed to eliminate the discharge or pollutant source or a description of procedures to stop discharges to the storm sewer until the proper authority can follow up; acceptable criteria for referring cases to other organizations; and a reference sheet or material outlining the requirements of coverage under the State's NPDES Industrial Stormwater Permit (e.g., SIC Codes).

The EPA inspection team also recommends that the County implement a periodic training course to teach municipal personnel and field staff responsible for routine field activities (specifically, DPW and Bureau of Highways field staff) how to identify and report conditions in stormwater facilities that might indicate the presence of illicit discharges to the MS4.

C. Requirement III.E.4 – County Property Management

The County's Property Management program element, as specified by the permit, is managed by the County's DPW. The County has identified seven water reclamation facilities (WRFs) that have obtained NPDES direct discharge permits that contain stormwater requirements, as well as three landfills and eight vehicle maintenance facilities that have obtained permit coverage under the State's NPDES Industrial Stormwater Permit (Discharge Permit No. 02-SW). The individual County departments responsible for the different types of facilities are also responsible for applying for permit coverage and maintaining compliance with the individual and general NPDES permits for their respective facilities. The County appears to have adequately identified County-owned facilities that require NPDES Stormwater Permit coverage, and has submitted notices of intent (NOIs). The County has also developed a stormwater pollution prevention plan (SWPPP) for each facility, though as discussed below the inspection team identified concerns with SWPPPs at some of the facilities inspected.

The EPA inspection team accompanied County personnel to two of the eight vehicle maintenance facilities and one landfill. The site visits included a physical review of the site, review of material-handling practices, and review of the facility-specific SWPPP and associated documentation. The following sections include the observations that the EPA inspection team made during the site visits.

Site: Central District Roads – Crownsville Yard at 1847 Crownsville Road, Annapolis, MD 21401

The Crownsville Yard (facility) covers approximately 2.7 acres and has two buildings, two sheds for material storage, a sand/salt storage shed, and a single-bay garage with an office. The facility stores and maintains 10 dump trucks, four pickup trucks, one backhoe, and one loader. It has a fueling station with underground storage of gasoline and diesel and conducts vehicle washing outdoors. There are two outfalls—one to a County ditch that runs alongside the facility and another from a stormwater management pond that has an overflow to the County ditch.

According to the facility representative, the site's SWPPP was prepared in anticipation of the EPA inspection of the County's MS4 program and was signed December 5, 2008 (four days before the inspection). The EPA inspection team noted that the SWPPP did not meet the requirements of Discharge Permit No. 02-SW-1179. The SWPPP was generic and did not include appropriate BMPs or stormwater management pond inspection and maintenance requirements, nor did it include all the sections required by Discharge Permit No. 02-SW. Because of the date of preparation, the plan did not contain any documentation of past inspections, employee training, or monitoring. Exhibit K contains a copy of the facility's SWPPP.

The EPA inspection team noted several physical issues throughout the facility, including improper maintenance of stormwater controls, inadequate BMP implementation, a lack of secondary containment of an aboveground heating oil tank, a failure to review transfer procedures for petroleum products, failure to maintain adequate secondary containment for a calcium chloride storage tank (open drain valve), and failure to review the operation and maintenance of an oil/water separator and fueling station (Photographs 29 through 48).

Site: Central District Roads – Odenton Yard (formerly Western District) at 1427 Duckens Street, Odenton, MD 21401

The Odenton Yard (facility) covers approximately 3.1 acres and comprises two buildings, three sheds for material storage, a sand/salt storage shed, and a five-bay garage with an office. The facility stores and maintains 10 dump trucks, four pickup trucks, two backhoes, three roadside mowers, two loaders, one excavation/grading vehicle, and one vactor. It has a fueling station with underground storage of gasoline and diesel and conducts vehicle washing. The entire site drains to an on-site stormwater management pond.

According to the facility representative, the site's SWPPP was prepared in anticipation of the EPA inspection of the County's MS4 program and was signed December 5, 2008 (approximately four days before the inspection). The EPA inspection team noted that the SWPPP was generic and did not meet the requirements of Discharge Permit No. 02-SW-1177. It did not include appropriate BMPs or stormwater management pond inspection and maintenance requirements, nor did it contain all sections required by Discharge Permit No. 02-SW. Because of the date of preparation, the plan did not contain any documentation of past inspections, employee training, or monitoring. Exhibit L contains a copy of the Facility's SWPPP.

The EPA inspection team noted several physical issues throughout the facility. They included improper maintenance of stormwater controls, inadequate BMP implementation, failure to review transfer procedures for deicing materials (calcium chloride) and petroleum products, and failure to review the operation and maintenance of an oil/water separator and fueling station (Photographs 49 through 63).

Site: Millersville Landfill and Resource Recovery Facility – 389 Burns Crossing Road, Severn, MD 21144

The Millersville Landfill and Resource Recovery Facility (facility) is regulated by Permit No. 02-SW-0298. The facility is a multicell landfill on 565 acres. Additional areas of industrial activity at the facility include leachate collection and storage, pretreatment facilities, a convenience center for collection of recycled materials and refuse, a paper recovery facility for recycling cardboard and paper products, a vehicle and equipment maintenance building, a warehouse, and a compost facility.

The EPA inspection team noted minor deficiencies in the facility's SWPPP and applicable records. The SWPPP did not contain a signature certifying the plan and was last updated in 2004. The EPA inspection team noted no physical deficiencies during the site visit (Photographs 64 through 67).

Finding 5. Failure to track the status of pollution prevention plan development and implementation

Permit requirement III.E.4 requires the County to track the status of pollution prevention plan development and implementation. The County failed to track the status of the SWPPP development and implementation at its eight vehicle maintenance facilities. The County appears to have adequately

prepared SWPPPs for the remaining County facilities—the seven WRFs and three landfills. Each facility has obtained coverage under General Discharge Permit No. 02-SW, and therefore is required to prepare and implement a SWPPP. The County's 2007 Annual Report failed to disclose that the eight vehicle maintenance facilities had failed to develop and implement the required SWPPPs. According to the facility representatives, the SWPPPs for the maintenance facilities were developed in response to EPA's announcement of this inspection. The SWPPPs were signed on December 5, 2008 (four days before the inspection) and were not adequately implemented.

Finding 6. Failure to develop and implement adequate pollution prevention plans

The County failed to adequately develop and implement SWPPPs for each of the eight vehicle maintenance facilities. The facilities are managed by the County's DPW, Highways Division. The EPA inspection team noted that the SWPPPs provided for the eight facilities were generic and did not meet the requirements of Discharge Permit No. 02-SW. The plans did not include appropriate BMPs or stormwater management pond inspection and maintenance requirements, and did not contain all the sections required by Discharge Permit No. 02-SW. Because of the date of preparation, the plans did not contain any documentation of past inspections, employee training, or monitoring.

The inspection team also identified several physical deficiencies at the two vehicle maintenance facilities. The County's failure to develop and implement adequate SWPPPs might have contributed to these physical deficiencies. The EPA inspection team recommends that the County develop and implement adequate SWPPPs to address all stormwater-related issues at the vehicle maintenance facilities. It is also recommended that the physical deficiencies noted during the site visits at the two maintenance facilities be corrected and that facility personnel be trained and all required documentation be maintained.

D. Requirement III.E.6 – Public Education

Publicized Compliance Hotline

Part III.E.6.a. of the Permit requires the County to "publicize a compliance hotline for the public reporting of suspected illicit discharges, illegal dumping, and spills." As discussed in Section A, the County operates a 24-hour hotline for environmental complaints. Complaints are entered based on phone calls received from the community as well as reports called in from County inspectors regarding environmental concerns observed in the field. The County provided a monthly summary of the number of complaints received; 928 complaints were recorded in 2007 and 912 in 2008. These complaints related primarily to erosion and sediment control concerns. The summary table indicated that these complaints resulted in 1,027 inspections in 2007 and 653 in 2008.

The 2007 Annual Report stated that the County "received no complaints regarding illegal dumping or spills" via the hotline. Although the lack of any calls regarding illegal dumping, spills, and connections to the MS4 may indicate that there are no issues related to that program component in the County, it could also be due to inadequate advertising of the hotline for this purpose. The EPA inspection team recommends that the County conduct further community outreach regarding reporting of illicit discharges, illegal dumping and spills.

Water Quality Education and Outreach

The County conducts education and outreach programs with the residential community through meetings with the Board of Realtors and local consulting engineers. The County personnel indicated that they do not conduct any outreach programs with industrial or commercial facilities. The County is

currently in the process of obtaining funding to support a new "train the trainers" program called the Watershed Stewards Academy through which the County will educate community leaders to become "Master Watershed Stewards." According to documentation provided during the inspection (included as Exhibit M), the intention of this program is to "educate the stewards on relevant Bay issues within their respective community and empower them to educate and engage a broad base of citizens and businesses in a coordinated effort to move to action on multiple initiatives designed to dramatically reduce the impacts of stormwater on receiving streams and the Chesapeake Bay."

Many of the communities within Anne Arundel County have active groups and community organizations that initiate and execute MS4-related education and outreach. In its 2007 Annual Report, the County discussed the following groups:

- Maryland Tributary Teams – County staff participate in several of the teams and facilitated forums with County staff, developers, and environmental advocates;
- Riverkeepers – Four Riverkeeper groups are active in the County and participate in coordination meetings with the County; and
- Greater Severna Park Watershed Action Group – An umbrella organization established in 2005 coordinating environmental activities among the following groups: the Greater Severna Park Chamber of Commerce; the Greater Severna Park Council (an umbrella group of community associations); the Magothy River Association (MRA); the Association for Severna Park Improvement, Renewal, and Enhancement (ASPIRE); and Anne Arundel County Government.

Part III.E.6.b of the permit requires that the County provide information regarding several water quality issues to the general public. The 2007 Annual Report presented new brochures and pamphlets that were provided to the public to address: grinder pumps, water conservation, road usage and safety tips during snowstorms, household hazardous waste disposal, and septic system and well water contamination. The 2007 Annual Report also indicated that the County has previously provided materials regarding: recycling, composting, yard waste recycling, and proper septic system maintenance outreach. Although some issues are addressed by the materials listed in the 2007 Annual Report, several issues outlined in the permit were not addressed in the 2007 Annual Report. Those issues include:

- Stormwater management facility maintenance;
- Erosion and sediment control;
- Lawn care and landscape management (e.g., the proper use of herbicides, pesticides, and fertilizers, ice control and snow removal, cash for clippers);
- Car care, mass transit, and alternative transportation; and
- Pet waste management.

E. <u>Requirement III.H – Assessment of Controls</u>

The County's Watershed and Ecosystem Services Department is responsible for conducting biological, physical, and chemical monitoring. The County has contracted with KCI to collect the permit-required samples at two locations to represent the Picture Springs and Church Creek watersheds. KCI has prepared and implemented a Quality Assurance Project Plan (QAPP) and reviews the plan annually.

The EPA inspection team identified no findings or deficiencies with respect to this program element. Based on an office discussion and a review of documentation provided, the County appeared to be effectively implementing the Assessment of Controls provisions of the Permit.

Although it noted no findings or deficiencies, the EPA inspection team strongly recommends that the County continue to make every attempt to collect samples from at least 12 storm events per year (at least 3 events per quarter) at both monitoring locations. The County reported in its 2007 Annual Report that only seven storm events could be sampled during the November 2006 to October 2007 sampling period. The County was able to obtain five additional base flow samples, as allowed by the permit (Part H.1.a.), during that period to satisfy the permit requirements.

IV. ADDITIONAL CONCERNS

The EPA inspection team found the following additional concerns during the inspection.

A. Use of Personnel Names Rather Than Titles in Procedures

In some of the County's standard operating procedures, the EPA inspection team noted that proper names were used rather than the responsible employee's title. For example, in Exhibit F under the section entitled "Public SWM Devices Maintained by DPW," the procedure states that "the Erosion Control Inspector is to contact Mr. Richard Olsen at X-7190…" This is a concern because if there is turnover within the County that procedure will become invalid. The EPA inspection team recommends that the County revise all procedural documents to indicate job titles instead of proper names.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

AUG 0 8 2012

Mr. Jay Sakai, Director
Water Management Administration
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, Maryland 21230

Re: Specific Objection to Anne Arundel County Phase I Municipal Separate Storm Sewer System (MS4) Permit MD0068306

Dear Mr. Sakai:

On May 18, 2012, the U. S. Environmental Protection Agency (EPA or the Agency), received the latest draft of the above-referenced National Pollutant Discharge Elimination System (NPDES) permit (Anne Arundel County permit) which was reviewed pursuant to 40 C.F.R. § 123.44 and the Memorandum of Agreement (MOA) between MDE and EPA Region III (May 22, 1989).

On June 14, 2012, EPA sent written comments and a marked-up permit to the Maryland Department of the Environment (MDE) with the understanding that changes would be made to all of the draft permits that EPA received, including Anne Arundel County. On June 15, 2012 EPA issued a time extension letter to increase our review time to 90 days, since we had reason to believe that the comments would not be addressed within the initial 30 day review period. EPA and MDE are currently in productive discussions on these issues. Since these discussions are ongoing and the 90-day review period will expire on August 16, 2012, EPA is issuing this specific objection to the issuance of the referenced permit pursuant to 40 C.F.R. §§ 123.44(b)(1) and (c)(1) and Section III.A of the MOA. As further explained herein, EPA believes that several substantive requirements for MS4 permits, as required by the federal Clean Water Act, 33 U.S.C. §§ 1251 *et seq.* (CWA), and its implementing regulations, have not been incorporated into the Anne Arundel County permit.

EPA's objection to the draft permit and identification of revisions needed before EPA can remove the objection, *see* 40 C.F.R. § 123.44(b)(2)(ii), are described below:

1. Water Quality Standards

Federal regulations require that all NPDES permits contain limitations to control discharges which may cause, have the reasonable potential to cause or contribute to an excursion above water quality standards. 40 C.F.R. §122.44(d)(1)(i). Part VI of the draft Anne Arundel County permit (Enforcement and Penalties) contains general language

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related to "minimizing" and "preventing to the MEP" contamination or physical alteration of waters of the state; however, it does not actually prohibit water quality exceedances. Please refer to EPA's suggested language in our comments of June 14, 2012 and also consider the recommendation made therein that the language be contained in the first part of the permit and not placed in a later section that would get lost among standard conditions and boilerplate language.

MDE may also wish to refer to the 2011 previously approved Frederick County permit (p.7), which contains the following provision: "Frederick County shall annually provide watershed assessments, watershed implementation plans, opportunities for public participation, and TMDL compliance status *as required below to ensure that water quality standards are met for all water bodies in the County.*" (emphasis added) The italicized language, which was omitted from the Anne Arundel County permit, would be appropriate to ensure attainment of water quality standards as well as consistency with federal regulations.

In order to resolve this portion of our objection, MDE must add the language recommended by EPA via the enclosed marked-up permit, the Frederick County language listed above, or similar acceptable language.

2. <u>Chesapeake Bay TMDL</u>

In 2010, EPA issued a document entitled "Urban Stormwater Approach for the Mid-Atlantic Region and the Chesapeake Bay Watershed" (herein after "Urban Stormwater Approach"; available at: http//www.epa.gov/reg3wapd/pdf/pdf_chesbay/MS4GuideR3final07_29_10.pdf), which outlines the standards that permitting authorities within Region III are expected to adopt to ensure that MS4 permits will contribute to meeting the water quality objectives of the Clean Water Act, including relevant wasteload allocations (WLAs). One such expectation is that "[p]ermits implementing Chesapeake Bay watershed WLAs should also include specific two year milestones, and the reporting requirements to determine if these milestones are being met." The Anne Arundel County draft permit does not contain sufficient requirements for Chesapeake Bay milestones and related reporting requirements. The section of the Anne Arundel permit that relates to the Chesapeake Bay (Part V.A) provides background and generalities about the NPDES program related to the Chesapeake Bay TMDL; however, it fails to explicitly state what steps the permittee must actually take to comply with the TMDL.

EPA's permit review has concluded that although the 20% restoration strategy in the draft Anne Arundel County permit does present a Bay milestone (and apparently constitutes partial compliance with Maryland's Watershed Implementation Plan), it is not adequately expressed in the draft permit. EPA included recommended language in our marked-up permit at Part VI.A that would clearly state that by requiring a 20% reduction, compliance with the TMDL can be reasonably achieved for this permit term.

In order to resolve this portion of our objection, the permit shall be revised to include the recommended provision.

3. Backsliding

Backsliding is prohibited in NPDES permits. *See* Section 402(o) of the CWA, 33 U.S.C. § 1342(o) ("[A} permit may not be renewed, reissued, or modified on the basis of effluent guidelines...subsequent to the original issuance of such a permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit..."). *See also* 40 C.F.R. § 122.44(l). Allowing additional time to complete a task that was required by the previous permit constitutes a less stringent condition and violates the prohibition against anti-backsliding.

The draft Anne Arundel County permit contains a number of provisions which violate this principle. For example, the draft permit requires the permittee to, *inter alia*: (1) establish or implement a management program in areas served by the County's MS4 (Part III.D.1-3, at pp. 2-4); and (2) establish and publicize a compliance hotline for the public reporting of suspected illicit discharges (Part III.D.6.a). These same requirements are contained in Anne Arundel's current permit. Anne Arundel County cannot be allowed an additional permit term to complete tasks that were required under the previous permit.

In order to resolve this portion of our objection, MDE must revise the permit to include new and updated permit requirements that will expand upon the tasks required by the current permit. For example, instead of requiring that a hotline be established as was required by the previous permit, this permit should include a provision to track the amount of calls received and actions taken in response to those calls. EPA's enclosed marked permit and comments to MDE reflect proposed language that would be acceptable to resolve this concern.

4. Industrial / Commercial Monitoring

Part III.C of the draft Anne Arundel County permit requires source identification of pollutants in certain categories of stormwater runoff County-wide. However, this requirement is insufficient because the draft permit does not specifically include the category of industrial and commercial sources. An inventory of industrial and commercial sites which could contribute pollutants to receiving waters is integral to compliance with the requirement under federal regulations that stormwater management programs for a description of "[d]escribe a monitoring program for storm water discharges associated with the industrial facilities identified in paragraph (d)(2)(iv)(C)..." 40 C.F.R. § 122.26 (d)(2)(iv)(C)(*2*).

EPA provided recommended language in Part IV.C, Part IV.D.3.b, and Part V.A.2 of the marked-up permit submitted to MDE. In order to resolve this portion of our objection, MDE must revise the permit in accordance with those recommendations.

EPA also suggests the following recommendations for inclusion in the County's permit.

1. **Education**

In Part IV.D.1 of the enclosed EPA marked-up permit (Management Programs), EPA recommended adding an additional section for staff training that includes requirements for new technology, implementing pollution prevention, good housekeeping, inspections and permit requirements. EPA believes this will improve employee efficiency and awareness during inspections while ensuring continued and thorough maintenance of the stormwater program.

2. **Maximum Extent Practicable**

Throughout EPA's permit mark up, we requested removing the use of the phrase "maximum extent practicable" or "MEP". EPA has a number of concerns about inclusion of this language: it is imprecise in its interpretation and thus makes enforcing the permit terms more difficult; it could lead to backsliding; and it rightfully is a determination to be made by the permitting authority in the permit's terms. All references to MEP with the exception of the requirements that the permittee develop and implement the "Stormwater Management Act of 2007 and Environmental Site Design to the MEP" should be modified.

EPA looks forward to working cooperatively with MDE to resolve the remaining issues in an expeditious manner. Until the issues are resolved, however, in accordance with 40 C.F.R §122.4(c), MDE may not issue the Anne Arundel County MS4 permit without written authorization from EPA.

If you have any questions, please contact me, or Evelyn S. MacKnight, Chief, NPDES Permits Branch, at (215) 814-5717.

Sincerely,

Jon M. Capacasa, Director
Water Protection Division

Enclosure

cc: Brian Clevenger, MDE
Janis Markusic, Anne Arundel County

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

JUL 1 0 2009

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Anne Arundel County, Maryland
c/o Ginger Ellis, Planning Administrator
2662 Riva Road
Third Floor / MS 7301
Annapolis, MD 21401

Re: Municipal Separate Storm Sewer System Inspection Report
and Administrative Order (CWA-03-2009-0165DN)

Dear Ms. Ellis:

On December 9-10, 2008, the U.S. Environmental Protection Agency, Region III (EPA) conducted an inspection to investigate compliance with the National Pollutant Discharge Elimination System permit issued for operation of Anne Arundel County's Municipal Separate Storm Sewer System (MS4). Enclosed is a copy of the report documenting that inspection.

Also enclosed is an Administrative Order (Order) issued this date pursuant to Section 309(a) of the Clean Water Act (the "Act"), as amended, 33 U.S.C. § 1319(a). The Order addresses violations identified during inspection. You should carefully read the contents of the enclosed Order, and communicate to each responsible official, agent, or employee the actions which each such person must take to ensure compliance with its terms. Failure to comply with the terms of the Order constitutes a violation of Section 309 of the Act, 33 U.S.C. § 1319, and may result in further enforcement action involving civil or criminal penalties. Please note that, as indicated by its terms, the Order is effective upon receipt.

EPA may take additional action to address findings from the December 9-10, 2008 inspection, and invites you to visit the Region 3 office in Philadelphia to discuss the inspection report in its entirety and what corrective action Anne Arundel County will undertake to achieve compliance. You may also use this opportunity to provide any information you wish EPA to consider in the development of a civil penalty, which EPA routinely assesses pursuant to

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Section 309(g) of the Act, 33 U.W. C. § 1319. To arrange a meeting, please contact Andy Dinsmore at (215) 814-2788 or Allison Graham at (215) 814-2373.

Sincerely,

for Jon M. Capacasa, Director
Water Protection Division

Enclosures (2)

cc: Brian Clevenger, MDE
Carol Coates, MDE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

In The Matter of: Anne Arundel County, Maryland 2662 Riva Road Annapolis, MD 21401 Respondent.	Proceeding Under Section 309(a) of the Clean Water Act, 33 U.S.C. § 1319(a) Docket No. CWA-03-2009-0165DN FINDINGS OF VIOLATION AND ORDER FOR COMPLIANCE

I. STATUTORY AUTHORITY

1. The following Findings of Violation and Order for Compliance (Order) is issued under the authority vested in the Administrator of the United States Environmental Protection Agency (EPA) by Section 309(a) of the Clean Water Act, 33 U.S.C. § 1319(a) (CWA or the "Act"). The Administrator has delegated this authority to the Regional Administrator of EPA Region III who in turn has delegated it to the Director of the Water Protection Division.

II. FINDINGS OF VIOLATION

2. Section 301(a) of the Act, 33 U.S.C. § 1311(a), prohibits the discharge of any pollutant from a point source into waters of the United States except in compliance with a permit issued pursuant to the National Pollutant Discharge Elimination System (NPDES) program under Section 402 of the Act, 33 U.S.C. § 1342, and 40 C.F.R. Part 122, or other specific authorization.

3. Section 402(a) of the Act, 33 U.S.C. § 1342(a), provides that the Administrator of EPA may issue permits under the NPDES program for the discharge of pollutants from point sources to waters of the United States. The discharges are subject to specific terms and conditions as prescribed in the permit.

4. An NPDES permit is required for discharges from a "municipal separate storm sewer system" serving a population of 250,000 or more, Section 402(p)(2)(c) of the Act, 33 U.S.C. § 1342(p); 40 C.F.R. § 122.26(a), 40 C.F.R. § 122.21.

5. The term "municipal separate storm sewer system" includes, "a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains) owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States." 40 C.F.R. § 122.26(b)(8)(I).

6. "Discharge of a pollutant" includes "any addition of any pollutant or combination of pollutants to waters of the United States from any point source." 40 C.F.R. § 122.2.

7. "Storm water" is defined as "storm water runoff, snow melt runoff and surface runoff and drainage." 40 C.F.R. § 122.26(b)(13).

8. Anne Arundel County, Maryland (Respondent) is a "person" within the meaning of Section 502(5) of the Act, 33 U.S.C. § 1362(5).

9. Respondent owns, and through its Department of Public Works (DPW), Department of Inspections and Permits (I&P), and Office of Planning and Zoning (OPZ), operates a municipal separate storm sewer system (MS4) located in Anne Arundel County, MD. Respondent's MS4 management programs include: storm water management, erosion and sediment control, illicit discharge detection and elimination, county property management, road maintenance, and public education.

10. The Maryland Department of the Environment (MDE) issued to Respondent an NPDES MS4 Discharge Permit No. MD0068306 on November 8, 2004, hereinafter referred to as the "MS4 Permit." The MS4 Permit is set to expire on November 8, 2009.

11. Part III, Section C(1) of the MS4 Permit requires the Respondent to annually submit a catalogue of it's storm drain system, in geographic information system (GIS) format, including major outfalls, inlets, and associated drainage areas.

12. In 2008, Respondent identified twelve major drainage basins, all of which contain or would flow to "waters of the United States" as that term is defined at 40 C.F.R. § 122.2.

13. On December 9 - 10, 2008, EPA and authorized representatives of EPA reviewed several of the Respondent's MS4 management programs. During this inspection, EPA and EPA representatives evaluated the Respondent's County Property Management program, required by Part III, Section E(4) of the permit, which is administered by the Respondent's DPW.

14. Part III, Section E(4) of the MS4 Permit requires that the Respondent identify all County-owned and municipal facilities requiring NPDES storm water general permit coverage, submit Notices of Intent (NOI) to MDE for each, and annually submit documentation of the status of the development and implementation of pollution prevention plans.

15. In the Respondent's 2007 Annual NPDES Report, the Respondent identified seven water reclamation facilities that have obtained NPDES permits, as well as three landfills and eight vehicle maintenance facilities that have obtained permit coverage under MDE's General NPDES Permit for Storm Water Associated with Industrial Activity (Discharge Permit No. 02-SW).

16. Respondent's DPW owns and operates all water reclamation facilities, landfills, and vehicle maintenance facilities identified in it's 2007 Annual NPDES Report.

17. On December 10, 2008, EPA and EPA representatives inspected two of the eight vehicle maintenance facilities and one of the three landfills identified in the Respondent's 2007 Annual NPDES Report. The facilities included: Central District Roads - Crownsville Yard located at 1847 Crownsville Road, Annapolis, MD 21401 (Site 1), Central District Roads - Odenton Yard located at 1427 Duckens Street, Odenton, MD 21401 (Site 2), and Millersville Landfill and Resource Recovery Facility located at 389 Burns Crossing Road, Severn, MD 21144 (Site 3).

18. Storm water discharges from Site 1 must meet the requirements of NPDES Permit No. 02-SW-1179. NPDES Permit No. 02-SW-1179 was set to expire on November 30, 2007; however, it has been administratively extended until 60 days after a new permit is issued by MDE. Inspectors observed two storm water discharge points into a County ditch at this site. The discharge points are located on the southwest corner of the property and from the storm water management pond overflow located on the southeast corner of the property.

19. Site 1 developed a storm water pollution prevention plan (SWPPP) dated December 5, 2008, in accordance with the requirements of NPDES Permit No. 02-SW-1179. As of the date of the inspection, the SWPPP developed for this site failed to meet the requirements of NPDES Permit No. 02-SW-1179. The SWPPP did not contain documentation of past inspections, employee training, and monitoring. Additionally, inspectors observed the trench drain on-site had collected debris and sediment, and the storm water management pond had sediment accumulation in the gravel inlet as well as trees growing inside of the pond.

20. Storm water discharges from Site 2 must meet the requirements of NPDES Permit No. 02-SW-1177. NPDES Permit No. 02-SW-1177 was set to expire on November 30, 2007; however, it has been administratively extended until 60 days after a

new permit is issued by MDE. Storm water from Site 2 drains to an on-site storm water management pond by way of several storm drains throughout the facility.

21. Site 2 developed a SWPPP dated December 5, 2008, in accordance with the requirements of NPDES Permit No. 02-SW-1177. As of the date of the inspection, the SWPPP developed for this site failed to meet the requirements of NPDES Permit No. 02-SW-1177. The SWPPP did not contain documentation of past inspections, employee training, and monitoring. Additionally, inspectors observed uncovered stockpiles located adjacent to storm drains, the drainage valve to the secondary containment surrounding the calcium chloride tank was open, and trash and debris had accumulated in the on-site dewatering gravel pit.

22. Storm water discharges from Site 3 must meet the requirements of NPDES Permit No. 02-SW-0298. NPDES Permit No. 02-SW-0298 was set to expire on November 30, 2007; however, it has been administratively extended until 60 days after a new permit is issued by MDE. Storm water from Site 3 drains to tributaries of Severn Run by way of several storm water management ponds located at the facility and overland flow.

23. Site 3 developed a SWPPP, last updated in October 2004, in accordance with the requirements of NPDES Permit No. 02-SW-0298. As of the date of the inspection, the SWPPP developed for Site 3 failed to meet the requirements of NPDES Permit No. 02-SW-0298. The SWPPP did not contain a certifying signature and employee training records.

24. By failing to ensure the proper development and implementation of pollution prevention plans, including maintenance of storm water controls and applying best management practices at Sites 1, 2, and 3, Respondent has violated Part III, Section E(4) of its MS4 Permit, and Section 301 of the Act, 33 U.S.C. § 1311.

III. ORDER FOR COMPLIANCE

Therefore, this JUL 1 0 2009 day of July, 2009, Respondent is hereby ORDERED, pursuant to Section 309(a) of the Clean Water Act, 33 U.S.C. § 1319(a), to conduct the following activities:

25. Within thirty (30) days upon receipt of this Order, Respondent shall come into compliance with all County Property Management requirements of the NPDES MS4 Permit with respect to all County-owned and municipal facilities identified in the Respondent's 2007 Annual NPDES Report.

26. Within thirty (30) days upon receipt of this Order, Respondent shall ensure all County-owned and municipal facilities identified in the Respondent's 2007 Annual NPDES

Report come into compliance with all requirements of the General NPDES Permit for Storm Water Associated with Industrial Activity (NPDES Permit No. 02-SW).

27. Within thirty (30) days upon receipt of this Order, Respondent shall submit a written report detailing the specific actions taken to correct the violations cited herein to the following individual:

Allison Graham
NPDES Enforcement Branch (3WP42)
United States Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

IV. GENERAL PROVISIONS

28. Issuance of this Order shall not be deemed an election by the EPA to forego any administrative, civil, or criminal action to seek penalties, fines, or any other appropriate relief under the Act for the violations cited herein. EPA reserves the right to seek any remedy available under the law that it deems appropriate for the violations cited.

29. Respondents' compliance with the terms of this Order shall not constitute compliance with the Clean Water Act or any other Federal, State or local law or regulation. Nor does this Order constitute a waiver or modification of the terms or conditions of any issued permit.

30. Violation of the terms and conditions of this Order constitutes an additional violation of the Act, and may result in a civil action for injunctive relief and/or a penalty not to exceed $37,500 per day of such violation, pursuant to Sections 309(b) and (d) of the Act, 33 U.S.C. §1319 (b) and (d). In addition, Section 309(c) provides criminal sanctions for knowing or negligent violations of the Act including imprisonment and fines of up to $50,000 per day of violation.

V. EFFECTIVE DATE

31. The effective date of this Order shall be the date it is received by the Respondent.

Date: 7/10/09

for Jon M. Capacasa, Director
Water Protection Division

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

SEP 30 2010

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

John R. Leopold, County Executive
Anne Arundel County, Maryland
The Arundel Center
44 Calvert Street
Annapolis, Maryland 21404

Re: Administrative Penalty Complaint
Docket No. CWA-03-2010-0404

Dear Mr. Leopold:

The U.S. Environmental Protection Agency (EPA) has determined that Anne Arundel County, Maryland has violated provisions of its Clean Water Act NPDES Permit No. MD0068306 dealing with its Municipal Separate Storm Sewer System (MS4) program. As a result, EPA has issued the enclosed Administrative Penalty Complaint and Notice of Opportunity to Request a Hearing pursuant to Section 309(g) of the Clean Water Act.

This action is an important part of EPA's Chesapeake Bay Compliance Strategy to protect and improve the water quality of the Chesapeake Bay watershed. By EPA regulations, EPA will be making the public aware of this enforcement action and other similar cases being taken at this time by EPA. EPA has worked closely with the Maryland Department of the Environment (MDE) on this and other cases in the state involving the MS4 program, and EPA has informed MDE about this action.

The Administrative Penalty Complaint and other documents enclosed with this letter contain important information concerning this legal proceeding, and I encourage you and other members of your office to review them closely. EPA will be happy to meet with you or other representatives to discuss this matter, and contact information is provided below.

Printed on 100% recycled/recyclable paper with 100% post-consumer fiber and process chlorine free.
Customer Service Hotline: 1-800-438-2474

I urge you to address this matter as soon as possible. Please contact Mr. Andrew Dinsmore at 215-814-2788 if you wish to discuss this matter, or you have your counsel contact Ms. Lori G. Kier, Esq., at 215-814-2656.

Sincerely,

Jon M. Capacasa, Director
Water Protection Division

Enclosures

cc: Mr. Brian Clevenger
Water Management Administration, Sediment, Stormwater and Dam Safety Program
Maryland Department of the Environment

Ms. Ginger Ellis
Watershed and Ecosystem Services, Anne Arundel County Department of Public Works

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

In the Matter of:	:	
	:	Docket No. CWA-03-2010-0404
Anne Arundel County	:	
The Arundel Center	:	**Proceeding to Assess Class II**
44 Calvert Street	:	**Administrative Penalty Under**
Annapolis, Maryland 21404	:	**Section 309(g) of the Clean Water Act**
	:	
	:	**ADMINISTRATIVE PENALTY COMPLAINT**
	:	**AND NOTICE OF OPPORTUNITY TO**
Respondent.	:	**REQUEST HEARING**

I. STATUTORY AUTHORITY

1. Pursuant to Section 309(g) of the Clean Water Act (CWA or Act), 33 U.S.C. § 1319(g), the Administrator of the United States Environmental Protection Agency (EPA) is authorized to assess administrative penalties against persons who violate Section 301(a) of the Act, 33 U.S.C. § 1311(a). The Administrator of EPA has delegated this authority to the Regional Administrator of EPA, Region III, who in turn has delegated this authority to the Water Protection Division Director (Complainant).

2. This action is governed by the "Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties, Issuance of Compliance or Corrective Action Orders, and the Revocation, Termination or Suspension of Permits; Final Rule," 40 C.F.R. Part 22 (hereinafter, Part 22 Procedural Rules), a copy of which is enclosed.

II. FACTUAL AND LEGAL ALLEGATIONS

3. Anne Arundel County (hereinafter, "the County" or "Respondent") is a political subdivision of the State of Maryland, and therefore a "person" as that term is defined at Section 502(5) of the Act, 33 U.S.C. § 1362(5) and 40 C.F.R. § 122.2.

4. At all times relevant to this Complaint, Respondent has owned and/or operated a municipal separate storm sewer system (MS4) as that term is defined in 40 C.F.R. § 122.26(b)(8).

5. Respondent's MS4 is located within the geographic boundaries of Anne Arundel County, Maryland.

6. Section 301(a) of the Act, 33 U.S.C. § 1311(a), prohibits the discharge of any pollutant (other than dredged or fill material) from a point source into waters of the United States except in compliance with a permit issued pursuant to the National Pollutant Discharge Elimination System (NPDES) program under Section 402 of the Act, 33 U.S.C. § 1342.

7. Section 402(a) of the Act, 33 U.S.C. § 1342(a), provides that the Administrator of EPA may issue permits under the NPDES program for the discharge of pollutants from point sources to waters of the United States. The discharges are subject to specific terms and conditions as prescribed in the permit.

8. Pursuant to Section 402(b) of the Act, 33 U.S.C. § 1342(b), EPA authorized the Maryland Department of the Environment (MDE) to issue NPDES permits in 1989.

9. MDE issued NPDES MS4 Discharge Permit No. MD0068306 to Respondent on November 8, 2004 (hereinafter "MS4 Permit"). The MS4 Permit expired on November 8, 2009, and has been administratively extended since that date.

10. Respondent submitted an application for renewal of the MS4 Permit along with its Year 4 Annual Report to MDE in or about November 2008.

11. Respondent's stormwater discharges associated with industrial activities are covered by Maryland's General Discharge Permit for Stormwater Associated with Industrial Activities, Permit No. 02-SW/MDR (hereinafter, "Maryland Industrial GP").

12. On December 9 – 10, 2008, duly-authorized representatives of EPA conducted an inspection (including a file review) of the Respondent's MS4 Program (hereinafter referred to as "December 2008 Inspection").

III. FINDINGS OF VIOLATION

Count 1: Failure to Conduct Preventative Maintenance Inspections

13. The MS4 Permit, at Part III.E.1.a., requires the Respondent to, among other things, conduct preventative maintenance inspections of all stormwater management facilities on at least a triennial basis.

14. The December 2008 Inspection revealed that since at least 2003, Respondent has failed to conduct preventative maintenance inspections of all stormwater management facilities on at least a triennial basis.

15. Respondent's failure to conduct preventative maintenance inspections of all stormwater management facilities on at least a triennial basis violates the MS4 Permit and Section 301 of the Act, 33 U.S.C. § 1311.

Count 2: Failure to Use Appropriate Enforcement Procedures

16. The MS4 Permit, Part III.E.3.d, requires the Respondent to use appropriate enforcement procedures for investigating and eliminating illicit discharges, illegal dumping, and spills, and to report significant discharges to MDE for enforcement and/or permitting.

17. The December 2008 Inspection revealed that since at least 2007, Respondent has failed to use appropriate enforcement procedures for investigating and eliminating illicit discharges, illegal dumping, and spills, and to report significant discharges to MDE for enforcement and/or permitting, by, inter alia, failing to address illicit discharges from the Shoreline Seafood site.

18. Respondent's failure to use appropriate enforcement procedures for investigating and eliminating illicit discharges, illegal dumping, and spills, and to report significant discharges to MDE for enforcement and/or permitting violates the MS4 Permit and section 301 of the Act, 33 U.S.C. § 1311.

Count 3: Failure to Develop and Implement Adequate Pollution Prevention Plans

19. The Maryland Industrial GP, Part IV.B, requires the Respondent to, among other things, develop, update, and implement a storm water pollution prevention plan (SWPPP) for each facility covered by such permit.

20. The December 2008 Inspection revealed that, at the time of the inspection, Respondent had failed to adequately develop, update, and implement SWPPPs for eight vehicle maintenance facilities operated by the County.

21. Respondent's failure to develop and implement SWPPPs for eight vehicle maintenance facilities operated by the County violates the Maryland Industrial GP and Section 301 of the Act, 33 U.S.C. § 1311.

IV. PROPOSED CIVIL PENALTY

22. Section 309(g)(2)(B) of the CWA, 33 U.S.C. § 1319(g)(2)(B), provides that any person who has violated any NPDES permit condition or limitation is liable for an administrative penalty not to exceed $10,000 per day for each such violation, up to a total penalty amount of $125,000.

23. Pursuant to the Civil Monetary Penalty Inflation Adjustment Rule, 40 C.F.R. Part 19 (effective March 15, 2004 through January 12, 2009), any person who has violated any NPDES permit condition or limitation after March 15, 2004, is liable for an administrative penalty not to exceed $11,000 per day for each such violation occurring after March 15, 2004 through January 11, 2009), up to a total penalty amount of $157,500.

24. Pursuant to the subsequent Civil Monetary Penalty Inflation Adjustment Rule, 40 C.F.R. Part 19 (effective January 12, 2009), any person who has violated any NPDES permit condition or limitation after January 12, 2009 is liable for an administrative penalty not to exceed

$16,000 per day for each such violation occurring after January 12, 2009, up to a total penalty amount of $177,500.

25. Based upon the foregoing allegations, and pursuant to the authority of Section 309(g)(2)(B) of the CWA, 33 U.S.C. § 1319(g)(2)(B), Complainant hereby proposes to issue a Final Order Assessing Administrative Penalties to the Respondent in the amount of Eighty-three thousand five hundred dollars ($83,500.00) for the violations alleged herein. This does not constitute a "demand" as that term is defined in the Equal Access to Justice Act, 28 U.S.C. § 2412.

26. The proposed penalty was determined after taking into account the nature, circumstances, extent and gravity of the violation, Respondent's prior compliance history, ability to pay the penalty, the degree of culpability for the cited violations, and any economic benefit or savings to Respondent because of the violations. 33 U.S.C. § 1319(g)(3). In addition, to the extent that facts or circumstances unknown to Complainant or EPA at the time of issuance of this Complaint become known after issuance of this Complaint, such facts or circumstances may also be considered as a basis for adjusting the proposed administrative penalty.

27. EPA may issue the Final Order Assessing Administrative Penalties after a thirty (30) day comment period unless Respondent either responds to the allegations in the Complaint and requests a hearing according to the terms of Section V, below, or pays the civil penalty in accordance with Section VI herein (Quick Resolution).

28. If warranted, EPA may adjust the proposed civil penalty assessed in this Complaint. In so doing, the Agency will consider any number of factors in making this adjustment, including Respondent's ability to pay. However, the burden of raising the issue of an inability to pay and demonstrating this fact rests with the Respondent.

29. Neither assessment nor payment of an administrative civil penalty pursuant to Section 309 of the CWA, 33 U.S.C. § 1319, shall affect Respondent's continuing obligation to comply with the Clean Water Act, any other Federal or State laws, and/or with any separate Compliance Order issued under Section 309 of the Act, 33 U.S.C. § 1319, for the violations alleged herein.

V. ANSWER TO COMPLAINT AND OPPORTUNITY TO REQUEST HEARING

30. Respondent must file an Answer to this Complaint; failure to file an Answer may result in entry of a Default Judgment against Respondent. Respondent's default constitutes a binding admission of all allegations made in the Complaint and waiver of Respondent's right to a Hearing under the CWA. The civil penalty proposed herein shall then become due and payable upon issuance of the Default Order.

31. Upon issuance of a Default Judgment, the civil penalty proposed herein shall become due and payable.

32. Respondent's failure to pay the entire penalty assessed by a Default Order by the due date will result in a civil action to collect the assessed penalty, plus interest, attorney's fees, costs, and an additional quarterly nonpayment penalty pursuant to Section 309(g)(9) of the Act, 33 U.S.C. § 1319(g)(9). In addition, a Default Penalty is subject to the provisions relating to imposition of interest, penalty and handling charges set forth in the Federal Claims Collection Act at the rate established by the Secretary of the Treasury pursuant to 31 U.S.C. § 3717.

33. Any Answer must clearly and directly admit, deny, and/or explain each of the factual allegations contained in the Complaint with respect to which the Respondent has any knowledge, or clearly and directly state that the Respondent has no knowledge as to particular factual allegations in the Complaint.

34. The Answer shall also indicate the following:

a. the specific factual and legal circumstances or arguments which are alleged to constitute any grounds of defense;

b. the specific facts that Respondent disputes;

c. Respondent's basis for opposing the proposed penalty; and

d. whether Respondent requests a hearing.

Failure to admit, deny or explain any of the factual allegations in the Complaint constitutes admission of the undenied allegations.

35. Pursuant to Section 309(g)(2)(B) of the Act, 33 U.S.C. § 1319(g)(2)(B), Respondent may request a hearing on the proposed civil penalty within thirty (30) days of receiving this Complaint.

36. EPA is obligated, pursuant to Section 309(g)(4)(A) of the Act, 33 U.S.C. § 1319(g)(4)(A), to give members of the public notice of and an opportunity to comment on this proposed penalty assessment.

37. If Respondent requests a hearing on this proposed penalty assessment, members of the public who submitted timely comments on this proposed penalty assessment will have a right under Section 309(g)(4)(B) of the Act, 33 U.S.C. § 1319(g)(4)(B), to not only be notified of the hearing but also to be heard and to present evidence at the hearing on the appropriateness of this proposed penalty assessment.

38. If Respondent does not request a hearing, EPA will issue a Final Order Assessing Administrative Penalties, and only members of the public who submit timely comments on this proposal will have an additional thirty (30) days to petition EPA to set aside the Final Order Assessing Administrative Penalties and to hold a hearing thereon. 33 U.S.C. § 1319(g)(4)(C). EPA will grant the petition and will hold a hearing if the petitioner's evidence is material and was not considered by EPA in the issuance of the Final Order Assessing Administrative Penalties.

39. Any hearing that Respondent requests will be held and conducted in accordance with the Part 22 Procedural Rules.

40. At such a hearing, Respondent may contest any material fact contained in the Factual and Legal Allegations listed in Section II above, the Findings listed in Section III, above, and the appropriateness of the amount of the proposed civil penalty in Section IV, above.

41. Any Answer to this Complaint, and any Request for Hearing, must be filed within thirty (30) days of receiving this Complaint with the following:

Regional Hearing Clerk (3RC00)
U.S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

42. Copies of any Answer and any Request for Hearing, along with any and all other documents filed in this action, shall also be sent to the following:

Lori G. Kier
Senior Assistant Regional Counsel (3RC20)
U.S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

43. The denial of any material fact or the raising of any affirmative defense shall be construed as a request for a hearing. Failure to deny any of the factual allegations in this Complaint constitutes admission of the undenied allegations. The Answer and any subsequent documents filed in this action should be sent to:

Regional Hearing Clerk (3RC00)
U.S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

VI. SETTLEMENT CONFERENCE

44. EPA encourages settlement of proceedings at any time after issuance of a Complaint if such settlement is consistent with the provisions and objectives of the Act. Whether or not a hearing is requested, Respondent may request a settlement conference with Complainant to discuss the allegations of the Complaint and the amount of the proposed civil penalty. **A request for a settlement conference does not relieve the Respondent of the responsibility to file a timely Answer to the Complaint.**

45. In the event settlement is reached, its terms shall be expressed in a written Consent Agreement prepared by Complainant, signed by the parties, and incorporated into a Final Order signed by the Regional Administrator or his delegatee. The execution of such a

Consent Agreement shall constitute a waiver of Respondent's right to contest the allegations of the Complaint or to appeal the Final Order accompanying the Consent Agreement.

46. If you wish to arrange a settlement conference, or if you have any questions related to this proceeding, please contact Mr. Charles Schadel at (215) 814-5761 before the expiration of the thirty (30) day period following your receipt of this Complaint. If you are represented by legal counsel, you may have your counsel contact Mr. Mark Bolender, Assistant Regional Counsel, at (215) 814-2642, on your behalf. **Such a request for a settlement conference does not relieve Respondent of the responsibility to file an Answer within thirty (30) days following Respondent's receipt of this Complaint.**

VII. QUICK RESOLUTION

47. In accordance with 40 C.F.R. § 22.18(a), and subject to the limitations in 40 C.F.R. § 22.45, Respondent may resolve this proceeding at any time by paying the specific penalty proposed in this Complaint.

48. If Respondent pays the specific penalty proposed in this Complaint within forty (40) days of receiving this Complaint, then, pursuant to 40 C.F.R. § 22.18(a)(1), no Answer need be filed.

49. If Respondent wishes to resolve this proceeding by paying the penalty proposed in this Complaint instead of filing an Answer, but needs additional time to pay the penalty, pursuant to 40 C.F.R. § 22.18(a)(2), Respondent may file a written statement with the Regional Hearing Clerk within 40 days after receiving this Complaint stating that Respondent agrees to pay the proposed penalty in accordance with 40 C.F.R. § 22.18(a)(1). Such written statement need not contain any response to, or admission of, the allegations in the Complaint. Such statement shall be filed with the following:

Regional Hearing Clerk (3RC00)
U.S. EPA, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

and a copy shall be provided to:

Lori G. Kier (3RC20)
Senior Assistant Regional Counsel
U.S. EPA, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

If Respondent files such a written statement with the Regional Hearing Clerk within 40 days after receiving this Complaint, Respondent shall pay the full amount of the proposed penalty within 60 days of receiving the Complaint. Failure to make such payment within 60 days of receipt of the Complaint may subject the Respondent to default pursuant to 40 C.F.R. § 22.17.

50. Upon receipt of payment in full, in accordance with 40 C.F.R. § 22.18(a)(3), the Regional Administrator shall issue a final order. Payment by Respondent shall constitute a waiver of Respondent's rights to contest the allegations and to appeal the final order.

51. Payment of the penalty shall be made by one of the following methods below. Payment by respondent shall reference Respondent's name and address, and the EPA Docket Number of the Complaint. A copy of Respondent's check or a copy of Respondent's electronic fund transfer shall be sent simultaneously to Lydia Guy, Regional Hearing Clerk, and the case attorney.

Payment by check to "United States Treasury"

By Regular US Postal Service Mail:

U.S. EPA
Fines and Penalties
Cincinnati Finance Center
P.O. Box 979077
St. Louis, MO 63197-9000

Contact: Eric Volck, (513) 487-2105

By Private Commercial Overnight Delivery:

U.S. Environmental Protection Agency
Fines and Penalties
U.S. Bank
1005 Convention Plaza
Mail Station SL-MO-C2GL
St. Louis, MO 63101

Contact: Eric Volck, (513) 487-2105

Payment by EFT to:

Wire Transfers

Federal Reserve Bank of New York
ABA = 021030004
Account = 68010727
SWIFT Address = FRNYUS33
33 Liberty Street
New York, NY 10045
(Field Tag 4200 of the wire transfer message should read:
"D 68010727 Environmental Protection Agency")

Automated Clearing House (ACH) Transfers for receiving U.S. currency (also known as REX or remittance express)

PNC Bank
ABA = 051036706
Environmental Protection Agency
Account = 310006
CTX Format
Transaction Code 22 – checking
808 17th Street, NW
Washington, DC 20074

Contact for ACH: John Schmid (202) 874-7026

ON LINE PAYMENTS:

There is now an On Line Payment Option, available through the Dept. of Treasury. This payment option can be accessed from the information below:

WWW.PAY.GOV
Enter sfo 1.1 in the search field
Open form and complete required fields.

52. At the same time payment is made, copies of the check shall be mailed to the addresses in Paragraph 46 above.

VIII. SEPARATION OF FUNCTIONS AND EX PARTE COMMUNICATIONS

53. The following Agency offices, and the staffs thereof, are designated as the trial staff to represent the Agency as a party in this case: the Region III Office of Regional Counsel, the Region III Water Protection Division, the Office of the EPA Assistant Administrator for the Office of Water, and the EPA Assistant Administrator for Enforcement and Compliance Assurance. From the date of this Complaint until the final agency decision in this case, neither the Administrator, members of the Environmental Appeals Board, Presiding Officer, Regional Administrator, nor the Regional Judicial Officer, may have an *ex parte* communication with the trial staff on the merits of any issue involved in this proceeding. Please be advised that the Part 22 Procedural Rules prohibit any unilateral discussion or *ex parte* communication of the merits of a case with the Administrator, members of the Environmental Appeals Board, Presiding Officer, Regional Administrator, or the Regional Judicial Officer after issuance of a Complaint.

Date: 9/30/2010

Jon M. Capacasa, Director
Water Protection Division
U.S. Environmental Protection
Agency, Region III

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

In the Matter of:	:	
	:	Docket No. CWA-03-2010-0404
Anne Arundel County	:	
The Arundel Center	:	**Proceeding to Assess Class II**
44 Calvert Street	:	**Administrative Penalty Under**
Annapolis, Maryland 21404	:	**Section 309(g) of the Clean Water Act**
	:	
	:	**CONSENT AGREEMENT**
Respondent.	:	**AND FINAL ORDER**
	:	

I. PRELIMINARY STATEMENT and STATUTORY AUTHORITY

1. This Consent Agreement and Final Order ("CAFO") is entered into by the Director, Water Protection Division, United States Environmental Protection Agency, Region III ("Complainant"), and the County of Anne Arundel, Maryland ("Anne Arundel," "County," or "Respondent"), pursuant to Section 309(g) of the Clean Water Act, 33 U.S.C. § 1319(g) ("CWA" or "Act"), and the *Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties, Issuance of Compliance or Corrective Action Orders, and the Revocation, Termination or Suspension of Permits* ("Consolidated Rules"), 40 C.F.R. Part 22. The parties have agreed that this CAFO resolves Complainant's civil claims pertaining to violations of Section 301 of the CWA, 33 U.S.C. § 1311, alleged in an administrative Complaint filed on September 30, 2010 ("Complaint").

2. Pursuant to Section 309(g) of the CWA, 33 U.S.C. § 1319(g), and the Civil Monetary Penalty Inflation Adjustment Rule, 40 C.F.R. Part 19, any person violating the CWA is liable for an administrative penalty under Section 309(g) of the Act. FOR penalties assessed under Section 309(g)(2)(B) of the Act , violations occurring after March 15, 2004 through January 12, 2009 subject the violator to civil penalties in an amount not to exceed $11,000 per day per violation, up to a total penalty amount of $157,500; violations of the Act that occurred after January 12, 2009 subject the violator to civil penalties in an amount not to exceed $16,000 per day per violation, up to a maximum of $177,500.

II. FINDINGS OF FACT AND JURISDICTIONAL ALLEGATIONS

3. Respondent admits the factual allegations contained in the Complaint.

4. Respondent admits the jurisdictional allegations contained in the Complaint.

III. CONCLUSIONS OF LAW

5. Respondent has violated Section 301 of the CWA, 33 U.S.C. § 1311, and is therefore liable to the United States for a civil penalty in accordance with Section 309(g) of the Act, 33 U.S.C. § 1319(g).

IV. CONSENT AGREEMENT AND FINAL ORDER

6. Respondent agrees not to contest EPA's jurisdiction to issue and enforce this CAFO.

7. Respondent hereby expressly waives its right to a hearing on any issue of law or fact in this matter pursuant to Section 309(g) of the CWA, 33 U.S.C. § 1319(g), and consents to issuance of this CAFO without adjudication.

8. Each party to this action shall bear its own costs and attorney fees.

9. The provisions of this CAFO shall be binding upon the Respondent, its officers, principals, directors, successors and assigns.

10. The parties agree that settlement of this matter is in the public interest and that entry of this CAFO is the most appropriate means of resolving this matter.

11. Based upon the foregoing and having taken into account the nature, circumstances, extent and gravity of the violations, Respondent's ability to pay, prior history of compliance, degree of culpability, economic benefit or savings resulting from the violations, and such other matters as justice may require pursuant to the authority of Section 309(g) of the Act, 33 U.S.C. § 1319(g), EPA HEREBY ORDERS AND Respondent CONSENTS to pay a civil penalty in the amount of seventy-five thousand one- hundred fifty dollars ($75,150) in full and final settlement of EPA's claims for civil penalties for the violations alleged herein.

12. Respondent shall pay the total administrative civil penalty of seventy-five thousand one-hundred fifty dollars ($75,150) for the violations alleged in this CAFO within thirty (30) days of the effective date of this CAFO pursuant to 40 C.F.R. § 22.31(c). Payment shall be made by one of the following methods set forth below.

    Payment by check to "United States Treasury":

By regular mail:

U.S. EPA
Fines and Penalties
Cincinnati Finance Center
P.O. Box 979077
St. Louis, MO 63197-9000

Contact Eric Volck (513-487-2105)

By overnight delivery:

U.S. Bank
Government Lock Box 979077
US EPA, Fines and Penalties
1005 Convention Plaza
Mail Station SL-MO-C2-GL
St. Louis, MO 63101

Contact: Eric Volck (513-487-2105)

By Wire Transfer:

Federal Reserve Bank of New York
ABA = 021030004
Account = 68010727
SWIFT Address = FRNYUS33
33 Liberty Street
New York, NY 10045
(Field Tag 4200 of the wire transfer message should read:
"D 68010727 Environmental Protection Agency")

By Automated Clearinghouse (ACH) Transfers for receiving U. S. currency (also known as REX or remittance express):

PNC Bank
ABA = 051036706
Environmental Protection Agency
Account Number: 310006
CTX Format
Transaction Code 22 - checking
808 17th Street, NW

Washington, D.C. 20074

Contact for ACH: John Schmid (202-874-7026)

On-Line Payments:

The On-Line Payment Option, available through the Dept. of Treasury, can be accessed from the information below:

WWW.PAY.GOV
Enter sfo 1.1 in the search field
Open form and complete required fields.

Additional payment guidance is available at:

http://www.epa.gov/ocfo/finservices/make_a_payment.htm

Respondent shall send notice of such payment, including a copy of the check if payment is made by check, to the Regional Hearing Clerk at the following address:

Regional Hearing Clerk (3RC00)
U.S. EPA Region III
1650 Arch Street
Philadelphia, PA 19103-2029

-and-

Lori G. Kier, Esquire
Mail Code 3RC20
Office of Regional Counsel
U.S. EPA Region III
1650 Arch Street
Philadelphia, PA 19103-2029

13. This CAFO shall not relieve Respondent of its obligation to comply with all applicable provisions of federal, state or local law and ordinance, nor shall it be construed to be a ruling on, or determination of, any issue related to any federal, state or local permit. Nor does this CAFO constitute a waiver, suspension or modification of the requirements of the CWA, 33 U.S.C. §§ 1251, *et seq.*, or any regulations promulgated thereunder.

14. The following notice concerns interest and late penalty charges that will accrue in the event that any portion of the civil penalty is not paid as directed:

Pursuant to 31 U.S.C. § 3717 and 40 C.F.R. § 13.11, EPA is entitled to assess interest and late payment penalties on outstanding debts owed to the United States and a charge to cover the costs of processing and handling a delinquent claim, as more fully described below. Accordingly, Respondent's failure to make timely payment or to comply with the conditions in this CAFO shall result in the assessment of late payment charges including interest, penalties, and/or administrative costs of handling delinquent debts.

Interest on the civil penalty assessed in this CAFO will begin to accrue on the date that a copy of this CAFO is mailed or hand-delivered to Respondent. However, EPA will not seek to recover interest on any amount of the civil penalty that is paid within thirty (30) calendar days after the date on which such interest begins to accrue. Interest will be assessed at the rate of the United States Treasury tax and loan rate in accordance with 40 C.F.R. § 13.11(a).

The costs of the Agency's administrative handling of overdue debts will be charged and assessed monthly throughout the period the debt is overdue. 40 C.F.R. § 13.11(b). A penalty charge of six percent per year will be assessed monthly on any portion of the civil penalty which remains delinquent more than ninety (90) calendar days. 40 C.F.R. § 13.11(c). Should assessment of the penalty charge on the debt be required, it shall accrue from the first day payment is delinquent. 31 C.F.R. § 901.9(d).

15. This Consent Agreement and Final Order resolve only the civil claims for the specific violations alleged herein. Nothing in this CAFO is intended to, nor shall be construed to operate in any way to resolve any criminal liability of Respondent. Compliance with the CAFO shall not be a defense to any actions subsequently commenced for any violations of any other Federal laws and regulations administered by EPA, and it is the responsibility of Respondent to comply with all such laws and regulations. Nothing herein shall be construed to limit the authority of the Complainant to undertake such action against any person, including the Respondent, in response to any condition which Complainant determines may present an imminent and substantial endangerment to the public health, public welfare or the environment. In addition, this settlement is subject to all limitations on the scope of resolution and to the reservation of rights set forth in Section 22.18(c) of the Consolidated Rules. Further, EPA reserves any rights and remedies available to it under the CWA, the regulations promulgated thereunder, and any other federal laws or regulations for which EPA has jurisdiction, to enforce the provisions of this CAFO, following its filing with the Regional Hearing Clerk.

16. Nothing in this CAFO shall be construed as prohibiting, altering or in any way eliminating the ability of EPA to seek any other remedies or sanctions available by virtue of Respondent's violations of this CAFO or of the statutes and regulations upon which this CAFO is based or for Respondent's violation of any other applicable provision of law.

17. The penalty specified above shall represent civil penalties assessed by EPA and shall not be deductible for purposes of Federal taxes.

18. Entry of this CAFO is a final settlement of all civil violations alleged in the Complaint. EPA shall have the right to institute a new and separate action to recover additional civil penalties for the claims made in the Complaint if the EPA obtains evidence that the information and/or representations of the Respondent are false, or, in any material respect, inaccurate. This right shall be in addition to all other rights and causes of action, civil or criminal, the EPA may have under law or equity in such event.

19. The undersigned representative of Respondent certifies that he or she is fully authorized to enter into the terms and conditions of this CAFO and to execute and legally bind the Respondent.

20. All of the terms and conditions of this CAFO together comprise one agreement, and each of the terms and conditions is in consideration of all of the other terms and conditions. In the event that this CAFO, or one or more of its terms and conditions, is held invalid, or is not executed by all of the signatories in identical form, or is not approved in such identical form by the Regional Administrator or his designee, then the entire CAFO shall be null and void.

V. EFFECTIVE DATE

21. This CAFO shall become final and effective, absent a petition for review, thirty (30) days after it is lodged with the Regional Hearing Clerk, pursuant to Section 309(g)(5), 33 U.S.C. § 1319(g)(5).

FOR RESPONDENT COUNTY of ANNE ARUNDEL, MARYLAND:

By: 2-10-11

Name: Dennis Callahan

Title: Chief Administrative Officer

FOR EPA:

Catherine A. Sebesky for

Jon M. Capacasa
Director, Water Protection Division
U.S. EPA Region III

Nina Pirrera for

Lori G. Kier
Senior Assistant Regional Counsel
U.S. EPA Region III

SO ORDERED, pursuant to 33 U.S.C. § 1319(g), and 40 C.F.R. Part 22,

this 4TH day of APRIL, 2011

Shawn M. Garvin
Regional Administrator
U.S.EPA Region III

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

SEP 30 2009

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mayor Sheila Dixon
City of Baltimore
City Hall, Room 250
100 N. Holliday Street
Baltimore, Maryland 21202

Re: Municipal Separate Storm Sewer System Inspection Report
and Administrative Order (CWA-03-2009-0312DN)

Dear Mayor Dixon:

On April 7-9, 2009, the U.S. Environmental Protection Agency, Region III (EPA) conducted an inspection to investigate compliance with the National Pollutant Discharge Elimination System permit issued for operation of Baltimore City's Municipal Separate Storm Sewer System (MS4). Enclosed is a copy of the report documenting that inspection.

Also enclosed is an Administrative Order (Order) issued this date pursuant to Section 309(a) of the Clean Water Act (the "Act"), as amended, 33 U.S.C. § 1319(a). The Order addresses violations indentified during the inspection. You should carefully read the contents of the enclosed Order, and communicate to each responsible official, agent, or employee the actions which each such person must take to ensure compliance with its terms. Failure to comply with the terms of this Order constitutes a violation of Section 309 of the Act, 33 U.S.C. § 1319, and may result in further enforcement action involving civil or criminal penalties. Please note that, as indicated by its terms, the Order is effective upon receipt.

EPA may take additional action to address findings from the April 7-9, 2009 inspection, and invites you to visit the Region 3 office in Philadelphia to discuss the inspection report in its entirety and what corrective actions Baltimore City will undertake to achieve compliance. You may also use this opportunity to provide any information you wish to EPA to consider in the development of a civil penalty, which EPA routinely assesses pursuant to Section 309(g) of the Act, 33 U.S.C. § 1319.

Printed on 100% recycled/recyclable paper with 100% post-consumer fiber and process chlorine free.
Customer Service Hotline: 1-800-438-2474

If you require any information or assistance regarding this Order, or to arrange a meeting, please contact Andrew Dinsmore at (215) 814-2788 or Allison Graham at 215-814-2373.

Sincerely,

Jon M. Capacasa, Director
Water Protection Division

Enclosure

cc: Ray Bahr, MDE
Carol Coates, MDE
William Stack, DPW-WQMS

Printed on 100% recycled/recyclable paper with 100% post-consumer fiber and process chlorine free.
Customer Service Hotline: 1-800-438-2474

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

In The Matter of: Baltimore City, Maryland Respondent.	Proceeding Under Section 309(a) of the Clean Water Act, 33 U.S.C. § 1319(a) Docket No. CWA-03-2009-0312DN FINDINGS OF VIOLATION AND ORDER FOR COMPLIANCE

I. STATUTORY AUTHORITY

1. The following Findings of Violation and Order for Compliance (Order) is issued under the authority vested in the Administrator of the United States Environmental Protection Agency (EPA) by Section 309(a) of the Clean Water Act, 33 U.S.C. § 1319(a) (CWA or the "Act"). The Administrator has delegated this authority to the Regional Administrator of EPA Region III who in turn has delegated it to the Director of the Water Protection Division.

II. FINDINGS OF VIOLATION

2. Section 301(a) of the Act, 33 U.S.C. § 1311(a), prohibits the discharge of any pollutant from a point source into waters of the United States except in compliance with a permit issued pursuant to the National Pollutant Discharge Elimination System (NPDES) program under Section 402 of the Act, 33 U.S.C. § 1342, and 40 C.F.R. Part 122, or other specific authorization.

3. Section 402(a) of the Act, 33 U.S.C. § 1342(a), provides that the Administrator of EPA may issue permits under the NPDES program for the discharge of pollutants from point sources to waters of the United States. The discharges are subject to specific terms and conditions as prescribed in the permit.

4. An NPDES permit is required for discharges from, among other entities, a large or medium municipal separate storm sewer system, 40 C.F.R. § 122.26(a), 40 C.F.R. § 122.21.

5. The term "municipal separate storm sewer system" includes, "a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins,

curbs, gutters, ditches, manmade channels, or storm drains) owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States." 40 C.F.R. § 122.26(b)(8)(I).

6. "Discharge of a pollutant" includes "any addition of any pollutant or combination of pollutants to waters of the United States from any point source." 40 C.F.R. § 122.2.

7. "Storm water" is defined as "storm water runoff, snow melt runoff and surface runoff and drainage." 40 C.F.R. § 122.26(b)(13).

8. Baltimore City, Maryland (Respondent) is a "person" within the meaning of Section 502(5) of the Act, 33 U.S.C. § 1362(5).

9. Respondent owns, and through its Department of Public Works (DPW), Department of General Services, and Department of Transportation (DOT), operates a municipal separate storm sewer system (MS4) located in Baltimore City, MD. Respondent's MS4 management programs include: storm water management, stormwater management best management practice (BMP) inspections, erosion and sediment control, illicit discharge detection and elimination, city property management, road construction and maintenance, and public education.

10. The Maryland Department of the Environment (MDE) issued to Respondent an NPDES MS4 Discharge Permit No. MD0068292 on January 3, 2005, hereinafter referred to as the "MS4 Permit." The MS4 Permit is set to expire on January 3, 2010.

11. Part III, Section C(1) of the MS4 Permit requires the Respondent to annually submit a catalogue of it's storm drain system, in geographic information system (GIS) format, including major outfalls, inlets, and associated drainage areas.

12. In 2004, Respondent identified multiple major drainage basins, all of which contain or would flow to "waters of the United States" as that term is defined at 40 C.F.R. § 122.2.

13. On April 7 - 9, 2009, EPA and authorized representatives of EPA reviewed several of the Respondent's MS4 management programs. During this inspection, EPA and EPA representatives evaluated the Respondent's City Property Management program, required by Part III, Section E(5) of the MS4 Permit, which is administered by the Respondent's DPW.

14. Part III, Section E(5) of the MS4 Permit requires that the Respondent identify all City-owned facilities requiring NPDES stormwater general permit coverage and submit

Notices of Intent (NOI) to MDE for each, and annually submit documentation of the status of development and implementation of pollution prevention plans.

15. In the Respondent's 2007 Annual NPDES Report, the Respondent identified two wastewater treatment plants that have obtained NPDES permits, as well as seven landfills and nine sub-stations that have obtained permit coverage under MDE's General NPDES Permit for Storm Water Associated with Industrial Activity (Discharge Permit No. 02-SW).

16. Respondent owns and operates all wastewater treatment plants, landfills, and sub-stations identified in it's 2007 Annual NPDES Report.

17. On April 8, 2009, EPA and EPA representatives inspected two of the nine sub-stations identified in the Respondent's 2007 Annual NPDES Report. The facilities included: Central Repair Garage located at 3800 East Biddle Street, Baltimore, MD 21213 (Site 1), and Northwest Transfer Station located at 5030 Reisterstown Road, Baltimore, MD 21215 (Site 2).

18. Respondent failed to submit a Notice of Intent (NOI) for permit coverage for Site 1.

19. Storm water discharges from Site 2 must meet the requirements of Discharge Permit No. 02-SW-1307. Storm water from Site 2 drains to several on-site inlets throughout the facility and enters the storm drain system.

20. Several violations of NPDES Permit No. 02-SW-1307 were found throughout Site 2 during the inspection, including a petroleum spill resulting in a sheen on flowing water in a downstream storm drain; a second smaller spill for which an employee had attempted to clean up with deicing salt; a failure to implement BMPs, especially good housekeeping (e.g., sediment and debris from the tire, metal and electronics recycling area) resulting in sediment and debris in storm drains; a failure to maintain adequate secondary containment for three waste oil tanks resulting in stormwater containing oily substances to overtop the berm and flow to on-site storm drains.

21. Respondent failed to ensure that a SWPPP was developed and pollutants minimized for Site 2 in accordance with the requirements of NPDES Permit No. 02-SW-1307.

22. By variously failing to submit an NOI and track the status of the pollution prevention plan development and implementation, including maintenance of storm water controls and applying best management practices, at the inspected Sites 1 and 2, Respondent has violated Part III.E.5 of the MS4 Permit, and Section 301 of the Act, 33 U.S.C. § 1311.

III. ORDER FOR COMPLIANCE

23. Therefore, this 30TH day of September, 2009, Respondent is hereby ORDERED, pursuant to Section 309(a) of the Clean Water Act, 33 U.S.C. § 1319(a), to conduct the following activities:

24. Within thirty (30) days upon receipt of this Order, Respondent shall come into compliance with all requirements of the MS4 Permit for all City-owned facilities identified in the Respondent's 2007 Annual NPDES Report.

25. Within thirty (30) days upon receipt of this Order, Respondent shall ensure all City-owned facilities identified in the Respondent's 2007 Annual NPDES Report come into compliance with all requirements of the General NPDES Permit for Storm Water Associated with Industrial Activity (NPDES Permit No. 02-SW).

26. Within thirty (30) days upon receipt of this Order, Respondent shall submit a written report detailing the specific actions taken to correct the violations cited herein to the following individual:

Allison M. Graham
NPDES Enforcement Branch (3WP42)
United States Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

IV. GENERAL PROVISIONS

27. Issuance of this Order shall not be deemed an election by the EPA to forego any administrative, civil, or criminal action to seek penalties, fines, or any other appropriate relief under the Act for the violations cited herein. EPA reserves the right to seek any remedy available under the law that it deems appropriate for the violations cited.

28. Respondents' compliance with the terms of this Order shall not constitute compliance with the Clean Water Act or any other Federal, State or local law or regulation. Nor does this Order constitute a waiver or modification of the terms or conditions of any issued permit.

29. Violation of the terms and conditions of this Order constitutes an additional violation of the Act, and may result in a civil action for injunctive relief and/or a penalty not to exceed $37,500 per day of such violation, pursuant to Sections 309(b) and (d) of the Act, 33 U.S.C. §1319 (b) and (d). In addition, Section 309(c) provides criminal sanctions for knowing or negligent violations of the Act including imprisonment and fines of up to $50,000 per day of violation.

V. EFFECTIVE DATE

V. EFFECTIVE DATE

30. The effective date of this Order shall be the date it is received by the Respondent.

Date: 9/30/2009

Jon M. Capacasa, Director
Water Protection Division

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

In the Matter of: City of Baltimore City Hall, Room 250 100 N. Holliday Street Baltimore, Maryland 21202 Respondent.	Docket No. CWA-03-2010-0405 **Proceeding to Assess Class II Administrative Penalty Under Section 309(g) of the Clean Water Act** **CONSENT AGREEMENT AND FINAL ORDER**

I. PRELIMINARY STATEMENT and STATUTORY AUTHORITY

1. This Consent Agreement and Final Order ("CAFO") is entered into by the Director, Water Protection Division, United States Environmental Protection Agency, Region III ("Complainant"), and the City of Baltimore, Maryland ("Baltimore" or "Respondent"), pursuant to Section 309(g) of the Clean Water Act, 33 U.S.C. § 1319(g) ("CWA" or "Act"), and the *Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties, Issuance of Compliance or Corrective Action Orders, and the Revocation, Termination or Suspension of Permits* ("Consolidated Rules"), 40 C.F.R. Part 22. The parties have agreed that this CAFO resolves Complainant's civil claims pertaining to violations of Section 301 of the CWA, 33 U.S.C. § 1311, alleged in an administrative Complaint filed on September 30, 2010.

2. Pursuant to Section 309(g) of the CWA, 33 U.S.C. § 1319(g), and the Civil Monetary Penalty Inflation Adjustment Rule, 40 C.F.R. Part 19, any person violating the CWA is liable for an administrative penalty under Section 309(g) of the Act. FOR penalties assessed under Section 309(g)(2)(B) of the Act , violations occurring after March 15, 2004 through January 12, 2009 subject the violator to civil penalties in an amount not to exceed $11,000 per day per violation, up to a total penalty amount of $157,500; violations of the Act that occurred after January 12, 2009 subject the violator to civil penalties in an amount not to exceed $16,000 per day per violation, up to a maximum of $177,500.

II. FINDINGS OF FACT AND JURISDICTIONAL ALLEGATIONS

3. For purposes of this proceeding, Respondent neither admits nor denies the specific factual allegations contained in the administrative Complaint filed on September 30, 2010.

4. Respondent admits the jurisdictional allegations contained in the Complaint.

III. EPA's CONCLUSIONS OF LAW

5. As described in the Findings of Fact and Jurisdictional Allegations referred to in Section II, above, EPA finds that Respondent has violated Section 301 of the CWA, 33 U.S.C. § 1311, and is therefore liable to the United States for a civil penalty in accordance with Section 309(g) of the Act, 33 U.S.C. § 1319(g).

IV. CONSENT AGREEMENT AND FINAL ORDER

6. Respondent agrees not to contest EPA's jurisdiction to issue and enforce this CAFO.

7. Respondent hereby expressly waives its right to a hearing on any issue of law or fact in this matter pursuant to Section 309(g) of the CWA, 33 U.S.C. § 1319(g), and consents to issuance of this CAFO without adjudication.

8. Each party to this action shall bear its own costs and attorney fees.

9. The provisions of this CAFO shall be binding upon the Respondent, its officers, principals, directors, successors and assigns.

10. The parties agree that settlement of this matter is in the public interest and that entry of this CAFO is the most appropriate means of resolving this matter.

11. Based upon the foregoing and EPA having taken into account the nature, circumstances, extent and gravity of the violations, Respondent's ability to pay, prior history of compliance, degree of culpability, economic benefit or savings resulting from the violations, and such other matters as justice may require pursuant to the authority of Section 309(g) of the Act, 33 U.S.C. § 1319(g), Respondent hereby CONSENTS to pay a civil penalty in the amount of sixty thousand dollars ($60,000) in full and final settlement of EPA's claims for civil penalties for the violations alleged herein.

12. Respondent shall pay the total administrative civil penalty of sixty thousand dollars ($60,000) for the violations alleged in this CAFO within thirty (30) days of the effective date of this CAFO pursuant to 40 C.F.R. § 22.31(c). Payment shall be made by one of the

following methods set forth below.

Payment by check to "United States Treasury"-

By regular mail:

U.S. EPA
Fines and Penalties
Cincinnati Finance Center
P.O. Box 979077
St. Louis, MO 63197-9000

Contact Eric Volck (513-487-2105)

By overnight delivery:

U.S. Bank
Government Lock Box 979077
US EPA, Fines and Penalties
1005 Convention Plaza
Mail Station SL-MO-C2-GL
St. Louis, MO 63101

Contact: Eric Volck (513-487-2105)

By Wire Transfer:

Federal Reserve Bank of New York
ABA = 021030004
Account = 68010727
SWIFT Address = FRNYUS33
33 Liberty Street
New York, NY 10045
(Field Tag 4200 of the wire transfer message should read:
"D 68010727 Environmental Protection Agency")

By Automated Clearinghouse (ACH) Transfers for receiving U. S. currency (also known as REX or remittance express):

PNC Bank
ABA = 051036706
Environmental Protection Agency

Account Number: 310006
CTX Format
Transaction Code 22 - checking
808 17th Street, NW
Washington, D.C. 20074

Contact for ACH: John Schmid (202-874-7026)

On Line Payments:

There is now an On Line Payment Option, available through the Dept. of Treasury. This payment option can be accessed from the information below:

WWW.PAY.GOV
Enter sfo 1.1 in the search field
Open form and complete required fields.

Additional payment guidance is available at:

http://www.epa.gov/ocfo/finservices/make_a_payment.htm

Respondent shall send notice of such payment, including a copy of the check if payment is made by check, to the Regional Hearing Clerk at the following address:

Regional Hearing Clerk (3RC00)
U.S. EPA Region III
1650 Arch Street
Philadelphia, PA 19103-2029

-and-

Deane H. Bartlett, Esquire
Mail Code 3RC20
Office of Regional Counsel
U.S. EPA Region III
1650 Arch Street
Philadelphia, PA 19103-2029

13. This CAFO shall not relieve Respondent of its obligation to comply with all applicable provisions of federal, state or local law and ordinance, nor shall it be construed to be a ruling on, or determination of, any issue related to any federal, state or local permit. Nor

does this CAFO constitute a waiver, suspension or modification of the requirements of the CWA, 33 U.S.C. §§ 1251, *et seq.,* or any regulations promulgated thereunder.

14. The following notice concerns interest and late penalty charges that will accrue in the event that any portion of the civil penalty is not paid as directed:

> Pursuant to 31 U.S.C. § 3717 and 40 C.F.R. § 13.11, EPA is entitled to assess interest and late payment penalties on outstanding debts owed to the United States and a charge to cover the costs of processing and handling a delinquent claim, as more fully described below. Accordingly, Respondent's failure to make timely payment or to comply with the conditions in this CAFO shall result in the assessment of late payment charges including interest, penalties, and/or administrative costs of handling delinquent debts.
>
> Interest on the civil penalty assessed in this CAFO will begin to accrue on the date that a copy of this CAFO is mailed or hand-delivered to Respondent. However, EPA will not seek to recover interest on any amount of the civil penalty that is paid within thirty (30) calendar days after the date on which such interest begins to accrue. Interest will be assessed at the rate of the United States Treasury tax and loan rate in accordance with 40 C.F.R. § 13.11(a).
>
> The costs of the Agency's administrative handling of overdue debts will be charged and assessed monthly throughout the period the debt is overdue. 40 C.F.R. § 13.11(b). A penalty charge of six percent per year will be assessed monthly on any portion of the civil penalty which remains delinquent more than ninety (90) calendar days. 40 C.F.R. § 13.11(c). Should assessment of the penalty charge on the debt be required, it shall accrue from the first day payment is delinquent. 31 C.F.R. § 901.9(d).

15. This Consent Agreement and the accompanying Final Order resolve only the civil claims for the specific violations alleged herein. Nothing in this CAFO is intended to, nor shall be construed to operate in any way to resolve any criminal liability of Respondent. Compliance with the CAFO shall not be a defense to any actions subsequently commenced for any violations of any other Federal laws and regulations administered by EPA, and it is the responsibility of Respondent to comply with all such laws and regulations. Nothing herein shall be construed to limit the authority of the Complainant to undertake such action against any person, including the Respondent, in response to any condition which Complainant determines may present an imminent and substantial endangerment to the public health, public welfare or the environment. In addition, this settlement is subject to all limitations on the scope of resolution and to the reservation of rights set forth in Section 22.18(c) of the Consolidated Rules. Further, EPA reserves any rights and remedies available to it under the CWA, the regulations promulgated

thereunder, and any other federal laws or regulations for which EPA has jurisdiction, to enforce the provisions of this CAFO, following its filing with the Regional Hearing Clerk.

16. Nothing in this CAFO shall be construed as prohibiting, altering or in any way eliminating the ability of EPA to seek any other remedies or sanctions available by virtue of Respondent's violations of this CAFO or of the statutes and regulations upon which this CAFO is based or for Respondent's violation of any other applicable provision of law.

17. The penalty specified above shall represent civil penalties assessed by EPA and shall not be deductible for purposes of Federal taxes.

18. Entry of this CAFO is a final settlement of all civil violations alleged in the Complaint. EPA shall have the right to institute a new and separate action to recover additional civil penalties for the claims made in the Complaint if the EPA obtains evidence that the information and/or representations of the Respondent are false, or, in any material respect, inaccurate. This right shall be in addition to all other rights and causes of action, civil or criminal, the EPA may have under law or equity in such event.

19. The undersigned representative of Respondent certifies that he or she is fully authorized to enter into the terms and conditions of this CAFO and to execute and legally bind the Respondent.

20. All of the terms and conditions of this CAFO together comprise one agreement, and each of the terms and conditions is in consideration of all of the other terms and conditions. In the event that this CAFO, or one or more of its terms and conditions, is held invalid, or is not executed by all of the signatories in identical form, or is not approved in such identical form by the Regional Administrator or his designee, then the entire CAFO shall be null and void.

V. EFFECTIVE DATE

21. This CAFO shall become final and effective, absent a petition for review, thirty (30) days after it is lodged with the Regional Hearing Clerk, pursuant to Section 309(g)(5), 33 U.S.C. § 1319(g)(5).

FOR RESPONDENT:

By: _____ Date: 3/20/11

Name: Alfred H. Foxx.
Title: Director, Department of Public Works

Approved as to Legal Form and Sufficiency:

By: _____ Date: 2/9/11

Name: Dawn Lettman
Title : Assistant City Solicitor

Approved By Baltimore City Board of Estimates:

MAR 3 0 2011

_____
Clerk Date

FOR EPA:

Jon M. Capacasa
Director, Water Protection Division
U.S. EPA Region III

Date: 5/5/11

Deane H. Bartlett
Senior Assistant Regional Counsel
U.S. EPA Region III

Date: 4/14/11

SO ORDERED, pursuant to 33 U.S.C. § 1319(g), and 40 C.F.R. Part 22,

this 6th day of May, 2011

Shawn M. Garvin
Regional Administrator
U.S.EPA Region III

CERTIFICATE OF SERVICE

I hereby certify that on this day, I caused to be filed with the **Regional Hearing Clerk**, EPA Region III, the original Consent Agreement and Final Order, EPA Docket No. CWA-03-2010-0405 and that copies of this document were sent to the following individual in the manner described below:

By first class, certified mail, return receipt requested:

Dawn Lettman, Esquire
Assistant Solicitor
City Hall Room 160
100 Holiday Street
Baltimore, MD 21202

Date: May 6, 2011

Deane H. Bartlett
Senior Assistant Regional Counsel
US EPA Region III

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

SEP 30 2010

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mayor Stephanie Rawlings-Blake
City of Baltimore
City Hall, Room 250
100 N. Holliday Street
Baltimore, Maryland 21202

Re: Administrative Penalty Complaint
Docket No. CWA-03-2010-0405

Dear Mayor Rawlings-Blake:

The U.S. Environmental Protection Agency (EPA) has determined that the City of Baltimore, Maryland has violated provisions of its Clean Water Act (CWA) NPDES Permit No. MD0068292 dealing with its Municipal Separate Storm Sewer System (MS4) program. As a result, EPA has issued the enclosed Administrative Penalty Complaint and Notice of Opportunity to Request a Hearing pursuant to Section 309(g) of the CWA.

This action is an important part of EPA's Chesapeake Bay Compliance Strategy to protect and improve the water quality of the Chesapeake Bay watershed. Consistent with EPA practice, EPA will be making the public aware of this enforcement action and other similar cases being taken at this time. EPA has worked closely with the Maryland Department of the Environment (MDE) on this and other cases in the state involving the MS4 program, and EPA has informed MDE about this action.

The Administrative Penalty Complaint and other documents enclosed with this letter contain important information concerning this legal proceeding, and I encourage you and other members of your office to review them closely. EPA will be happy to meet with you or your representatives to discuss this matter, and contact information is provided below.

Printed on 100% recycled/recyclable paper with 100% post-consumer fiber and process chlorine free.
Customer Service Hotline: 1-800-438-2474

I urge you to address this matter as soon as possible. Please contact Mr. Andrew Dinsmore, Stormwater Team Leader, at 215-814-2788 if you wish to discuss this matter, or have your counsel contact Deane H. Bartlett, Esq., at 215-814-2776.

Sincerely,

Shawn M. Garvin
Regional Administrator

Enclosures

cc: Mr. Brian Clevenger
Water Management Administration, Sediment, Stormwater, and Dam Safety Program
Maryland Department of the Environment

Mr. Alfred H. Foxx, Jr., Acting Director
Department of Public Works
City of Baltimore

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

In the Matter of:	:	
	:	Docket No. CWA-03-2010-0405
City of Baltimore	:	
City Hall, Room 250	:	**Proceeding to Assess Class II**
100 N. Holliday Street	:	**Administrative Penalty Under**
Baltimore, Maryland 21202	:	**Section 309(g) of the Clean Water Act**
	:	
	:	**ADMINISTRATIVE PENALTY COMPLAINT**
	:	**AND NOTICE OF OPPORTUNITY TO**
Respondent.	:	**REQUEST HEARING**

I. STATUTORY AUTHORITY

1. Pursuant to Section 309(g) of the Clean Water Act (CWA or Act), 33 U.S.C. § 1319(g), the Administrator of the United States Environmental Protection Agency (EPA) is authorized to assess administrative penalties against persons who violate Section 301(a) of the Act, 33 U.S.C. § 1311(a). The Administrator of EPA has delegated this authority to the Regional Administrator of EPA, Region III, who in turn has delegated this authority to the Water Protection Division Director (Complainant).

2. This action is governed by the "Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties, Issuance of Compliance or Corrective Action Orders, and the Revocation, Termination or Suspension of Permits; Final Rule," 40 C.F.R. Part 22 (hereinafter, Part 22 Procedural Rules), a copy of which is enclosed.

II. FACTUAL AND LEGAL ALLEGATIONS

3. Baltimore City (hereinafter, the City or Respondent) is a political subdivision of the State of Maryland, and therefore a "person" as that term is defined at Section 502(5) of the Act, 33 U.S.C. § 1362(5) and 40 C.F.R. § 122.2.

4. At all times relevant to this Complaint, Respondent has owned and/or operated a municipal separate storm sewer system (MS4) as that term is defined in 40 C.F.R. § 122.26(b)(8).

5. Respondent's MS4 is located within the geographic boundaries of Baltimore City, Maryland.

6. Section 301(a) of the Act, 33 U.S.C. § 1311(a), prohibits the discharge of any pollutant (other than dredged or fill material) from a point source into waters of the United States except in compliance with a permit issued pursuant to the National Pollutant Discharge Elimination System (NPDES) program under Section 402 of the Act, 33 U.S.C. § 1342.

7. Section 402(a) of the Act, 33 U.S.C. § 1342(a), provides that the Administrator of EPA may issue permits under the NPDES program for the discharge of pollutants from point sources to waters of the United States. The discharges are subject to specific terms and conditions as prescribed in the permit.

8. Pursuant to Section 402(b) of the Act, 33 U.S.C. § 1342(b), EPA authorized the Maryland Department of the Environment (MDE) to issue NPDES permits in 1989.

9. MDE issued NPDES MS4 Discharge Permit No. MD0068292 to Respondent on January 3, 2005 (hereinafter "MS4 Permit"). The MS4 Permit expired on January 3, 2010, and has been administratively extended since that date.

10. Respondent submitted an application for renewal of the MS4 Permit along with its Year 4 Annual Report to MDE in or about January 2009.

11. Respondent's stormwater discharges associated with industrial activities are required to be covered by Maryland's General Discharge Permit for Stormwater Associated with Industrial Activities, Permit No. 02-SW/MDR (hereinafter, "Maryland Industrial GP").

12. On April 7-9, 2009, duly-authorized representatives of EPA conducted an inspection (including a file review) of the Respondent's MS4 Program (hereinafter referred to as "April 2009 Inspection").

III. FINDINGS OF VIOLATION

Count 1: Failure to Develop and Implement Written Maintenance Inspection Procedures

13. The MS4 Permit, at Part III.E.2., requires the Respondent to, among other things, develop and implement specific written procedures for conducting routine maintenance inspections, preparing maintenance reports, enforcing requirements and following up to ensure that specified maintenance is performed for all best management practices (BMPs).

14. The April 2009 Inspection revealed that Respondent has failed to develop and implement specific written procedures for conducting routine maintenance inspections, preparing maintenance reports, enforcing requirements and following up to ensure that specified maintenance is performed for all BMPs.

15. Respondent's failure to develop and implement specific written procedures for conducting routine maintenance inspections, preparing maintenance reports, enforcing requirements and following up to ensure that specified maintenance is performed for all BMPs as set forth above violates the MS4 Permit and Section 301 of the Act, 33 U.S.C. § 1311.

Count 2: Failure to Report and Eliminate Illicit Connections

16. The MS4 Permit, Part III.E.4., requires the Respondent to report illicit discharge detection and elimination activities as specified in the annual reporting requirements in Part IV of the permit.

17. At the time of the April 2009 Inspection, it was revealed that Respondent's Year 4 Annual Report did not contain information regarding illicit discharge detection and elimination activities.

18. Respondent's failure to report illicit discharge detection and elimination activities in its annual report violates the MS4 Permit and Section 301 of the Act, 33 U.S.C. § 1311.

Count 3: Failure to Obtain NPDES Industrial Stormwater Permit Coverage at City Facilities

19. The MS4 Permit, Part III.E.5 requires the Respondent to "identify all City-owned facilities requiring NPDES stormwater general permit coverage and submit Notices of Intent (NOI) to MDE for each."

20. The April 2009 Inspection revealed that Respondent had failed to submit a NOI and obtain coverage under the Maryland Industrial GP for its recently constructed Central Repair Garage, located at 3800 East Biddle Street.

21. Respondent's failure to submit a NOI and obtain Maryland Industrial GP coverage violates the MS4 Permit and Section 301 of the Act, 33 U.S.C. § 1311.

Count 4: Failure to develop and implement adequate pollution prevention plans

22. The Maryland Industrial GP, Part IV.B, requires the Respondent to, among other things, develop, update, and implement a storm water pollution prevention plan (SWPPP) for each facility covered by such permit.

23. The April 2009 Inspection revealed that, at the time of the inspection, Respondent had failed to adequately develop, update, and implement a SWPPP for the Northwest Transfer Station operated by the City.

24. Respondent's failure to develop, update, and implement a SWPPP for the Northwest Transfer Station operated by the City violates the Maryland Industrial GP and Section 301 of the Act, 33 U.S.C. § 1311.

IV. PROPOSED CIVIL PENALTY

25. Section 309(g)(2)(B) of the CWA, 33 U.S.C. § 1319(g)(2)(B), provides that any person who has violated any NPDES permit condition or limitation is liable for an administrative penalty not to exceed $10,000 per day for each such violation, up to a total penalty amount of $125,000.

26. Pursuant to the Civil Monetary Penalty Inflation Adjustment Rule, 40 C.F.R. Part 19 (effective March 15, 2004 through January 12, 2009), any person who has violated any NPDES permit condition or limitation after March 15, 2004, is liable for an administrative penalty not to exceed $11,000 per day for each such violation occurring after March 15, 2004 through January 11, 2009), up to a total penalty amount of $157,500.

27. Pursuant to the subsequent Civil Monetary Penalty Inflation Adjustment Rule, 40 C.F.R. Part 19 (effective January 12, 2009), any person who has violated any NPDES permit condition or limitation after January 12, 2009 is liable for an administrative penalty not to exceed $16,000 per day for each such violation occurring after January 12, 2009, up to a total penalty amount of $177,500.

28. Based upon the foregoing allegations, and pursuant to the authority of Section 309(g)(2)(B) of the CWA, 33 U.S.C. § 1319(g)(2)(B), and in accordance with the Part 22 Procedural Rules, Complainant hereby proposes to issue a Final Order Assessing Administrative Penalties to the Respondent in the amount of Ninety thousand dollars ($90,000) for the violations alleged herein. This does not constitute a "demand" as that term is defined in the Equal Access to Justice Act, 28 U.S.C. § 2412.

29. The proposed penalty was determined after taking into account the nature, circumstances, extent and gravity of the violation, Respondent's prior compliance history, ability to pay the penalty, the degree of culpability for the cited violations, and any economic benefit or savings to Respondent because of the violations. 33 U.S.C. § 1319(g)(3). In addition, to the extent that facts or circumstances unknown to Complainant or EPA at the time of issuance of this Complaint become known after issuance of this Complaint, such facts or circumstances may also be considered as a basis for adjusting the proposed administrative penalty.

30. EPA may issue the Final Order Assessing Administrative Penalties after a thirty (30) day comment period unless Respondent either responds to the allegations in the Complaint and requests a hearing according to the terms of Section V, below, or pays the civil penalty in accordance with Section VI herein (Quick Resolution).

31. If warranted, EPA may adjust the proposed civil penalty assessed in this Complaint. In so doing, the Agency will consider any number of factors in making this adjustment, including Respondent's ability to pay. However, the burden of raising the issue of an inability to pay and demonstrating this fact rests with the Respondent.

32. Neither assessment nor payment of an administrative civil penalty pursuant to Section 309 of the CWA, 33 U.S.C. § 1319, shall affect Respondent's continuing obligation to comply with the Clean Water Act, any other Federal or State laws, and/or with any separate Compliance Order issued under Section 309 of the Act, 33 U.S.C. § 1319, for the violations alleged herein.

V. ANSWER TO COMPLAINT AND OPPORTUNITY TO REQUEST HEARING

33. Respondent must file an Answer to this Complaint; failure to file an Answer may result in entry of a Default Judgment against Respondent. Respondent's default constitutes a binding admission of all allegations made in the Complaint and waiver of Respondent's right to a Hearing under the CWA. The civil penalty proposed herein shall then become due and payable upon issuance of the Default Order.

34. Upon issuance of a Default Judgment, the civil penalty proposed herein shall become due and payable.

35. Respondent's failure to pay the entire penalty assessed by the Default Order by its due date will result in a civil action to collect the assessed penalty, plus interest, attorney's fees, costs, and an additional quarterly nonpayment penalty pursuant to Section 309(g)(9) of the Act, 33 U.S.C. § 1319(g)(9). In addition, a Default Penalty is subject to the provisions relating to imposition of interest, penalty and handling charges set forth in the Federal Claims Collection Act at the rate established by the Secretary of the Treasury pursuant to 31 U.S.C. § 3717.

36. Any Answer must clearly and directly admit, deny, and/or explain each of the factual allegations contained in the Complaint with respect to which the Respondent has any knowledge, or clearly and directly state that the Respondent has no knowledge as to particular factual allegations in the Complaint.

37. The Answer shall also indicate the following:

a. the specific factual and legal circumstances or arguments which are alleged to constitute any grounds of defense;

b. the specific facts that Respondent disputes;

c. Respondent's basis for opposing the proposed penalty; and

d. whether Respondent requests a hearing.

Failure to admit, deny or explain any of the factual allegations in the Complaint constitutes admission of the undenied allegations.

38. Pursuant to Section 309(g)(2)(B) of the Act, 33 U.S.C. § 1319(g)(2)(B), Respondent may request a hearing on the proposed civil penalty within thirty (30) days of receiving this Complaint.

39. EPA is obligated, pursuant to Section 309(g)(4)(A) of the Act, 33 U.S.C. § 1319(g)(4)(A), to give members of the public notice of and an opportunity to comment on this proposed penalty assessment.

40. If Respondent requests a hearing on this proposed penalty assessment, members of the public who submitted timely comments on this proposed penalty assessment will have a right under Section 309(g)(4)(B) of the Act, 33 U.S.C. § 1319(g)(4)(B), to not only be notified of the hearing but also to be heard and to present evidence at the hearing on the appropriateness of this proposed penalty assessment.

41. If Respondent does not request a hearing, EPA will issue a Final Order Assessing Administrative Penalties, and only members of the public who submit timely comments on this proposal will have an additional thirty (30) days to petition EPA to set aside the Final Order Assessing Administrative Penalties and to hold a hearing thereon. 33 U.S.C. § 1319(g)(4)(C). EPA will grant the petition and will hold a hearing if the petitioner's evidence is material and was not considered by EPA in the issuance of the Final Order Assessing Administrative Penalties.

42. Any hearing that Respondent requests will be held and conducted in accordance with the Part 22 Procedural Rules.

43. At such a hearing, Respondent may contest any material fact contained in the Factual and Legal Allegations listed in Section II above, the Findings listed in Section III, above, and the appropriateness of the amount of the proposed civil penalty in Section IV, above.

44. Any Answer to this Complaint, and any Request for Hearing, must be filed within thirty (30) days of receiving this Complaint with the following:

Regional Hearing Clerk (3RC00)
U.S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

45. Copies of the Answer and any Request for Hearing, along with any and all other documents filed in this action, shall also be sent to the following:

Deane H. Bartlett
Senior Assistant Regional Counsel (3RC20)
U.S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

46. The denial of any material fact or the raising of any affirmative defense shall be construed as a request for a hearing. Failure to deny any of the factual allegations in this Complaint constitutes admission of the undenied allegations. The Answer and any subsequent documents filed in this action should be sent to:

Regional Hearing Clerk (3RC00)
U.S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

VI. SETTLEMENT CONFERENCE

47. EPA encourages settlement of proceedings at any time after issuance of a Complaint if such settlement is consistent with the provisions and objectives of the Act. Whether or not a hearing is requested, Respondent may request a settlement conference with Complainant to discuss the allegations of the Complaint and the amount of the proposed civil penalty. **However, a request for a settlement conference does not relieve the Respondent of the responsibility to file a timely Answer to the Complaint.**

48. In the event settlement is reached, its terms shall be expressed in a written Consent Agreement prepared by Complainant, signed by the parties, and incorporated into a Final Order signed by the Regional Administrator or his delegatee. The execution of such a Consent Agreement shall constitute a waiver of Respondent's right to contest the allegations of the Complaint or to appeal the Final Order accompanying the Consent Agreement.

49. If you wish to arrange a settlement conference, or if you have any questions related to this proceeding, please contact Ms. Deane Bartlett, Senior Assistant Regional Counsel, U.S. Environmental Protection Agency, Region III, at (215) 814-2776 before the expiration of the thirty (30) day period following your receipt of this Complaint. If you are represented by legal counsel, you must have your counsel contact Ms. Bartlett on your behalf. Once again, however, such **a request for a settlement conference does not relieve the Respondent of the responsibility to file an Answer within thirty (30) days following Respondent's receipt of this Complaint.**

VII. QUICK RESOLUTION

50. In accordance with 40 C.F.R. § 22.18(a), and subject to the limitations in 40 C.F.R. § 22.45, Respondent may resolve this proceeding at any time by paying the specific penalty proposed in this Complaint.

51. If Respondent pays the specific penalty proposed in this Complaint within forty (40) days of receiving this Complaint, then, pursuant to 40 C.F.R. § 22.18(a)(1), no Answer need be filed.

52. If Respondent wishes to resolve this proceeding by paying the penalty proposed in this Complaint instead of filing an Answer, but needs additional time to pay the penalty, pursuant to 40 C.F.R. § 22.18(a)(2), Respondent may file a written statement with the Regional Hearing Clerk within 40 days after receiving this Complaint stating that Respondent agrees to pay the proposed penalty in accordance with 40 C.F.R. § 22.18(a)(1). Such written statement need not contain any response to, or admission of, the allegations in the Complaint. Such statement shall be filed with the following:

Regional Hearing Clerk (3RC00)
U.S. EPA, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

and a copy shall be provided to:

Deane H. Bartlett (3RC20)
Senior Assistant Regional Counsel
U.S. EPA, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

If Respondent files such a written statement with the Regional Hearing Clerk within 40 days after receiving this Complaint, Respondent shall pay the full amount of the proposed penalty within 60 days of receiving the Complaint. Failure to make such payment within 60 days of receipt of the Complaint may subject the Respondent to default pursuant to 40 C.F.R. § 22.17.

53. Upon receipt of payment in full, in accordance with 40 C.F.R. § 22.18(a)(3), the Regional Administrator shall issue a final order. Payment by Respondent shall constitute a waiver of Respondent's rights to contest the allegations and to appeal the final order.

54. Payment of the penalty shall be made by one of the following methods below. Payment by respondent shall reference Respondent's name and address, and the EPA Docket Number of this action. A copy of Respondent's check or a copy of Respondent's electronic fund transfer shall be sent simultaneously to Lydia Guy, Regional Hearing Clerk, and the case attorney.

Payment by check to "United States Treasury"

By Regular US Postal Service Mail:

U.S. EPA
Fines and Penalties
Cincinnati Finance Center
P.O. Box 979077
St. Louis, MO 63197-9000

Contact: Eric Volck (513-487-2105)

By Private Commercial Overnight Delivery:

U.S. Bank
Government Lockbox 979077
U.S. EPA, Fines & Penalties
1005 Convention Plaza
Mail Station SL-MO-C2-GL
St. Louis, MO 63101

Contact: Eric Volck (513-487-2105)

Payment by EFT to:

Wire Transfers

Federal Reserve Bank of New York
ABA = 021030004
Account = 68010727
SWIFT Address = FRNYUS33
33 Liberty Street
New York, NY 10045
(Field Tag 4200 of the wire transfer message should read:
"D 68010727 Environmental Protection Agency")

Automated Clearing House (ACH) Transfers for receiving U.S. currency (also known as REX or remittance express):

PNC Bank
ABA = 051036706
Environmental Protection Agency
Account = 310006
CTX Format
Transaction Code 22 – checking
808 17th Street, NW
Washington, DC 20074

Contact for ACH: John Schmid (202-874-7026)

On Line Payments:

There is now an On Line Payment Option, available through the Dept. of Treasury. This payment option can be accessed from the information below:

WWW.PAY.GOV
Enter sfo 1.1 in the search field
Open form and complete required fields.

Additional payment guidance is available at:

http://www.epa.gov/ocfo/finservices/make_a_payment.htm

55. At the same time payment is made, copies of the check shall be mailed to the addresses in Paragraph 52 above.

VIII. SEPARATION OF FUNCTIONS AND *EX PARTE* COMMUNICATIONS

56. The following Agency offices, and the staffs thereof, are designated as the trial staff to represent the Agency as a party in this case: the Region III Office of Regional Counsel, the Region III Water Protection Division, the Office of the EPA Assistant Administrator for the Office of Water, and the EPA Assistant Administrator for Enforcement and Compliance Assurance. From the date of this Complaint until the final agency decision in this case, neither the Administrator, members of the Environmental Appeals Board, Presiding Officer, Regional Administrator, nor the Regional Judicial Officer, may have an *ex parte* communication with the trial staff on the merits of any issue involved in this proceeding. Please be advised that the Part 22 Procedural Rules prohibit any unilateral discussion or *ex parte* communication of the merits of a case with the Administrator, members of the Environmental Appeals Board, Presiding Officer, Regional Administrator, or the Regional Judicial Officer after issuance of a Complaint.

Date: 9/30/2010

Jon M. Capacasa, Director
Water Protection Division
U.S. Environmental Protection
Agency, Region III

MARYLAND DEPARTMENT OF THE ENVIRONMENT

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

MUNICIPAL SEPARATE STORM SEWER SYSTEM DISCHARGE PERMIT

PART I. IDENTIFICATION

A. <u>Permit Number</u>: 11-DP-3315 MD0068292

B. <u>Permit Area</u>

This permit covers all stormwater discharges from the municipal separate storm sewer system (MS4) owned or operated by Baltimore City, Maryland.

C. <u>Effective Date</u>: December 27, 2013

D. <u>Expiration Date</u>: December 26, 2018

PART II. DEFINITIONS

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.

PART III. WATER QUALITY

The permittee 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.

PART IV. STANDARD PERMIT CONDITIONS

A. Permit Administration

Baltimore City shall designate an individual to act as a liaison with the Maryland Department of the Environment (MDE) for the implementation of this permit. The City shall provide the coordinator's name, title, address, phone number, and email address. Additionally, the City shall submit in its annual reports 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.

B. Legal Authority

Baltimore City 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 City shall notify MDE within 30 days and make the necessary changes to maintain adequate legal authority. All changes shall be included in the City's annual report.

C. Source Identification

Sources of pollutants in stormwater runoff citywide shall be identified and linked to specific water quality impacts on a watershed basis. The source identification process shall be used to develop watershed restoration plans. The following information shall be submitted annually for all City watersheds within the permit area in geographic information system (GIS) format with associated tables as required in PART V of this permit:

1. Storm drain system: all infrastructure, major outfalls, inlets, and associated drainage areas delineated;

2. Industrial and commercial sources: industrial and commercial land uses and sites that the City has determined have the potential to contribute significant pollutants;

3. Urban best management practices (BMPs): stormwater management facility data including outfall locations and delineated drainage areas;

4. Impervious surfaces: public and private land use delineated, controlled and uncontrolled impervious areas based on, at a minimum, Maryland's hierarchical eight-digit sub-basins;

5. Monitoring locations: locations established for chemical, biological, and physical monitoring of watershed restoration efforts and the *2000 Maryland Stormwater Design Manual*; and

6. Water quality improvement projects: projects proposed, under construction, and completed with associated drainage areas delineated.

D. Management Programs

The following management programs shall be implemented in areas served by Baltimore City's MS4. These management programs are designed to control stormwater discharges to the maximum extent practicable (MEP) and shall be maintained for the term of this permit. Additionally, these programs shall be integrated with other permit requirements to promote a comprehensive adaptive approach toward solving water quality problems. The City shall modify these programs according to needed program improvements identified as a result of periodic evaluations by MDE.

1. Stormwater Management

An acceptable stormwater management program shall continue to be maintained in accordance with the Environment Article, Title 4, Subtitle 2, Annotated Code of Maryland. Activities to be undertaken by Baltimore City shall include, but not be limited to:

Implementing the stormwater management design policies, principles, methods, and practices found in the latest version of the 2000 Maryland Stormwater Design Manual. This includes:

i. Complying with the Stormwater Management Act of 2007 (Act) by implementing environmental site design (ESD) to the MEP for new and redevelopment projects;
ii. 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; and
iii. Reporting annually the modifications that have been 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.

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.

c. Maintaining 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 Baltimore City.

d. Conducting 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 City's annual reports.

2. Erosion and Sediment Control

An acceptable erosion and sediment control program shall continue to be maintained and implemented in accordance with the Environment Article, Title 4, Subtitle 1, Annotated Code of Maryland. Activities to be undertaken by the City shall include, but not be limited to:

Implementing program improvements identified in any MDE evaluation of the City's erosion and sediment control enforcement authority;

a. At least three times per year, conducting responsible personnel certification classes to educate construction site operators regarding erosion and sediment control compliance;

b. Program activity shall be recorded on MDE's annual report database and submitted as required in PART V of this permit; and

c. 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.

3. Illicit Discharge Detection and Elimination

Baltimore City 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 or conducting an MDE-approved program of monthly chemical screening downstream of all major storm sewer outfalls during dry weather. 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 City'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.

4. Trash and Litter

Baltimore City drains to at least two major water bodies (the Middle Branch and Northwest Branch of the Patapsco River) determined to be impaired by trash. The trash and litter section of this permit is to assist in efforts to address water quality improvements. Increases in trash discharges to receiving waters have become a growing concern both nationally and within Maryland. This section requires Baltimore City to evaluate current trash and litter control efforts; develop strategies to reduce trash, floatables, and debris within those areas draining to the Middle Branch and Northwest Branch of the Patapsco River; and bolster public education.

a. Within one year of permit issuance, the City shall inventory and evaluate all current trash and recyclable pick-up operations, litter control programs, and public outreach efforts. The analysis shall identify opportunities for improving overall efficiency, especially in the Middle Branch and Northwest Branch of the Patapsco River.

b. Within one year of permit issuance, develop and implement a public education and outreach strategy with specific performance goals, and corresponding deadlines to initiate or increase residential and commercial recycling rates, improve trash management, and reduce littering. The strategy shall include:

i. Educating the public on the importance of reducing, reusing, and recycling;
ii. Disseminating information by using signs, articles, and other media outlets;
iii. Promoting educational programs in schools, businesses, community associations, etc.; and
iv. Providing the strategy to interested parties upon request.

c. Evaluating annually the effectiveness of the education program.

d. Within one year of the Environmental Protection Agency's (EPA) approval of a trash TMDL for the Middle Branch and Northwest Branch of the Patapsco River, implement those program improvements identified in PART IV.D.4.a above and any additional programs needed to address the TMDL.

e. Submit annually, a report which details progress toward implementing the trash reduction strategies. 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.

5. Property Management and Maintenance

a. Baltimore City shall ensure that a Notice of Intent (NOI) has been submitted to MDE and a pollution prevention plan developed for each City-owned municipal facility requiring NPDES stormwater general permit coverage. The status of pollution prevention plan development and implementation for each City-owned municipal facility shall be reviewed, documented, and submitted to MDE annually.

b. The City shall implement a program to reduce pollutants associated with maintenance activities at City-owned facilities including parks, roadways, and parking lots. The maintenance program shall include these or MDE-approved alternative activities:

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

The City 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.

6. Public Education

Baltimore City shall continue to implement a public education and outreach program to reduce stormwater pollutants. Outreach efforts may be integrated with other aspects of the City's activities. These efforts are to be documented and summarized in each annual report. The City shall continue to implement a public outreach and education campaign with specific performance goals and deadlines to:

a. Maintain a compliance hotline or similar mechanism for public reporting of water quality complaints, including suspected illicit discharges, illegal dumping, and spills.

b. Provide information to inform the general public about the benefits of:

   i. Increasing water conservation;
   ii. Residential and community stormwater management implementation and facility maintenance;
   iii. Proper erosion and sediment control practices;
   iv. Increasing proper disposal of household hazardous waste;
   v. 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.);
   vi. Residential car care and washing; and
   vii. Proper pet waste management.

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.

E. Restoration Plans and Total Maximum Daily Loads

In compliance with §402(p)(3)(B)(iii) of the CWA, MS4 permits must require stormwater controls to reduce the discharge of pollutants to the MEP. By regulation at 40 CFR §122.44, BMPs and programs implemented pursuant to this permit must be consistent with applicable WLAs developed under EPA approved TMDLs (see list of EPA approved TMDLs attached and incorporated as Attachment B).

Baltimore City shall annually provide watershed assessments, restoration plans, opportunities for public participation, and TMDL compliance status to MDE. A systematic assessment shall be conducted and a detailed restoration plan developed for all watersheds within Baltimore City. As required below, watershed assessments and restoration plans shall include a thorough water quality analysis, identification of water quality improvement opportunities, and a schedule for

BMP and programmatic implementation to meet stormwater WLAs included in EPA approved TMDLs.

1. Watershed Assessments

a. By the end of the permit term, Baltimore City shall complete detailed watershed assessments for the entire City. 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 City water quality analysis;

b. Watershed assessments by the City 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.

2. Restoration Plans

a. Within one year of permit issuance, Baltimore City 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.

By the end of this permit term, Baltimore City shall commence and complete the implementation of restoration efforts for twenty percent of the City'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 WQ_v 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.

b. Within one year of permit issuance, Baltimore City 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 City 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, Baltimore City shall:

i. Include the final date for meeting applicable WLAs and a detailed schedule for implementing all structural and nonstructural water quality 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 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 City's watershed assessments.

3. Public Participation

Baltimore City shall provide continual outreach to the public regarding the development of its watershed assessments and restoration plans. Additionally, the City 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. Baltimore City shall provide:

a. Notice in a local newspaper and the City'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 copies of 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 City addressed or will address any material comment received from the public.

4. TMDL Compliance

Baltimore City 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 City's

restoration plans and how these plans are working toward achieving compliance with EPA approved TMDLs. Baltimore City 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;

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

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

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

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.

F. Assessment of Controls

Baltimore City and ten other municipalities in Maryland have been conducting discharge characterization monitoring since the early 1990s. From this expansive monitoring, a statewide database has been developed that includes hundreds of storms across numerous land uses. Analyses of this dataset and other research performed nationally effectively characterize stormwater runoff in Maryland for NPDES municipal stormwater purposes. To build on existing information and to better track progress toward meeting TMDLs, better data are needed on ESD performance and BMP efficiencies and effectiveness.

Assessment of controls is critical for determining the effectiveness of the NPDES stormwater management program and progress toward improving water quality. The City 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 City shall conduct physical stream monitoring to assess the implementation of the latest version of the *2000 Maryland Stormwater Design Manual.* Specific monitoring requirements are described below.

1. Watershed Restoration Assessment

The City shall continue monitoring the Moores Run, 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. The minimum criteria for chemical, biological, and physical monitoring are as follows:

a. Chemical Monitoring:

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;

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;

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

Biochemical Oxygen Demand (BOD_5)	Total Lead
Total Kjeldahl Nitrogen (TKN)	Total Copper
Nitrate plus Nitrite	Total Zinc
Total Suspended Solids	Total Phosphorus
Total Petroleum Hydrocarbons (TPH)	Hardness
E. coli or enterococcus	

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 TMDL with a stormwater WLA.

b. Biological Monitoring:

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; and

ii. The City shall use the EPA Rapid Bioassessment Protocols (RBP), Maryland Biological Stream Survey (MBSS), or other similar method approved by MDE.

c. Physical Monitoring:

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

ii. A stream habitat assessment shall be conducted using techniques defined

by the EPA's RBP, MBSS, or other similar method approved by MDE; and

iii. A hydrologic and/or hydraulic model shall be used (e.g., TR-20, HEC-2, HEC-RAS, 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.

d. Annual Data Submittal: The City 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 V below;

ii. Chemical, biological, and physical monitoring results and a combined analysis for the approved monitoring locations; and

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

2. Stormwater Management Assessment

The City shall continue monitoring the Stony Run Watershed, or select and submit for MDE's approval a new watershed restoration project for determining the effectiveness of stormwater management practices for stream channel protection. Physical stream monitoring protocols shall include:

a. An annual stream profile and survey of permanently monumented cross-sections in the Stony Run to evaluate channel stability;

b. 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; and

c. A hydrologic and/or hydraulic model shall be used (e.g., TR-20, HEC-2, HEC-RAS, 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.

G. Program Funding

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.

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.

PART V. PROGRAM REVIEW AND ANNUAL PROGRESS REPORTING

A. <u>Annual Reporting</u>

1. Annual progress reports, required under 40 CFR 122.42(c), will facilitate the long-term assessment of Baltimore City's NPDES stormwater program. The City shall submit annual reports on or before the anniversary date of this permit and post these reports on the City's website. All information, data, and analyses shall be based on the fiscal year and include:

    a. The status of implementing the components of the stormwater management program that are established as permit conditions including:

        i. Source Identification;
        ii. Stormwater Management;
        iii. Erosion and Sediment Control;
        iv. Illicit Discharge Detection and Elimination;
        v. Trash and Litter;
        vi. Property Management and Maintenance;
        vii. Public Education;
        viii. Watershed Assessment;
        ix. Restoration Plans;
        x. TMDL Compliance;
        xi. Assessment of Controls; and
        xii. Program Funding.

    b. A narrative summary describing the results and analyses of data, including monitoring data that is accumulated throughout the reporting year;

    c. Expenditures for the reporting period and the proposed budget for the upcoming year;

    d. A summary describing the number and nature of enforcement actions, inspections, and public education programs;

    e. The identification of water quality improvements and documentation of attainment and/or progress toward attainment of benchmarks and applicable WLAs developed under EPA approved TMDLs; and

    f. The identification of any proposed changes to the City's program when WLAs are not being met.

2. To enable MDE to evaluate the effectiveness of permit requirements, the following information shall be submitted in a format consistent with Attachment A:

    a. Storm drain system mapping (PART IV.C.1);

b. Urban BMP locations (PART IV.C.3);

c. Impervious surfaces (PART IV.C.4);

d. Water quality improvement project locations (PART IV.C.6);

e. Monitoring site locations (PART IV.C.5);

f. Chemical monitoring results (PART IV.F.1);

g. Pollutant load reductions (PART IV.E.4 and IV.F.1);

h. Biological and habitat monitoring (PART IV.F.1);

i. Illicit discharge detection and elimination activities (PART IV.D.3);

j. Erosion and sediment control, and stormwater program information (PART IV.D.1 and IV.D.2);

k. Grading permit information - quarterly (PART IV.D.2); and

l. Fiscal analyses - cost for NPDES related implementation (PART IV.G).

3. Because this permit uses an iterative approach to implementation, the City must evaluate the effectiveness of its programs in each annual report. BMP and program modifications shall be made within 12 months if the City's annual report does not demonstrate compliance with this permit and show progress toward meeting WLAs developed under EPA approved TMDLs.

B. Program Review

In order to assess the effectiveness of the City's NPDES program for eliminating non-stormwater discharges through the illicit connection program and reducing the discharge of pollutants to protect water quality, MDE will review program implementation, annual reports, and periodic data submittal. Procedures for the review of local erosion and sediment control and stormwater management programs exist in Maryland's sediment control and stormwater management laws. Additional evaluations may be conducted at MDE’s discretion to determine compliance with permit conditions.

C. Reapplication for NPDES Stormwater Discharge Permit

This permit is effective for no more than 5 years, unless administratively continued by MDE. Continuation or reissuance of this permit beyond this permit term will require the City to reapply for NPDES stormwater discharge permit coverage in its fourth year annual report. Failure to reapply for coverage constitutes a violation of this permit.

As part of this application process, Baltimore City shall submit to MDE an executive summary of its NPDES stormwater management program that specifically describes how the City is meeting the overall goal to ensure that each City watershed has been thoroughly evaluated and its progress in implementing water quality improvements. This application shall be used to gauge the effectiveness of the City's NPDES stormwater program and will provide guidance for developing future permit conditions. At a minimum, the application summary shall include:

1. Baltimore City's NPDES stormwater program goals;

2. Program summaries for the permit term regarding:

    a. Illicit discharge detection and elimination results;

    b. Restoration plan status including City totals for impervious acres, impervious acres controlled by stormwater management, the current status of water quality improvement projects and acres managed, and documentation of progress toward meeting WLAs developed under EPA approved TMDLs;

    c. Pollutant load reductions as a result of this permit and an evaluation of whether TMDLs are being achieved;

    d. Impervious acres compared to the baseline and twenty percent restoration requirement in PART IV.E.2.a; and

    e. Other relevant data and information for describing City programs;

3. Program operation and capital improvement costs for the permit term; and

4. Descriptions of any proposed permit condition changes based on analyses of the successes and failures of the City's efforts to comply with the conditions of this permit.

PART VI. SPECIAL PROGRAMMATIC CONDITIONS

A. <u>Chesapeake Bay Restoration by 2025</u>

A Chesapeake Bay TMDL has been developed by the EPA for the six Bay States (Delaware, Maryland, New York, Pennsylvania, Virginia, and West Virginia) and the District of Columbia. The TMDL describes the level of effort that will be necessary for meeting water quality criteria and restoring Chesapeake Bay. This permit is requiring compliance with the Chesapeake Bay TMDL through the use of a strategy that calls for the restoration of twenty percent of previously developed impervious land with little or no controls within this five year permit term as described in Maryland's Watershed Implementation Plan. The TMDL is an aggregate of nonpoint sources or the load allocation (LA), point sources or WLA, and a margin of safety. The State is required to issue NPDES permits to point source discharges that are consistent with the assumptions of any applicable TMDL, including those approved subsequent to permit issuance.

Urban stormwater is defined in the CWA as a point source discharge and will subsequently be a part of Maryland's WLA. The NPDES stormwater permits can play a significant role in regulating pollutants from Maryland's urban sector and in the development of Chesapeake Bay Watershed Implementation Plans. Therefore, Maryland's NPDES stormwater permits issued to Baltimore City and other municipalities will require coordination with MDE's Watershed Implementation Plan and be used as the regulatory backbone for controlling urban pollutants toward meeting the Chesapeake Bay TMDL by 2025.

B. Comprehensive Planning

Baltimore City shall cooperate with other agencies during the completion of the Water Resources Element (WRE) as required by the Maryland Economic Growth, Resource Protection and Planning Act of 1992 (Article 66B, Annotated Code of Maryland). Such cooperation shall entail all reasonable actions authorized by law and shall not be restricted by the responsibilities attributed to other entities by separate State statute, including but not limited to reviewing and approving plans and appropriating funds.

PART VII. ENFORCEMENT AND PENALTIES

A. Discharge Prohibitions and Receiving Water Limitations

Baltimore City shall prohibit non-stormwater discharges through its MS4. NPDES permitted non-stormwater discharges are exempt from this prohibition. Discharges from the following will not be considered a source of pollutants when properly managed: water line flushing; landscape irrigation; diverted stream flows; rising ground waters; uncontaminated ground water infiltration to separate storm sewers; uncontaminated pumped ground water; discharges from potable water sources; foundation drains; air conditioning condensation; irrigation waters; springs; footing drains; lawn watering; individual residential car washing; flows from riparian habitats and wetlands; de-chlorinated swimming pool discharges (not including filter backwash); street wash water; and fire fighting activities.

Consistent with §402(p)(3)(B)(iii) of the CWA, Baltimore City shall take all reasonable steps to minimize or prevent the contamination or other alteration of the physical, chemical, or biological properties of any waters of the State, including a change in temperature, taste, color, turbidity, or odor of the waters or the discharge or deposit of any organic matter, harmful organism, or liquid, gaseous, solid, radioactive, or other substance into any waters of the State, that will render the waters harmful to:

1. Public health, safety, or welfare;

2. Domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial use;

3. Livestock, wild animals, or birds; and

4. Fish or other aquatic life.

B. Duty to Mitigate

Baltimore City shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

C. Duty to Comply

Baltimore City shall be responsible for complying with all conditions of this permit. Other entities may be used to meet various permit obligations provided that both the City and the other entity agree contractually. Regardless of any arrangement entered into however, the City remains responsible for permit compliance. In no case may this responsibility or permit compliance liability be transferred to another entity.

Failure to comply with a permit provision constitutes a violation of the CWA and is grounds for enforcement action; permit termination, revocation, or modification; or denial of a permit renewal application. The City shall comply at all times with the provisions of the Environment Article, Title 4, Subtitles 1, 2, and 4; Title 7, Subtitle 2; and Title 9, Subtitle 3 of the Annotated Code of Maryland.

The City shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the City to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the City only when the operation is necessary to achieve compliance with the conditions of the permit.

D. Sanctions

1. Penalties Under the CWA - Civil and Criminal

Section 309(g)(2) of the CWA, 33 USC §1319(g)(2) provides that any person who violates any permit condition is subject to a civil penalty not to exceed $10,000 per day for each violation, not to exceed $125,000. Pursuant to the Civil Monetary Penalty Inflation Adjustment Rule, 40 CFR Part 19, any person who violates any NPDES permit condition or limitation is liable for an administrative penalty not to exceed $16,000 per day for each such violation, up to a total penalty of $177,500. Pursuant to Section 309(c) of the CWA, 33 USC §1319(c), any person who negligently violates any permit condition is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than 1 year, or both. Any person who knowingly violates any permit condition is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than 3 years, or both.

2. Penalties Under the State's Environment Article - Civil and Criminal

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the City from civil or criminal responsibilities and/or penalties for a violation of Title 4, Title 7, and Title 9 of the Environment Article, Annotated Code of Maryland, or any federal, local, or other State law or regulation. Section 9-342 of the Environment Article provides that a person who violates any condition of this permit is liable to a civil penalty of up to $10,000 per violation, to be collected in a civil action brought by MDE, and with each day a violation continues being a separate violation. Section 9-342 further authorizes the MDE to impose upon any person who violates a permit condition, administrative civil penalties of up to $5,000 per violation, up to $50,000.

Section 9-343 of the Environment Article provides that any person who violates a permit condition is subject to a criminal penalty not exceeding $25,000 or imprisonment not exceeding 1 year, or both for a first offense. For a second offense, Section 9-343 provides for a fine not exceeding $50,000 and up to 2 years imprisonment.

The Environment Article, §9-343, Annotated Code of Maryland, provides that any person who tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $50,000 per violation, or by imprisonment for not more than 2 years per violation, or both.

The Environment Article, §9-343, Annotated Code of Maryland, provides that any person who knowingly makes any false statement, representation, or certification in any records or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $50,000 per violation, or by imprisonment for not more than 2 years per violation, or both.

E. Permit Revocation and Modification

1. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the City for a permit modification or a notification of planned changes or anticipated noncompliance does not stay any permit condition. A permit may be modified by MDE upon written request by the City and after notice and opportunity for a public hearing in accordance with and for the reasons set forth in COMAR 26.08.04.10.

After notice and opportunity for a hearing and in accordance with COMAR 26.08.04.10, MDE may modify, suspend, or revoke and reissue this permit in whole or in part during its term for causes including, but not limited to the following:

a. Violation of any terms or conditions of this permit;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;

c. A change in any condition that requires either a temporary reduction or elimination of the authorized discharge;

d. A determination that the permitted discharge poses a threat to human health or welfare or to the environment and can only be regulated to acceptable levels by permit modification or termination;

e. To incorporate additional controls that are necessary to ensure that the permit effluent limit requirements are consistent with any applicable TMDL WLA allocated to the discharge of pollutants from the MS4; or

f. As specified in 40 CFR §§122.62, 122.63, 122.64, and 124.5.

2. Duty to Provide Information

Baltimore City shall furnish to MDE, within a reasonable time, any information that MDE may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit; or to determine compliance with this permit. The City shall also furnish to MDE, upon request, copies of records required to be kept by this permit.

F. Inspection and Entry

Baltimore City shall allow an authorized representative of the State or EPA, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter the permittee's premises where a regulatory activity is located or conducted or where records must be kept under the conditions of this permit;

2. Have access to and obtain copies at reasonable times of any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times, without prior notice, any construction site, facility, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location.

G. Monitoring and Recordkeeping

Unless otherwise specified by this permit, all monitoring and records of monitoring shall be in accordance with 40 CFR Part 122.41(j).

H. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, State, or local law or regulations.

I. Severability

The provisions of this permit are severable. If any provision of this permit shall be held invalid for any reason, the remaining provisions shall remain in full force and effect. If the application of any provision of this permit to any circumstance is held invalid, its application to other circumstances shall not be affected.

J. Signature of Authorized Administrator and Jurisdiction

Each application, report, or other information required under this permit to be submitted to MDE shall be signed as required by COMAR 26.08.04.01-1. Signatories shall be a principal executive officer, ranking elected official, or other duly authorized employee.

Jay G. Sakai, Director
Water Management Administration

12/27/13
Date

Attachment A
Annual Report Databases

As part of the NPDES annual reporting process, permittees are required to complete databases for storm drain systems, urban best management practices, impervious surfaces, watershed restoration, monitoring site locations, chemical monitoring, pollutant load reductions, biological monitoring, illicit discharge detection, erosion and sediment control responsible personnel training, quarterly grading permit summaries, and fiscal analyses. For compatibility purposes, databases should be submitted in Access or Excel. Any file in a format other than Access or Excel is to be submitted in a "*.dbf" format. Examples of databases and definitions for each category are provided below. If there are any questions regarding the compatibility of databases, please contact the Water Management Administration's Sediment, Stormwater, and Dam Safety Program at (410) 537-3543.

MDE is utilizing Environmental System Research Institute (ESRI) Arc Geographic Information System (ArcGIS) technologies to track and update all collected datasets and integrate them spatially. GIS datasets shall be submitted in an ESRI Geodatabase or shapefile format, (i.e., "*.shp"). All datasets shall conform to the Maryland State Geographic Information Committee standard – North American Datum (NAD), 1983 Maryland State Plane Coordinate System in "meter" units. Location information collected by global positioning systems (GPS) for the purposes of populating the GIS datasets shall be accurate to the sub-meter (+/- 1 meter) level for acceptable mapping. Additionally, each table below requires a "unique identifier" which is necessary for linking GIS mapping locations to datasets with further descriptions (i.e., outfall dimensions, BMP type, chemical results, etc.).

A. Storm Drain System Mapping Associated with GIS Coverage (PART III.C.1.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
OUTFALL_ID	TEXT	15	Unique outfall ID
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Northing
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Easting
DIM_OUTFL	NUMBER	3	Outfall Dimensions in inches
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
TYPE_OUTFL	TEXT	3	Outfall Type (RCP,CMP, PVC)
DRAIN_AREA	NUMBER	8	Drainage area to outfall (acres)[1]
LAND_USE	NUMBER	3	Predominant land use[2]

[1] GIS shapefile required
[2] Use attached Maryland Office of Planning land use codes.

B. Urban Best Management Practices (BMPs) Associated with GIS Coverage (PART III.C.2.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
STRU_ID	TEXT	8	Unique structure ID[5]
PERMIT_NO	TEXT	10	Unique permit number
STRU_NAME	TEXT	60	Structure name
ADDRESS	TEXT	50	Structure address
CITY	TEXT	15	Structure address
STATE	TEXT	2	Structure address
ZIP	NUMBER	10	Structure address
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Northing
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Easting
ADC_MAP	TEXT	5	ADC map book coordinate (optional if BMP has MD Northing\Easting)
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code

STRU_TYPE	TEXT	10	Identify structure or BMP type[3]
LAND_USE	NUMBER	3	Predominant land use[2]
CON_PURPOSE	TEXT	4	New development (NEWD), Redevelopment (REDE), or Restoration (REST)
DRAIN_AREA	NUMBER	8	Structure drainage area (acres)[1]
IMP_ACRES	NUMBER	8	Structure impervious drainage area (acres) [1]
TOT_DRAIN	NUMBER	8	Total site area (acres)
WQ_VOLUME	NUMBER	8	Volume of rainfall depth in inches managed by the practice
RCN	NUMBER	5	Runoff curve number (weighted)
ON_OFF_SITE	TEXT	3	On or offsite structure
APPR_DATE	DATE/TIME	8	Permit approval date
BUILT_DATE	DATE/TIME	8	Construction completion date
INSP_DATE	DATE/TIME	8	Record most recent inspection date
GEN_COMNT	TEXT	60	General comments
LAST_CHANGE	DATE/TIME	8	Date last change made to this record

[1] GIS shapefile required
[2] Use attached Maryland Office of Planning land use codes
[3] Use attached urban BMP type code
[5] Use attached unique structure identification codes

C. Impervious Surfaces Associated with GIS Coverage (PART III.C.3.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
IMP_ACREAGE	NUMBER	8	Total impervious acreage in watershed[1]
IMP_CONTROLLED	NUMBER	8	Impervious acreage controlled to the maximum extent practicable[1]
IMP_BASELINE	NUMBER	8	Impervious acreage not controlled to the maximum extent practicable[1, 2]
RESTORATION_P	NUMBER	8	Impervious acreage proposed for watershed restoration[1]
RESTORATION_UC	NUMBER	8	Impervious acreage under construction for watershed restoration[1]
RESTORATION_C	NUMBER	8	Impervious acreage completed (since program inception)[1]

[1] GIS shapefile required
[2] Fixed baseline based on MDE Guidance and approval

D. Water Quality Improvement Project Locations Associated with GIS Coverage (PART III.C.5.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
STRU_ID	TEXT	8	Unique structure ID[5]
STRU_NAME	TEXT	60	Structure name
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Northing
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Easting
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
STRU_TYPE	TEXT	10	Identify structure or BMP type[3]
LAND_USE	NUMBER	3	Predominant land use[2]
DRAIN_AREA	NUMBER	8	Structure drainage area (acres)[1]
IMP_ACRES	NUMBER	8	Structure impervious drainage area (acres) [1]
WQ_VOLUME	NUMBER	8	Volume of rainfall depth in inches managed by the practice
LINEAR_FT	NUMBER	8	Use this field for stream restoration or shoreline protection
POUNDS_TN	NUMBER	8	Use this field for street sweeping or inlet cleaning
POUNDS_TP	NUMBER	8	Use this field for street sweeping or inlet cleaning
POUNDS_TSS	NUMBER	8	Use this field for street sweeping or inlet cleaning
APPR_DATE	DATE/TIME	8	Permit approval date
BUILT_DATE	DATE/TIME	8	Construction completion date
INSP_DATE	DATE/TIME	8	Record most recent inspection date
GEN_COMNT	TEXT	60	General comments

LAST_CHANGE	DATE/TIME	8	Date last change made to this record

[1] GIS shapefile required
[2] Use attached Maryland Office of Planning land use codes
[3] Use attached urban BMP type code
[5] Use attached unique structure identification codes

E. Monitoring Site Locations Associated with GIS Coverage (PART III.C.4.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
STATION	TEXT	30	Unique station ID
OUTFALL_OR_INSTREAM	TEXT	10	Outfall or instream station
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Northing
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Easting
DRAIN_AREA	NUMBER	8	Drainage area in acres[1]

[1] GIS shapefile required

E.1. Monitoring Site Locations - Use for Multiple Land Use Values in the Drainage Area

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
STATION	TEXT	30	Name of station (associated with unique station ID in section E.)
LAND_USE_RANK	NUMBER	8	Ranking of land use from predominant to least
LAND_USE	NUMBER	3	Identify land use[2]
DRAIN_AREA	NUMBER	8	Drainage area in acres[1]

[1] GIS shapefile required
[2] Use attached Maryland Office of Planning land use codes

E.2. Monitoring Site Locations - Use for Multiple Stormwater BMPs in the Drainage Area

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
STATION	TEXT	30	Name of station (associated with unique station ID in section E.)
BMP_RANK	NUMBER	5	Ranking of BMPs from predominant to least
STRU_TYPE	TEXT	10	Identify structure or BMP type[3]
BMP_DESCRIPTION	TEXT	60	Brief description of BMP
DRAIN_AREA	NUMBER	8	Drainage area in acres treated by BMP[1]

[1] GIS shapefile required
[3] Use attached urban BMP type code.

F. Chemical Monitoring (PART III.F.1.)

Column Name	Data Type	Length	Description
JURISDICTION	TEXT	50	Monitoring jurisdiction name
EVENT_DATE	DATE/TIME	8	Date of storm event
EVENT_TIME	DATE/TIME	8	Time monitoring begins
STATION	TEXT	30	Station name (associated w/ unique station ID in section E.)
OUTFALL_OR_INSTREAM	TEXT	10	Outfall or instream station
STORM_OR_BASEFLOW	TEXT	10	Storm or base flow sample
DEPTH	NUMBER	5	Depth of rain in inches
DURATION	NUMBER	5	Duration of event in hours and minutes
INTENSITY	NUMBER	5	Intensity = depth/duration
TOTAL_STORM_FLOW_VOLUME	NUMBER	5	Total storm flow volume in gallons

WATER_TEMP	NUMBER	5	Flow weighted average of water temperature (Fahrenheit)
pH	NUMBER	5	Flow weighted average of pH
BOD_dt	NUMBER	5	Biological Oxygen Demand detection limit used in analysis
BOD_EMC0	NUMBER	5	EMC for Biological Oxygen Demand in mg/l using (0)*
BOD_EMC_dt	NUMBER	5	EMC for Biological Oxygen Demand in mg/l using (dt)**
TKN_dt	NUMBER	5	Total Kjeldahl Nitrogen detection limit used in analysis
TKN_EMC0	NUMBER	5	EMC for Total Kjeldahl Nitrogen in mg/l using (0)*
TKN_EMC_dt	NUMBER	5	EMC for Total Kjeldahl Nitrogen in mg/l using (dt)**
NITRATE+NITRITE_dt	NUMBER	5	Record Nitrate + Nitrite detection limit used in analysis
NITRATE+NITRITE_EMC0	NUMBER	5	Enter EMC for Nitrate + Nitrite in mg/l using (0)*
NITRATE_EMC_dt	NUMBER	5	Enter EMC for Nitrate + Nitrite in mg/l using (dt)**
TOTAL_PHOSPHORUS_dt	NUMBER	5	Record Total Phosphorus detection limit used in analysis
TOTAL_PHOSPHORUS_EMC0	NUMBER	5	Enter EMC for Total Phosphorus in mg/l using (0)*
TOTAL_PHOSPHORUSEMC_dt	NUMBER	5	Enter EMC for Total Phosphorus in mg/l using (dt)**
TSS_dt	NUMBER	5	Total Suspended Solids detection limit used in analysis
TSS_EMC0	NUMBER	5	EMC for Total Suspended Solids in mg/l using (0)*
TSS_EMC_dt	NUMBER	5	EMC for Total Suspended Solids in mg/l using (dt)**
TOTAL_COPPER_dt	NUMBER	5	Record Total Copper detection limit used in analysis
TOTAL_COPPER_EMC0	NUMBER	5	Enter EMC for Total Copper in ug/l using (0)*
TOTAL_COPPER_EMC_dt	NUMBER	5	Enter EMC for Total Copper in ug/l using (dt)**
TOTAL_LEAD_dt	NUMBER	5	Record Total Lead detection limit used in analysis
TOTAL_LEAD_EMC0	NUMBER	5	Enter EMC for Total Lead in ug/l using (0)*
TOTAL_LEAD_EMC_dt	NUMBER	5	Enter EMC for Total Lead in ug/l using (dt)**
TOTAL_ZINC_dt	NUMBER	5	Record Total Zinc detection limit used in analysis
TOTAL_ZINC_EMC0	NUMBER	5	Enter EMC for Total Zinc in ug/l using (0)*
TOTAL_ZINC_EMC_dt	NUMBER	5	Enter EMC for Total Zinc in ug/l using (dt)**
HARDNESS_dt	NUMBER	5	Record detection limit used in analysis
HARDNESS_EMC0	NUMBER	5	Enter EMC for Hardness in ug/l using (0)*
HARDNESS_EMC_dt	NUMBER	5	Enter EMC for Hardness in ug/l using (dt)**
TPH_dt	NUMBER	5	Record detection limit used in analysis
TPH_EMC0	NUMBER	5	EMC for Total Petroleum Hydrocarbons in mg/l using (0)*
TPH_EMC_dt	NUMBER	5	EMC for Total Petroleum Hydrocarbon in mg/l using (dt)**
ENTEROCOCCI_dt	NUMBER	5	Record detection limit used in analysis
ENTEROCOCCI_EMC0	NUMBER	5	EMC for enterococci in MPN/100 using (0)*
ENTEROCOCCI_EMC_dt	NUMBER	5	EMC for enterococci in MPN/100 using (dt)**
ECOLI_dt	NUMBER	5	Record E. Coli detection limit used in analysis
ECOLI_EMC0	NUMBER	5	Enter EMC for E. Coli in MPN/100ml using (0)*
ECOLI_EMC_dt	NUMBER	5	Enter EMC for E. Coli in MPN/100ml using (dt)**
LOCAL_CONCERN1_dt	NUMBER	5	Record detection limit used in analysis
LOCAL_CONCERN1_EMC0	NUMBER	5	Enter EMC for in mg/l using (0)*
LOCAL_CONCERN1_EMC_dt	NUMBER	5	Enter EMC for in mg/l using (dt)**
LOCAL_CONCERN2_dt	NUMBER	5	Record detection limit used in analysis
LOCAL_CONCERN2_EMC0	NUMBER	5	Enter EMC for in mg/l using (0)*
LOCAL_CONCERN2_EMC_dt	NUMBER	5	Enter EMC for in mg/l using (dt)**
LOCAL_CONCERN3_dt	NUMBER	5	Record detection limit used in analysis
LOCAL_CONCERN3_EMC0	NUMBER	5	Enter EMC for in mg/l using (0)*
LOCAL_CONCERN3_EMC_dt	NUMBER	5	Enter EMC for in mg/l using (dt)**
GEN_COMNT	TEXT	50	Monitoring comments/documentation

key: **mg/l** = milligrams per liter ***u*g/l** = micrograms per liter **MPN** = most probable number per 100 milliliters
*** EMC (0)** = Flow weighted averages for three discrete samples representative of a storm using zero (0) for any discrete samples recorded less than the detection limit.

** **EMC (dt)** = Flow weighted averages for three discrete samples representative of a storm using the detection limit value (dt) for any discrete samples recorded less than the detection limit.

G. Pollutant Load Reductions Associated with GIS Coverage (PART III.E.4. and III.F.1.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
TN_RUNOFF	NUMBER	10	(TKN) + (Nitrate + Nitrite) load before treatment (lbs/year)
TN_CONTROLLED	NUMBER	10	(TKN) + (Nitrate + Nitrite) treated by BMPs (lbs/year)
TP_RUNOFF	NUMBER	10	TP load before treatment (lbs/year)
TP_CONTROLLED	NUMBER	10	TP treated by BMPs (lbs/year)
TSS_RUNOFF	NUMBER	10	TSS load before treatment (lbs/year)
TSS_CONTROLLED	NUMBER	10	TSS treated by BMPs (lbs/year)

G.1. Additional Pollutants - Use for Multiple Pollutant Entries

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
POLLUTANT	TEXT	20	Identify additional pollutants for impaired water (TMDLs)
WLA_RUNOFF	NUMBER	10	WLA for an approved TMDL before treatment (lbs/year)
WLA_CONTROLLED	NUMBER	10	Waste load for an approved TMDL treated by BMPs (lbs/year)

H. Biological and Habitat Monitoring (PART III.F.1.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
STATION	TEXT	30	Unique station ID
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 Meters) Northing
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 Meters) Easting
DRAIN_AREA	NUMBER	8	Drainage area in acres
BIBI	NUMBER	4	Benthic index of biological indicators
EMBEDDEDNESS	NUMBER	4	Rapid bioassessment protocol score for embeddedness
EPIFAUNAL	NUMBER	4	Rapid bioassessment protocol score for epifaunal
HABITAT	NUMBER	4	Rapid bioassessment protocol score for habitat
LAND_USE	NUMBER	3	Predominant land use[2]

[2] Use attached Maryland Office of Planning land use codes

I. Illicit Discharge Detection and Elimination (PART III.D.3.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
OUTFALL_ID	TEXT	15	Unique outfall ID used in Section A. database
SCREEN_DATE	DATE/TIME	8	Field screening date
TEST_NUM	NUMBER	5	Initial screening, follow-up test, 3rd, etc.
LAST_RAIN	DATE/TIME	8	Date of last rain > 0.10”
TIME	DATE/TIME	8	Field screening time
OBSERV_FLOW	TEXT	3	Was flow observed? (yes/no)
CFS_FLOW	NUMBER	5	Flow rate in cubic feet per second (CFS)
WATER_TEMP	NUMBER	5	Water temperature (Fahrenheit)
AIR_TEMP	NUMBER	5	Air temperature in (Fahrenheit)

CHEM_TEST	TEXT	3	Was chemical test performed? (yes/no)
pH	NUMBER	5	pH meter reading
PHENOL	NUMBER	5	Milligrams per Liter (mg/l)
CHLORINE	NUMBER	5	mg/l
DETERGENTS	NUMBER	5	mg/l
COPPER	NUMBER	5	mg/l
ALGAEGROW	TEXT	3	Was algae growth observed? (yes/no)
ODOR	TEXT	2	Type of odor[4]
COLOR	TEXT	2	Discharge color[4]
CLARITY	TEXT	2	Discharge clarity [4]
FLOATABLES	TEXT	2	Floatables in discharge[4]
DEPOSITS	TEXT	2	Deposits in outfall area[4]
VEG_COND	TEXT	2	Vegetative condition in outfall area[4]
STRUCT_COND	TEXT	2	Structural condition of outfall[4]
EROSION	TEXT	2	Erosion in outfall area[4]
COMPLA_NUM	TEXT	3	Is screening complaint driven? (yes/no)
ILLICIT_Q	TEXT	3	Was illicit discharge found? (yes/no)
ILLICIT_ELIM	TEXT	3	Was illicit discharge eliminated? (yes/no)

[4] Use Attached Pollution Prevention Activities Codes

J. Responsible Personnel Certification Information (PART III.D.2.)

Column Name	Data Type	Length	Description*
PREFIX	TEXT	2	Mr, Ms
FIRSTNAME	TEXT	15	First name
LASTNAME	TEXT	15	Last name
ADDRESS	TEXT	50	Full address
CITY	TEXT	15	City
STATE	TEXT	2	State
ZIP	NUMBER	10	Zip code
DATE	DATE/TIME	8	Date of class
PHONE	NUMBER	10	Phone number
CERT_NUM	NUMBER	6	Certification number as provided by MDE
COMPANY	TEXT	30	Employer
INSTRUCTOR	TEXT	20	Instructor's last name

* Do not use all caps

K. Quarterly Grading Permit Information Associated with GIS Coverage (PART III.D.2.)

Column Name	Data Type	Length	Description
SITE_NAME	TEXT	60	Construction site name
SITE_OWNER	TEXT	60	Construction site owner
OWNER_ADDRESS	TEXT	50	Owner address
OWNER_CITY	TEXT	15	Owner address
OWNER_ZIP	NUMBER	10	Owner zip code
SITE_ADDRESS	TEXT	50	Site address
SITE_CITY	TEXT	15	Site address
SITE_ZIP	NUMBER	10	Site zip code
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 meters) – site
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 meters) – site
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
DIST_AREA	NUMBER	8	Disturbed area of site in acres[1]
GRAD_PERMIT	TEXT	50	Local grading permit number

APPR_DATE	DATE/TIME	8	Grading Permit approval date
LAND_USE	NUMBER	3	Predominant land use[2] (built)

[1] GIS shapefile required
[2] Use attached Maryland Office of Planning land use codes

L. Fiscal Analyses (PART III.G.)

Permit Condition	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
LEGAL_AUTH	NUMBER	13	Total annual cost for legal authority
SOURCE_ID	NUMBER	13	Total annual cost for source ID
SW_MANAGEMENT	NUMBER	13	Total annual cost for stormwater management
EROS_SED_CON	NUMBER	13	Total annual cost for erosion and sediment
ILLICIT_DET/ELIM	NUMBER	13	Total annual cost for illicit det/elimination
TRASH_ELIM	NUMBER	13	Total annual cost for trash elimination
PROP_MANAGEMENT	NUMBER	13	Total annual cost for property management
INLET_CLEAN	NUMBER	13	Total annual cost for inlet cleaning
STRT_SWEEP	NUMBER	13	Total annual cost for street sweeping
RD_MAINT_OTHER	NUMBER	13	Total annual cost for road maintenance - other
PUB_EDUCATION	NUMBER	13	Total annual cost for public education
WATERSHED_ASSESS	NUMBER	13	Total annual cost for watershed assessment
WATERSHED_RESTOR	NUMBER	13	Total annual cost for watershed restoration
CHEM_MON_ASSESS	NUMBER	13	Total annual cost for chemical monitoring
BIO_MON_ASSESS	NUMBER	13	Total annual cost for biological monitoring
PHYS_STRM_ASSESS	NUMBER	13	Total annual cost for physical assessment
MANUAL_MON	NUMBER	13	Total annual cost for design manual monitorin
TMDL_ASSESS	NUMBER	13	Total annual cost for tmdl assessment
TOTAL_NPDES_FUNDS	NUMBER	13	Total annual cost for total npdes program

[2]MDP Land Use/Land Cover

10 Urban Built-up

- **11 Low Density Residential** – Detached single family/duplex dwelling units, yards, and associated areas. Areas of more than 90 percent single family/duplex dwelling units, with lot sizes less than five acres but at least one-half acres (.2 dwelling units/acre to 2 dwelling units/acre).

- **12 Medium Density Residential** – Detached single family/duplex, attached single unit row housing, yards, and associated areas. Areas of more than 90 percent single family/duplex units and attached single unit row housing, with lot sizes of less than one-half acre but at least one-eighth acre (2 dwelling units/acre to 8 dwelling units/acre).

- **13 High Density Residential** – Attached single unit row housing, garden apartments, high rise apartments/condominiums, mobile home and trailer parks. Areas of more than 90 percent high density residential units, with more than 8 dwelling units/acre.

- **14 Commercial** – Retail and wholesale services. Areas used primarily for the sale of products and services, including associated yards and parking areas.

- **15 Industrial** – Manufacturing and industrial parks, including associated warehouses, storage yards, research laboratories, and parking areas.

- **16 Institutional** – Elementary and secondary schools, middle schools, junior and senior high schools, public and private colleges and universities, military installations (built-up areas only, including buildings and storage, training, and similar areas) churches and health facilities, correctional facilities, and government offices and facilities that are clearly separable from the surrounding land cover.

- **17 Extractive** – Surface mining operations, including sand and gravel pits, quarries, coal surface mines, and deep coal mines. Status of activity (active vs. abandoned) is not distinguished.

- **18 Open Urban Land** – Urban areas whose use does not require structures, or urban areas where non-conforming uses characterized by open land have become isolated. Included are golf courses, parks, recreation areas (except associated with schools or other institutions), cemeteries, and entrapped agricultural and undeveloped land within urban areas.

- **191 Large Lot Subdivision (Agriculture)** – Residential subdivisions with lot sizes less than 20 acres but at least 5 acres, with a dominant land cover of open fields or pasture.

- **192 Large Lot Subdivision (Forest)** - Residential subdivisions with lot sizes less than 20 acres but at least 5 acres, with a dominant land cover of deciduous, evergreen or mixed forest.

20 Agriculture

- **21 Cropland** – Field and forage crops.

- **22 Pasture** – Land used for pasture, both permanent and rotated: grass.

- **23 Orchards/Vineyards/Horticulture** – Areas of intensively managed commercial bush and tree crops, including areas used for fruit production, vineyards, sod and seed farms, nurseries, and green houses.

- **24 Feeding Operations** – Cattle or hog feeding lots, poultry houses, and holding lots for animals, and commercial fishing areas (including oyster beds).

- **241 Feeding Operations** – Cattle or hog feeding lots, poultry houses, and holding lots for animals.

- **242 Agricultural Building** – Breeding and training facilities, storage facilities, built-up areas associated with a farmstead, small farm ponds, and commercial fishing areas.

- **25 Row and Garden Crops** – Intensively managed track and vegetable farms and associated areas.

40 Forest

- **41 Deciduous Forest** – Forested areas in which the trees characteristically lose their leaves at the end of the growing season. Included are such species as oak, hickory, aspen, sycamore, birch, yellow poplar, elm, maple, and cypress.

- **42 Evergreen Forest** - Forested areas in which the trees are characterized by persistent foliage throughout the year. Included are such species as white pine, pond pine, hemlock, southern white cedar, and red pine.

- **43 Mixed Forest** – Forested areas in which neither deciduous or evergreen species dominate, but in which there is a combination of both types.

- **44 Brush** – Areas that do not produce timber or other wood products but may have cut-over timber stands, abandoned agriculture fields, or pasture. These areas are characterized by vegetation types such as sumac, vines, rose, brambles, and tree seedlings.

50 Water – Rivers, waterways, reservoirs, ponds, bays, estuaries, and ocean.

60 Wetlands – Forested and non-forested wetlands, including tidal flats, tidal and non-tidal marshes, and upland swamps and wet areas.

70 Barren Land

- **71 Beaches** – Extensive shoreline areas of sand and gravel accumulation, with no vegetative cover or other land use.

- **72 Bare Exposed Rock** – Areas of bedrock exposure, scarps, and other natural accumulations of rock without vegetative cover.

73 Bare Ground – Areas of exposed ground caused naturally, by construction, or other cultural processes.

[3] Glossary of Stormwater BMP Structure Types and Practices Reported to MDE

Structural BMPs			
Structure Type	**Code**	**Structure Function**	**Chesapeake Bay Program Classification**
Artificial Wetlands (See Shallow Marsh also)	SM	A structure with a permanent shallow pool planted with wetland vegetation often designed to provide extended detention.	Wet Pond & Wetlands
Attenuation swale or dry swale	SW	Open drainage channel designed to detain and promote the filtration of stormwater runoff through underlying fabricated soil media (see Grassed Swale or SW).	Filtering Practice
Bio-retention	BR	Landscape designed such that stormwater runoff collects in shallow depressions before filtering through fabricated planting soil media .	Filtering Practice
Check Dam	CD	A small dam constructed in a gully or other small waterway to decrease flow velocity (by reducing the channel gradient), minimize scour, & promote deposition of sediment.	Filtering Practice
Detention Structure (Dry Pond)	DP	Designed to store runoff without a permanent pool.	Dry Detention Pond & Hydrodynamic Structure
Dry Well	DW	An infiltration trench variant designed to exclusively accommodate rooftop runoff.	Infiltration Practice
Extended Detention Structure (Two types):	ED	Designed to temporarily detain a portion of runoff for 24 hrs after a storm using a fixed orifice to regulate outflow at a specific rate, allowing solids & associated time to settle out.	Dry Extended Detention Pond
Extended Detention Structure, Dry	EDSD	Designed for the temporary storage of runoff associated with at least a 24 hr 1-year storm without creating a permanent pool of water.	Dry Extended Detention Pond
Extended Detention Structure, Wet	EDSW	Designed for the storage of runoff associated with at least a 24 hr 1-year storm. The detained water drains partially & the remaining portion creates a permanent pool .	Dry Extended Detention Pond or Wet Pond & Wetlands
Filter Strip	FS	Vegetated land designed to intercept sheet flow from upstream development.	Filtering Practice
Flow Splitter	FlSp	Hydraulic structure designed either to divert a portion of stream flow to a BMP located away from a channel, direct stormwater to a parallel pipe system or bypass a portion of base flow around a pond .	Not a WQ BMP
Flood Management Area	FLOOD	10 year storm overbank flood protection	Not a WQ BMP
Forebay	FOREBAY	Storage structure adjoining a SWM BMP inlet designed to trap coarse sediments and thereby lessen their accumulation in the main treatment area .	Dry Detention Pond & Hydrodynamic Structure
Gabion	GABION	A large rectangular box made of heavy gauge wire mesh which holds cobbles and boulders for changing stream flow patterns, bank stabilization, and erosion control.	Filtering Practice
Grass Swale	SW	Open vegetated channel used to convey runoff and provide treatment by filtering pollutants and sediment.	Filtering Practice
Hydrodynamic Structure such as 1) Oil grit separator 2) Bay Saver© 3) Stormceptor©	 OGS BS SC	An engineered structure used to separate sediments and oils from stormwater runoff using gravitational separation and/or hydraulic flow.	Dry Detention Pond & Hydrodynamic Structure
Infiltration Basin	IB	Designed to allow stormwater to infiltrate into permeable soils. It differs from a retention structure in that it may include a back-up underdrain pipe to ensure eventual removal of standing water.	Infiltration Practice

Infiltration Trench (Three types):	IT	An excavated trench that has been backfilled with exposed or unexposed stones to form an underground reservoir (Also see Dry Well).	Infiltration Practice
Complete Exfiltration	ITCE	Runoff can only exit the trench by exfiltrating through the stone reservoir into the underlying soil	
Partial Exfiltration	ITPE	Runoff exits the trench by exfiltrating a) through the stone reservoir into the underlying soil, and b) via a perforated underdrain at the bottom of the trench that diverts runoff to a central outlet.	
Water Quality Exfiltration	ITWQE	Storage volume is set to receive only the first $\frac{1}{2}$" of runoff (first flush) from an impervious area of the watershed.	
Landscape	LANDSCAPE	Impervious area reduction (Thus far, only Prince Georges County has submitted reports of this practice).	Filtering Practice
Level Spreader	LS	A device for distributing stormwater uniformly over the ground surface as sheet flow to prevent concentrated, erosive flow and promote infiltration.	Infiltration Practice
Micropool (Reported by various jurisdictions before the standardization of codes)	MP	A smaller permanent pool used in a stormwater pond to mitigate the thermal impacts of a larger pond, impacts on existing wetlands, or compensate for lack of topographic relief.	Wet Pond & Wetlands
Observation well	OBS_WELL	A test well installed in an infiltration trench to monitor draining time after installation.	Not a SWM BMP – Observation Well
Other	OTH	A stormwater facility that is known to have been implemented but whose type cannot definitively be identified at the time of submitting a Notice of Construction Completion report to MDE.	Defaults to Dry Detention Pond & Hydrodynamic Structure, evaluated as the least efficient class of facilities in removing TSS, TN, and TP from stormwater runoff.
Porous Pavement	PP	A porous asphalt surface designed to have bearing strength similar to conventional asphalt but provides a rapid conduit for runoff to reach a subsurface stone reservoir.	Infiltration Practice
Retention Pond (See Wet Pond/WP)	WP	A structure with a permanent pool of water for treating incoming storm runoff.	Wet Pond & Wetlands
Sand Filter	SF	A bed of sand to which the first flush of runoff is diverted. Water leaving the filter is collected in underground pipes & returned to a waterway. A layer of peat, limestone, and/topsoil may be added to improve removal efficiency.	Filtering Practice
Shallow Marsh	SM	A structure with a permanent shallow pool planted with wetland vegetation often designed to provide extended detention.	Wet Pond & Wetlands
Underground Storage	UGS	Vault like structure designed for the temporary storage of storm flow.	Dry Detention Pond & Hydrodynamic Structure
Vegetated Buffer	VB	A vegetated protective zone of variable width located along both sides of a waterway.	Filtering Practice
Water Quality Inlet	OGS	See Hydrodynamic Structure-Oil Grit Separator.	Dry Detention Pond & Hydrodynamic Structure
Wet Pond	WP	A structure with a permanent pool of water for treating incoming storm runoff.	Wet Pond & Wetlands

Environmental Site Design Practices			
Practice Type	**Code**	**Function**	**Chesapeake Bay Program Classification**
Environmental Site Design -- alternative surfaces, non-structural and micro-scale practices may be grouped as a comprehensive stormwater design system and identified singlely as ESD.	ESD	A comprehensive design strategy for maintaining predevelopment runoff characteristics and protecting natural resources is available. This strategy relies on integrating site design, natural hydrology, and smaller controls to capture and treat runoff.	Stormwater to the MEP
Alternative Surfaces			
1) Green Roof	ESDGR	Alternative surface used in place of traditional flat or pitched roofs to reduce runoff.	Stormwater to the MEP
2) Permeable Pavements	ESDPERMP	Any of the available materials that are used to replace traditional pavements (e.g., asphalt, concrete) and reduce runoff.	
3) Reinforced Turf	ESDRTRF	Grassed or gravel area with open, load-bearing matrix for structural integrity.	
Nonstructural Practices			
1) Disconnection of Rooftop Runoff	ESDRTD	Rooftop runoff is disconnected and then directed to a pervious area where it either infiltrates or is filtered.	Stormwater to the MEP
2) Disconnection of Non-Rooftop Runoff	ESDNRTD	Runoff from surface impervious areas is disconnected and then directed to a pervious area where it either infiltrates or is filtered. Examples: Overland sheetflow, permeable pavers, rain gardens and small scale filters.	
3) Sheetflow to Conservation Areas	ESDSFNAC	Runoff is discharged to a natural conservation or buffer area (e.g. stream buffers, forest buffers) through overland flow.	
Micro-Scale Practices			
1) Rainwater Harvesting	ESDRH	These practices intercept and store rainfall for future use.	Stormwater to the MEP
2) Submerged Gravel Wetlands	ESDSGW	Small-scale filter using wetland plants and a gravel media to provide treatment.	
3) Landscape Infiltration	ESDIL	Combination of landscape features with infiltration practices.	
4) Infiltration Berms	ESDIB	Series of small berms used in sloped areas to detain, infiltrate, and filter runoff.	
5) Dry Wells	ESDDW	An infiltration trench variant designed to exclusively accommodate rooftop runoff.	
6) Micro-Bioretention	ESDMB	Small, vegetated filter used to capture and treat runoff from adjacent impervious areas.	
7) Rain Gardens	ESDRG	Shallow landscaped feature used to detain and filter runoff and used primarily in residential applications.	
8) Swales	ESDSW	Channels that provide conveyance, water quality treatment and flow attenuation of runoff. Variants include the grassed swale, bio-swale, and wet swale.	
9) Enhanced Filters	ESDEF	A modification applied to other filters that increase nutrient removal and groundwater recharge.	

Alternative MS4 BMPs			
Practice Type	**Code**	**Description**	**Chesapeake Bay Program Classification**
Mechanical Street Sweeping	MSS	Removes the buildup of pollutants that have been deposited along the street or curb using a mechanical sweeper truck	Street Sweeping, Mechanical
Regenerative/Vacuum Street Sweeping	VSS	Removes the buildup of pollutants that have been deposited along the street or curb using a vacuum-assisted sweeper truck	Street Sweeping, Regenerative
Nutrient Management	NM	Comprehensive nutrient management plan for reducing and or eliminating fertilizer use	Nutrient Management
Grass/Meadow Buffers	GMB	An area of trees at least 35 feet wide on one side of a stream, usually accompanied by infrequently-mowed grass, meadow flora species, and other vegetation that is adjacent to a body of water	Urban Grass/Meadow Buffers
Forest Buffers	FB	An area of trees at least 35 feet wide on one side of a stream, usually accompanied by trees, shrubs, and other vegetation that is adjacent to a body of water	Urban Forest Buffers
Impervious Surface Elimination (to Pervious)	IMPP	Pollutant load reduction expected when land cover is converted from impervious to pervious	Land Cover Change
Impervious Surface Elimination (to Forest)	IMPF	Pollutant load reduction expected when land cover is converted from impervious to forest	Land Cover Change
Planting Trees or Forestation on Pervious Urban	FPU	100 trees per acre or greater is necessary with at least 50% of the trees being 2 inches or greater in diameter at 4 ½ feet above ground level (an aggregate of smaller sites may be used)	Land Cover Change
Catch Basin Cleaning	CBC	Routine cleanouts performed on targeted infrastructure that have high accumulation rates	Street Sweeping
Storm Drain Vacuuming	SDV	Routine vacuuming performed on targeted infrastructure that has high accumulation rates	Street Sweeping
Stream Restoration	STRE	Stream restoration includes re-establishing a stable channel; reconnecting the stream with the floodplain; introducing habitat features such as step-pools, woody debris, or riparian vegetation; and integrating structural approaches such as rock walls or riprap.	Urban Stream Restoration
Shoreline Stabilization	SHST	These practices apply to the shoreline of the Chesapeake and Atlantic Coastal Bays and tidal rivers. Nonstructural practices or living shorelines include tidal marsh creation and beach nourishment; structural practices include stone revetments, breakwaters, or groins.	Shoreline Stabilization
Septic Pumping	SEPP	Implementation of septic system pumping	Septic Pumping
Septic Denitrification	SEPD	Implementation of enhanced denitrification technology	Septic Denitrification
Septic Connections to WWTP	SEPC	Removal of septic system and waste stream connection made to a waste water treatment plant.	Septic Connection to WWTP
Education	EDU	Education	To Be Determined
Sub-Soiling	SUB	Sub-Soiling	To Be Determined
Trash Removal	TRA	Trash Removal	To Be Determined
Pet Waste Management	PET	Pet Waste Management	To Be Determined
Outfall Stabilization	OUTS	Outfall Stabilization	To Be Determined
Floodplain Restoration	FPRES	Floodplain Restoration	To Be Determined
River Bank Stabilization	RBS	River Bank Stabilization	To Be Determined
Bio-Reactor Carbon Filter	BRCF	Bio-Reactor Carbon Filter	To Be Determined
Disconnection of Illicit Discharges	DID	Disconnection of Illicit Discharges	To Be Determined

Alternative MS4 BMPs (Continued)			
Practice Type	**Code**	**Description**	**Chesapeake Bay Program Classification**
Step Pool Storm Conveyance	SPSC	Step Pool Storm Conveyance; if used as a filtration practice, the pollutant removal efficiencies for micro-bioretention can be applied to the drainage area treated.	To Be Determined

Policy Decision			
Policy	**Code**	**Description**	**Chesapeake Bay Program Classification**
Exemption	EXEMPT	Land development activities that are not subject to the stormwater management requirements.	Not a SWM BMP
Variance	VARIANCE	A modification of the minimum stormwater management requirement if site conditions are such that strict adherence to the Guidelines would impose unnecessary hardship on the applicant without fulfilling the intent of the Guidelines.	Not a SWM BMP
Waiver	WAIVER	Exemption from stormwater management requirements granted to an applicant for a specific project based on a review by MDE.	Not a SWM BMP

[4] Pollution Prevention Activities Codes

21. **ODOR:** None(N), Sewage (SE), Sulfur (S), Oil (IL), Gas (G), Rancid-Sour (RS), Other (O)

22. **COLOR:** Clear (C), Yellow (Y),Brown (B), Green (GR), Red (R), Gray (G), Other (O)

23. **CLARITY:** Clear (C), Opaque (OP), Cloudy (CD), Other (O)

24. **FLOATABLES:** None (N), Oil Sheen (OS), Sewage (SE), Trash (T), Other (O)

25. **DEPOSITS:** None (N), Sediment (S), Oil (IL), Other (O)

26. **VEG_COND.:** Normal (N), Excessive Growth (EG), Inhibited Growth (IG), Other (O)

27. **STRUCT_COND**: Normal (N), Concrete Cracking (CC), Concrete Spalling (SP), Other (O)

28. **EROSION**: None (N), Moderate (M), Severe (S)

[5]Unique Structure Identification Codes

Each stormwater best management structure or water quality improvement project will need a unique identification code. For management of these data Statewide it is necessary that these codes also indicate the jurisdiction where they are implemented. Please use the County, City, or State abbreviations listed below as part of each structures unique identification code.

Anne Arundel County	AA
Baltimore City	BC
Baltimore County	BA
Carroll County	CA
Charles County	CH
Frederick County	FR
Harford County	HA
Howard County	HO
Prince George's County	PG
Montgomery County	MO
Maryland State Highway Administration	SHA

Attachment B
EPA Approved Total Maximum Daily Loads (TMDLs)
Baltimore City

This NPDES permit requires Baltimore City to submit an annual TMDL assessment report evaluating the effectiveness of the City's restoration plans and progress made in achieving compliance with EPA approved TMDLs. Similarly, by regulation at 40 CFR §122.44, EPA further requires that stormwater controls and programs implemented pursuant to this NPDES permit be consistent with applicable WLAs developed under any approved TMDLs. The following is a list of approved TMDLs applicable to Baltimore City:

Basin Name	8-digit Basin Number	Impairment	YEAR	Comments
Back River (Herring Run)	02130901	Bacteria	2007	
Baltimore Harbor (Furnace Creek)	02130903	Bacteria	2010	
Baltimore Harbor (Marley Creek)	02130903	Bacteria	2010	
Gwynns Falls	02130905	Bacteria	2006	
Jones Falls	02130904	Bacteria	2006	
Back River	02130901	Chlordane	1999	
Baltimore Harbor	02130903	Chlordane	2000	
Impoundment, Lake Roland	02130904	Chlordane	2000	
Back River	02130901	Nutrients	2005	Local TMDL*
Back River Oligohaline	02130901	Nutrients & Sediments	2010	Bay TMDL*
Baltimore Harbor	02130903	Nutrients	2007	Local TMDL*
Patapsco River Mesohaline	02130902, 02130903	Nutrients & Sediments	2010	Bay TMDL*
Gwynns Falls	02130905	Sediments	2009	
Jones Falls	02130904	Sediments	2009	
Patapsco River Lower N. Branch	02130906	Sediments	2009	
Patapsco River Lower N. Branch	02130906	Bacteria	2009	Delisted in 2004; Relisted 2008

*Note: Local TMDL is superseded by the Bay TMDL if the latter is more stringent.

MARYLAND DEPARTMENT OF THE ENVIRONMENT

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

MUNICIPAL SEPARATE STORM SEWER SYSTEM DISCHARGE PERMIT

PART I. IDENTIFICATION

A. Permit Number: 11-DP-3315 MD0068292

B. Permit Area

This permit covers all stormwater discharges from the municipal separate storm sewer system (MS4) owned or operated by Baltimore City, Maryland.

C. Effective Date: December 27, 2013

D. Expiration Date: December 26, 2018

PART II. DEFINITIONS

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.

PART III. WATER QUALITY

The permittee 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.

PART IV. STANDARD PERMIT CONDITIONS

A. Permit Administration

Baltimore City shall designate an individual to act as a liaison with the Maryland Department of the Environment (MDE) for the implementation of this permit. The City shall provide the coordinator's name, title, address, phone number, and email address. Additionally, the City shall submit in its annual reports 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.

B. Legal Authority

Baltimore City 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 City shall notify MDE within 30 days and make the necessary changes to maintain adequate legal authority. All changes shall be included in the City's annual report.

C. Source Identification

Sources of pollutants in stormwater runoff citywide shall be identified and linked to specific water quality impacts on a watershed basis. The source identification process shall be used to develop watershed restoration plans. The following information shall be submitted annually for all City watersheds within the permit area in geographic information system (GIS) format with associated tables as required in PART V of this permit:

1. Storm drain system: all infrastructure, major outfalls, inlets, and associated drainage areas delineated;

2. Industrial and commercial sources: industrial and commercial land uses and sites that the City has determined have the potential to contribute significant pollutants;

3. Urban best management practices (BMPs): stormwater management facility data including outfall locations and delineated drainage areas;

4. Impervious surfaces: public and private land use delineated, controlled and uncontrolled impervious areas based on, at a minimum, Maryland's hierarchical eight-digit sub-basins;

5. Monitoring locations: locations established for chemical, biological, and physical monitoring of watershed restoration efforts and the *2000 Maryland Stormwater Design Manual*; and

6. Water quality improvement projects: projects proposed, under construction, and completed with associated drainage areas delineated.

D. Management Programs

The following management programs shall be implemented in areas served by Baltimore City's MS4. These management programs are designed to control stormwater discharges to the maximum extent practicable (MEP) and shall be maintained for the term of this permit. Additionally, these programs shall be integrated with other permit requirements to promote a comprehensive adaptive approach toward solving water quality problems. The City shall modify these programs according to needed program improvements identified as a result of periodic evaluations by MDE.

1. Stormwater Management

An acceptable stormwater management program shall continue to be maintained in accordance with the Environment Article, Title 4, Subtitle 2, Annotated Code of Maryland. Activities to be undertaken by Baltimore City shall include, but not be limited to:

Implementing the stormwater management design policies, principles, methods, and practices found in the latest version of the 2000 Maryland Stormwater Design Manual. This includes:

i. Complying with the Stormwater Management Act of 2007 (Act) by implementing environmental site design (ESD) to the MEP for new and redevelopment projects;
ii. 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; and
iii. Reporting annually the modifications that have been 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.

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.

c. Maintaining 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 Baltimore City.

d. Conducting 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 City's annual reports.

2. Erosion and Sediment Control

An acceptable erosion and sediment control program shall continue to be maintained and implemented in accordance with the Environment Article, Title 4, Subtitle 1, Annotated Code of Maryland. Activities to be undertaken by the City shall include, but not be limited to:

Implementing program improvements identified in any MDE evaluation of the City's erosion and sediment control enforcement authority;

a. At least three times per year, conducting responsible personnel certification classes to educate construction site operators regarding erosion and sediment control compliance;

b. Program activity shall be recorded on MDE's annual report database and submitted as required in PART V of this permit; and

c. 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.

3. Illicit Discharge Detection and Elimination

Baltimore City 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 or conducting an MDE-approved program of monthly chemical screening downstream of all major storm sewer outfalls during dry weather. 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 City'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.

4. Trash and Litter

Baltimore City drains to at least two major water bodies (the Middle Branch and Northwest Branch of the Patapsco River) determined to be impaired by trash. The trash and litter section of this permit is to assist in efforts to address water quality improvements. Increases in trash discharges to receiving waters have become a growing concern both nationally and within Maryland. This section requires Baltimore City to evaluate current trash and litter control efforts; develop strategies to reduce trash, floatables, and debris within those areas draining to the Middle Branch and Northwest Branch of the Patapsco River; and bolster public education.

a. Within one year of permit issuance, the City shall inventory and evaluate all current trash and recyclable pick-up operations, litter control programs, and public outreach efforts. The analysis shall identify opportunities for improving overall efficiency, especially in the Middle Branch and Northwest Branch of the Patapsco River.

b. Within one year of permit issuance, develop and implement a public education and outreach strategy with specific performance goals, and corresponding deadlines to initiate or increase residential and commercial recycling rates, improve trash management, and reduce littering. The strategy shall include:

i. Educating the public on the importance of reducing, reusing, and recycling;
ii. Disseminating information by using signs, articles, and other media outlets;
iii. Promoting educational programs in schools, businesses, community associations, etc.; and
iv. Providing the strategy to interested parties upon request.

c. Evaluating annually the effectiveness of the education program.

d. Within one year of the Environmental Protection Agency's (EPA) approval of a trash TMDL for the Middle Branch and Northwest Branch of the Patapsco River, implement those program improvements identified in PART IV.D.4.a above and any additional programs needed to address the TMDL.

e. Submit annually, a report which details progress toward implementing the trash reduction strategies. 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.

5. Property Management and Maintenance

a. Baltimore City shall ensure that a Notice of Intent (NOI) has been submitted to MDE and a pollution prevention plan developed for each City-owned municipal facility requiring NPDES stormwater general permit coverage. The status of pollution prevention plan development and implementation for each City-owned municipal facility shall be reviewed, documented, and submitted to MDE annually.

b. The City shall implement a program to reduce pollutants associated with maintenance activities at City-owned facilities including parks, roadways, and parking lots. The maintenance program shall include these or MDE-approved alternative activities:

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

The City 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.

6. Public Education

Baltimore City shall continue to implement a public education and outreach program to reduce stormwater pollutants. Outreach efforts may be integrated with other aspects of the City's activities. These efforts are to be documented and summarized in each annual report. The City shall continue to implement a public outreach and education campaign with specific performance goals and deadlines to:

a. Maintain a compliance hotline or similar mechanism for public reporting of water quality complaints, including suspected illicit discharges, illegal dumping, and spills.

b. Provide information to inform the general public about the benefits of:

   i. Increasing water conservation;
   ii. Residential and community stormwater management implementation and facility maintenance;
   iii. Proper erosion and sediment control practices;
   iv. Increasing proper disposal of household hazardous waste;
   v. 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.);
   vi. Residential car care and washing; and
   vii. Proper pet waste management.

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.

E. Restoration Plans and Total Maximum Daily Loads

In compliance with §402(p)(3)(B)(iii) of the CWA, MS4 permits must require stormwater controls to reduce the discharge of pollutants to the MEP. By regulation at 40 CFR §122.44, BMPs and programs implemented pursuant to this permit must be consistent with applicable WLAs developed under EPA approved TMDLs (see list of EPA approved TMDLs attached and incorporated as Attachment B).

Baltimore City shall annually provide watershed assessments, restoration plans, opportunities for public participation, and TMDL compliance status to MDE. A systematic assessment shall be conducted and a detailed restoration plan developed for all watersheds within Baltimore City. As required below, watershed assessments and restoration plans shall include a thorough water quality analysis, identification of water quality improvement opportunities, and a schedule for

BMP and programmatic implementation to meet stormwater WLAs included in EPA approved TMDLs.

1. Watershed Assessments

a. By the end of the permit term, Baltimore City shall complete detailed watershed assessments for the entire City. 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 City water quality analysis;

b. Watershed assessments by the City 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.

2. Restoration Plans

a. Within one year of permit issuance, Baltimore City 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.

By the end of this permit term, Baltimore City shall commence and complete the implementation of restoration efforts for twenty percent of the City'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 WQ_v 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.

b. Within one year of permit issuance, Baltimore City 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 City 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, Baltimore City shall:

i. Include the final date for meeting applicable WLAs and a detailed schedule for implementing all structural and nonstructural water quality 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 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 City's watershed assessments.

3. Public Participation

Baltimore City shall provide continual outreach to the public regarding the development of its watershed assessments and restoration plans. Additionally, the City 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. Baltimore City shall provide:

a. Notice in a local newspaper and the City'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 copies of 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 City addressed or will address any material comment received from the public.

4. TMDL Compliance

Baltimore City 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 City's

restoration plans and how these plans are working toward achieving compliance with EPA approved TMDLs. Baltimore City 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;

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

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

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

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.

F. Assessment of Controls

Baltimore City and ten other municipalities in Maryland have been conducting discharge characterization monitoring since the early 1990s. From this expansive monitoring, a statewide database has been developed that includes hundreds of storms across numerous land uses. Analyses of this dataset and other research performed nationally effectively characterize stormwater runoff in Maryland for NPDES municipal stormwater purposes. To build on existing information and to better track progress toward meeting TMDLs, better data are needed on ESD performance and BMP efficiencies and effectiveness.

Assessment of controls is critical for determining the effectiveness of the NPDES stormwater management program and progress toward improving water quality. The City 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 City shall conduct physical stream monitoring to assess the implementation of the latest version of the *2000 Maryland Stormwater Design Manual.* Specific monitoring requirements are described below.

1. Watershed Restoration Assessment

The City shall continue monitoring the Moores Run, 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. The minimum criteria for chemical, biological, and physical monitoring are as follows:

a. Chemical Monitoring:

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;

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;

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

Biochemical Oxygen Demand (BOD_5)	Total Lead
Total Kjeldahl Nitrogen (TKN)	Total Copper
Nitrate plus Nitrite	Total Zinc
Total Suspended Solids	Total Phosphorus
Total Petroleum Hydrocarbons (TPH)	Hardness
E. coli or enterococcus	

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 TMDL with a stormwater WLA.

b. Biological Monitoring:

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; and

ii. The City shall use the EPA Rapid Bioassessment Protocols (RBP), Maryland Biological Stream Survey (MBSS), or other similar method approved by MDE.

c. Physical Monitoring:

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

ii. A stream habitat assessment shall be conducted using techniques defined

by the EPA's RBP, MBSS, or other similar method approved by MDE; and

iii. A hydrologic and/or hydraulic model shall be used (e.g., TR-20, HEC-2, HEC-RAS, 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.

d. Annual Data Submittal: The City 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 V below;

ii. Chemical, biological, and physical monitoring results and a combined analysis for the approved monitoring locations; and

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

2. Stormwater Management Assessment

The City shall continue monitoring the Stony Run Watershed, or select and submit for MDE's approval a new watershed restoration project for determining the effectiveness of stormwater management practices for stream channel protection. Physical stream monitoring protocols shall include:

a. An annual stream profile and survey of permanently monumented cross-sections in the Stony Run to evaluate channel stability;

b. 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; and

c. A hydrologic and/or hydraulic model shall be used (e.g., TR-20, HEC-2, HEC-RAS, 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.

G. Program Funding

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.

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.

PART V. PROGRAM REVIEW AND ANNUAL PROGRESS REPORTING

A. <u>Annual Reporting</u>

1. Annual progress reports, required under 40 CFR 122.42(c), will facilitate the long-term assessment of Baltimore City's NPDES stormwater program. The City shall submit annual reports on or before the anniversary date of this permit and post these reports on the City's website. All information, data, and analyses shall be based on the fiscal year and include:

    a. The status of implementing the components of the stormwater management program that are established as permit conditions including:

        i. Source Identification;
        ii. Stormwater Management;
        iii. Erosion and Sediment Control;
        iv. Illicit Discharge Detection and Elimination;
        v. Trash and Litter;
        vi. Property Management and Maintenance;
        vii. Public Education;
        viii. Watershed Assessment;
        ix. Restoration Plans;
        x. TMDL Compliance;
        xi. Assessment of Controls; and
        xii. Program Funding.

    b. A narrative summary describing the results and analyses of data, including monitoring data that is accumulated throughout the reporting year;

    c. Expenditures for the reporting period and the proposed budget for the upcoming year;

    d. A summary describing the number and nature of enforcement actions, inspections, and public education programs;

    e. The identification of water quality improvements and documentation of attainment and/or progress toward attainment of benchmarks and applicable WLAs developed under EPA approved TMDLs; and

    f. The identification of any proposed changes to the City's program when WLAs are not being met.

2. To enable MDE to evaluate the effectiveness of permit requirements, the following information shall be submitted in a format consistent with Attachment A:

    a. Storm drain system mapping (PART IV.C.1);

b. Urban BMP locations (PART IV.C.3);

c. Impervious surfaces (PART IV.C.4);

d. Water quality improvement project locations (PART IV.C.6);

e. Monitoring site locations (PART IV.C.5);

f. Chemical monitoring results (PART IV.F.1);

g. Pollutant load reductions (PART IV.E.4 and IV.F.1);

h. Biological and habitat monitoring (PART IV.F.1);

i. Illicit discharge detection and elimination activities (PART IV.D.3);

j. Erosion and sediment control, and stormwater program information (PART IV.D.1 and IV.D.2);

k. Grading permit information - quarterly (PART IV.D.2); and

l. Fiscal analyses - cost for NPDES related implementation (PART IV.G).

3. Because this permit uses an iterative approach to implementation, the City must evaluate the effectiveness of its programs in each annual report. BMP and program modifications shall be made within 12 months if the City's annual report does not demonstrate compliance with this permit and show progress toward meeting WLAs developed under EPA approved TMDLs.

B. Program Review

In order to assess the effectiveness of the City's NPDES program for eliminating non-stormwater discharges through the illicit connection program and reducing the discharge of pollutants to protect water quality, MDE will review program implementation, annual reports, and periodic data submittal. Procedures for the review of local erosion and sediment control and stormwater management programs exist in Maryland's sediment control and stormwater management laws. Additional evaluations may be conducted at MDE’s discretion to determine compliance with permit conditions.

C. Reapplication for NPDES Stormwater Discharge Permit

This permit is effective for no more than 5 years, unless administratively continued by MDE. Continuation or reissuance of this permit beyond this permit term will require the City to reapply for NPDES stormwater discharge permit coverage in its fourth year annual report. Failure to reapply for coverage constitutes a violation of this permit.

As part of this application process, Baltimore City shall submit to MDE an executive summary of its NPDES stormwater management program that specifically describes how the City is meeting the overall goal to ensure that each City watershed has been thoroughly evaluated and its progress in implementing water quality improvements. This application shall be used to gauge the effectiveness of the City's NPDES stormwater program and will provide guidance for developing future permit conditions. At a minimum, the application summary shall include:

1. Baltimore City's NPDES stormwater program goals;

2. Program summaries for the permit term regarding:

    a. Illicit discharge detection and elimination results;

    b. Restoration plan status including City totals for impervious acres, impervious acres controlled by stormwater management, the current status of water quality improvement projects and acres managed, and documentation of progress toward meeting WLAs developed under EPA approved TMDLs;

    c. Pollutant load reductions as a result of this permit and an evaluation of whether TMDLs are being achieved;

    d. Impervious acres compared to the baseline and twenty percent restoration requirement in PART IV.E.2.a; and

    e. Other relevant data and information for describing City programs;

3. Program operation and capital improvement costs for the permit term; and

4. Descriptions of any proposed permit condition changes based on analyses of the successes and failures of the City's efforts to comply with the conditions of this permit.

PART VI. SPECIAL PROGRAMMATIC CONDITIONS

A. <u>Chesapeake Bay Restoration by 2025</u>

A Chesapeake Bay TMDL has been developed by the EPA for the six Bay States (Delaware, Maryland, New York, Pennsylvania, Virginia, and West Virginia) and the District of Columbia. The TMDL describes the level of effort that will be necessary for meeting water quality criteria and restoring Chesapeake Bay. This permit is requiring compliance with the Chesapeake Bay TMDL through the use of a strategy that calls for the restoration of twenty percent of previously developed impervious land with little or no controls within this five year permit term as described in Maryland's Watershed Implementation Plan. The TMDL is an aggregate of nonpoint sources or the load allocation (LA), point sources or WLA, and a margin of safety. The State is required to issue NPDES permits to point source discharges that are consistent with the assumptions of any applicable TMDL, including those approved subsequent to permit issuance.

Urban stormwater is defined in the CWA as a point source discharge and will subsequently be a part of Maryland's WLA. The NPDES stormwater permits can play a significant role in regulating pollutants from Maryland's urban sector and in the development of Chesapeake Bay Watershed Implementation Plans. Therefore, Maryland's NPDES stormwater permits issued to Baltimore City and other municipalities will require coordination with MDE's Watershed Implementation Plan and be used as the regulatory backbone for controlling urban pollutants toward meeting the Chesapeake Bay TMDL by 2025.

B. Comprehensive Planning

Baltimore City shall cooperate with other agencies during the completion of the Water Resources Element (WRE) as required by the Maryland Economic Growth, Resource Protection and Planning Act of 1992 (Article 66B, Annotated Code of Maryland). Such cooperation shall entail all reasonable actions authorized by law and shall not be restricted by the responsibilities attributed to other entities by separate State statute, including but not limited to reviewing and approving plans and appropriating funds.

PART VII. ENFORCEMENT AND PENALTIES

A. Discharge Prohibitions and Receiving Water Limitations

Baltimore City shall prohibit non-stormwater discharges through its MS4. NPDES permitted non-stormwater discharges are exempt from this prohibition. Discharges from the following will not be considered a source of pollutants when properly managed: water line flushing; landscape irrigation; diverted stream flows; rising ground waters; uncontaminated ground water infiltration to separate storm sewers; uncontaminated pumped ground water; discharges from potable water sources; foundation drains; air conditioning condensation; irrigation waters; springs; footing drains; lawn watering; individual residential car washing; flows from riparian habitats and wetlands; de-chlorinated swimming pool discharges (not including filter backwash); street wash water; and fire fighting activities.

Consistent with §402(p)(3)(B)(iii) of the CWA, Baltimore City shall take all reasonable steps to minimize or prevent the contamination or other alteration of the physical, chemical, or biological properties of any waters of the State, including a change in temperature, taste, color, turbidity, or odor of the waters or the discharge or deposit of any organic matter, harmful organism, or liquid, gaseous, solid, radioactive, or other substance into any waters of the State, that will render the waters harmful to:

1. Public health, safety, or welfare;

2. Domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial use;

3. Livestock, wild animals, or birds; and

4. Fish or other aquatic life.

B. Duty to Mitigate

Baltimore City shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

C. Duty to Comply

Baltimore City shall be responsible for complying with all conditions of this permit. Other entities may be used to meet various permit obligations provided that both the City and the other entity agree contractually. Regardless of any arrangement entered into however, the City remains responsible for permit compliance. In no case may this responsibility or permit compliance liability be transferred to another entity.

Failure to comply with a permit provision constitutes a violation of the CWA and is grounds for enforcement action; permit termination, revocation, or modification; or denial of a permit renewal application. The City shall comply at all times with the provisions of the Environment Article, Title 4, Subtitles 1, 2, and 4; Title 7, Subtitle 2; and Title 9, Subtitle 3 of the Annotated Code of Maryland.

The City shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the City to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the City only when the operation is necessary to achieve compliance with the conditions of the permit.

D. Sanctions

1. Penalties Under the CWA - Civil and Criminal

Section 309(g)(2) of the CWA, 33 USC §1319(g)(2) provides that any person who violates any permit condition is subject to a civil penalty not to exceed $10,000 per day for each violation, not to exceed $125,000. Pursuant to the Civil Monetary Penalty Inflation Adjustment Rule, 40 CFR Part 19, any person who violates any NPDES permit condition or limitation is liable for an administrative penalty not to exceed $16,000 per day for each such violation, up to a total penalty of $177,500. Pursuant to Section 309(c) of the CWA, 33 USC §1319(c), any person who negligently violates any permit condition is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than 1 year, or both. Any person who knowingly violates any permit condition is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than 3 years, or both.

2. Penalties Under the State's Environment Article - Civil and Criminal

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the City from civil or criminal responsibilities and/or penalties for a violation of Title 4, Title 7, and Title 9 of the Environment Article, Annotated Code of Maryland, or any federal, local, or other State law or regulation. Section 9-342 of the Environment Article provides that a person who violates any condition of this permit is liable to a civil penalty of up to $10,000 per violation, to be collected in a civil action brought by MDE, and with each day a violation continues being a separate violation. Section 9-342 further authorizes the MDE to impose upon any person who violates a permit condition, administrative civil penalties of up to $5,000 per violation, up to $50,000.

Section 9-343 of the Environment Article provides that any person who violates a permit condition is subject to a criminal penalty not exceeding $25,000 or imprisonment not exceeding 1 year, or both for a first offense. For a second offense, Section 9-343 provides for a fine not exceeding $50,000 and up to 2 years imprisonment.

The Environment Article, §9-343, Annotated Code of Maryland, provides that any person who tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $50,000 per violation, or by imprisonment for not more than 2 years per violation, or both.

The Environment Article, §9-343, Annotated Code of Maryland, provides that any person who knowingly makes any false statement, representation, or certification in any records or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $50,000 per violation, or by imprisonment for not more than 2 years per violation, or both.

E. Permit Revocation and Modification

1. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the City for a permit modification or a notification of planned changes or anticipated noncompliance does not stay any permit condition. A permit may be modified by MDE upon written request by the City and after notice and opportunity for a public hearing in accordance with and for the reasons set forth in COMAR 26.08.04.10.

After notice and opportunity for a hearing and in accordance with COMAR 26.08.04.10, MDE may modify, suspend, or revoke and reissue this permit in whole or in part during its term for causes including, but not limited to the following:

a. Violation of any terms or conditions of this permit;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;

c. A change in any condition that requires either a temporary reduction or elimination of the authorized discharge;

d. A determination that the permitted discharge poses a threat to human health or welfare or to the environment and can only be regulated to acceptable levels by permit modification or termination;

e. To incorporate additional controls that are necessary to ensure that the permit effluent limit requirements are consistent with any applicable TMDL WLA allocated to the discharge of pollutants from the MS4; or

f. As specified in 40 CFR §§122.62, 122.63, 122.64, and 124.5.

2. Duty to Provide Information

Baltimore City shall furnish to MDE, within a reasonable time, any information that MDE may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit; or to determine compliance with this permit. The City shall also furnish to MDE, upon request, copies of records required to be kept by this permit.

F. Inspection and Entry

Baltimore City shall allow an authorized representative of the State or EPA, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter the permittee's premises where a regulatory activity is located or conducted or where records must be kept under the conditions of this permit;

2. Have access to and obtain copies at reasonable times of any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times, without prior notice, any construction site, facility, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location.

G. Monitoring and Recordkeeping

Unless otherwise specified by this permit, all monitoring and records of monitoring shall be in accordance with 40 CFR Part 122.41(j).

H. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, State, or local law or regulations.

I. Severability

The provisions of this permit are severable. If any provision of this permit shall be held invalid for any reason, the remaining provisions shall remain in full force and effect. If the application of any provision of this permit to any circumstance is held invalid, its application to other circumstances shall not be affected.

J. Signature of Authorized Administrator and Jurisdiction

Each application, report, or other information required under this permit to be submitted to MDE shall be signed as required by COMAR 26.08.04.01-1. Signatories shall be a principal executive officer, ranking elected official, or other duly authorized employee.

Jay G. Sakai, Director
Water Management Administration

12/27/13
Date

Attachment A
Annual Report Databases

As part of the NPDES annual reporting process, permittees are required to complete databases for storm drain systems, urban best management practices, impervious surfaces, watershed restoration, monitoring site locations, chemical monitoring, pollutant load reductions, biological monitoring, illicit discharge detection, erosion and sediment control responsible personnel training, quarterly grading permit summaries, and fiscal analyses. For compatibility purposes, databases should be submitted in Access or Excel. Any file in a format other than Access or Excel is to be submitted in a "*.dbf" format. Examples of databases and definitions for each category are provided below. If there are any questions regarding the compatibility of databases, please contact the Water Management Administration's Sediment, Stormwater, and Dam Safety Program at (410) 537-3543.

MDE is utilizing Environmental System Research Institute (ESRI) Arc Geographic Information System (ArcGIS) technologies to track and update all collected datasets and integrate them spatially. GIS datasets shall be submitted in an ESRI Geodatabase or shapefile format, (i.e., "*.shp"). All datasets shall conform to the Maryland State Geographic Information Committee standard – North American Datum (NAD), 1983 Maryland State Plane Coordinate System in "meter" units. Location information collected by global positioning systems (GPS) for the purposes of populating the GIS datasets shall be accurate to the sub-meter (+/- 1 meter) level for acceptable mapping. Additionally, each table below requires a "unique identifier" which is necessary for linking GIS mapping locations to datasets with further descriptions (i.e., outfall dimensions, BMP type, chemical results, etc.).

A. Storm Drain System Mapping Associated with GIS Coverage (PART III.C.1.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
OUTFALL_ID	TEXT	15	Unique outfall ID
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Northing
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Easting
DIM_OUTFL	NUMBER	3	Outfall Dimensions in inches
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
TYPE_OUTFL	TEXT	3	Outfall Type (RCP,CMP, PVC)
DRAIN_AREA	NUMBER	8	Drainage area to outfall (acres)[1]
LAND_USE	NUMBER	3	Predominant land use[2]

[1] GIS shapefile required
[2] Use attached Maryland Office of Planning land use codes.

B. Urban Best Management Practices (BMPs) Associated with GIS Coverage (PART III.C.2.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
STRU_ID	TEXT	8	Unique structure ID[5]
PERMIT_NO	TEXT	10	Unique permit number
STRU_NAME	TEXT	60	Structure name
ADDRESS	TEXT	50	Structure address
CITY	TEXT	15	Structure address
STATE	TEXT	2	Structure address
ZIP	NUMBER	10	Structure address
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Northing
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Easting
ADC_MAP	TEXT	5	ADC map book coordinate (optional if BMP has MD Northing\Easting)
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code

STRU_TYPE	TEXT	10	Identify structure or BMP type[3]
LAND_USE	NUMBER	3	Predominant land use[2]
CON_PURPOSE	TEXT	4	New development (NEWD), Redevelopment (REDE), or Restoration (REST)
DRAIN_AREA	NUMBER	8	Structure drainage area (acres)[1]
IMP_ACRES	NUMBER	8	Structure impervious drainage area (acres) [1]
TOT_DRAIN	NUMBER	8	Total site area (acres)
WQ_VOLUME	NUMBER	8	Volume of rainfall depth in inches managed by the practice
RCN	NUMBER	5	Runoff curve number (weighted)
ON_OFF_SITE	TEXT	3	On or offsite structure
APPR_DATE	DATE/TIME	8	Permit approval date
BUILT_DATE	DATE/TIME	8	Construction completion date
INSP_DATE	DATE/TIME	8	Record most recent inspection date
GEN_COMNT	TEXT	60	General comments
LAST_CHANGE	DATE/TIME	8	Date last change made to this record

[1] GIS shapefile required
[2] Use attached Maryland Office of Planning land use codes
[3] Use attached urban BMP type code
[5] Use attached unique structure identification codes

C. Impervious Surfaces Associated with GIS Coverage (PART III.C.3.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
IMP_ACREAGE	NUMBER	8	Total impervious acreage in watershed[1]
IMP_CONTROLLED	NUMBER	8	Impervious acreage controlled to the maximum extent practicable[1]
IMP_BASELINE	NUMBER	8	Impervious acreage not controlled to the maximum extent practicable[1, 2]
RESTORATION_P	NUMBER	8	Impervious acreage proposed for watershed restoration[1]
RESTORATION_UC	NUMBER	8	Impervious acreage under construction for watershed restoration[1]
RESTORATION_C	NUMBER	8	Impervious acreage completed (since program inception)[1]

[1] GIS shapefile required
[2] Fixed baseline based on MDE Guidance and approval

D. Water Quality Improvement Project Locations Associated with GIS Coverage (PART III.C.5.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
STRU_ID	TEXT	8	Unique structure ID[5]
STRU_NAME	TEXT	60	Structure name
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Northing
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Easting
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
STRU_TYPE	TEXT	10	Identify structure or BMP type[3]
LAND_USE	NUMBER	3	Predominant land use[2]
DRAIN_AREA	NUMBER	8	Structure drainage area (acres)[1]
IMP_ACRES	NUMBER	8	Structure impervious drainage area (acres) [1]
WQ_VOLUME	NUMBER	8	Volume of rainfall depth in inches managed by the practice
LINEAR_FT	NUMBER	8	Use this field for stream restoration or shoreline protection
POUNDS_TN	NUMBER	8	Use this field for street sweeping or inlet cleaning
POUNDS_TP	NUMBER	8	Use this field for street sweeping or inlet cleaning
POUNDS_TSS	NUMBER	8	Use this field for street sweeping or inlet cleaning
APPR_DATE	DATE/TIME	8	Permit approval date
BUILT_DATE	DATE/TIME	8	Construction completion date
INSP_DATE	DATE/TIME	8	Record most recent inspection date
GEN_COMNT	TEXT	60	General comments

LAST_CHANGE	DATE/TIME	8	Date last change made to this record

[1] GIS shapefile required
[2] Use attached Maryland Office of Planning land use codes
[3] Use attached urban BMP type code
[5] Use attached unique structure identification codes

E. Monitoring Site Locations Associated with GIS Coverage (PART III.C.4.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
STATION	TEXT	30	Unique station ID
OUTFALL_OR_INSTREAM	TEXT	10	Outfall or instream station
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Northing
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Easting
DRAIN_AREA	NUMBER	8	Drainage area in acres[1]

[1] GIS shapefile required

E.1. Monitoring Site Locations - Use for Multiple Land Use Values in the Drainage Area

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
STATION	TEXT	30	Name of station (associated with unique station ID in section E.)
LAND_USE_RANK	NUMBER	8	Ranking of land use from predominant to least
LAND_USE	NUMBER	3	Identify land use[2]
DRAIN_AREA	NUMBER	8	Drainage area in acres[1]

[1] GIS shapefile required
[2] Use attached Maryland Office of Planning land use codes

E.2. Monitoring Site Locations - Use for Multiple Stormwater BMPs in the Drainage Area

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
STATION	TEXT	30	Name of station (associated with unique station ID in section E.)
BMP_RANK	NUMBER	5	Ranking of BMPs from predominant to least
STRU_TYPE	TEXT	10	Identify structure or BMP type[3]
BMP_DESCRIPTION	TEXT	60	Brief description of BMP
DRAIN_AREA	NUMBER	8	Drainage area in acres treated by BMP[1]

[1] GIS shapefile required
[3] Use attached urban BMP type code.

F. Chemical Monitoring (PART III.F.1.)

Column Name	Data Type	Length	Description
JURISDICTION	TEXT	50	Monitoring jurisdiction name
EVENT_DATE	DATE/TIME	8	Date of storm event
EVENT_TIME	DATE/TIME	8	Time monitoring begins
STATION	TEXT	30	Station name (associated w/ unique station ID in section E.)
OUTFALL_OR_INSTREAM	TEXT	10	Outfall or instream station
STORM_OR_BASEFLOW	TEXT	10	Storm or base flow sample
DEPTH	NUMBER	5	Depth of rain in inches
DURATION	NUMBER	5	Duration of event in hours and minutes
INTENSITY	NUMBER	5	Intensity = depth/duration
TOTAL_STORM_FLOW_VOLUME	NUMBER	5	Total storm flow volume in gallons

WATER_TEMP	NUMBER	5	Flow weighted average of water temperature (Fahrenheit)
pH	NUMBER	5	Flow weighted average of pH
BOD_dt	NUMBER	5	Biological Oxygen Demand detection limit used in analysis
BOD_EMC0	NUMBER	5	EMC for Biological Oxygen Demand in mg/l using (0)*
BOD_EMC_dt	NUMBER	5	EMC for Biological Oxygen Demand in mg/l using (dt)**
TKN_dt	NUMBER	5	Total Kjeldahl Nitrogen detection limit used in analysis
TKN_EMC0	NUMBER	5	EMC for Total Kjeldahl Nitrogen in mg/l using (0)*
TKN_EMC_dt	NUMBER	5	EMC for Total Kjeldahl Nitrogen in mg/l using (dt)**
NITRATE+NITRITE_dt	NUMBER	5	Record Nitrate + Nitrite detection limit used in analysis
NITRATE+NITRITE_EMC0	NUMBER	5	Enter EMC for Nitrate + Nitrite in mg/l using (0)*
NITRATE_EMC_dt	NUMBER	5	Enter EMC for Nitrate + Nitrite in mg/l using (dt)**
TOTAL_PHOSPHORUS_dt	NUMBER	5	Record Total Phosphorus detection limit used in analysis
TOTAL_PHOSPHORUS_EMC0	NUMBER	5	Enter EMC for Total Phosphorus in mg/l using (0)*
TOTAL_PHOSPHORUSEMC_dt	NUMBER	5	Enter EMC for Total Phosphorus in mg/l using (dt)**
TSS_dt	NUMBER	5	Total Suspended Solids detection limit used in analysis
TSS_EMC0	NUMBER	5	EMC for Total Suspended Solids in mg/l using (0)*
TSS_EMC_dt	NUMBER	5	EMC for Total Suspended Solids in mg/l using (dt)**
TOTAL_COPPER_dt	NUMBER	5	Record Total Copper detection limit used in analysis
TOTAL_COPPER_EMC0	NUMBER	5	Enter EMC for Total Copper in ug/l using (0)*
TOTAL_COPPER_EMC_dt	NUMBER	5	Enter EMC for Total Copper in ug/l using (dt)**
TOTAL_LEAD_dt	NUMBER	5	Record Total Lead detection limit used in analysis
TOTAL_LEAD_EMC0	NUMBER	5	Enter EMC for Total Lead in ug/l using (0)*
TOTAL_LEAD_EMC_dt	NUMBER	5	Enter EMC for Total Lead in ug/l using (dt)**
TOTAL_ZINC_dt	NUMBER	5	Record Total Zinc detection limit used in analysis
TOTAL_ZINC_EMC0	NUMBER	5	Enter EMC for Total Zinc in ug/l using (0)*
TOTAL_ZINC_EMC_dt	NUMBER	5	Enter EMC for Total Zinc in ug/l using (dt)**
HARDNESS_dt	NUMBER	5	Record detection limit used in analysis
HARDNESS_EMC0	NUMBER	5	Enter EMC for Hardness in ug/l using (0)*
HARDNESS_EMC_dt	NUMBER	5	Enter EMC for Hardness in ug/l using (dt)**
TPH_dt	NUMBER	5	Record detection limit used in analysis
TPH_EMC0	NUMBER	5	EMC for Total Petroleum Hydrocarbons in mg/l using (0)*
TPH_EMC_dt	NUMBER	5	EMC for Total Petroleum Hydrocarbon in mg/l using (dt)**
ENTEROCOCCI_dt	NUMBER	5	Record detection limit used in analysis
ENTEROCOCCI_EMC0	NUMBER	5	EMC for enterococci in MPN/100 using (0)*
ENTEROCOCCI_EMC_dt	NUMBER	5	EMC for enterococci in MPN/100 using (dt)**
ECOLI_dt	NUMBER	5	Record E. Coli detection limit used in analysis
ECOLI_EMC0	NUMBER	5	Enter EMC for E. Coli in MPN/100ml using (0)*
ECOLI_EMC_dt	NUMBER	5	Enter EMC for E. Coli in MPN/100ml using (dt)**
LOCAL_CONCERN1_dt	NUMBER	5	Record detection limit used in analysis
LOCAL_CONCERN1_EMC0	NUMBER	5	Enter EMC for in mg/l using (0)*
LOCAL_CONCERN1_EMC_dt	NUMBER	5	Enter EMC for in mg/l using (dt)**
LOCAL_CONCERN2_dt	NUMBER	5	Record detection limit used in analysis
LOCAL_CONCERN2_EMC0	NUMBER	5	Enter EMC for in mg/l using (0)*
LOCAL_CONCERN2_EMC_dt	NUMBER	5	Enter EMC for in mg/l using (dt)**
LOCAL_CONCERN3_dt	NUMBER	5	Record detection limit used in analysis
LOCAL_CONCERN3_EMC0	NUMBER	5	Enter EMC for in mg/l using (0)*
LOCAL_CONCERN3_EMC_dt	NUMBER	5	Enter EMC for in mg/l using (dt)**
GEN_COMNT	TEXT	50	Monitoring comments/documentation

key: **mg/l** = milligrams per liter ***u*g/l** = micrograms per liter **MPN** = most probable number per 100 milliliters
*** EMC (0)** = Flow weighted averages for three discrete samples representative of a storm using zero (0) for any discrete samples recorded less than the detection limit.

** **EMC (dt)** = Flow weighted averages for three discrete samples representative of a storm using the detection limit value (dt) for any discrete samples recorded less than the detection limit.

G. Pollutant Load Reductions Associated with GIS Coverage (PART III.E.4. and III.F.1.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
TN_RUNOFF	NUMBER	10	(TKN) + (Nitrate + Nitrite) load before treatment (lbs/year)
TN_CONTROLLED	NUMBER	10	(TKN) + (Nitrate + Nitrite) treated by BMPs (lbs/year)
TP_RUNOFF	NUMBER	10	TP load before treatment (lbs/year)
TP_CONTROLLED	NUMBER	10	TP treated by BMPs (lbs/year)
TSS_RUNOFF	NUMBER	10	TSS load before treatment (lbs/year)
TSS_CONTROLLED	NUMBER	10	TSS treated by BMPs (lbs/year)

G.1. Additional Pollutants - Use for Multiple Pollutant Entries

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
POLLUTANT	TEXT	20	Identify additional pollutants for impaired water (TMDLs)
WLA_RUNOFF	NUMBER	10	WLA for an approved TMDL before treatment (lbs/year)
WLA_CONTROLLED	NUMBER	10	Waste load for an approved TMDL treated by BMPs (lbs/year)

H. Biological and Habitat Monitoring (PART III.F.1.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
STATION	TEXT	30	Unique station ID
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 Meters) Northing
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 Meters) Easting
DRAIN_AREA	NUMBER	8	Drainage area in acres
BIBI	NUMBER	4	Benthic index of biological indicators
EMBEDDEDNESS	NUMBER	4	Rapid bioassessment protocol score for embeddedness
EPIFAUNAL	NUMBER	4	Rapid bioassessment protocol score for epifaunal
HABITAT	NUMBER	4	Rapid bioassessment protocol score for habitat
LAND_USE	NUMBER	3	Predominant land use[2]

[2] Use attached Maryland Office of Planning land use codes

I. Illicit Discharge Detection and Elimination (PART III.D.3.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
OUTFALL_ID	TEXT	15	Unique outfall ID used in Section A. database
SCREEN_DATE	DATE/TIME	8	Field screening date
TEST_NUM	NUMBER	5	Initial screening, follow-up test, 3rd, etc.
LAST_RAIN	DATE/TIME	8	Date of last rain > 0.10”
TIME	DATE/TIME	8	Field screening time
OBSERV_FLOW	TEXT	3	Was flow observed? (yes/no)
CFS_FLOW	NUMBER	5	Flow rate in cubic feet per second (CFS)
WATER_TEMP	NUMBER	5	Water temperature (Fahrenheit)
AIR_TEMP	NUMBER	5	Air temperature in (Fahrenheit)

CHEM_TEST	TEXT	3	Was chemical test performed? (yes/no)
pH	NUMBER	5	pH meter reading
PHENOL	NUMBER	5	Milligrams per Liter (mg/l)
CHLORINE	NUMBER	5	mg/l
DETERGENTS	NUMBER	5	mg/l
COPPER	NUMBER	5	mg/l
ALGAEGROW	TEXT	3	Was algae growth observed? (yes/no)
ODOR	TEXT	2	Type of odor[4]
COLOR	TEXT	2	Discharge color[4]
CLARITY	TEXT	2	Discharge clarity [4]
FLOATABLES	TEXT	2	Floatables in discharge[4]
DEPOSITS	TEXT	2	Deposits in outfall area[4]
VEG_COND	TEXT	2	Vegetative condition in outfall area[4]
STRUCT_COND	TEXT	2	Structural condition of outfall[4]
EROSION	TEXT	2	Erosion in outfall area[4]
COMPLA_NUM	TEXT	3	Is screening complaint driven? (yes/no)
ILLICIT_Q	TEXT	3	Was illicit discharge found? (yes/no)
ILLICIT_ELIM	TEXT	3	Was illicit discharge eliminated? (yes/no)

[4] Use Attached Pollution Prevention Activities Codes

J. Responsible Personnel Certification Information (PART III.D.2.)

Column Name	Data Type	Length	Description*
PREFIX	TEXT	2	Mr, Ms
FIRSTNAME	TEXT	15	First name
LASTNAME	TEXT	15	Last name
ADDRESS	TEXT	50	Full address
CITY	TEXT	15	City
STATE	TEXT	2	State
ZIP	NUMBER	10	Zip code
DATE	DATE/TIME	8	Date of class
PHONE	NUMBER	10	Phone number
CERT_NUM	NUMBER	6	Certification number as provided by MDE
COMPANY	TEXT	30	Employer
INSTRUCTOR	TEXT	20	Instructor's last name

* Do not use all caps

K. Quarterly Grading Permit Information Associated with GIS Coverage (PART III.D.2.)

Column Name	Data Type	Length	Description
SITE_NAME	TEXT	60	Construction site name
SITE_OWNER	TEXT	60	Construction site owner
OWNER_ADDRESS	TEXT	50	Owner address
OWNER_CITY	TEXT	15	Owner address
OWNER_ZIP	NUMBER	10	Owner zip code
SITE_ADDRESS	TEXT	50	Site address
SITE_CITY	TEXT	15	Site address
SITE_ZIP	NUMBER	10	Site zip code
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 meters) – site
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 meters) – site
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
DIST_AREA	NUMBER	8	Disturbed area of site in acres[1]
GRAD_PERMIT	TEXT	50	Local grading permit number

APPR_DATE	DATE/TIME	8	Grading Permit approval date
LAND_USE	NUMBER	3	Predominant land use[2] (built)

[1] GIS shapefile required
[2] Use attached Maryland Office of Planning land use codes

L. Fiscal Analyses (PART III.G.)

Permit Condition	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
LEGAL_AUTH	NUMBER	13	Total annual cost for legal authority
SOURCE_ID	NUMBER	13	Total annual cost for source ID
SW_MANAGEMENT	NUMBER	13	Total annual cost for stormwater management
EROS_SED_CON	NUMBER	13	Total annual cost for erosion and sediment
ILLICIT_DET/ELIM	NUMBER	13	Total annual cost for illicit det/elimination
TRASH_ELIM	NUMBER	13	Total annual cost for trash elimination
PROP_MANAGEMENT	NUMBER	13	Total annual cost for property management
INLET_CLEAN	NUMBER	13	Total annual cost for inlet cleaning
STRT_SWEEP	NUMBER	13	Total annual cost for street sweeping
RD_MAINT_OTHER	NUMBER	13	Total annual cost for road maintenance - other
PUB_EDUCATION	NUMBER	13	Total annual cost for public education
WATERSHED_ASSESS	NUMBER	13	Total annual cost for watershed assessment
WATERSHED_RESTOR	NUMBER	13	Total annual cost for watershed restoration
CHEM_MON_ASSESS	NUMBER	13	Total annual cost for chemical monitoring
BIO_MON_ASSESS	NUMBER	13	Total annual cost for biological monitoring
PHYS_STRM_ASSESS	NUMBER	13	Total annual cost for physical assessment
MANUAL_MON	NUMBER	13	Total annual cost for design manual monitorin
TMDL_ASSESS	NUMBER	13	Total annual cost for tmdl assessment
TOTAL_NPDES_FUNDS	NUMBER	13	Total annual cost for total npdes program

[2]MDP Land Use/Land Cover

10 Urban Built-up

- **11 Low Density Residential** – Detached single family/duplex dwelling units, yards, and associated areas. Areas of more than 90 percent single family/duplex dwelling units, with lot sizes less than five acres but at least one-half acres (.2 dwelling units/acre to 2 dwelling units/acre).

- **12 Medium Density Residential** – Detached single family/duplex, attached single unit row housing, yards, and associated areas. Areas of more than 90 percent single family/duplex units and attached single unit row housing, with lot sizes of less than one-half acre but at least one-eighth acre (2 dwelling units/acre to 8 dwelling units/acre).

- **13 High Density Residential** – Attached single unit row housing, garden apartments, high rise apartments/condominiums, mobile home and trailer parks. Areas of more than 90 percent high density residential units, with more than 8 dwelling units/acre.

- **14 Commercial** – Retail and wholesale services. Areas used primarily for the sale of products and services, including associated yards and parking areas.

- **15 Industrial** – Manufacturing and industrial parks, including associated warehouses, storage yards, research laboratories, and parking areas.

- **16 Institutional** – Elementary and secondary schools, middle schools, junior and senior high schools, public and private colleges and universities, military installations (built-up areas only, including buildings and storage, training, and similar areas) churches and health facilities, correctional facilities, and government offices and facilities that are clearly separable from the surrounding land cover.

- **17 Extractive** – Surface mining operations, including sand and gravel pits, quarries, coal surface mines, and deep coal mines. Status of activity (active vs. abandoned) is not distinguished.

- **18 Open Urban Land** – Urban areas whose use does not require structures, or urban areas where non-conforming uses characterized by open land have become isolated. Included are golf courses, parks, recreation areas (except associated with schools or other institutions), cemeteries, and entrapped agricultural and undeveloped land within urban areas.

- **191 Large Lot Subdivision (Agriculture)** – Residential subdivisions with lot sizes less than 20 acres but at least 5 acres, with a dominant land cover of open fields or pasture.

- **192 Large Lot Subdivision (Forest)** - Residential subdivisions with lot sizes less than 20 acres but at least 5 acres, with a dominant land cover of deciduous, evergreen or mixed forest.

20 Agriculture

- **21 Cropland** – Field and forage crops.

- **22 Pasture** – Land used for pasture, both permanent and rotated: grass.

- **23 Orchards/Vineyards/Horticulture** – Areas of intensively managed commercial bush and tree crops, including areas used for fruit production, vineyards, sod and seed farms, nurseries, and green houses.

- **24 Feeding Operations** – Cattle or hog feeding lots, poultry houses, and holding lots for animals, and commercial fishing areas (including oyster beds).

- **241 Feeding Operations** – Cattle or hog feeding lots, poultry houses, and holding lots for animals.

- **242 Agricultural Building** – Breeding and training facilities, storage facilities, built-up areas associated with a farmstead, small farm ponds, and commercial fishing areas.

- **25 Row and Garden Crops** – Intensively managed track and vegetable farms and associated areas.

40 Forest

- **41 Deciduous Forest** – Forested areas in which the trees characteristically lose their leaves at the end of the growing season. Included are such species as oak, hickory, aspen, sycamore, birch, yellow poplar, elm, maple, and cypress.

- **42 Evergreen Forest** - Forested areas in which the trees are characterized by persistent foliage throughout the year. Included are such species as white pine, pond pine, hemlock, southern white cedar, and red pine.

- **43 Mixed Forest** – Forested areas in which neither deciduous or evergreen species dominate, but in which there is a combination of both types.

- **44 Brush** – Areas that do not produce timber or other wood products but may have cut-over timber stands, abandoned agriculture fields, or pasture. These areas are characterized by vegetation types such as sumac, vines, rose, brambles, and tree seedlings.

50 Water – Rivers, waterways, reservoirs, ponds, bays, estuaries, and ocean.

60 Wetlands – Forested and non-forested wetlands, including tidal flats, tidal and non-tidal marshes, and upland swamps and wet areas.

70 Barren Land

- **71 Beaches** – Extensive shoreline areas of sand and gravel accumulation, with no vegetative cover or other land use.

- **72 Bare Exposed Rock** – Areas of bedrock exposure, scarps, and other natural accumulations of rock without vegetative cover.

73 Bare Ground – Areas of exposed ground caused naturally, by construction, or other cultural processes.

[3] Glossary of Stormwater BMP Structure Types and Practices Reported to MDE

Structural BMPs			
Structure Type	**Code**	**Structure Function**	**Chesapeake Bay Program Classification**
Artificial Wetlands (See Shallow Marsh also)	SM	A structure with a permanent shallow pool planted with wetland vegetation often designed to provide extended detention.	Wet Pond & Wetlands
Attenuation swale or dry swale	SW	Open drainage channel designed to detain and promote the filtration of stormwater runoff through underlying fabricated soil media (see Grassed Swale or SW).	Filtering Practice
Bio-retention	BR	Landscape designed such that stormwater runoff collects in shallow depressions before filtering through fabricated planting soil media .	Filtering Practice
Check Dam	CD	A small dam constructed in a gully or other small waterway to decrease flow velocity (by reducing the channel gradient), minimize scour, & promote deposition of sediment.	Filtering Practice
Detention Structure (Dry Pond)	DP	Designed to store runoff without a permanent pool.	Dry Detention Pond & Hydrodynamic Structure
Dry Well	DW	An infiltration trench variant designed to exclusively accommodate rooftop runoff.	Infiltration Practice
Extended Detention Structure (Two types):	ED	Designed to temporarily detain a portion of runoff for 24 hrs after a storm using a fixed orifice to regulate outflow at a specific rate, allowing solids & associated time to settle out.	Dry Extended Detention Pond
Extended Detention Structure, Dry	EDSD	Designed for the temporary storage of runoff associated with at least a 24 hr 1-year storm without creating a permanent pool of water.	Dry Extended Detention Pond
Extended Detention Structure, Wet	EDSW	Designed for the storage of runoff associated with at least a 24 hr 1-year storm. The detained water drains partially & the remaining portion creates a permanent pool .	Dry Extended Detention Pond or Wet Pond & Wetlands
Filter Strip	FS	Vegetated land designed to intercept sheet flow from upstream development.	Filtering Practice
Flow Splitter	FlSp	Hydraulic structure designed either to divert a portion of stream flow to a BMP located away from a channel, direct stormwater to a parallel pipe system or bypass a portion of base flow around a pond .	Not a WQ BMP
Flood Management Area	FLOOD	10 year storm overbank flood protection	Not a WQ BMP
Forebay	FOREBAY	Storage structure adjoining a SWM BMP inlet designed to trap coarse sediments and thereby lessen their accumulation in the main treatment area .	Dry Detention Pond & Hydrodynamic Structure
Gabion	GABION	A large rectangular box made of heavy gauge wire mesh which holds cobbles and boulders for changing stream flow patterns, bank stabilization, and erosion control.	Filtering Practice
Grass Swale	SW	Open vegetated channel used to convey runoff and provide treatment by filtering pollutants and sediment.	Filtering Practice
Hydrodynamic Structure such as 1) Oil grit separator 2) Bay Saver© 3) Stormceptor©	 OGS BS SC	An engineered structure used to separate sediments and oils from stormwater runoff using gravitational separation and/or hydraulic flow.	Dry Detention Pond & Hydrodynamic Structure
Infiltration Basin	IB	Designed to allow stormwater to infiltrate into permeable soils. It differs from a retention structure in that it may include a back-up underdrain pipe to ensure eventual removal of standing water.	Infiltration Practice

Infiltration Trench (Three types):	IT	An excavated trench that has been backfilled with exposed or unexposed stones to form an underground reservoir (Also see Dry Well).	Infiltration Practice
Complete Exfiltration	ITCE	Runoff can only exit the trench by exfiltrating through the stone reservoir into the underlying soil	
Partial Exfiltration	ITPE	Runoff exits the trench by exfiltrating a) through the stone reservoir into the underlying soil, and b) via a perforated underdrain at the bottom of the trench that diverts runoff to a central outlet.	
Water Quality Exfiltration	ITWQE	Storage volume is set to receive only the first $\frac{1}{2}$" of runoff (first flush) from an impervious area of the watershed.	
Landscape	LANDSCAPE	Impervious area reduction (Thus far, only Prince Georges County has submitted reports of this practice).	Filtering Practice
Level Spreader	LS	A device for distributing stormwater uniformly over the ground surface as sheet flow to prevent concentrated, erosive flow and promote infiltration.	Infiltration Practice
Micropool (Reported by various jurisdictions before the standardization of codes)	MP	A smaller permanent pool used in a stormwater pond to mitigate the thermal impacts of a larger pond, impacts on existing wetlands, or compensate for lack of topographic relief.	Wet Pond & Wetlands
Observation well	OBS_WELL	A test well installed in an infiltration trench to monitor draining time after installation.	Not a SWM BMP – Observation Well
Other	OTH	A stormwater facility that is known to have been implemented but whose type cannot definitively be identified at the time of submitting a Notice of Construction Completion report to MDE.	Defaults to Dry Detention Pond & Hydrodynamic Structure, evaluated as the least efficient class of facilities in removing TSS, TN, and TP from stormwater runoff.
Porous Pavement	PP	A porous asphalt surface designed to have bearing strength similar to conventional asphalt but provides a rapid conduit for runoff to reach a subsurface stone reservoir.	Infiltration Practice
Retention Pond (See Wet Pond/WP)	WP	A structure with a permanent pool of water for treating incoming storm runoff.	Wet Pond & Wetlands
Sand Filter	SF	A bed of sand to which the first flush of runoff is diverted. Water leaving the filter is collected in underground pipes & returned to a waterway. A layer of peat, limestone, and/topsoil may be added to improve removal efficiency.	Filtering Practice
Shallow Marsh	SM	A structure with a permanent shallow pool planted with wetland vegetation often designed to provide extended detention.	Wet Pond & Wetlands
Underground Storage	UGS	Vault like structure designed for the temporary storage of storm flow.	Dry Detention Pond & Hydrodynamic Structure
Vegetated Buffer	VB	A vegetated protective zone of variable width located along both sides of a waterway.	Filtering Practice
Water Quality Inlet	OGS	See Hydrodynamic Structure-Oil Grit Separator.	Dry Detention Pond & Hydrodynamic Structure
Wet Pond	WP	A structure with a permanent pool of water for treating incoming storm runoff.	Wet Pond & Wetlands

Environmental Site Design Practices			
Practice Type	**Code**	**Function**	**Chesapeake Bay Program Classification**
Environmental Site Design -- alternative surfaces, non-structural and micro-scale practices may be grouped as a comprehensive stormwater design system and identified singlely as ESD.	ESD	A comprehensive design strategy for maintaining predevelopment runoff characteristics and protecting natural resources is available. This strategy relies on integrating site design, natural hydrology, and smaller controls to capture and treat runoff.	Stormwater to the MEP
Alternative Surfaces			
1) Green Roof	ESDGR	Alternative surface used in place of traditional flat or pitched roofs to reduce runoff.	Stormwater to the MEP
2) Permeable Pavements	ESDPERMP	Any of the available materials that are used to replace traditional pavements (e.g., asphalt, concrete) and reduce runoff.	
3) Reinforced Turf	ESDRTRF	Grassed or gravel area with open, load-bearing matrix for structural integrity.	
Nonstructural Practices			
1) Disconnection of Rooftop Runoff	ESDRTD	Rooftop runoff is disconnected and then directed to a pervious area where it either infiltrates or is filtered.	Stormwater to the MEP
2) Disconnection of Non-Rooftop Runoff	ESDNRTD	Runoff from surface impervious areas is disconnected and then directed to a pervious area where it either infiltrates or is filtered. Examples: Overland sheetflow, permeable pavers, rain gardens and small scale filters.	
3) Sheetflow to Conservation Areas	ESDSFNAC	Runoff is discharged to a natural conservation or buffer area (e.g. stream buffers, forest buffers) through overland flow.	
Micro-Scale Practices			
1) Rainwater Harvesting	ESDRH	These practices intercept and store rainfall for future use.	Stormwater to the MEP
2) Submerged Gravel Wetlands	ESDSGW	Small-scale filter using wetland plants and a gravel media to provide treatment.	
3) Landscape Infiltration	ESDIL	Combination of landscape features with infiltration practices.	
4) Infiltration Berms	ESDIB	Series of small berms used in sloped areas to detain, infiltrate, and filter runoff.	
5) Dry Wells	ESDDW	An infiltration trench variant designed to exclusively accommodate rooftop runoff.	
6) Micro-Bioretention	ESDMB	Small, vegetated filter used to capture and treat runoff from adjacent impervious areas.	
7) Rain Gardens	ESDRG	Shallow landscaped feature used to detain and filter runoff and used primarily in residential applications.	
8) Swales	ESDSW	Channels that provide conveyance, water quality treatment and flow attenuation of runoff. Variants include the grassed swale, bio-swale, and wet swale.	
9) Enhanced Filters	ESDEF	A modification applied to other filters that increase nutrient removal and groundwater recharge.	

Alternative MS4 BMPs			
Practice Type	**Code**	**Description**	**Chesapeake Bay Program Classification**
Mechanical Street Sweeping	MSS	Removes the buildup of pollutants that have been deposited along the street or curb using a mechanical sweeper truck	Street Sweeping, Mechanical
Regenerative/Vacuum Street Sweeping	VSS	Removes the buildup of pollutants that have been deposited along the street or curb using a vacuum-assisted sweeper truck	Street Sweeping, Regenerative
Nutrient Management	NM	Comprehensive nutrient management plan for reducing and or eliminating fertilizer use	Nutrient Management
Grass/Meadow Buffers	GMB	An area of trees at least 35 feet wide on one side of a stream, usually accompanied by infrequently-mowed grass, meadow flora species, and other vegetation that is adjacent to a body of water	Urban Grass/Meadow Buffers
Forest Buffers	FB	An area of trees at least 35 feet wide on one side of a stream, usually accompanied by trees, shrubs, and other vegetation that is adjacent to a body of water	Urban Forest Buffers
Impervious Surface Elimination (to Pervious)	IMPP	Pollutant load reduction expected when land cover is converted from impervious to pervious	Land Cover Change
Impervious Surface Elimination (to Forest)	IMPF	Pollutant load reduction expected when land cover is converted from impervious to forest	Land Cover Change
Planting Trees or Forestation on Pervious Urban	FPU	100 trees per acre or greater is necessary with at least 50% of the trees being 2 inches or greater in diameter at 4 ½ feet above ground level (an aggregate of smaller sites may be used)	Land Cover Change
Catch Basin Cleaning	CBC	Routine cleanouts performed on targeted infrastructure that have high accumulation rates	Street Sweeping
Storm Drain Vacuuming	SDV	Routine vacuuming performed on targeted infrastructure that has high accumulation rates	Street Sweeping
Stream Restoration	STRE	Stream restoration includes re-establishing a stable channel; reconnecting the stream with the floodplain; introducing habitat features such as step-pools, woody debris, or riparian vegetation; and integrating structural approaches such as rock walls or riprap.	Urban Stream Restoration
Shoreline Stabilization	SHST	These practices apply to the shoreline of the Chesapeake and Atlantic Coastal Bays and tidal rivers. Nonstructural practices or living shorelines include tidal marsh creation and beach nourishment; structural practices include stone revetments, breakwaters, or groins.	Shoreline Stabilization
Septic Pumping	SEPP	Implementation of septic system pumping	Septic Pumping
Septic Denitrification	SEPD	Implementation of enhanced denitrification technology	Septic Denitrification
Septic Connections to WWTP	SEPC	Removal of septic system and waste stream connection made to a waste water treatment plant.	Septic Connection to WWTP
Education	EDU	Education	To Be Determined
Sub-Soiling	SUB	Sub-Soiling	To Be Determined
Trash Removal	TRA	Trash Removal	To Be Determined
Pet Waste Management	PET	Pet Waste Management	To Be Determined
Outfall Stabilization	OUTS	Outfall Stabilization	To Be Determined
Floodplain Restoration	FPRES	Floodplain Restoration	To Be Determined
River Bank Stabilization	RBS	River Bank Stabilization	To Be Determined
Bio-Reactor Carbon Filter	BRCF	Bio-Reactor Carbon Filter	To Be Determined
Disconnection of Illicit Discharges	DID	Disconnection of Illicit Discharges	To Be Determined

Alternative MS4 BMPs (Continued)			
Practice Type	**Code**	**Description**	**Chesapeake Bay Program Classification**
Step Pool Storm Conveyance	SPSC	Step Pool Storm Conveyance; if used as a filtration practice, the pollutant removal efficiencies for micro-bioretention can be applied to the drainage area treated.	To Be Determined

Policy Decision			
Policy	**Code**	**Description**	**Chesapeake Bay Program Classification**
Exemption	EXEMPT	Land development activities that are not subject to the stormwater management requirements.	Not a SWM BMP
Variance	VARIANCE	A modification of the minimum stormwater management requirement if site conditions are such that strict adherence to the Guidelines would impose unnecessary hardship on the applicant without fulfilling the intent of the Guidelines.	Not a SWM BMP
Waiver	WAIVER	Exemption from stormwater management requirements granted to an applicant for a specific project based on a review by MDE.	Not a SWM BMP

[4] Pollution Prevention Activities Codes

21. **ODOR:** None(N), Sewage (SE), Sulfur (S), Oil (IL), Gas (G), Rancid-Sour (RS), Other (O)

22. **COLOR:** Clear (C), Yellow (Y),Brown (B), Green (GR), Red (R), Gray (G), Other (O)

23. **CLARITY:** Clear (C), Opaque (OP), Cloudy (CD), Other (O)

24. **FLOATABLES:** None (N), Oil Sheen (OS), Sewage (SE), Trash (T), Other (O)

25. **DEPOSITS:** None (N), Sediment (S), Oil (IL), Other (O)

26. **VEG_COND.:** Normal (N), Excessive Growth (EG), Inhibited Growth (IG), Other (O)

27. **STRUCT_COND**: Normal (N), Concrete Cracking (CC), Concrete Spalling (SP), Other (O)

28. **EROSION**: None (N), Moderate (M), Severe (S)

[5]Unique Structure Identification Codes

Each stormwater best management structure or water quality improvement project will need a unique identification code. For management of these data Statewide it is necessary that these codes also indicate the jurisdiction where they are implemented. Please use the County, City, or State abbreviations listed below as part of each structures unique identification code.

Anne Arundel County	AA
Baltimore City	BC
Baltimore County	BA
Carroll County	CA
Charles County	CH
Frederick County	FR
Harford County	HA
Howard County	HO
Prince George's County	PG
Montgomery County	MO
Maryland State Highway Administration	SHA

Attachment B
EPA Approved Total Maximum Daily Loads (TMDLs)
Baltimore City

This NPDES permit requires Baltimore City to submit an annual TMDL assessment report evaluating the effectiveness of the City's restoration plans and progress made in achieving compliance with EPA approved TMDLs. Similarly, by regulation at 40 CFR §122.44, EPA further requires that stormwater controls and programs implemented pursuant to this NPDES permit be consistent with applicable WLAs developed under any approved TMDLs. The following is a list of approved TMDLs applicable to Baltimore City:

Basin Name	8-digit Basin Number	Impairment	YEAR	Comments
Back River (Herring Run)	02130901	Bacteria	2007	
Baltimore Harbor (Furnace Creek)	02130903	Bacteria	2010	
Baltimore Harbor (Marley Creek)	02130903	Bacteria	2010	
Gwynns Falls	02130905	Bacteria	2006	
Jones Falls	02130904	Bacteria	2006	
Back River	02130901	Chlordane	1999	
Baltimore Harbor	02130903	Chlordane	2000	
Impoundment, Lake Roland	02130904	Chlordane	2000	
Back River	02130901	Nutrients	2005	Local TMDL*
Back River Oligohaline	02130901	Nutrients & Sediments	2010	Bay TMDL*
Baltimore Harbor	02130903	Nutrients	2007	Local TMDL*
Patapsco River Mesohaline	02130902, 02130903	Nutrients & Sediments	2010	Bay TMDL*
Gwynns Falls	02130905	Sediments	2009	
Jones Falls	02130904	Sediments	2009	
Patapsco River Lower N. Branch	02130906	Sediments	2009	
Patapsco River Lower N. Branch	02130906	Bacteria	2009	Delisted in 2004; Relisted 2008

*Note: Local TMDL is superseded by the Bay TMDL if the latter is more stringent.

MARYLAND DEPARTMENT OF THE ENVIRONMENT

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

MUNICIPAL SEPARATE STORM SEWER SYSTEM DISCHARGE PERMIT

PART I. IDENTIFICATION

A. Permit Number: 11-DP-3317 MD0068314

B. Permit Area

This permit covers all stormwater discharges from the municipal separate storm sewer system (MS4) owned or operated by Baltimore County, Maryland.

C. Effective Date: December 23, 2013

D. Expiration Date: December 22, 2018

PART II. DEFINITIONS

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.

PART III. WATER QUALITY

The permittee 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.

PART IV. STANDARD PERMIT CONDITIONS

A. Permit Administration

Baltimore 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.

B. Legal Authority

Baltimore 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.

C. Source Identification

Sources of pollutants in stormwater runoff countywide shall be identified and linked to specific water quality impacts on a watershed basis. The source identification process shall be used to develop watershed restoration plans. The following 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:

1. Storm drain system: all infrastructure, major outfalls, inlets, and associated drainage areas delineated;

2. Industrial and commercial sources: industrial and commercial land uses and sites that the County has determined have the potential to contribute significant pollutants;

3. Urban best management practices (BMPs): stormwater management facility data including outfall locations and delineated drainage areas;

4. Impervious surfaces: public and private land use delineated, controlled and uncontrolled impervious areas based on, at a minimum, Maryland's hierarchical eight-digit sub-basins;

5. Monitoring locations: locations established for chemical, biological, and physical monitoring of watershed restoration efforts and the *2000 Maryland Stormwater Design Manual*; and

6. Water quality improvement projects: projects proposed, under construction, and completed with associated drainage areas delineated.

D. Management Programs

The following management programs shall be implemented in areas served by Baltimore County's MS4s. These management programs are designed to control stormwater discharges to the maximum extent practicable (MEP) and shall be maintained for the term of this permit. Additionally, these programs shall be integrated with other permit requirements to promote a comprehensive adaptive approach toward solving water quality problems. The County shall modify these programs according to needed program improvements identified as a result of periodic evaluations by MDE.

1. Stormwater Management

An acceptable stormwater management program shall continue to be maintained in accordance with the Environment Article, Title 4, Subtitle 2, Annotated Code of Maryland. Activities to be undertaken by the County shall include, but not be limited to:

a. Implementing the stormwater management design policies, principles, methods, and practices found in the latest version of the *2000 Maryland Stormwater Design Manual*. This includes:

   i. Complying with the Stormwater Management Act of 2007 (Act) by implementing environmental site design (ESD) to the MEP for new and redevelopment projects;
   ii. 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; and
   iii. Reporting annually the modifications that have been 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.

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.

c. Maintaining 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 Baltimore County.

d. Conducting 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.

2. Erosion and Sediment Control

An acceptable erosion and sediment control program shall continue to be maintained and implemented in accordance with the Environment Article, Title 4, Subtitle 1, Annotated Code of Maryland. Activities to be undertaken by Baltimore County shall include, but not be limited to:

a. Implementing program improvements identified in any MDE evaluation of the County's erosion and sediment control enforcement authority;

b. At least three times per year, conducting responsible personnel certification classes to educate construction site operators regarding erosion and sediment control compliance;

c. Program activity shall be recorded on MDE's annual report database and submitted as required in PART V of this permit; and

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.

3. Illicit Discharge Detection and Elimination

Baltimore 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.

4. Trash and Litter

Baltimore County drains to at least two major water bodies (the Middle Branch and Northwest Branch of the Patapsco River) determined to be impaired by trash. The trash and litter section of this permit is to assist in efforts to address water quality improvements. Increases in trash discharges to receiving waters have become a growing concern both nationally and within Maryland. This section requires Baltimore County to evaluate current trash and litter control efforts; develop strategies to reduce trash, floatables, and debris within those areas draining to the Middle Branch and Northwest Branch of the Patapsco River; and bolster public education.

a. Within one year of permit issuance, the County shall inventory and evaluate all current trash and recyclable pick-up operations, litter control programs, and public outreach efforts. The analysis shall identify opportunities for improving overall efficiency, especially in the Middle Branch and Northwest Branch of the Patapsco River.

b. Within one year of permit issuance, develop and implement a public education and outreach campaign with specific performance goals, and corresponding deadlines to initiate or increase residential and commercial recycling rates, improve trash management, and reduce littering. The strategy shall include:

i. Educating the public on the importance of reducing, reusing, and recycling;
ii. Disseminating information by using signs, articles, and other media outlets;
iii. Promoting educational programs in schools, businesses, community associations, etc.; and
iv. Providing the strategy to interested parties upon request.

c. Evaluating annually the effectiveness of the education program.

d. Within one year of the Environmental Protection Agency's (EPA) approval of a trash TMDL for the Middle Branch and Northwest Branch of the Patapsco River,

implement those program improvements identified in PART IV.D.4.a above and any additional programs needed to address the TMDL.

e. Submit annually, a report which details progress toward implementing the trash reduction strategies. 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.

5. Property Management and Maintenance

a. Baltimore 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.

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

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

6. Public Education

Baltimore County shall continue to implement a public education and outreach program to reduce stormwater pollutants. Outreach efforts may be integrated with other aspects of the County's activities. These efforts are to be documented and summarized in each annual report. The County shall continue to implement a public outreach and education campaign with specific performance goals and deadlines to:

a. Maintain a compliance hotline or similar mechanism for public reporting of water quality complaints, including suspected illicit discharges, illegal dumping, and spills.

b. Provide information to inform the general public about the benefits of:

i. Increasing water conservation;
ii. Residential and community stormwater management implementation and facility maintenance;
iii. Proper erosion and sediment control practices;
iv. Increasing proper disposal of household hazardous waste;
v. 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.);
vi. Residential car care and washing; and
vii. Proper pet waste management.

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.

E. Restoration Plans and Total Maximum Daily Loads

In compliance with §402(p)(3)(B)(iii) of the CWA, MS4 permits must require stormwater controls to reduce the discharge of pollutants to the MEP. By regulation at 40 CFR §122.44, BMPs and programs implemented pursuant to this permit must be consistent with applicable WLAs developed under EPA approved TMDLs (see list of EPA approved TMDLs attached and incorporated as Attachment B).

Baltimore County shall annually provide watershed assessments, restoration plans, opportunities for public participation, and TMDL compliance status to MDE. A systematic assessment shall be conducted and a detailed restoration plan developed for all watersheds within Baltimore County. As required below, watershed assessments and restoration plans shall include a thorough water quality analysis, identification of water quality improvement opportunities, and a schedule for BMP and programmatic implementation to meet stormwater WLAs included in EPA approved TMDLs.

1. Watershed Assessments

a. By the end of the permit term, Baltimore 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.

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.

2. Restoration Plans

a. Within one year of permit issuance, Baltimore 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.

By the end of this permit term, Baltimore 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.

b. Within one year of permit issuance, Baltimore 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, Baltimore 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.

3. Public Participation

Baltimore 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. Baltimore 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 stormwater watershed 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.

4. TMDL Compliance

Baltimore 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. Baltimore 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;

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

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

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

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.

F. Assessment of Controls

Baltimore County and ten other municipalities in Maryland have been conducting discharge characterization monitoring since the early 1990s. From this expansive monitoring, a statewide database has been developed that includes hundreds of storms across numerous land uses. Analyses of this dataset and other research performed nationally effectively characterize stormwater runoff in Maryland for NPDES municipal stormwater purposes. To build on the existing information and to better track progress toward meeting TMDLs, better data are needed on ESD performance and BMP efficiencies and effectiveness.

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 Windlass Run watershed to assess the implementation of the latest version of the *2000 Maryland Stormwater Design Manual.* Specific monitoring requirements are described below.

1. Watershed Restoration Assessment

Baltimore County shall continue monitoring in the Scotts Level 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 an associated in-stream station, or other locations based on a study design approved by MDE, shall be monitored. The minimum criteria for chemical, biological, and physical monitoring are as follows:

a. Chemical Monitoring:

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;

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;

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

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.

b. Biological Monitoring:

i. Benthic macroinvertebrate samples shall be gathered each Spring between the outfall and in-stream stations or other practical locations based on an MDE approved study design; and

ii. The County shall use the EPA Rapid Bioassessment Protocols (RBP), Maryland Biological Stream Survey (MBSS), or other similar method approved by MDE.

c. Physical Monitoring:

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

ii. A stream habitat assessment shall be conducted using techniques defined by the EPA's RBP, MBSS, or other similar method approved by MDE; and

iii. A hydrologic and/or hydraulic model shall be used (e.g., TR-20, HEC-2, HEC-RAS, 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.

d. 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 V below;

ii. Chemical, biological, and physical monitoring results and a combined analysis for the approved monitoring locations; and

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

2. Stormwater Management Assessment

The County shall continue to monitor the Windlass Run watershed or, select and submit for MDE's approval an alternative project for determining the effectiveness of stormwater management practices for stream channel protection. Physical stream monitoring protocols shall include:

a. An annual stream profile and survey of permanently monumented cross-sections in the Windlass Run to evaluate channel stability in conjunction with surrounding and on-going commercial development;

b. 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; and

c. A hydrologic and/or hydraulic model shall be used (e.g., TR-20, HEC-2, HEC-RAS, 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.

G. Program Funding

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.

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.

PART V. PROGRAM REVIEW AND ANNUAL PROGRESS REPORTING

A. Annual Reporting

1. Annual progress reports, required under 40 CFR 122.42(c), will facilitate the long-term assessment of Baltimore County's NPDES stormwater program. The County shall submit annual reports on or before the anniversary date of this permit and post these reports on the County's website. All information, data, and analyses shall be based on the fiscal year and include:

a. The status of implementing the components of the stormwater management program that are established as permit conditions including:

i Source Identification;

ii Stormwater Management;
iii Erosion and Sediment Control;
iv Illicit Discharge Detection and Elimination;
v Trash and Litter;
vi Property Management and Maintenance;
vii Public Education;
viii Watershed Assessment;
ix Restoration Plans;
x TMDL Compliance;
xi Assessment of Controls; and
xii Program Funding.

b. A narrative summary describing the results and analyses of data, including monitoring data that is accumulated throughout the reporting year;

c. Expenditures for the reporting period and the proposed budget for the upcoming year;

d. A summary describing the number and nature of enforcement actions, inspections, and public education programs;

e. The identification of water quality improvements and documentation of attainment and/or progress toward attainment of benchmarks and applicable WLAs developed under EPA approved TMDLs; and

f. The identification of any proposed changes to the County's program when WLAs are not being met.

2. To enable MDE to evaluate the effectiveness of permit requirements, the following information shall be submitted in a format consistent with Attachment A:

a. Storm drain system mapping (PART IV.C.1.);

b. Urban BMP locations (PART IV.C.3.);

c. Impervious surfaces (PART IV.C.4.);

d. Water quality improvement project locations (PART IV.C.6.);

e. Monitoring site locations (PART IV.C.5.);

f. Chemical monitoring results (PART IV.F.1.);

g. Pollutant load reductions (PART IV.E.4. and IV.F.1);

h. Biological and habitat monitoring (PART IV.F.1.);

i. Illicit discharge detection and elimination activities (PART IV.D.3.);

j. Erosion and sediment control and stormwater program information (PART IV.D.1 and IV.D.2.);

k. Grading permit information - quarterly (PART IV.D.2.);

l. Fiscal analyses - cost for NPDES related implementation (PART IV.G.).

3. Because this permit uses an iterative approach to implementation, the County must evaluate the effectiveness of its programs in each annual report. BMP and program modifications shall be made within 12 months if the County's annual report does not demonstrate compliance with this permit and show progress toward meeting WLAs developed under EPA approved TMDLs.

B. Program Review

In order to assess the effectiveness of the County's NPDES program for eliminating non-stormwater discharges through the illicit connection program and reducing the discharge of pollutants to protect water quality, MDE will review program implementation, annual reports, and periodic data submittal. Procedures for the review of local erosion and sediment control and stormwater management programs exist in Maryland's sediment control and stormwater management laws. Additional evaluations may be conducted at MDE's discretion to determine compliance with permit conditions.

C. Reapplication for NPDES Stormwater Discharge Permit

This permit is effective for no more than 5 years, unless administratively continued by MDE. Continuation or reissuance of this permit beyond this permit term will require Baltimore County to reapply for NPDES stormwater discharge permit coverage in its fourth year annual report. Failure to reapply for coverage constitutes a violation of this permit.

As part of this reapplication process, Baltimore County shall submit to MDE an executive summary of its NPDES stormwater management program that specifically describes how the County is meeting the overall goal to ensure that each County watershed has been thoroughly evaluated and its progress in implementing water quality improvements. This application shall be used to gauge the effectiveness of the County's NPDES stormwater program and will provide guidance for developing future permit conditions. At a minimum, the application summary shall include:

1. Baltimore County's NPDES stormwater program goals;

2. Program summaries for the permit term regarding:

a. Illicit discharge detection and elimination results;

b. Restoration plan status including County totals for impervious acres, impervious acres controlled by stormwater management, the current status of water quality improvement projects and acres managed, and documentation of progress toward

meeting stormwater WLAs developed under EPA approved TMDLs;

c. Pollutant load reductions as a result of this permit and an evaluation of whether TMDLs are being achieved;

d. Impervious acres compared to the baseline and twenty percent restoration requirement in PART IV.E.2.a.; and

e. Other relevant data and information for describing County programs;

3. Program operation and capital improvement costs for the permit term; and

4. Descriptions of any proposed permit condition changes based on analyses of the successes and failures of the County's efforts to comply with the conditions of this permit.

PART VI. SPECIAL PROGRAMMATIC CONDITIONS

A. Chesapeake Bay Restoration by 2025

A Chesapeake Bay TMDL has been developed by the EPA for the six Bay States (Delaware, Maryland, New York, Pennsylvania, Virginia, and West Virginia) and the District of Columbia. The TMDL describes the level of effort that will be necessary for meeting water quality criteria and restoring Chesapeake Bay. This permit is requiring compliance with the Chesapeake Bay TMDL through the use of a strategy that calls for the restoration of twenty percent of previously developed impervious land with little or no controls within this five year permit term as described in Maryland's Watershed Implementation Plan. The TMDL is an aggregate of nonpoint sources or the load allocation (LA), and point sources or WLA, and a margin of safety. The State is required to issue NPDES permits to point source discharges that are consistent with the assumptions of any applicable TMDL, including those approved subsequent to permit issuance.

Urban stormwater is defined in the CWA as a point source discharge and will subsequently be a part of Maryland's WLA. The NPDES stormwater permits can play a significant role in regulating pollutants from Maryland's urban sector and in the development of Chesapeake Bay Watershed Implementation Plans. Therefore, Maryland's NPDES stormwater permits issued to Baltimore County and other municipalities will require coordination with MDE's Watershed Implementation Plan and be used as the regulatory backbone for controlling urban pollutants toward meeting the Chesapeake Bay TMDL by 2025.

B. Comprehensive Planning

Baltimore County shall cooperate with other agencies during the completion of the Water Resources Element (WRE) as required by the Maryland Economic Growth, Resource Protection and Planning Act of 1992 (Article 66B, Annotated Code of Maryland). Such cooperation shall entail all reasonable actions authorized by law and shall not be restricted by the responsibilities attributed to other entities by separate State statute, including but not limited to reviewing and approving plans and appropriating funds.

PART VII. ENFORCEMENT AND PENALTIES

A. Discharge Prohibitions and Receiving Water Limitations

Baltimore County shall prohibit non-stormwater discharges through its MS4. NPDES permitted non-stormwater discharges are exempt from this prohibition. Discharges from the following will not be considered a source of pollutants when properly managed: water line flushing; landscape irrigation; diverted stream flows; rising ground waters; uncontaminated ground water infiltration to separate storm sewers; uncontaminated pumped ground water; discharges from potable water sources; foundation drains; air conditioning condensation; irrigation waters; springs; footing drains; lawn watering; individual residential car washing; flows from riparian habitats and wetlands; de-chlorinated swimming pool discharges (not including filter backwash); street wash water; and fire fighting activities.

Consistent with § 402(p)(3)(B)(iii) of the CWA, the County shall take all reasonable steps to minimize or prevent the contamination or other alteration of the physical, chemical, or biological properties of any waters of the State, including a change in temperature, taste, color, turbidity, or odor of the waters or the discharge or deposit of any organic matter, harmful organism, or liquid, gaseous, solid, radioactive, or other substance into any waters of the State, that will render the waters harmful to:

1. Public health, safety, or welfare;

2. Domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial use;

3. Livestock, wild animals, or birds; and

4. Fish or other aquatic life.

B. Duty to Mitigate

Baltimore County shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

C. Duty to Comply

Baltimore County shall be responsible for complying with all conditions of this permit. Other entities may be used to meet various permit obligations provided that both the County and the other entity agree contractually. Regardless of any arrangement entered into however, the County remains responsible for permit compliance. In no case may this responsibility or permit compliance liability be transferred to another entity.

Failure to comply with a permit provision constitutes a violation of the CWA and is grounds for enforcement action; permit termination, revocation, or modification; or denial of a permit renewal application. The County shall comply at all times with the provisions of the

Environment Article, Title 4, Subtitles 1, 2, and 4; Title 7, Subtitle 2; and Title 9, Subtitle 3 of the Annotated Code of Maryland.

The County shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the County to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the County only when the operation is necessary to achieve compliance with the conditions of the permit.

D. Sanctions

1. Penalties Under the CWA - Civil and Criminal

Section 309(g)(2) of the CWA, 33 USC §1319(g)(2) provides that any person who violates any permit condition is subject to a civil penalty not to exceed $10,000 per day for each violation, not to exceed $125,000. Pursuant to the Civil Monetary Penalty Inflation Adjustment Rule, 40 CFR Part 19 (effective January 12, 2009), any person who violates any NPDES permit condition or limitation after January 12, 2009 is liable for an administrative penalty not to exceed $16,000 per day for each such violation, up to a total penalty of $177,500. Pursuant to Section 309(c) of the CWA, 33 USC §1319(c), any person who negligently violates any permit condition is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than 1 year, or both. Any person who knowingly violates any permit condition is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than 3 years, or both.

2. Penalties Under the State's Environment Article - Civil and Criminal

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the County from civil or criminal responsibilities and/or penalties for a violation of Title 4, Title 7, and Title 9 of the Environment Article, Annotated Code of Maryland, or any federal, local, or other State law or regulation. Section 9-342 of the Environment Article provides that a person who violates any condition of this permit is liable to a civil penalty of up to $10,000 per violation, to be collected in a civil action brought by MDE, and with each day a violation continues being a separate violation. Section 9-342 further authorizes the MDE to impose upon any person who violates a permit condition, administrative civil penalties of up to $5,000 per violation, up to $50,000.

Section 9-343 of the Environment Article provides that any person who violates a permit condition is subject to a criminal penalty not exceeding $25,000 or imprisonment not exceeding 1 year, or both for a first offense. For a second offense, Section 9-343 provides for a fine not exceeding $50,000 and up to 2 years imprisonment.

The Environment Article, §9-343, Annotated Code of Maryland, provides that any person who tampers with, or knowingly renders inaccurate any monitoring device or method

required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $50,000 per violation, or by imprisonment for not more than 2 years per violation, or both.

The Environment Article, §9-343, Annotated Code of Maryland, provides that any person who knowingly makes any false statement, representation, or certification in any records or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $50,000 per violation, or by imprisonment for not more than 2 years per violation, or both.

E. **Permit Revocation and Modification**

1. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the County for a permit modification or a notification of planned changes or anticipated noncompliance does not stay any permit condition. A permit may be modified by MDE upon written request by the County and after notice and opportunity for a public hearing in accordance with and for the reasons set forth in COMAR 26.08.04.10.

After notice and opportunity for a hearing and in accordance with COMAR 26.08.04.10, MDE may modify, suspend, or revoke and reissue this permit in whole or in part during its term for causes including, but not limited to the following:

a. Violation of any terms or conditions of this permit;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;

c. A change in any condition that requires either a temporary reduction or elimination of the authorized discharge;

d. A determination that the permitted discharge poses a threat to human health or welfare or to the environment and can only be regulated to acceptable levels by permit modification or termination;

e. To incorporate additional controls that are necessary to ensure that the permit requirements are consistent with any applicable TMDL WLA allocated to the discharge of pollutants from the MS4; or

f. As specified in 40 C.F.R §§122.62, 122.63, 122.64, and 124.5.

2. Duty to Provide Information

The County shall furnish to MDE, within a reasonable time, any information that MDE may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit; or to determine compliance with this permit. The County shall also furnish to MDE, upon request, copies of records required to be kept by this permit.

F. Inspection and Entry

Baltimore County shall allow an authorized representative of the State or EPA, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter the permittee's premises where a regulatory activity is located or conducted or where records must be kept under the conditions of this permit;

2. Have access to and obtain copies at reasonable times of any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times, without prior notice, any construction site, facility, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location.

G. Monitoring and Recordkeeping

Unless otherwise specified by this permit, all monitoring and records of monitoring shall be in accordance with 40 CFR Part 122.41(j).

H. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, State, or local law or regulations.

I. Severability

The provisions of this permit are severable. If any provision of this permit shall be held invalid for any reason, the remaining provisions shall remain in full force and effect. If the application of any provision of this permit to any circumstance is held invalid, its application to other circumstances shall not be affected.

J. **Signature of Authorized Administrator and Jurisdiction**

Each application, report, or other information required under this permit to be submitted to MDE shall be signed as required by COMAR 26.08.04.01-1. Signatories shall be a principal executive officer, ranking elected official, or other duly authorized employee.

Jay G. Sakai, Director
Water Management Administration

12/23/13
Date

Attachment A
Annual Report Databases

As part of the NPDES annual reporting process, permittees are required to complete databases for storm drain systems, urban best management practices, impervious surfaces, watershed restoration, monitoring site locations, chemical monitoring, pollutant load reductions, biological monitoring, illicit discharge detection, erosion and sediment control responsible personnel training, quarterly grading permit summaries, and fiscal analyses. For compatibility purposes, databases should be submitted in Access or Excel. Any file in a format other than Access or Excel is to be submitted in a "*.dbf" format. Examples of databases and definitions for each category are provided below. If there are any questions regarding the compatibility of databases, please contact the Water Management Administration's Sediment, Stormwater, and Dam Safety Program at (410) 537-3543.

MDE is utilizing Environmental System Research Institute (ESRI) Arc Geographic Information System (ArcGIS) technologies to track and update all collected datasets and integrate them spatially. GIS datasets shall be submitted in an ESRI Geodatabase or shapefile format, (i.e., "*.shp"). All datasets shall conform to the Maryland State Geographic Information Committee standard – North American Datum (NAD), 1983 Maryland State Plane Coordinate System in "meter" units. Location information collected by global positioning systems (GPS) for the purposes of populating the GIS datasets shall be accurate to the sub-meter (+/- 1 meter) level for acceptable mapping. Additionally, each table below requires a "unique identifier" which is necessary for linking GIS mapping locations to datasets with further descriptions (i.e., outfall dimensions, BMP type, chemical results, etc.).

A. Storm Drain System Mapping Associated with GIS Coverage (PART III.C.1.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
OUTFALL_ID	TEXT	15	Unique outfall ID
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Northing
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Easting
DIM_OUTFL	NUMBER	3	Outfall Dimensions in inches
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
TYPE_OUTFL	TEXT	3	Outfall Type (RCP,CMP, PVC)
DRAIN_AREA	NUMBER	8	Drainage area to outfall (acres)[1]
LAND_USE	NUMBER	3	Predominant land use[2]

[1] GIS shapefile required
[2] Use attached Maryland Office of Planning land use codes.

B. Urban Best Management Practices (BMPs) Associated with GIS Coverage (PART III.C.2.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
STRU_ID	TEXT	8	Unique structure ID[5]
PERMIT_NO	TEXT	10	Unique permit number
STRU_NAME	TEXT	60	Structure name
ADDRESS	TEXT	50	Structure address
CITY	TEXT	15	Structure address
STATE	TEXT	2	Structure address
ZIP	NUMBER	10	Structure address
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Northing
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Easting
ADC_MAP	TEXT	5	ADC map book coordinate (optional if BMP has MD Northing\Easting)
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code

STRU_TYPE	TEXT	10	Identify structure or BMP type[3]
LAND_USE	NUMBER	3	Predominant land use[2]
CON_PURPOSE	TEXT	4	New development (NEWD), Redevelopment (REDE), or Restoration (REST)
DRAIN_AREA	NUMBER	8	Structure drainage area (acres)[1]
IMP_ACRES	NUMBER	8	Structure impervious drainage area (acres) [1]
TOT_DRAIN	NUMBER	8	Total site area (acres)
WQ_VOLUME	NUMBER	8	Volume of rainfall depth in inches managed by the practice
RCN	NUMBER	5	Runoff curve number (weighted)
ON_OFF_SITE	TEXT	3	On or offsite structure
APPR_DATE	DATE/TIME	8	Permit approval date
BUILT_DATE	DATE/TIME	8	Construction completion date
INSP_DATE	DATE/TIME	8	Record most recent inspection date
GEN_COMNT	TEXT	60	General comments
LAST_CHANGE	DATE/TIME	8	Date last change made to this record

[1] GIS shapefile required
[2] Use attached Maryland Office of Planning land use codes
[3] Use attached urban BMP type code
[5] Use attached unique structure identification codes

C. Impervious Surfaces Associated with GIS Coverage (PART III.C.3.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
IMP_ACREAGE	NUMBER	8	Total impervious acreage in watershed[1]
IMP_CONTROLLED	NUMBER	8	Impervious acreage controlled to the maximum extent practicable[1]
IMP_BASELINE	NUMBER	8	Impervious acreage not controlled to the maximum extent practicable[1, 2]
RESTORATION_P	NUMBER	8	Impervious acreage proposed for watershed restoration[1]
RESTORATION_UC	NUMBER	8	Impervious acreage under construction for watershed restoration[1]
RESTORATION_C	NUMBER	8	Impervious acreage completed (since program inception)[1]

[1] GIS shapefile required
[2] Fixed baseline based on MDE Guidance and approval

D. Water Quality Improvement Project Locations Associated with GIS Coverage (PART III.C.5.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
STRU_ID	TEXT	8	Unique structure ID[5]
STRU_NAME	TEXT	60	Structure name
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Northing
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Easting
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
STRU_TYPE	TEXT	10	Identify structure or BMP type[3]
LAND_USE	NUMBER	3	Predominant land use[2]
DRAIN_AREA	NUMBER	8	Structure drainage area (acres)[1]
IMP_ACRES	NUMBER	8	Structure impervious drainage area (acres) [1]
WQ_VOLUME	NUMBER	8	Volume of rainfall depth in inches managed by the practice
LINEAR_FT	NUMBER	8	Use this field for stream restoration or shoreline protection
POUNDS_TN	NUMBER	8	Use this field for street sweeping or inlet cleaning
POUNDS_TP	NUMBER	8	Use this field for street sweeping or inlet cleaning
POUNDS_TSS	NUMBER	8	Use this field for street sweeping or inlet cleaning
APPR_DATE	DATE/TIME	8	Permit approval date
BUILT_DATE	DATE/TIME	8	Construction completion date
INSP_DATE	DATE/TIME	8	Record most recent inspection date
GEN_COMNT	TEXT	60	General comments

LAST_CHANGE	DATE/TIME	8	Date last change made to this record

[1] GIS shapefile required
[2] Use attached Maryland Office of Planning land use codes
[3] Use attached urban BMP type code
[5] Use attached unique structure identification codes

E. Monitoring Site Locations Associated with GIS Coverage (PART III.C.4.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
STATION	TEXT	30	Unique station ID
OUTFALL_OR_INSTREAM	TEXT	10	Outfall or instream station
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Northing
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Easting
DRAIN_AREA	NUMBER	8	Drainage area in acres[1]

[1] GIS shapefile required

E.1. Monitoring Site Locations - Use for Multiple Land Use Values in the Drainage Area

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
STATION	TEXT	30	Name of station (associated with unique station ID in section E.)
LAND_USE_RANK	NUMBER	8	Ranking of land use from predominant to least
LAND_USE	NUMBER	3	Identify land use[2]
DRAIN_AREA	NUMBER	8	Drainage area in acres[1]

[1] GIS shapefile required
[2] Use attached Maryland Office of Planning land use codes

E.2. Monitoring Site Locations - Use for Multiple Stormwater BMPs in the Drainage Area

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
STATION	TEXT	30	Name of station (associated with unique station ID in section E.)
BMP_RANK	NUMBER	5	Ranking of BMPs from predominant to least
STRU_TYPE	TEXT	10	Identify structure or BMP type[3]
BMP_DESCRIPTION	TEXT	60	Brief description of BMP
DRAIN_AREA	NUMBER	8	Drainage area in acres treated by BMP[1]

[1] GIS shapefile required
[3] Use attached urban BMP type code.

F. Chemical Monitoring (PART III.F.1.)

Column Name	Data Type	Length	Description
JURISDICTION	TEXT	50	Monitoring jurisdiction name
EVENT_DATE	DATE/TIME	8	Date of storm event
EVENT_TIME	DATE/TIME	8	Time monitoring begins
STATION	TEXT	30	Station name (associated w/ unique station ID in section E.)
OUTFALL_OR_INSTREAM	TEXT	10	Outfall or instream station
STORM_OR_BASEFLOW	TEXT	10	Storm or base flow sample
DEPTH	NUMBER	5	Depth of rain in inches
DURATION	NUMBER	5	Duration of event in hours and minutes
INTENSITY	NUMBER	5	Intensity = depth/duration
TOTAL_STORM_FLOW_VOLUME	NUMBER	5	Total storm flow volume in gallons

WATER_TEMP	NUMBER	5	Flow weighted average of water temperature (Fahrenheit)
pH	NUMBER	5	Flow weighted average of pH
BOD_dt	NUMBER	5	Biological Oxygen Demand detection limit used in analysis
BOD_EMC0	NUMBER	5	EMC for Biological Oxygen Demand in mg/l using (0)*
BOD_EMC_dt	NUMBER	5	EMC for Biological Oxygen Demand in mg/l using (dt)**
TKN_dt	NUMBER	5	Total Kjeldahl Nitrogen detection limit used in analysis
TKN_EMC0	NUMBER	5	EMC for Total Kjeldahl Nitrogen in mg/l using (0)*
TKN_EMC_dt	NUMBER	5	EMC for Total Kjeldahl Nitrogen in mg/l using (dt)**
NITRATE+NITRITE_dt	NUMBER	5	Record Nitrate + Nitrite detection limit used in analysis
NITRATE+NITRITE_EMC0	NUMBER	5	Enter EMC for Nitrate + Nitrite in mg/l using (0)*
NITRATE_EMC_dt	NUMBER	5	Enter EMC for Nitrate + Nitrite in mg/l using (dt)**
TOTAL_PHOSPHORUS_dt	NUMBER	5	Record Total Phosphorus detection limit used in analysis
TOTAL_PHOSPHORUS_EMC0	NUMBER	5	Enter EMC for Total Phosphorus in mg/l using (0)*
TOTAL_PHOSPHORUSEMC_dt	NUMBER	5	Enter EMC for Total Phosphorus in mg/l using (dt)**
TSS_dt	NUMBER	5	Total Suspended Solids detection limit used in analysis
TSS_EMC0	NUMBER	5	EMC for Total Suspended Solids in mg/l using (0)*
TSS_EMC_dt	NUMBER	5	EMC for Total Suspended Solids in mg/l using (dt)**
TOTAL_COPPER_dt	NUMBER	5	Record Total Copper detection limit used in analysis
TOTAL_COPPER_EMC0	NUMBER	5	Enter EMC for Total Copper in ug/l using (0)*
TOTAL_COPPER_EMC_dt	NUMBER	5	Enter EMC for Total Copper in ug/l using (dt)**
TOTAL_LEAD_dt	NUMBER	5	Record Total Lead detection limit used in analysis
TOTAL_LEAD_EMC0	NUMBER	5	Enter EMC for Total Lead in ug/l using (0)*
TOTAL_LEAD_EMC_dt	NUMBER	5	Enter EMC for Total Lead in ug/l using (dt)**
TOTAL_ZINC_dt	NUMBER	5	Record Total Zinc detection limit used in analysis
TOTAL_ZINC_EMC0	NUMBER	5	Enter EMC for Total Zinc in ug/l using (0)*
TOTAL_ZINC_EMC_dt	NUMBER	5	Enter EMC for Total Zinc in ug/l using (dt)**
HARDNESS_dt	NUMBER	5	Record detection limit used in analysis
HARDNESS_EMC0	NUMBER	5	Enter EMC for Hardness in ug/l using (0)*
HARDNESS_EMC_dt	NUMBER	5	Enter EMC for Hardness in ug/l using (dt)**
TPH_dt	NUMBER	5	Record detection limit used in analysis
TPH_EMC0	NUMBER	5	EMC for Total Petroleum Hydrocarbons in mg/l using (0)*
TPH_EMC_dt	NUMBER	5	EMC for Total Petroleum Hydrocarbon in mg/l using (dt)**
ENTEROCOCCI_dt	NUMBER	5	Record detection limit used in analysis
ENTEROCOCCI_EMC0	NUMBER	5	EMC for enterococci in MPN/100 using (0)*
ENTEROCOCCI_EMC_dt	NUMBER	5	EMC for enterococci in MPN/100 using (dt)**
ECOLI_dt	NUMBER	5	Record E. Coli detection limit used in analysis
ECOLI_EMC0	NUMBER	5	Enter EMC for E. Coli in MPN/100ml using (0)*
ECOLI_EMC_dt	NUMBER	5	Enter EMC for E. Coli in MPN/100ml using (dt)**
LOCAL_CONCERN1_dt	NUMBER	5	Record detection limit used in analysis
LOCAL_CONCERN1_EMC0	NUMBER	5	Enter EMC for in mg/l using (0)*
LOCAL_CONCERN1_EMC_dt	NUMBER	5	Enter EMC for in mg/l using (dt)**
LOCAL_CONCERN2_dt	NUMBER	5	Record detection limit used in analysis
LOCAL_CONCERN2_EMC0	NUMBER	5	Enter EMC for in mg/l using (0)*
LOCAL_CONCERN2_EMC_dt	NUMBER	5	Enter EMC for in mg/l using (dt)**
LOCAL_CONCERN3_dt	NUMBER	5	Record detection limit used in analysis
LOCAL_CONCERN3_EMC0	NUMBER	5	Enter EMC for in mg/l using (0)*
LOCAL_CONCERN3_EMC_dt	NUMBER	5	Enter EMC for in mg/l using (dt)**
GEN_COMNT	TEXT	50	Monitoring comments/documentation

key: **mg/l** = milligrams per liter ***u*g/l** = micrograms per liter **MPN** = most probable number per 100 milliliters
*** EMC (0)** = Flow weighted averages for three discrete samples representative of a storm using zero (0) for any discrete samples recorded less than the detection limit.

** **EMC (dt)** = Flow weighted averages for three discrete samples representative of a storm using the detection limit value (dt) for any discrete samples recorded less than the detection limit.

G. Pollutant Load Reductions Associated with GIS Coverage (PART III.E.4. and III.F.1.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
TN_RUNOFF	NUMBER	10	(TKN) + (Nitrate + Nitrite) load before treatment (lbs/year)
TN_CONTROLLED	NUMBER	10	(TKN) + (Nitrate + Nitrite) treated by BMPs (lbs/year)
TP_RUNOFF	NUMBER	10	TP load before treatment (lbs/year)
TP_CONTROLLED	NUMBER	10	TP treated by BMPs (lbs/year)
TSS_RUNOFF	NUMBER	10	TSS load before treatment (lbs/year)
TSS_CONTROLLED	NUMBER	10	TSS treated by BMPs (lbs/year)

G.1. Additional Pollutants - Use for Multiple Pollutant Entries

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
POLLUTANT	TEXT	20	Identify additional pollutants for impaired water (TMDLs)
WLA_RUNOFF	NUMBER	10	WLA for an approved TMDL before treatment (lbs/year)
WLA_CONTROLLED	NUMBER	10	Waste load for an approved TMDL treated by BMPs (lbs/year)

H. Biological and Habitat Monitoring (PART III.F.1.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
STATION	TEXT	30	Unique station ID
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 Meters) Northing
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 Meters) Easting
DRAIN_AREA	NUMBER	8	Drainage area in acres
BIBI	NUMBER	4	Benthic index of biological indicators
EMBEDDEDNESS	NUMBER	4	Rapid bioassessment protocol score for embeddedness
EPIFAUNAL	NUMBER	4	Rapid bioassessment protocol score for epifaunal
HABITAT	NUMBER	4	Rapid bioassessment protocol score for habitat
LAND_USE	NUMBER	3	Predominant land use[2]

[2] Use attached Maryland Office of Planning land use codes

I. Illicit Discharge Detection and Elimination (PART III.D.3.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
OUTFALL_ID	TEXT	15	Unique outfall ID used in Section A. database
SCREEN_DATE	DATE/TIME	8	Field screening date
TEST_NUM	NUMBER	5	Initial screening, follow-up test, 3rd, etc.
LAST_RAIN	DATE/TIME	8	Date of last rain > 0.10”
TIME	DATE/TIME	8	Field screening time
OBSERV_FLOW	TEXT	3	Was flow observed? (yes/no)
CFS_FLOW	NUMBER	5	Flow rate in cubic feet per second (CFS)
WATER_TEMP	NUMBER	5	Water temperature (Fahrenheit)
AIR_TEMP	NUMBER	5	Air temperature in (Fahrenheit)

CHEM_TEST	TEXT	3	Was chemical test performed? (yes/no)
pH	NUMBER	5	pH meter reading
PHENOL	NUMBER	5	Milligrams per Liter (mg/l)
CHLORINE	NUMBER	5	mg/l
DETERGENTS	NUMBER	5	mg/l
COPPER	NUMBER	5	mg/l
ALGAEGROW	TEXT	3	Was algae growth observed? (yes/no)
ODOR	TEXT	2	Type of odor[4]
COLOR	TEXT	2	Discharge color[4]
CLARITY	TEXT	2	Discharge clarity [4]
FLOATABLES	TEXT	2	Floatables in discharge[4]
DEPOSITS	TEXT	2	Deposits in outfall area[4]
VEG_COND	TEXT	2	Vegetative condition in outfall area[4]
STRUCT_COND	TEXT	2	Structural condition of outfall[4]
EROSION	TEXT	2	Erosion in outfall area[4]
COMPLA_NUM	TEXT	3	Is screening complaint driven? (yes/no)
ILLICIT_Q	TEXT	3	Was illicit discharge found? (yes/no)
ILLICIT_ELIM	TEXT	3	Was illicit discharge eliminated? (yes/no)

[4] Use Attached Pollution Prevention Activities Codes

J. Responsible Personnel Certification Information (PART III.D.2.)

Column Name	Data Type	Length	Description*
PREFIX	TEXT	2	Mr, Ms
FIRSTNAME	TEXT	15	First name
LASTNAME	TEXT	15	Last name
ADDRESS	TEXT	50	Full address
CITY	TEXT	15	City
STATE	TEXT	2	State
ZIP	NUMBER	10	Zip code
DATE	DATE/TIME	8	Date of class
PHONE	NUMBER	10	Phone number
CERT_NUM	NUMBER	6	Certification number as provided by MDE
COMPANY	TEXT	30	Employer
INSTRUCTOR	TEXT	20	Instructor's last name

* Do not use all caps

K. Quarterly Grading Permit Information Associated with GIS Coverage (PART III.D.2.)

Column Name	Data Type	Length	Description
SITE_NAME	TEXT	60	Construction site name
SITE_OWNER	TEXT	60	Construction site owner
OWNER_ADDRESS	TEXT	50	Owner address
OWNER_CITY	TEXT	15	Owner address
OWNER_ZIP	NUMBER	10	Owner zip code
SITE_ADDRESS	TEXT	50	Site address
SITE_CITY	TEXT	15	Site address
SITE_ZIP	NUMBER	10	Site zip code
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 meters) – site
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 meters) – site
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
DIST_AREA	NUMBER	8	Disturbed area of site in acres[1]
GRAD_PERMIT	TEXT	50	Local grading permit number

APPR_DATE	DATE/TIME	8	Grading Permit approval date
LAND_USE	NUMBER	3	Predominant land use[2] (built)

[1] GIS shapefile required
[2] Use attached Maryland Office of Planning land use codes

L. Fiscal Analyses (PART III.G.)

Permit Condition	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
LEGAL_AUTH	NUMBER	13	Total annual cost for legal authority
SOURCE_ID	NUMBER	13	Total annual cost for source ID
SW_MANAGEMENT	NUMBER	13	Total annual cost for stormwater management
EROS_SED_CON	NUMBER	13	Total annual cost for erosion and sediment
ILLICIT_DET/ELIM	NUMBER	13	Total annual cost for illicit det/elimination
TRASH_ELIM	NUMBER	13	Total annual cost for trash elimination
PROP_MANAGEMENT	NUMBER	13	Total annual cost for property management
INLET_CLEAN	NUMBER	13	Total annual cost for inlet cleaning
STRT_SWEEP	NUMBER	13	Total annual cost for street sweeping
RD_MAINT_OTHER	NUMBER	13	Total annual cost for road maintenance - other
PUB_EDUCATION	NUMBER	13	Total annual cost for public education
WATERSHED_ASSESS	NUMBER	13	Total annual cost for watershed assessment
WATERSHED_RESTOR	NUMBER	13	Total annual cost for watershed restoration
CHEM_MON_ASSESS	NUMBER	13	Total annual cost for chemical monitoring
BIO_MON_ASSESS	NUMBER	13	Total annual cost for biological monitoring
PHYS_STRM_ASSESS	NUMBER	13	Total annual cost for physical assessment
MANUAL_MON	NUMBER	13	Total annual cost for design manual monitorin
TMDL_ASSESS	NUMBER	13	Total annual cost for tmdl assessment
TOTAL_NPDES_FUNDS	NUMBER	13	Total annual cost for total npdes program

[2]MDP Land Use/Land Cover

10 Urban Built-up

- **11 Low Density Residential –** Detached single family/duplex dwelling units, yards, and associated areas. Areas of more than 90 percent single family/duplex dwelling units, with lot sizes less than five acres but at least one-half acres (.2 dwelling units/acre to 2 dwelling units/acre).

- **12 Medium Density Residential –** Detached single family/duplex, attached single unit row housing, yards, and associated areas. Areas of more than 90 percent single family/duplex units and attached single unit row housing, with lot sizes of less than one-half acre but at least one-eighth acre (2 dwelling units/acre to 8 dwelling units/acre).

- **13 High Density Residential –** Attached single unit row housing, garden apartments, high rise apartments/condominiums, mobile home and trailer parks. Areas of more than 90 percent high density residential units, with more than 8 dwelling units/acre.

- **14 Commercial –** Retail and wholesale services. Areas used primarily for the sale of products and services, including associated yards and parking areas.

- **15 Industrial –** Manufacturing and industrial parks, including associated warehouses, storage yards, research laboratories, and parking areas.

- **16 Institutional –** Elementary and secondary schools, middle schools, junior and senior high schools, public and private colleges and universities, military installations (built-up areas only, including buildings and storage, training, and similar areas) churches and health facilities, correctional facilities, and government offices and facilities that are clearly separable from the surrounding land cover.

- **17 Extractive –** Surface mining operations, including sand and gravel pits, quarries, coal surface mines, and deep coal mines. Status of activity (active vs. abandoned) is not distinguished.

- **18 Open Urban Land –** Urban areas whose use does not require structures, or urban areas where non-conforming uses characterized by open land have become isolated. Included are golf courses, parks, recreation areas (except associated with schools or other institutions), cemeteries, and entrapped agricultural and undeveloped land within urban areas.

- **191 Large Lot Subdivision (Agriculture) –** Residential subdivisions with lot sizes less than 20 acres but at least 5 acres, with a dominant land cover of open fields or pasture.

- **192 Large Lot Subdivision (Forest) -** Residential subdivisions with lot sizes less than 20 acres but at least 5 acres, with a dominant land cover of deciduous, evergreen or mixed forest.

20 Agriculture

- **21 Cropland –** Field and forage crops.

- **22 Pasture –** Land used for pasture, both permanent and rotated: grass.

- **23 Orchards/Vineyards/Horticulture** – Areas of intensively managed commercial bush and tree crops, including areas used for fruit production, vineyards, sod and seed farms, nurseries, and green houses.

- **24 Feeding Operations** – Cattle or hog feeding lots, poultry houses, and holding lots for animals, and commercial fishing areas (including oyster beds).

- **241 Feeding Operations** – Cattle or hog feeding lots, poultry houses, and holding lots for animals.

- **242 Agricultural Building** – Breeding and training facilities, storage facilities, built-up areas associated with a farmstead, small farm ponds, and commercial fishing areas.

- **25 Row and Garden Crops** – Intensively managed track and vegetable farms and associated areas.

40 Forest

- **41 Deciduous Forest** – Forested areas in which the trees characteristically lose their leaves at the end of the growing season. Included are such species as oak, hickory, aspen, sycamore, birch, yellow poplar, elm, maple, and cypress.

- **42 Evergreen Forest** - Forested areas in which the trees are characterized by persistent foliage throughout the year. Included are such species as white pine, pond pine, hemlock, southern white cedar, and red pine.

- **43 Mixed Forest** – Forested areas in which neither deciduous or evergreen species dominate, but in which there is a combination of both types.

- **44 Brush** – Areas that do not produce timber or other wood products but may have cut-over timber stands, abandoned agriculture fields, or pasture. These areas are characterized by vegetation types such as sumac, vines, rose, brambles, and tree seedlings.

50 Water – Rivers, waterways, reservoirs, ponds, bays, estuaries, and ocean.

60 Wetlands – Forested and non-forested wetlands, including tidal flats, tidal and non-tidal marshes, and upland swamps and wet areas.

70 Barren Land

- **71 Beaches** – Extensive shoreline areas of sand and gravel accumulation, with no vegetative cover or other land use.

- **72 Bare Exposed Rock** – Areas of bedrock exposure, scarps, and other natural accumulations of rock without vegetative cover.

73 Bare Ground – Areas of exposed ground caused naturally, by construction, or other cultural processes.

[3] Glossary of Stormwater BMP Structure Types and Practices Reported to MDE

Structural BMPs			
Structure Type	**Code**	**Structure Function**	**Chesapeake Bay Program Classification**
Artificial Wetlands (See Shallow Marsh also)	SM	A structure with a permanent shallow pool planted with wetland vegetation often designed to provide extended detention.	Wet Pond & Wetlands
Attenuation swale or dry swale	SW	Open drainage channel designed to detain and promote the filtration of stormwater runoff through underlying fabricated soil media (see Grassed Swale or SW).	Filtering Practice
Bio-retention	BR	Landscape designed such that stormwater runoff collects in shallow depressions before filtering through fabricated planting soil media .	Filtering Practice
Check Dam	CD	A small dam constructed in a gully or other small waterway to decrease flow velocity (by reducing the channel gradient), minimize scour, & promote deposition of sediment.	Filtering Practice
Detention Structure (Dry Pond)	DP	Designed to store runoff without a permanent pool.	Dry Detention Pond & Hydrodynamic Structure
Dry Well	DW	An infiltration trench variant designed to exclusively accommodate rooftop runoff.	Infiltration Practice
Extended Detention Structure (Two types):	ED	Designed to temporarily detain a portion of runoff for 24 hrs after a storm using a fixed orifice to regulate outflow at a specific rate, allowing solids & associated time to settle out.	Dry Extended Detention Pond
Extended Detention Structure, Dry	EDSD	Designed for the temporary storage of runoff associated with at least a 24 hr 1-year storm without creating a permanent pool of water.	Dry Extended Detention Pond
Extended Detention Structure, Wet	EDSW	Designed for the storage of runoff associated with at least a 24 hr 1-year storm. The detained water drains partially & the remaining portion creates a permanent pool .	Dry Extended Detention Pond or Wet Pond & Wetlands
Filter Strip	FS	Vegetated land designed to intercept sheet flow from upstream development.	Filtering Practice
Flow Splitter	FlSp	Hydraulic structure designed either to divert a portion of stream flow to a BMP located away from a channel, direct stormwater to a parallel pipe system or bypass a portion of base flow around a pond .	Not a WQ BMP
Flood Management Area	FLOOD	10 year storm overbank flood protection	Not a WQ BMP
Forebay	FOREBAY	Storage structure adjoining a SWM BMP inlet designed to trap coarse sediments and thereby lessen their accumulation in the main treatment area .	Dry Detention Pond & Hydrodynamic Structure
Gabion	GABION	A large rectangular box made of heavy gauge wire mesh which holds cobbles and boulders for changing stream flow patterns, bank stabilization, and erosion control.	Filtering Practice
Grass Swale	SW	Open vegetated channel used to convey runoff and provide treatment by filtering pollutants and sediment.	Filtering Practice
Hydrodynamic Structure such as 1) Oil grit separator 2) Bay Saver© 3) Stormceptor©	 OGS BS SC	An engineered structure used to separate sediments and oils from stormwater runoff using gravitational separation and/or hydraulic flow.	Dry Detention Pond & Hydrodynamic Structure
Infiltration Basin	IB	Designed to allow stormwater to infiltrate into permeable soils. It differs from a retention structure in that it may include a back-up underdrain pipe to ensure eventual removal of standing water.	Infiltration Practice

Infiltration Trench (Three types):	IT	An excavated trench that has been backfilled with exposed or unexposed stones to form an underground reservoir (Also see Dry Well).	Infiltration Practice
Complete Exfiltration	ITCE	Runoff can only exit the trench by exfiltrating through the stone reservoir into the underlying soil	
Partial Exfiltration	ITPE	Runoff exits the trench by exfiltrating a) through the stone reservoir into the underlying soil, and b) via a perforated underdrain at the bottom of the trench that diverts runoff to a central outlet.	
Water Quality Exfiltration	ITWQE	Storage volume is set to receive only the first $\frac{1}{2}$" of runoff (first flush) from an impervious area of the watershed.	
Landscape	LANDSCAPE	Impervious area reduction (Thus far, only Prince Georges County has submitted reports of this practice).	Filtering Practice
Level Spreader	LS	A device for distributing stormwater uniformly over the ground surface as sheet flow to prevent concentrated, erosive flow and promote infiltration.	Infiltration Practice
Micropool (Reported by various jurisdictions before the standardization of codes)	MP	A smaller permanent pool used in a stormwater pond to mitigate the thermal impacts of a larger pond, impacts on existing wetlands, or compensate for lack of topographic relief.	Wet Pond & Wetlands
Observation well	OBS_WELL	A test well installed in an infiltration trench to monitor draining time after installation.	Not a SWM BMP – Observation Well
Other	OTH	A stormwater facility that is known to have been implemented but whose type cannot definitively be identified at the time of submitting a Notice of Construction Completion report to MDE.	Defaults to Dry Detention Pond & Hydrodynamic Structure, evaluated as the least efficient class of facilities in removing TSS, TN, and TP from stormwater runoff.
Porous Pavement	PP	A porous asphalt surface designed to have bearing strength similar to conventional asphalt but provides a rapid conduit for runoff to reach a subsurface stone reservoir.	Infiltration Practice
Retention Pond (See Wet Pond/WP)	WP	A structure with a permanent pool of water for treating incoming storm runoff.	Wet Pond & Wetlands
Sand Filter	SF	A bed of sand to which the first flush of runoff is diverted. Water leaving the filter is collected in underground pipes & returned to a waterway. A layer of peat, limestone, and/topsoil may be added to improve removal efficiency.	Filtering Practice
Shallow Marsh	SM	A structure with a permanent shallow pool planted with wetland vegetation often designed to provide extended detention.	Wet Pond & Wetlands
Underground Storage	UGS	Vault like structure designed for the temporary storage of storm flow.	Dry Detention Pond & Hydrodynamic Structure
Vegetated Buffer	VB	A vegetated protective zone of variable width located along both sides of a waterway.	Filtering Practice
Water Quality Inlet	OGS	See Hydrodynamic Structure-Oil Grit Separator.	Dry Detention Pond & Hydrodynamic Structure
Wet Pond	WP	A structure with a permanent pool of water for treating incoming storm runoff.	Wet Pond & Wetlands

Environmental Site Design Practices			
Practice Type	**Code**	**Function**	**Chesapeake Bay Program Classification**
Environmental Site Design -- alternative surfaces, non-structural and micro-scale practices may be grouped as a comprehensive stormwater design system and identified singlely as ESD.	ESD	A comprehensive design strategy for maintaining predevelopment runoff characteristics and protecting natural resources is available. This strategy relies on integrating site design, natural hydrology, and smaller controls to capture and treat runoff.	Stormwater to the MEP
Alternative Surfaces			
1) Green Roof	ESDGR	Alternative surface used in place of traditional flat or pitched roofs to reduce runoff.	Stormwater to the MEP
2) Permeable Pavements	ESDPERMP	Any of the available materials that are used to replace traditional pavements (e.g., asphalt, concrete) and reduce runoff.	
3) Reinforced Turf	ESDRTRF	Grassed or gravel area with open, load-bearing matrix for structural integrity.	
Nonstructural Practices			
1) Disconnection of Rooftop Runoff	ESDRTD	Rooftop runoff is disconnected and then directed to a pervious area where it either infiltrates or is filtered.	Stormwater to the MEP
2) Disconnection of Non-Rooftop Runoff	ESDNRTD	Runoff from surface impervious areas is disconnected and then directed to a pervious area where it either infiltrates or is filtered. Examples: Overland sheetflow, permeable pavers, rain gardens and small scale filters.	
3) Sheetflow to Conservation Areas	ESDSFNAC	Runoff is discharged to a natural conservation or buffer area (e.g. stream buffers, forest buffers) through overland flow.	
Micro-Scale Practices			
1) Rainwater Harvesting	ESDRH	These practices intercept and store rainfall for future use.	Stormwater to the MEP
2) Submerged Gravel Wetlands	ESDSGW	Small-scale filter using wetland plants and a gravel media to provide treatment.	
3) Landscape Infiltration	ESDIL	Combination of landscape features with infiltration practices.	
4) Infiltration Berms	ESDIB	Series of small berms used in sloped areas to detain, infiltrate, and filter runoff.	
5) Dry Wells	ESDDW	An infiltration trench variant designed to exclusively accommodate rooftop runoff.	
6) Micro-Bioretention	ESDMB	Small, vegetated filter used to capture and treat runoff from adjacent impervious areas.	
7) Rain Gardens	ESDRG	Shallow landscaped feature used to detain and filter runoff and used primarily in residential applications.	
8) Swales	ESDSW	Channels that provide conveyance, water quality treatment and flow attenuation of runoff. Variants include the grassed swale, bio-swale, and wet swale.	
9) Enhanced Filters	ESDEF	A modification applied to other filters that increase nutrient removal and groundwater recharge.	

Alternative MS4 BMPs			
Practice Type	**Code**	**Description**	**Chesapeake Bay Program Classification**
Mechanical Street Sweeping	MSS	Removes the buildup of pollutants that have been deposited along the street or curb using a mechanical sweeper truck	Street Sweeping, Mechanical
Regenerative/Vacuum Street Sweeping	VSS	Removes the buildup of pollutants that have been deposited along the street or curb using a vacuum-assisted sweeper truck	Street Sweeping, Regenerative
Nutrient Management	NM	Comprehensive nutrient management plan for reducing and or eliminating fertilizer use	Nutrient Management
Grass/Meadow Buffers	GMB	An area of trees at least 35 feet wide on one side of a stream, usually accompanied by infrequently-mowed grass, meadow flora species, and other vegetation that is adjacent to a body of water	Urban Grass/Meadow Buffers
Forest Buffers	FB	An area of trees at least 35 feet wide on one side of a stream, usually accompanied by trees, shrubs, and other vegetation that is adjacent to a body of water	Urban Forest Buffers
Impervious Surface Elimination (to Pervious)	IMPP	Pollutant load reduction expected when land cover is converted from impervious to pervious	Land Cover Change
Impervious Surface Elimination (to Forest)	IMPF	Pollutant load reduction expected when land cover is converted from impervious to forest	Land Cover Change
Planting Trees or Forestation on Pervious Urban	FPU	100 trees per acre or greater is necessary with at least 50% of the trees being 2 inches or greater in diameter at 4 ½ feet above ground level (an aggregate of smaller sites may be used)	Land Cover Change
Catch Basin Cleaning	CBC	Routine cleanouts performed on targeted infrastructure that have high accumulation rates	Street Sweeping
Storm Drain Vacuuming	SDV	Routine vacuuming performed on targeted infrastructure that has high accumulation rates	Street Sweeping
Stream Restoration	STRE	Stream restoration includes re-establishing a stable channel; reconnecting the stream with the floodplain; introducing habitat features such as step-pools, woody debris, or riparian vegetation; and integrating structural approaches such as rock walls or riprap.	Urban Stream Restoration
Shoreline Stabilization	SHST	These practices apply to the shoreline of the Chesapeake and Atlantic Coastal Bays and tidal rivers. Nonstructural practices or living shorelines include tidal marsh creation and beach nourishment; structural practices include stone revetments, breakwaters, or groins.	Shoreline Stabilization
Septic Pumping	SEPP	Implementation of septic system pumping	Septic Pumping
Septic Denitrification	SEPD	Implementation of enhanced denitrification technology	Septic Denitrification
Septic Connections to WWTP	SEPC	Removal of septic system and waste stream connection made to a waste water treatment plant.	Septic Connection to WWTP
Education	EDU	Education	To Be Determined
Sub-Soiling	SUB	Sub-Soiling	To Be Determined
Trash Removal	TRA	Trash Removal	To Be Determined
Pet Waste Management	PET	Pet Waste Management	To Be Determined
Outfall Stabilization	OUTS	Outfall Stabilization	To Be Determined
Floodplain Restoration	FPRES	Floodplain Restoration	To Be Determined
River Bank Stabilization	RBS	River Bank Stabilization	To Be Determined
Bio-Reactor Carbon Filter	BRCF	Bio-Reactor Carbon Filter	To Be Determined
Disconnection of Illicit Discharges	DID	Disconnection of Illicit Discharges	To Be Determined

Alternative MS4 BMPs (Continued)			
Practice Type	**Code**	**Description**	**Chesapeake Bay Program Classification**
Step Pool Storm Conveyance	SPSC	Step Pool Storm Conveyance; if used as a filtration practice, the pollutant removal efficiencies for micro-bioretention can be applied to the drainage area treated.	To Be Determined

Policy Decision			
Policy	**Code**	**Description**	**Chesapeake Bay Program Classification**
Exemption	EXEMPT	Land development activities that are not subject to the stormwater management requirements.	Not a SWM BMP
Variance	VARIANCE	A modification of the minimum stormwater management requirement if site conditions are such that strict adherence to the Guidelines would impose unnecessary hardship on the applicant without fulfilling the intent of the Guidelines.	Not a SWM BMP
Waiver	WAIVER	Exemption from stormwater management requirements granted to an applicant for a specific project based on a review by MDE.	Not a SWM BMP

[4] Pollution Prevention Activities Codes

21. **ODOR:** None(N), Sewage (SE), Sulfur (S), Oil (IL), Gas (G), Rancid-Sour (RS), Other (O)

22. **COLOR:** Clear (C), Yellow (Y),Brown (B), Green (GR), Red (R), Gray (G), Other (O)

23. **CLARITY:** Clear (C), Opaque (OP), Cloudy (CD), Other (O)

24. **FLOATABLES:** None (N), Oil Sheen (OS), Sewage (SE), Trash (T), Other (O)

25. **DEPOSITS:** None (N), Sediment (S), Oil (IL), Other (O)

26. **VEG_COND.:** Normal (N), Excessive Growth (EG), Inhibited Growth (IG), Other (O)

27. **STRUCT_COND**: Normal (N), Concrete Cracking (CC), Concrete Spalling (SP), Other (O)

28. **EROSION**: None (N), Moderate (M), Severe (S)

[5]Unique Structure Identification Codes

Each stormwater best management structure or water quality improvement project will need a unique identification code. For management of these data Statewide it is necessary that these codes also indicate the jurisdiction where they are implemented. Please use the County, City, or State abbreviations listed below as part of each structures unique identification code.

Anne Arundel County	AA
Baltimore City	BC
Baltimore County	BA
Carroll County	CA
Charles County	CH
Frederick County	FR
Harford County	HA
Howard County	HO
Prince George's County	PG
Montgomery County	MO
Maryland State Highway Administration	SHA

Attachment B
EPA Approved Total Maximum Daily Loads (TMDLs)
Baltimore County

This NPDES permit requires Baltimore County to submit an annual TMDL assessment report evaluating the effectiveness of the County's restoration plans and progress made in achieving compliance with EPA approved TMDLs. Similarly, by regulation at 40 CFR §122.44, EPA further requires that stormwater controls and programs implemented pursuant to this NPDES permit be consistent with applicable WLAs developed under any approved TMDLs. The following is a list of approved TMDLs applicable to Baltimore County:

Basin Name	8-digit Basin Number	Impairment	Year	Comments
Loch Raven Reservoir	02130805	Bacteria	2009	Local
Loch Raven Reservoir	02130805	Mercury	2004	Local
Loch Raven Reservoir	02130805	Nutrients & Sediments	2007	Local
Prettyboy Reservoir	02130806	Bacteria	2009	Local
Prettyboy Reservoir	02130806	Mercury	2004	Local
Prettyboy Reservoir	02130806	Nutrients	2007	Local
Back River	02130901	Bacteria	2007	Local
Back River Oligohaline	02130901	Chlordane	1999	Local
Back River Oligohaline	02130901	Nutrients & Sediments	2005 / 2010	Local / Bay TMDL
Patapsco River Mesohaline	02130903	Bacteria	2011	Local
Patapsco River Mesohaline	02130903	Chlordane	2001	Local
Patapsco River Mesohaline	02130903	Nutrients & Sediments	2007 / 2010	Local / Bay TMDL
Jones Falls	02130904	Bacteria	2008	Local
Jones Falls	02130904	Chlordane	2001	Local
Jones Falls	02130904	Sediments	2011	Local
Gwynns Falls	02130905	Bacteria	2007	Local
Gwynns Falls	02130905	Sediments	2010	Local
Patapsco River Lower N. Branch	02130906	Bacteria	2009	Local
Patapsco River Lower N. Branch	02130906	Sediments	2011	Local
Liberty Reservoir	02130907	Bacteria	2009	Local
Chesapeake Bay Mainstem 1 Tidal Fresh	02139996, 02130609, 02130705	Nutrients & Sediments	2010	Bay TMDL
Chesapeake Bay Mainstem 2 Oligohaline	02139996, 02139997, 02130611, 02130705, 02130901	Nutrients & Sediments	2010	Bay TMDL
Chesapeake Bay Mainstem 3 Mesohaline	02139997, 02139998, 02130511, 02130505, 02130903	Nutrients & Sediments	2010	Bay TMDL
Gunpowder River Oligohaline	02130801, 02130802, 02130803, 02130804	Nutrients & Sediments	2010	Bay TMDL
Middle River Oligohaline	02130801, 02130807	Nutrients & Sediments	2010	Bay TMDL

U.S. Environmental Protection Agency
Office of Compliance and Enforcement
1200 Pennsylvania Avenue, NW
Washington, DC 20460

U.S. Environmental Protection Agency, Region 3
Water Protection Division, Office of Enforcement
1650 Arch Street
Philadelphia, PA 19103

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROGRAM COMPLIANCE INSPECTION

BALTIMORE COUNTY, MARYLAND

FINAL INSPECTION REPORT

Inspection Date:
March 8–9, 2011

Report Date:
September 19, 2011

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Major Documents and Abbreviations Used

Short-name	Document Title and Date
COMAR	*Code of Maryland Regulations*
Industrial General Permit	*Maryland Department of the Environment /National Pollutant Discharge Elimination System General Discharge Permit for Storm Water Associated with Industrial Activities*, No. 02-SW, effective December 1, 2002
Permit	*Maryland Department of the Environment /National Pollutant Discharge Elimination System Municipal Separate Storm Sewer Systems Permit* No. MD0068314 (99-DP-3317), effective June 15, 2005

Introduction

On March 8–9, 2010, the U.S. Environmental Protection Agency (EPA), Region 3, and an EPA contractor, PG Environmental, LLC (hereinafter, collectively, the EPA Inspection Team) conducted an inspection of the Baltimore County (hereinafter, County or Permittee) Municipal Separate Storm Sewer System (MS4) Program. Discharges from the County's MS4 are regulated under the *Maryland Department of the Environment (MDE)/National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer Systems Permit* No. MD0068314 (99-DP-3317) (hereinafter, the Permit), effective June 15, 2005. The Permit expired on June 15, 2010, but has been administratively extended by MDE.

The County encompasses approximately 384,825 acres; it has 2,100 stream miles, and 217 miles of shoreline on the Chesapeake Bay in the southeast portion of the County. The County borders Pennsylvania to the north and is surrounded by Harford County to the east, Baltimore City to the south, Howard County to the southwest, and Carroll County to the west. According to County officials, the total population of the County was estimated to be approximately 800,000 people at the time of the inspection. There are no combined sewer systems in the County. Approximately 90 percent of the County population is served by the sanitary sewer system; the remaining 10 percent is served by septic systems.

The Permit authorizes the County to discharge stormwater runoff and certain non-stormwater discharges to and from the MS4 owned and operated by the County, under the Permit terms and conditions. The County's receiving waters include 14 different watersheds, 3 drinking water reservoirs, and 6 tidal water segments.

The purpose of the inspection was to obtain information that will assist EPA in assessing the County's compliance with the requirements of the Permit. The inspection schedule is presented in Appendix A.

The EPA Inspection Team obtained information through a series of interviews with representatives from the Department of Environmental Protection and Sustainability (DEPS), the Department of Public Works (DPW), and Baltimore County Schools, along with a series of site visits, record reviews, and field verification activities. The primary representatives involved in the inspection were the following:

Baltimore County MS4 Program Compliance Inspection: March 8–9, 2011	
Department of Environmental Protection and Sustainability	Thomas L. Vidmar, Deputy Director
Watershed Management & Monitoring	Steven L. Stewart, Manager Nancy Pentz, Natural Resource Specialist Kevin Brittingham, Watershed Monitoring Supervisor
Stormwater Engineering	Al Wirth, Manager
Capital Program and Operations	Candace L. Croswell, Manager
Baltimore County Public Schools	Bob Merrey, Environmental Services Supervisor
Department of Public Works	Radu Zamfirache, Engineer III
EPA Representatives	Chuck Schadel, EPA Region 3 Allison Graham, EPA Region 3
EPA Contractors	Max Kuker, PG Environmental, LLC Scott Coulson, PG Environmental, LLC Katie Bradshaw, PG Environmental, LLC

Wet weather conditions were experienced during some of the inspection activities. Weather history reports[1] indicate that approximately 0.02 inch of precipitation fell in the Baltimore County area on March 9, 2011.

[1] Weather history reports for Baltimore Washington International (BWI) Airport were obtained from the National Weather Service website (http://www.weather.gov/climate/index.php?wfo=lwx).

Information Obtained Regarding Compliance with the Permit

During the MS4 inspection, the EPA Inspection Team obtained documentation and other supporting evidence regarding compliance with the Permit. Pertinent information obtained during the inspection is presented in this report. The presentation of inspection observations in this report does not constitute a formal compliance determination or notice of violation. All referenced documentation used as supporting evidence is provided in Appendix B, and photo documentation is provided in Appendix C.

Section A. Stormwater Management and Stormwater Management BMP Inspections

As a component of this inspection, the EPA Inspection Team conducted a review of the County's Stormwater Management program and Stormwater Management Best Management Practice (BMP) inspection program in comparison to Parts III.E.1 and III.E.2 of the Permit and the Environmental Article, Title 4, Subtitle 2, *Annotated Code of Maryland*. The *Code of Maryland Regulations* (COMAR) 26.17.02 includes regulations that govern stormwater management for the development, or redevelopment of land with the goal of maintaining predevelopment runoff characteristics and reducing stream channel erosion, pollution, siltation, sedimentation, and local flooding.

The EPA Inspection Team reviewed procedures related to the implementation of the requirements in both the Permit and COMAR, including tracking and reporting of the implementation of the *2000 Maryland Stormwater Design Manual* as well as identifying, conducting, and documenting maintenance inspections for stormwater management BMPs in the County. Site visits were used to verify these implementation procedures.

A.1. Stormwater Management Site Visits

On March 8–9, 2011, the EPA Inspection Team conducted two site visits to stormwater management facilities within the County. The purposes of the site visits were to document site conditions and to assess the County's oversight and maintenance activities for stormwater management facilities. Summary observations pertaining to these two sites are presented below. All referenced photographs are contained in Appendix C, Photograph Log.

Long Quarter Branch Retrofit

The Long Quarter Branch Retrofit is located near the intersection of Winsford Road and Fairmount Avenue. The retrofit was observed to divert stormwater from a paved stormwater drainage canal into the stormwater management structure (see Appendix C, Photographs 1 and 2). The Long Quarter Branch Retrofit appears to receive stormwater from the surrounding roadways, commercial properties, multi-family residential developments, and specifically from active construction activities at the Carver Center for Arts and Technology.

It was noted that turbid water was visible in the stormwater entering the structure, and it appeared to be a result of active construction activities at the Carver Center for Arts and Technology approximately 0.2 mile to the west of the structure (see Appendix C, Photographs 2 and 3). The Carver Center construction site was visited during this inspection to confirm the source of the turbidity in the structure. The EPA Enforcement Officer, a member of the EPA Inspection Team, conducted a more thorough investigation of erosion and sediment control practices at the site, as well as documentation associated with the NPDES program for storm water discharges associated with construction. The required documentation (i.e., self-inspection reports, permit coverage, and erosion and sediment control (E&S) plan) was present and of an acceptable quality. The Enforcement Officer identified several areas of the site where erosion was present. The site operator indicated that a heavy rain had occurred recently and that the erosion would be repaired within 2 days. All E&S controls required by the approved E&S plan were installed.

According to a County representative, maintenance on the Long Quarter Branch stormwater management structure was completed in 2008 by a contractor and again in 2010 by the County.

The Quarters

The Quarters is an apartment complex located at 948 Dulaney Valley Road (at the intersection of Dulaney Valley Road and Southerly Road). The County approved plans for the complex in 2005, and the complex was subsequently constructed. As part of construction of the apartment complex, a sand filter stormwater management structure was implemented under the parking garage (see Appendix C, Photographs 4 and 5). Stormwater from the property drains to the sand filter structure, where it is filtered before being discharged.

The documentation provided by the County indicated that the County had implemented its review process in accordance with COMAR and the *2000 Maryland Stormwater Design Manual*.

Section B. Illicit Discharge Detection and Elimination

Part III.E.4 of the Permit requires that "Baltimore County shall maintain its illicit connection detection and elimination program to ensure that all discharges to and from the municipal separate storm sewer system that are not composed entirely of stormwater are either permitted by MDE or eliminated."

Observation 1. Illegal Dumping and Spills

Part III.E.4 of the Permit requires the County to "maintain an illicit detection and elimination program to ensure that all discharges to and from the municipal separate storm sewer system that are not comprised entirely of stormwater are either permitted by MDE or eliminated."

County representatives stated that they had not documented or reported IDDE education and outreach for the public, and therefore no documentation was available. County representatives stated that the County had not developed public education materials to be distributed or made available to the public regarding IDDE or spills. County representatives further explained that volunteers from the public participate in a County-sponsored Stream Watch Program, which organizes and completes stream cleanup activities and monitors changes to assigned stream segments. The County's 2010 Annual Report indicates that these Steam Watch Program volunteers receive "field training and the use of the GIS system." The volunteer training is not aimed at identifying illicit discharges and spills or educating the public about the harmful effects of such discharges.

In addition, County representatives explained that training on IDDE and spills for municipal staff, including field employees and operators, had not been conducted. In particular, field employees who might observe illegal dumping or spills had not been trained in proper identification and reporting procedures.

Furthermore, procedures for tracking and reporting of IDDE-related complaints had not been developed for complaints received by County departments outside the DEPS. The Watershed Monitoring section of DEPS is responsible for the investigation, tracking, and reporting of illicit discharges. County representatives stated that the procedures apply, once the Watershed Monitoring section receives a report of an illicit discharge. County representatives stated that staff from the Watershed Monitoring section conduct an initial review of the reports and either conduct a full investigation or route the reports to the appropriate County department or to MDE for further investigation and/or elimination depending on the nature of the complaint. County representatives explained that investigation procedures had been established for tracking, follow-up, and reporting of illicit discharge complaints handled by DEPS, including using a spreadsheet to document the date, complaint, action taken, status, and location.

If the Watershed Monitoring section has to refer a complaint outside DEPS, however, the complaint is labeled as having been referred to another agency or department and is no longer tracked.

In addition, if complaints are not initially received by the Watershed Monitoring section of DEPS, they are not tracked, documented, or reported to the Watershed Monitoring section of DEPS unless the agency or department informs the Watershed Monitoring section of the complaint. There are no procedures to ensure that complaints received by other County Departments are adequately responded to or that they are reported to the Watershed Monitoring section of DEPS for tracking (i.e., for an understanding of what types of pollutants may be entering their system) and for annual reporting purposes.

Under this approach, the County Watershed Monitoring section does not track all referrals through resolution.

Observation 2. Public Reporting of Spills and Other Illicit Discharges

Part III.E.7.a of the Permit requires the County to "establish and publicize a compliance hotline for the public reporting of suspected illicit discharges, illegal dumping, and spills."

As reported in the County's 2010 Annual Report, the Watershed Monitoring section processed a total of 75 complaints during the 2010 reporting period; 33 of the complaints were citizen complaints, and the remaining complaints were from DEPS or other agencies. Of the 75 complaints, 45 were referred to other agencies (e.g., MDE). The County estimates that 13 percent of the complaints involve potential illicit discharges or connections.

A reporting system (i.e., a dedicated local telephone number or hotline) for public reporting of spills and other illicit discharges had not been established or publicized. During normal business hours, the front desk staff at DEPS receives call complaints and directs them to the Watershed Monitoring section. However, no procedures had been developed for reporting of illicit discharges after business hours. **[NOTE: Is the fact that they don't have a number for "after hours" the inadequacy ?]**

In addition, procedures had not been developed for the recording and tracking of complaints related to spills or illicit discharges that are received by departments outside DEPS. As a result, illicit discharges reported to other departments or agencies might not be tracked, investigated, and reported for NPDES purposes.

Observation 3. Surveys of Commercial and Industrial Watersheds

Part III.E.4.b of the Permit requires the County to "conduct routine surveys of commercial and industrial watersheds for discovering and eliminating pollutant sources."

The County is using hot spot investigations (HSIs) for surveying commercial and industrial watersheds in the County. HSIs are conducted during the completion of small watershed action plans (SWAPs). Baltimore County has 22 SWAP areas, totaling 383,127 acres. To date, SWAPs and HSIs have been completed in five of the SWAP areas, totaling 60,179 acres or approximately 15.7 percent. Of the five completed SWAPs, four have been completed by

Baltimore County and/or a consultant and one has been completed by Harford County. Development of procedures for conducting HSIs began in 2008; the remaining 17 SWAPs are scheduled for completion by 2014.

Starting in 2010, the County began using contractors to complete the HSIs for the remaining 17 SWAPs that are in progress. Of the remaining 17 SWAPs that are in development, 15 are scheduled to be completed by contractors and two are scheduled to be completed by DEPS.

Section C. County Property Management and Road Maintenance

Part III.E.5 of the Permit requires the County to "identify all County-owned facilities requiring NPDES stormwater general permit coverage and submit Notices of Intent (NOI) to MDE for each. The status of pollution prevention plan development and implementation shall be submitted annually."

The County's 2010 Annual Report indicates DEPS estimated that approximately 30 facilities may require coverage under the *MDE NPDES General Discharge Permit for Storm Water Associated with Industrial Activities*, No. 02-SW (hereinafter, the Industrial General Permit), effective December 1, 2002.

C.1. County Property Management Site Visits

On March 8–9, 2011, the EPA Inspection Team conducted eight site visits at County-owned facilities and municipal activities within the County. All referenced photographs are contained in Appendix C, Photograph Log.

County Department of Education North Point Bus Facility – 4242 North Point Road, Baltimore, Maryland

The North Point Bus Facility (see Appendix C, Photograph 6) is used for various Department of Education activities associated with the County's MS4. The facility Grounds Maintenance Supervisor explained that the site was previously a lumber business, and the Department of Education began its activities in October 2010.

The Department of Education Environmental Services Supervisor explained that a Notice of Intent (NOI) had been drafted, but it had not been submitted to MDE to obtain Industrial General Permit coverage. He also stated that a Stormwater Pollution Prevention Plan (SWPPP) had not yet been developed. On March 16, 2011, MDE provided the EPA Inspection Team with a list of facilities where Industrial General Permit coverage had been obtained (hereinafter, MDE Permitted Facilities Inventory; see Appendix B, Exhibit 1). The EPA Inspection Team reviewed the MDE Permitted Facilities Inventory and confirmed that the North Point Bus Facility did not have Industrial General Permit coverage.

Back River is approximately 0.56 mile to the west of the facility, and Bear Creek is approximately 0.27 mile to the east. There is an unnamed lake, possibly a natural lake, immediately south of the facility, and it might serve as the initial receiving water. The EPA Inspection Team observed the following with regard to pollution prevention and good housekeeping at the facility:

- The Department of Education conducts regulated industrial activity at the North Point Bus Facility, as specified in Part I.B of the Industrial General Permit and as further defined in Title 40 of the *Code of Federal Regulations* (CFR), section 122.26(b)(14). As evidenced below, the observed industrial activities included mechanical repairs, fueling, and lubrication of buses and other equipment.
- A fueling area was located in the southern portion of the site (see Appendix C, Photographs 7 and 8). The Department of Education maintains both underground storage

tanks (USTs) and above ground fuel storage tanks (AGSTs) that are actively used for vehicle and equipment fueling. The fueling area had not been provided with overhead coverage, but a spill kit was present at the fueling area and inside the nearby vehicle maintenance shop. The Department of Education Environmental Services Supervisor explained that a Spill Prevention, Control and Countermeasures (SPCC) Plan had not been developed in association with the fuel and various other petroleum products stored at the facility.

- A bus-washing area, which was used for vehicle cleaning operations, was located outside the vehicle maintenance shop in the southern portion of the site (see Appendix C, Photograph 9). A hose bib and detergent were observed at the washing area (see Appendix C, Photographs 9 through 11). The facility Transportation Maintenance Supervisor explained that out of approximately 80 buses that are stored on-site, nearly half are washed at this location. The bus-washing area was located outside on an impervious surface, but wash water containment BMPs had not been installed (see Appendix C, Photograph 12). Furthermore, the EPA Inspection Team observed a storm drain inlet down-gradient of the bus-washing area on the west side of the vehicle maintenance shop (see Appendix C, Photograph 12).
- A vehicle maintenance shop was present in the southern portion of the site (see Appendix C, Photograph 9). Used vehicle and equipment parts were stored uncovered, outside one of the maintenance bays on the eastern side of the maintenance shop (see Appendix C, Photograph 13). The main vehicle maintenance bay was located at the southwest corner of this building (see Appendix C, Photograph 14). The facility Transportation Maintenance Supervisor explained that the vehicle maintenance shop is used to conduct routine bus repairs such as fluid changes and work on lights, brakes, and exhaust systems. This activity constitutes vehicle rehabilitation, mechanical repairs, and lubrication.
- A storm drain inlet was located outside the main vehicle maintenance bay and down-gradient from the aforementioned fueling area in the southern portion of the site (see Appendix C, Photographs 14 and 15). A flow pathway was observed leading from the fueling area to the storm drain inlet, indicating the general drainage pattern at the location.
- A roadway salt stockpile was located in the northeast corner of the site, adjacent to the facility boundary and fenceline (see Appendix C, Photograph 16). White salt residue was observed on the pavement, leading from the stockpile to the east (see Appendix C, Photograph 17). Salt residue was also present beyond the fenceline, and salt had migrated toward an area of standing water along the I-695 beltway inner loop (see Appendix C, Photographs 18 and 19).

County Office of Budget and Finance, Essex Fuel Center (a.k.a., Shop II) – 511 Mace Avenue Baltimore, Maryland

The Essex Fuel Center (see Appendix C, Photograph 20) is used for maintenance service and fueling of County vehicles.

The DEPS Natural Resource Specialist explained that the County Office of Budget and Finance had not submitted NOIs to MDE to obtain Industrial General Permit coverage for their vehicle operations and maintenance facilities. The EPA Inspection Team reviewed the MDE Permitted

Facilities Inventory and confirmed that the Essex Fuel Center did not have Industrial General Permit coverage.

Northeast Creek is approximately 0.58 mile to the west of the facility, and Duck Creek is approximately 0.39 mile to the east. The EPA Inspection Team observed the following with regard to pollution prevention and good housekeeping at the facility:

- The County Office of Budget and Finance conducts regulated industrial activity at the Essex Fuel Center, as specified in Part I.B of the Industrial General Permit and as further defined at 40 CFR 122.26(b)(14). As evidenced below, the observed industrial activities included mechanical repairs, fueling, and lubrication of County Office of Budget and Finance fleet vehicles.
- A fueling station was located along Mace Avenue (see Appendix C, Photograph 21). The County Office of Budget and Finance maintains an AGST and USTs that are actively used for vehicle fueling (see Appendix C, Photographs 22 and 23). The facility Maintenance Manager explained that controlled, 24-hour access is provided to County employees for the use of the fuel pumps (see Appendix C, Photograph 24). The fueling area, however, had not been provided with overhead coverage, and spill cleanup materials (e.g., absorbent) were available only inside the maintenance shop during business hours.
- A vehicle maintenance shop was located inside the main building present at this site (see Appendix C, Photograph 25). The facility Maintenance Manager explained that the vehicle maintenance shop is used to conduct routine County Office of Budget and Finance fleet vehicle repairs such as fluid changes, brake repair, and tune-ups. This activity constitutes vehicle rehabilitation, mechanical repairs, and lubrication. Notably, the facility was equipped with a self-contained pumping system to transfer used motor oil from inside the vehicle maintenance shop to an outdoor used oil storage tank (see Appendix C, Photographs 26 and 27). Although the used oil tank was protected from vehicle traffic, an unlabeled and partially filled drum was stored without containment or protection along the east side of the vehicle maintenance shop (see Appendix C, Photograph 28). The facility Maintenance Manager indicated that the drum contained a cleaning product or detergent.
- The facility Maintenance Manager stated "it is rare that vehicles are washed at the facility."
- A storm drain inlet was observed to the southeast of the facility, near the intersection of Wolf Street and George Avenue (see Appendix C, Photographs 29).

County Department of Education Kenwood Bus Facility – 600 Stemmers Run Road, Baltimore, Maryland

The Kenwood Bus Facility (see Appendix C, Photograph 30) is used for various Department of Education activities associated with the County's MS4, including the following: (1) bus, truck, and grounds equipment maintenance (including mechanical repairs, fueling, steam cleaning, and lubrication); (2) material storage (e.g., vehicle parts, roadway salt); and (3) vehicle and equipment storage (including County buses).

Part IV.B.2 of the Industrial General Permit requires that a SWPPP be completed and implemented prior to submitting an NOI. The Department of Education Environmental Services

Supervisor stated that an NOI had been submitted to MDE in approximately November 2007 to obtain Industrial General Permit coverage for multiple Department of Education facilities, but SWPPPs had not yet been developed. The EPA Inspection Team reviewed the MDE Permitted Facilities Inventory and confirmed that the Kenwood Bus Facility had Industrial General Permit coverage under Registration No. 02SW2115.

Northeast Creak is approximately 0.50 mile to the west of the facility, and Middle River is located approximately 1.0 mile to the east. The EPA Inspection Team observed the following with regard to pollution prevention and good housekeeping at the facility:

- A roadway salt stockpile was located in the northwest corner of the site, adjacent to the facility boundary and fenceline (see Appendix C, Photograph 31). White salt residue was observed on the pavement, leading from the stockpile to the north (see Appendix C, Photograph 32) and behind the stockpile leading toward the facility boundary and fenceline (see Appendix C, Photograph 33). Salt was present beyond the fenceline within a rock-lined ditch (see Appendix C, Photographs 34 and 35) that is tributary to a drainage conveyance along the adjacent Northeast Corridor railway (see Appendix C, Photographs 36 and 37). It should also be noted that uncovered salt product was observed at two other locations at the facility—the eastern portion of the bus storage lot (see Appendix C, Photograph 38), and the southern entranceway to the bus storage lot (see Appendix C, Photograph 39). Part IV.C.5 of the Industrial General Permit states that "storage piles of salt used for deicing or other commercial or industrial purposes shall be enclosed or covered to prevent exposure to precipitation."
- A bus washing area, used for vehicle cleaning operations, was located on the west side of the bus maintenance shop in the central portion of the site. A hose bib, bucket, and cleaning brush were observed at the washing area (see Appendix C, Photograph 40). A 55-gallon drum, which was labeled as a cleaner/degreaser, was present on the west side of the bus maintenance shop (see Appendix C, Photographs 41 and 42). The bus-washing area was located outside on an impervious surface, but wash water containment BMPs had not been installed (see Appendix C, Photograph 40). Drainage features were not observed in the immediate vicinity of bus-washing area (see Appendix C, Photograph 43).

County Department of Public Works, Bureau of Highways, Perry Road Facility (Shop 7-1) – 7801 Perry Road, Baltimore, Maryland

The Perry Road Facility is used for various Bureau of Highways activities associated with the County's MS4, including the following: (1) fueling of Bureau of Highways vehicles and equipment; (2) material storage (e.g., cold mix asphalt, asphalt millings, roadside waste, green waste, roadway salt, liquid de-icer); and (3) vehicle and equipment storage (including a street sweeper, snow removal equipment, tree trimming equipment, and other highway maintenance equipment).

The EPA Inspection Team reviewed the MDE Permitted Facilities Inventory and confirmed that the Perry Road Facility had Industrial General Permit coverage under Registration No. 02SW1970. The facility SWPPP was also viewed as a component of the site visit.

The EPA Inspection Team observed the following with regard to pollution prevention and good housekeeping at the facility:

- A vehicle washing area, which was used for vehicle cleaning operations, was located on the south side of the main shop building (see Appendix C, Photograph 44). A wash bucket and brush were in use at the washing area (see Appendix C, Photograph 45). The facility Highway Maintenance Manager explained that the Bureau of Highways shops are not equipped with vehicle wash facilities that capture, treat, reuse, or dispose of vehicle wash water. The vehicle washing area was outside on an impervious surface, but wash water containment BMPs had not been installed in the immediate proximity (see Appendix C, Photograph 45). A white foam, indicative of detergent, and wash water were observed on the pavement, leading from the vehicle washing area to the southwest (see Appendix C, Photographs 46) and continuing toward the facility boundary and fenceline (see Appendix C, Photographs 47 and 48). Although an absorbent boom had been installed at the fenceline, wash water continued beyond the facility boundary (see Appendix C, Photographs 48). The facility Highway Maintenance Manager explained that a drainage pipe had been installed some time ago at the base of the slope outfall from the facility (see Appendix C, Photographs 49 and 50). A black drainage pipe was observed leading from the vicinity of the slope outfall (see Appendix C, Photographs 51). A sheen was present on the surface of the turbid flow that was exiting the black drainage pipe (see Appendix C, Photographs 52). White foam accumulation was observed below the outlet of the black drainage pipe, within a tributary to Stemmers Run (see Appendix C, Photographs 53 through 56). Stemmers Run is approximately 0.602 mile to the southwest. The facility SWPPP was viewed as a component of the site visit, and it did not address illicit non-stormwater discharges such as vehicle wash water and associated pollutants. Part III.E.4 of the Permit requires the County to "maintain its illicit connection detection and elimination program to ensure that all discharges to and from the municipal separate storm sewer system that are not composed entirely of stormwater are either permitted by MDE or eliminated."
- A roadway waste storage area was located in the eastern portion of the site, adjacent to the salt storage building (see Appendix C, Photograph 57). The facility Highway Maintenance Manager explained that the area is used to temporarily store items that are discarded by motorists along the highways, as well as waste materials generated during highway maintenance. The EPA Inspection Team observed concrete, asphalt, tree trimmings, soil, tires, batteries, and various metal goods at the storage area (see Appendix C, Photographs 58 through 60). The roadway waste storage area drains through a set of concrete highway barriers and is located adjacent to a paved swale (see Appendix C, Photograph 61). A wetted flow path was observed leading from the roadway waste storage area along the paved swale to the west (see Appendix C, Photographs 61 and 62). The facility Highway Maintenance Manager explained that a berm had been installed along the fenceline and flow was now directed to the west. Snow plows were stored along the flow path, and hydraulic fluid leaks were present (see Appendix C, Photographs 62 and 63). Furthermore, white salt residue was observed on the pavement, leading along the snow plow storage area toward the slope outfall in the southwest corner of the site (see Appendix C, Photographs 64, 65, and 48).

County Department of Education Cockeysville Service Center – 101 Wight Avenue, Cockeysville, Maryland

The Cockeysville Service Center is used for various Department of Education activities associated with the County's MS4, including the following: (1) bus, truck, and grounds equipment maintenance (including mechanical repairs, fueling, pressure washing, and lubrication); (2) material storage (e.g., vehicle parts, landscaping materials); and (3) vehicle and equipment storage (including County buses).

Part IV.B.2 of the Industrial General Permit requires that a SWPPP be completed and implemented prior to submitting an NOI. The Department of Education Environmental Services Supervisor stated that an NOI had been submitted to MDE in approximately November 2007 to obtain Industrial General Permit coverage for multiple Department of Education facilities, but SWPPPs had not yet been developed. The EPA Inspection Team reviewed the MDE Permitted Facilities Inventory and confirmed that the Cockeysville Service Center had Industrial General Permit coverage under Registration No. 02SW2121.

Oregon Branch is approximately 0.05 mile to the southwest of the facility, and the confluence of Oregon Branch with Beaverdam Run is approximately 0.06 mile to the south. Beaverdam Run is tributary to Loch Raven Reservoir, which is approximately 1.0 mile to the northeast. The EPA Inspection Team observed the following with regard to pollution prevention and good housekeeping at the facility:

- A bus-washing area, which was used for vehicle cleaning operations, was located on the north side of the bus maintenance building (see Appendix C, Photograph 66). A cleaning product container/applicator was present at the washing area (see Appendix C, Photograph 67). A facility Bus Maintenance Mechanic explained that the applicator contained a cleaner/degreaser product that was sprayed onto the bus engine and parts prior to rinsing with the adjacent hose. The bus-washing area was located outside on an impervious surface, but wash water containment BMPs had not been installed. A white foam, indicative of cleaner/degreaser product, and wash water were observed on the pavement (see Appendix C, Photograph 68) and actively flowing from the bus washing area into an adjacent storm drain inlet, a component of the MS4 (see Appendix C, Photographs 69 through 72). The facility Transportation Maintenance Supervisor explained that the mechanics are supposed to use the designated pressure washing pad, which he claimed is connected to the sanitary sewer system (see Appendix C, Photograph 73). Part III.E.4 of the Permit requires the County to "maintain its illicit connection detection and elimination program to ensure that all discharges to and from the municipal separate storm sewer system that are not composed entirely of stormwater are either permitted by MDE or eliminated."
- A partially-filled 55-gallon drum, which was labeled as gear oil, was stored without containment and overhead coverage BMPs on the west side of the bus maintenance building (see Appendix C, Photographs 74 and 75). Adjacent to this drum were multiple partially filled fuel tanks, which were stored outdoors and open to the elements (see Appendix C, Photographs 74, 76, and 77). A storm drain inlet was located down-gradient from the aforementioned drum and partially filled fuel tanks (see Appendix C, Photographs 78 and 79). Furthermore, a wetted flow pathway was observed leading from one of the maintenance bays of the bus maintenance building to the storm drain inlet (see

Appendix C, Photographs 80). A white foam, indicative of cleaner/degreaser product, and discolored water were present along the wetted flow pathway (see Appendix C, Photographs 81). Discolored water and a slight sheen were observed on the standing water present inside this storm drain inlet (see Appendix C, Photographs 82).

- Another bus-washing area, which was used for vehicle cleaning operations, was located adjacent to the fueling station (see Appendix C, Photographs 83 and 84). A hose was present at the washing area (see Appendix C, Photographs 83 and 84). The facility Transportation Maintenance Supervisor explained that individual bus drivers wash buses at this location. The bus-washing area was located outside on an impervious surface, but wash water containment BMPs had not been installed (see Appendix C, Photograph 84). A curb cut/overland outfall was located at the southeast corner of the site, down-gradient of the bus-washing area (see Appendix C, Photographs 85 and 86). Part III.E.4 of the Permit requires the County to "maintain its illicit connection detection and elimination program to ensure that all discharges to and from the municipal separate storm sewer system that are not composed entirely of stormwater are either permitted by MDE or eliminated."
- In the southern portion of the facility, decommissioned buses were stored with dismantled parts exposed near an area of standing water (see Appendix C, Photographs 86 through 90). Specifically, a decommissioned bus was not stored with the hood down (i.e., overhead coverage for engines and fluid residues), and another bus was not stored with metal parts raised off the ground (e.g., on wheels with the tire intact). A second curb cut/overland outfall was located at the southwest corner of the site, down-gradient of the decommissioned buses (see Appendix C, Photographs 91 and 92). Oregon Branch is located approximately 0.05 mile to the southwest, and the confluence of Oregon Branch with Beaverdam Run is located approximately 0.06 mile to the south.
- As previously mentioned, a fueling station was located in the eastern portion of the site (see Appendix C, Photograph 93). A spill kit was not maintained at the fueling station, and spilled diesel fuel and petroleum products residues were present on the pavement (see Appendix C, Photographs 93 through 95). Although the fueling station had been provided with overhead coverage, petroleum product residues had migrated to a down-gradient trench drain (see Appendix C, Photographs 95 and 96). The fluid level in the trench drain was approaching capacity, leaving the trench drain with little remaining capacity in the event of a spill (see Appendix C, Photograph 97). Furthermore, a drainage inlet was present beyond the overhead coverage and immediately down-gradient of the trench drain (see Appendix C, Photograph 98). Drainage schematics were not available during the inspection; therefore, the EPA Inspection Team could not verify whether this drainage inlet is connected to the sanitary collection system or to the storm drainage system. Flow was present inside the drainage inlet, however, and no sewage odors were apparent (see Appendix C, Photograph 99). Flow inside the drainage inlet appeared to lead in the direction of an adjacent concrete drainage swale leading east from facility (see Appendix C, Photographs 100 and 101).

Observation 4. County-owned Facilities Requiring NPDES Coverage.

Part III.E.5 of the Permit requires the County to "identify all County-owned facilities requiring NPDES stormwater general permit coverage and submit Notices of Intent (NOI) to MDE for each."

On March 8–9, 2011, the EPA Inspection Team conducted eight site visits at County-owned facilities managed and operated by four different organizational divisions. The following is a summary of the eight site visits and their relevance to the County's obligations under its MS4 permit to identify County-owned facilities that require NPDES stormwater general permit coverage, and to obtain coverage where applicable.

The EPA Inspection Team identified two County facilities with industrial activities where an NOI had not been submitted to MDE:

- County Department of Education North Point Bus Facility – 4242 North Point Road, Baltimore, Maryland. The team identified site concerns pertaining to vehicle fueling and proximity to drainage conveyances, bus washing, salt storage, and pollution prevention practices. (See Section C.1, County Property Management Site Visits, for additional details.)
- County Office of Budget and Finance, Essex Fuel Center (a.k.a., Shop II) – 511 Mace Avenue, Baltimore, Maryland. The team identified site concerns pertaining to vehicle fueling and material storage. (See Section C.1, County Property Management Site Visits, for additional details.)

The EPA Inspection Team identified three County Department of Education facilities where NOIs had been submitted to MDE in approximately November 2007 but SWPPPs had not yet been developed:

- County Department of Education Kenwood Bus Facility – 600 Stemmers Run Road, Baltimore, Maryland. The team identified site concerns pertaining to salt storage, bus washing, and pollution prevention practices. (See Section C.1, County Property Management Site Visits, for additional details.)
- County Department of Education Cockeysville Service Center – 101 Wight Avenue, Cockeysville, Maryland. The team identified site concerns pertaining to bus washing, material storage, decommissioned buses, vehicle fueling and proximity to drainage conveyances, and pollution prevention practices. (See Section C.1, County Property Management Site Visits, for additional details.)
- County Department of Education Hopkins Creek Bus Lot – 104 Weber Avenue, Baltimore, Maryland.

The EPA Inspection Team identified one County facility where an NOI had been submitted to MDE, but the SWPPP did not address all potential pollutant sources:

- County Department of Public Works, Bureau of Highways, Perry Road Facility (Shop 7-1) – 7801 Perry Road, Baltimore, Maryland. This was the only site visited by the EPA Inspection Team that had developed a SWPPP. The team identified site concerns pertaining to vehicle washing, material storage, and pollution prevention practices. (See Section C.1, County Property Management Site Visits, for additional details.)

The EPA Inspection Team identified two County facilities where industrial activities were not observed at the time of the inspection:

- Gilroy Facility – 1440 Gilroy Road, Hunt Valley, Maryland. This site is operated by multiple different County organizational divisions.
- County Department of Public Works, Bureau of Highways, Industry Lane Salt Storage Facility – 155 Industry Lane, Cockeysville, Maryland.

The County Watershed Management and Monitoring Section Manager explained that DEPS does not directly manage any County property; therefore, DEPS has assumed an advisory role whereby it assists other County organizational divisions in understanding and complying with the requirements of the MDE Industrial General Permit. NOI submittal and SWPPP development and implementation are the direct responsibility of the seven organizational divisions that manage and operate the County facilities: the Department of Public Works, Bureau of Utilities; Department of Public Works, Bureau of Highways; Department of Public Works, Bureau of Building and Equipment Services; Department of Public Works, Bureau of Solid Waste Management; Department of Education; Community College of Baltimore County; and Office of Budget and Finance, Vehicle Operations and Maintenance.

The County's 2010 Annual Report indicates that "DEPRM [now DEPS] is still identifying all county-owned facilities requiring NPDES stormwater general permit coverage. DEPRM estimates approximately 30 facilities may be included." The EPA Inspection Team reviewed the MDE Permitted Facilities Inventory and counted 27 County facilities that have Industrial General Permit coverage.

The County Watershed Management and Monitoring Section Manager explained that DEPS has attempted to provide specific compliance assistance to one County organizational division each year, such as providing the divisions with a SWPPP template and training on the Industrial General Permit. The County's 2010 Annual Report, Table 3-1 shows the status of County facilities that DEPS "has started assisting," which includes only three of the seven organizational divisions listed above.

Part III.E.5 of the Permit further requires that "the status of pollution prevention plan development and implementation shall be submitted annually." The County's 2010 Annual Report, Table 3-1, shows the status of NOI submittal and SWPPP development, but it does not specifically report on the status of SWPPP implementation (see Appendix B, Exhibit 2). The County DEPS Natural Resource Specialist explained that, for annual reporting purposes, NOI submittal and SWPPP development are tracked by polling each organizational division with an annual email requesting the status. According to the County Watershed Management and Monitoring Section Manager, DEPS had not conducted facility oversight inspections, and tracking of SWPPP implementation was the direct responsibility of the seven organizational divisions that manage and operate the County facilities.

Section D. Watershed Assessment, Planning, and Restoration

Part III.F of the Permit, Watershed Assessment and Planning, requires the County to continue to update and revise watershed assessments that have been developed for its 10 urban watersheds.

Part III.G of the Permit, Watershed Restoration, requires the County to implement those practices identified through Watershed Assessment and Planning. "The overall goal is to maximize the water quality in the County's urban watersheds, using efforts that are definable and the effects of which are measurable."

As a component of this inspection, the EPA Inspection Team obtained information on (1) how the County interprets the impervious surface restoration requirement specified in Part III.G of the Permit; (2) what types of controls (e.g., structural and nonstructural) the County uses to qualify for the impervious surface restoration requirement; and (3) how the County calculates the amount of impervious surface area restored. The following is a brief narrative description of the County's accounting methods for impervious surface restoration.

The County's 2010 Annual Report indicates that the County interprets Part III.G of the Permit as requiring the County to restore 20 percent (continuation of 10 percent from previous permit and 10 percent during the current permit) of the County's impervious cover by the end of the Permit term in June 2010 (see Appendix B, Exhibit 3, Page 10-10). The report indicates that there was a total of 33,171.1 acres of impervious cover to be addressed in the County within fourteen 8-digit watersheds. Based on this figure, the County's 20 percent impervious restoration goal during the two permit terms (2000 through 2010) is 6,634.2 acres. More detailed information on these calculations can be found in the County's 2010 Annual Report (see Appendix B, Exhibit 3, Pages 10-10 and 10-11).

The County stated in its 2010 Annual Report (see Appendix B, Exhibit 3, Page 10-10) that the major focus of the watershed assessment, planning, and restoration activities is implementation of the County's watershed management plans. As of the end of the 2010 reporting period, the County reported that it had completed 10 of the fourteen 8-digit watershed management plans in the County and that the four remaining watersheds do not require plans because they do not have a significant urban component.

The County uses direct and indirect calculations to quantify progress toward the impervious surface restoration requirement. Direct calculations are based on impervious cover in the drainage area, and they include stormwater conversion retrofits or conversion drainage areas and stream restoration of restored reaches. Indirect calculations are based on pollutant removal, including street sweeping, storm drain cleaning, shoreline erosion control, and reforestation (tree planting). Street sweeping and inlet cleaning credits are based on a local street sweeping and storm drain cleaning study that derived the bulk density of collected materials for total nitrogen and total phosphorus concentrations. The County uses the Chesapeake Bay Partnership Model Phase 5.2 to calculate the impervious loading rate. Shoreline erosion control is determined by calculating the average annual shoreline loss mitigated by completed projects, and reforestation is calculated by changing the land use from impervious urban to forest. More detailed

information on these calculations can be found in presentation slides provided by the County (see Appendix B, Exhibit 4).

D.1. Watershed Assessment, Planning, and Restoration Site Visits

On March 8–9, 2011, the EPA Inspection Team conducted two site visits of two different phases of a single watershed restoration effort in the County. The purposes of the site visits were to document site conditions and to assess the County's oversight activities and maintenance of the watershed restoration sites. Summary observations pertaining to these two sites are presented together below. All referenced photographs are contained in Appendix C, Photograph Log.

Spring Branch Restoration Phase I and Phase II

Spring Branch is in the Lock Raven watershed, with direct drainage to the Lock Raven Reservoir municipal water supply. The Spring Branch area was historically used for agricultural activities; subsequent urbanization degraded the stream channels and altered the watershed.

Phase I of the Spring Branch Restoration included the restoration of two miles of Upper Spring Branch, which was completed in 1997. Phase I of the restoration had been in place for 14 years, and over that time extensive natural vegetation had developed (see Appendix C, Photographs 102 and 103). Phase II of the Spring Branch Restoration included the removal of 450 feet of concrete channel, and it was completed in 2008. Phase II of the restoration had been in place for only three years, and natural vegetation was starting to grow (see Appendix C, Photographs 104 and 105). Between the two phases, a total of 2,824 linear feet of Spring Branch had been restored.

Observation 5. Restoration of Impervious Surfaces.

Part III.G.1 of the Permit requires the County to "complete the implementation of those restoration efforts that were identified and initiated during the previous permit term to restore 10% of the County's impervious surface area." Part III.G.2 of the Permit requires the County to "within one year of permit issuance [June 2006], begin to implement restoration of an additional 10% of the County's impervious surface area." The EPA Inspection Team reviewed the methodology for calculating the required 20 percent impervious surface area reduction.

In other words, the Permit requires the County to restore or treat 20 percent of the County's impervious surface area during the 2000 to 2010 Permit terms, which amounts to 6,634 acres of the County's total impervious cover (33,171 acres), according to the County's calculations (see Appendix B, Exhibit 3, Page 10-11). The County's 2010 Annual Report indicated that by the end of the Permit term in October 2010, the County had restored or provided treatment for only 5,849.2 acres or approximately 17.6 percent of the County's impervious cover (see Appendix B, Exhibit 3, Page 10-11).

Appendix A
Inspection Schedule

Agenda for MS4 Program Inspection of Baltimore County, MD – March 8-9, 2011

Day	Time	Activity	
		Team 1	Team 2
Tuesday March 8, 2011	9:00 am – 10:00 am	**Kickoff Meeting & Program Management Overview** – (Specifically: County overview; departments involved in implementing SW program; regulatory history, etc.)	
	10:00 am – 11:00am	**Municipal Operations and Maintenance (Office)** – County Property Management – Permit PART III.E.5 Road/ Infrastructure Maintenance (as time permits) – Permit PART III.E.6	
	11:00 am – 12:00pm	Planning of Field Logistics for Tuesday Afternoon	**Illicit Discharge Detection and Elimination (IDDE)/ Industrial (Office)** – Permit PART III.E.4 Commercial/Industrial Surveys – Permit PART III.E.4.b
	12:00 pm – 1:00 pm	Lunch Break	
	1:00 pm – 2:30 pm	**Municipal Operations (Field)**	**Post Construction (Office)** Stormwater Management – Permit PART III.E.1 BMP Maintenance Inspection – Permit PART III.E.2
	2:30 pm – 4:30 pm		**Post Construction (Field, as time permits)** Stormwater Management – Permit PART III.E.1 BMP Maintenance Inspection – Permit PART III.E.2
	4:30 pm – 5:00 pm	Recap and Logistics Planning for Wednesday	

Agenda for MS4 Program Inspection of Baltimore County, MD – March 8-9, 2011

Day	Time	Activity	
		Team 1	**Team 2**
Wednesday March 9, 2011	8:00 am – 9:30 am	**Municipal Operations (Field)**	**Watershed Assessment, Planning, and Restoration (Field)** – Permit PART III.F and III.G Post Construction (as time permits)
	9:30 am – 11:30 am		
	11:30 am – 12:30 pm	Lunch Break	
	12:30 pm – 2:00 pm	**Watershed Assessment, Planning, and Restoration (Office)** – Permit PART III.F and III.G	
	2:00 pm – 3:00 pm	Reserved for additional discussion or records review (as needed)	
	3:00 pm – 3:30 pm	Internal Discussion[2] (Tentative time slot)	
	3:30 pm – 4:30 pm	Closing Conference[3] (Tentative time slot)	

[2] Internal Discussion – Discussion among members of the EPA Inspection Team. Goal is to compare notes and prepare information to be discussed with the County during Closing Conference. County participation is not expected.

[3] Closing Conference – The County is encouraged to invite representatives from all applicable organizational divisions/departments.

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BEFORE THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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Philadelphia, Pennsylvania 19103-2029

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In the Matter of: Baltimore County County Office Building 111 Chesapeake Avenue Suite 319 Towson, MD 21204 Respondent	Proceeding under Section 309(g)(2)(B) of the Clean Water Act EPA Docket No. CWA-03-2013-0124 **CONSENT AGREEMENT**

I. PRELIMINARY STATEMENT and STATUTORY AUTHORITY

1. This Consent Agreement is entered into by the Director, Water Protection Division, United States Environmental Protection Agency, Region III ("Complainant"), and Respondent, Baltimore County, pursuant to Section 309(g) of the Clean Water Act, 33 U.S.C. § 1319(g), and the *Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties, Issuance of Compliance or Corrective Action Orders, and the Revocation, Termination or Suspension of Permits ("Consolidated Rules")*, 40 C.F.R. Part 22. The authority to settle this matter has been delegated to the Regional Administrator pursuant to delegation no. 2-52-A (9/1/05). The parties have agreed to settlement of alleged violations of the Clean Water Act by Respondent. This Consent Agreement and accompanying Final Order (jointly "CAFO") simultaneously commence and conclude this action pursuant to 40 C.F.R. § 22.13(b) and 22.18(b)(2) & (3).

2. Pursuant to Section 309(g) of the Clean Water Act ("CWA" or "Act"), 33 U.S.C. § 1319(g), and the Civil Monetary Penalty Inflation Adjustment Rule, 40 C.F.R. Part 19, any person violating the CWA is liable for an administrative penalty under Section 309(g) of the Act, in an amount not to exceed $16,000 per day for each day of violation, up to a total penalty amount of $177,500.

II. FINDINGS OF FACTS, JURISDICTIONAL ALLEGATIONS AND CONCLUSIONS OF LAW

3. Baltimore County, Maryland ("Respondent" or "County") is a "person" within the meaning of Section 502(5) of the Act, 33 U.S.C. § 1362(5).

4. At all times relevant to this Complaint, Respondent has owned and/or operated a municipal separate storm sewer system ("MS4") as that term is defined in 40 C.F.R. § 122.26(b)(8).

5. Respondent's MS4 is located within the geographic boundaries of the County.

6. Baltimore County encompasses a total area of approximately 384,825 acres. According to the U.S. Census Bureau, as of 2010, the county's population was estimated at approximately 800,000 people.

7. Stormwater from the County drains to a number of water bodies, including the Baltimore Harbor, Back River, Lower Gunpowder River, Middle River, Patapsco River and the Chesapeake Bay, in addition to numerous small tributary creeks and streams, which are considered "waters of the United States" within the meaning of Section 502(7) of the Act, 33 U.S.C. § 1362(7); 40 C.F.R. § 232.2; 40 C.F.R. § 122.2.

8. Section 301(a) of the Act, 33 U.S.C. § 1311(a), prohibits the discharge of any pollutant (other than dredged or fill material) from a point source into waters of the United States except in compliance with a permit issued pursuant to the National Pollutant Discharge Elimination System ("NPDES") program under Section 402 of the Act, 33 U.S.C. § 1342.

9. Section 402(a) of the Act, 33 U.S.C. § 1342(a), provides that the Administrator of EPA may issue permits under the NPDES program for the discharge of pollutants from point sources to waters of the United States. The discharges are subject to specific terms and conditions as prescribed in the permit.

10. "Discharge of a pollutant" includes "any addition of any pollutant or combination of pollutants to waters of the United States from any point source." 40 C.F.R. § 122.2.

11. "Storm water" is defined as "storm water runoff, snow melt runoff and surface runoff and drainage." 40 C.F.R. § 122.26(b)(13).

12. The term "municipal separate storm sewer system" ("MS4") includes, "a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains) owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States." 40 C.F.R. § 122.26(b)(8)(i).

13. An NPDES permit is required for discharges from an MS4 serving a population of 100,000 or more, Section 402(p)(2)(C) of the Act, 33 U.S.C. § 1342(p); 40 C.F.R. § 122.26(a), 40 C.F.R. § 122.21.

14. Respondent's MS4 serves a population of at least 100,000 people.

15. Pursuant to Section 402(b) of the Act, 33 U.S.C. § 1342(b), EPA authorized the Maryland Department of the Environment ("MDE") to issue NPDES permits on September 5, 1974.

16. MDE issued to Respondent a NPDES MS4 Discharge Permit No. MD0068314, which became effective on June 15, 2005 (hereinafter the "MS4 Permit").

17. The expiration date of the MS4 Permit was June 15, 2010; however, the MS4 Permit has been administratively extended pending a final decision on the renewal application.

18. An NPDES permit is also required for discharges of storm water associated with industrial activity, as well as for stormwater discharges which MDE or EPA determine to be a significant contributor of pollutants or that contributes to a violation of a water quality standard. Section 402(p)(2) of the Act, 33 U.S.C. § 1342(p)(2); 40 C.F.R. § 122.26(a), 40 C.F.R. § 122.21.

19. On December 1, 2002, MDE issued a General Discharge Permit for Storm Water Associated with Industrial Activities ("Industrial SW Permit"). The permit also covers storm water discharges determined to be significant contributor of pollutants. The permit was set to expire on November 30, 2007, but it has been administratively extended.

20. On March 8 - 9, 2011, a compliance inspection team comprised of authorized representatives of EPA inspected Respondent's MS4 program (the "MS4 Inspection").

21. The MS4 Inspection identified a number of violations of Respondent's NPDES permit and the CWA as described below.

Count I: Failure to Adequately Address Illicit Discharges

22. Part III.E.4 of the MS4 Permit requires that the County maintain a program to detect and eliminate illicit discharges. At a minimum, the program shall address illegal dumping and spills, and include appropriate enforcement procedures for investigating and eliminating illegal discharges and dumping.

23. The March 2011 Inspection revealed that Respondent did not implement an adequate program to address illicit discharges through the failure to:

a. Inform and educate the public employees, businesses, and the general public of the hazards associated with illegal discharges; and

b. Train municipal staff, including field employees on illegal discharge identification and reporting procedure.

c. Although the County has established procedures for tracking and reporting illegal discharges complaints received by the County's Watershed Monitoring section of the Department of Environmental Protection and Sustainability, the County has no procedures to assure that complaints received by other County agencies are adequately responded to.

d. The County has not identified or addressed illegal discharges from county-owned facilities, as evidenced by facilities that conduct vehicle washing on impervious surfaces in the absence of best management practices and protective measures in which washwater was seen or evidenced entering into the storm sewer systems. These facilities included the County Department of Education's Cockeysville Service Center and North Point Bus Facility and the County Department of Public Works Perry Road Facility.

24. Respondent's failure to maintain an adequate program for detecting and eliminating illicit discharges violates the MS4 Permit and Section 301 of the Act, 33 U.S.C. § 1311.

Count II: Failure to Develop and Implement Pollution Prevention Plan

25. Part III.E.5 of the MS4 Permit requires that County identify all County-owned facilities requiring Industrial SW permit coverage, and submit the application for such coverage. The County must report on the status of pollution prevention plan development for these facilities.

26. MDE has authorized coverage under the Industrial SW Permit for the stormwater discharges of several county facilities operated by the Baltimore County Department of Education, determining that such discharges can be significant contributors of pollutants.

27. MDE authorized such coverage for the Kenwood Bus Facility, 600 Stemmers Road, Baltimore, Maryland, under registration number 02SW2115.

28. MDE authorized such coverage for the Cockeysville Service Center, 101 Wight Avenue, Cockeysville, Maryland, under registration number 02SW2121.

29. MDE authorized such coverage for the Hopkins Creek Bus Lot, 104 Weber Avenue, Baltimore, Maryland, under registration number 02SW2122.

30. The Industrial SW Permit requires the permittee to develop and implement a stormwater pollution prevention plan (SWPPP) that includes a description of potential sources of pollutants and stormwater management controls appropriate for the facility.

31. The County has not developed a SWPPP for the Kenwood Bus Facility.

32. The County has not developed a SWPPP for the Cockysville Service Center.

33. The County has not developed a SWPPP for the Hopkins Creek Bus Lot.

34. Respondent's failure to develop and implement SWPPPs for these facilities are violations of the General Industrial SW Permit and Section 301 of the Act, 33 U.S.C. § 1311.

Count III: Failure to Enclose Salt Piles

35. Part III.E.5 of the MS4 Permit requires that County identify all County-owned facilities requiring Industrial SW Permit coverage, and submit the application for such coverage.

36. MDE has authorized coverage under the Industrial SW Permit for the stormwater discharges from the Kenwood Bus Facility, 600 Stemmers Road, Baltimore, Maryland, which operated by the Baltimore County Department of Education, under registration number 02SW2115.

37. The Industrial SW Permit requires that storage piles of salt be enclosed or covered to prevent exposure to precipitation.

38. The inspectors observed several stockpiles of roadway salt at the Kenwood Bus Facility that was exposed to precipitation. The inspectors observed traces of salt residue from one stockpile leading to a ditch outside the facility.

39. Respondent's failure to enclose or cover the salt piles at Kenwood Bus Facility is a violation of the Industrial SW Permit and Section 301 of the Act, 33 U.S.C. § 1311.

III. CONSENT AGREEMENT

40. Respondent neither admits nor denies the Findings of Fact and Conclusions of Law set forth in Section II, above, and waive any defenses it might have as to jurisdiction and venue.

41. Respondent admits the jurisdictional allegations and agrees not to contest EPA's jurisdiction to issue and enforce this CAFO.

42. Respondent hereby expressly waives its right to a hearing or other proceeding on any issue of law or fact in this matter pursuant to Section 309(g) of the CWA, 33 U.S.C. § 1319(g), and consent to issuance of this CAFO without adjudication.

43. Each party shall bear its own costs and attorney fees.

44. The provisions of this CAFO shall be binding upon the Respondent, its officers, principals, directors, successors and assigns.

45. The parties agree that settlement of this matter prior to the initiation of litigation is in the public interest and that entry of this CAFO is the most appropriate means of resolving this matter.

46. Pursuant to Section 309(g)(4)(A) of the Act, 33 U.S.C. § 1319(g)(4)(A), and 40 C.F.R. § 22.45(b), EPA is providing public notice and an opportunity to comment on this CAFO prior to issuing the Final Order. In addition, pursuant to Section 309(g)(1)(A), EPA has consulted with the MDE regarding this action, and will mail a copy of this document to the appropriate Maryland officials.

47. Based upon the foregoing and having taken into account the nature, circumstances, extent and gravity of the violations, Respondent's ability to pay, prior history of compliance, degree of culpability, economic benefit or savings resulting from the violations, and such other matters as justice may require pursuant to the authority of Section 309(g) of the Act, 33 U.S.C. § 1319(g), EPA and Respondent agree that Respondent will pay an administrative civil penalty in the

amount of forty-seven thousand dollars ($47,000) in full and final settlement of EPA's claims for civil penalties for the violations alleged herein.

48. Respondent shall pay an administrative civil penalty of forty-seven thousand dollars ($47,000) pursuant to this CAFO within thirty (30) days of the effective date, in the following manner:

A. All payments by Respondent shall reference Respondent's name and address, and the Docket Number of this action, CWA 03-2013-0124;

B. All checks shall be made payable to "United States Treasury";

C. All payments made by check and sent by regular mail shall be addressed to:

U.S. Environmental Protection Agency
Fines and Penalties
Cincinnati Finance Center
P.O. Box 979077
St. Louis, MO 63197-9000

Contact: Heather Russell 513-487-2044

D. All payments made by check and sent by overnight delivery service shall be addressed for delivery to:

U.S. Bank
Government Lockbox 979077
U.S. EPA, Fines & Penalties
1005 Convention Plaza
Mail Station SL-MO-C2-GL
St. Louis, MO 63101

Contact: 314-418-1028

E. All payments made by check in any currency drawn on banks with no USA branches shall be addressed for delivery to:

Cincinnati Finance
US EPA, MS-NWD
26 W. M.L. King Drive
Cincinnati, OH 45268-0001

F. All payments made by electronic wire transfer shall be directed to:

Federal Reserve Bank of New York
ABA = 021030004
Account No. = 68010727
SWIFT address = FRNYUS33
33 Liberty Street
New York, NY 10045

Field Tag 4200 of the Fedwire message should read:
"D 68010727 Environmental Protection Agency"

G. All electronic payments made through the Automated Clearinghouse (ACH), also known as Remittance Express (REX), shall be directed to:

US Treasury REX / Cashlink ACH Receiver
ABA = 051036706
Account No.: 310006, Environmental Protection Agency
CTX Format Transaction Code 22 - Checking

Physical location of U.S. Treasury facility:
5700 Rivertech Court
Riverdale, MD 20737
Contact: Jesse White 301-887-6548 or REX, 1-866-234-5681

H. On-Line Payment Option:

WWW.PAY.GOV/PAYGOV

Enter sfo 1.1 in the search field. Open and complete the form.

I. Additional payment guidance is available at:

http://www.epa.gov/ocfo/finservices/make_a_payment.htm

49. Respondent shall send notice of such payment, including a copy of the check, to the Regional Hearing Clerk at the following address:

Regional Hearing Clerk
Mail Code: 3RC00
U.S. EPA Region III
1650 Arch Street
Philadelphia, PA 19103-2029

-and-

Nina Rivera
Mail Code: 3RC20
Office of Regional Counsel
U.S. EPA Region III
1650 Arch Street
Philadelphia, PA 19103-2029

50. This CAFO shall not relieve Respondent of its obligation to comply with all applicable provisions of federal, state or local law and ordinance, nor shall it be construed to be a ruling on, or determination of, any issue related to any federal, state or local permit. Nor does this CAFO constitute a waiver, suspension or modification of the requirements of the CWA, 33 U.S.C. §§ 1251, *et seq.*, or any regulations promulgated thereunder.

51. The following notice concerns interest and late penalty charges that will accrue in the event that any portion of the civil penalty due pursuant to this CAFO is not paid as directed:

> Pursuant to 31 U.S.C. § 3717 and 40 C.F.R. § 13.11, EPA is entitled to assess interest and late payment penalties on outstanding debts owed to the United States and a charge to cover the costs of processing and handling a delinquent claim, as more fully described below. Accordingly, Respondent's failure to make timely payment or to comply with the conditions in this CAFO shall result in the assessment of late payment charges including interest, penalties, and/or administrative costs of handling delinquent debts.
>
> Interest on the civil penalty assessed in this CAFO will begin to accrue on the date that a copy of this CAFO is mailed or hand-delivered to Respondent. However, EPA will not seek to recover interest on any amount that is paid within thirty (30) calendar days after the date on which such interest begins to accrue. Interest will be assessed at the rate of the United States Treasury tax and loan rate in accordance with 40 C.F.R. § 13.11(a).
>
> The costs of the Agency's administrative handling of overdue debts will be charged and assessed monthly throughout the period the debt is overdue. 40 C.F.R. § 13.11(b). A penalty charge of six percent per year will be assessed monthly on any amount which remains delinquent more than ninety (90) calendar days. 40 C.F.R. § 13.11(c). Should assessment of the penalty charge on the debt be required, it shall accrue from the first day payment is delinquent. 31 C.F.R. § 901.9(d).

52. This Consent Agreement and the accompanying Final Order settle and resolve only the civil claims for the specific violations alleged herein. EPA reserves the right to commence action against any person, including Respondent, in response to any condition which EPA determines may present an imminent and substantial endangerment to the public health, public welfare, or the environment. In addition, this settlement is subject to all limitations on the scope of resolution and to the reservation of rights set forth in Section 22.18(c) of the Consolidated Rules of Practice. Further, EPA reserves any rights and remedies available to it under the Clean Water Act, 33 U.S.C. §§ 301 *et seq.*, the regulations promulgated thereunder,

and any other federal laws or regulations for which EPA has jurisdiction, to enforce the provisions of this CAFO, following its filing with the Regional Hearing Clerk.

53. Nothing in this CAFO shall be construed as prohibiting, altering or in any way eliminating the ability of EPA to seek any other remedies or sanctions available by virtue of Respondent's violations of this CAFO or of the statutes and regulations upon which this CAFO is based or for Respondent's violation of any applicable provision of law, except as specified in paragraph 52.

54. The penalty specified above represents a civil penalty assessed by EPA and shall not be deductible for purposes of Federal taxes.

55. EPA shall have the right to institute a new and separate action to recover civil penalties for the claims made in this CAFO if the EPA obtains evidence that the information and/or representations of the Respondent is false, or, in any material respect, inaccurate. This right shall be in addition to all other rights and causes of action, civil or criminal, the EPA may have under law or equity in such event.

56. The undersigned representative of the Respondent certifies that he or she is fully authorized by the party represented to enter into the terms and conditions of this CAFO and to execute and legally bind that party to it.

57. All of the terms and conditions of this CAFO together comprise one agreement, and each of the terms and conditions is in consideration of all of the other terms and conditions. In the event that this CAFO, or one or more of its terms and conditions, is held invalid, or is not executed by all of the signatories in identical form, or is not approved in such identical form by the Regional Administrator or his designee, then the entire CAFO shall be null and void.

IV. EFFECTIVE DATE

58. Pursuant to 33 U.S.C. § 309(g)(4) and 40 C.F.R. § 22.45, this CAFO shall be issued after a 40-day public notice period has concluded and upon filing with the Regional Hearing Clerk. This CAFO will become final thirty (30) days after issuance, 33 U.S.C. § 1319(g)(5), and will become effective on that same date, 40 C.F.R. § 22.31(b).

FOR RESPONDENT Baltimore County:

By: _____ Date: 4/19/13

Name: Fred Homan

Title: County Admin Officer

FOR COMPLAINANT, US ENVIRONMENTAL PROTECTION AGENCY, REGION III:

By: _____ Date: 5/29/2013

Jon Capacasa
Director, Water Protection Division
U.S. EPA Region III

BEFORE THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

In the Matter of: Baltimore County County Office Building 111 Chesapeake Avenue Suite 319 Towson, MD 21204 Respondent	Proceeding under Section 309(g)(2)(B) of the Clean Water Act EPA Docket No. CWA-03-2013-0124 **FINAL ORDER**

PURSUANT TO Section 309(g) of the Clean Water Act, as amended, 33 U.S.C.§1319 ("CWA"), and the Consolidated Rules of Practice, and having determined that the penalty agreed to in the Consent Agreement is based on a consideration of the factors set forth in Section 309(g)(3) of the CWA, IT IS HEREBY ORDERED that Respondent pay forty-seven thousand dollars ($47,000) in accordance with Section III of the Consent Agreement.

The foregoing Consent Agreement and this Final Order shall be issued after the forty (40) days public comment period described at 33 U.S.C.§309(g)(4) and 40 C.F.R.§22.45(b) and upon filing with Regional Hearing Clerk. It will become effective thirty (30) days after issuance, 33 U.S.C.§309(g)(5).

AUG 0 6 2013
Date

Shawn M. Garvin
Regional Administrator
U.S. Environmental Protection Agency, Region III

CERTIFICATE OF SERVICE

I hereby certify that on this day, I caused to be filed with the Regional Hearing Clerk, EPA Region III, the original Consent Agreement and Final Order, and that copies of this document were sent to the following individual in the manner described below:

By first class, certified mail, return receipt requested:

Michael Field
Baltimore County Office of Law
Historic Courthouse
400 Washington Avenue
Towson, MD 21204

Date: AUG 12 2013

Nina Rivera
Sr. Asst. Regional Counsel
US EPA Region III

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

AUG 0 8 2012

Mr. Jay Sakai, Director
Water Management Administration
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, Maryland 21230

Re: Specific Objection to Baltimore County Phase I Municipal Separate Storm Sewer System (MS4) Permit MD0068314

Dear Mr. Sakai:

On May 18, 2012, the U. S. Environmental Protection Agency (EPA or the Agency), received the latest draft of the above-referenced National Pollutant Discharge Elimination System (NPDES) permit (Baltimore County permit) which was reviewed pursuant to 40 C.F.R. § 123.44 and the Memorandum of Agreement (MOA) between MDE and EPA Region III (May 22, 1989).

On June 14, 2012, EPA sent written comments and a marked-up permit to the Maryland Department of the Environment (MDE) with the understanding that changes would be made to all of the draft permits that EPA received, including Baltimore County. On June 15, 2012 EPA issued a time extension letter to increase our review time to 90 days, since we had reason to believe that the comments would not be addressed within the initial 30 day review period. EPA and MDE are currently in productive discussions on these issues. Since these discussions are ongoing and the 90-day review period will expire on August 16, 2012, EPA is issuing this specific objection to the issuance of the referenced permit pursuant to 40 C.F.R. §§ 123.44(b)(1) and (c)(1) and Section III.A of the MOA. As further explained herein, EPA believes that several substantive requirements for MS4 permits, as required by the federal Clean Water Act, 33 U.S.C. §§ 1251 *et seq.* (CWA), and its implementing regulations, have not been incorporated into the Baltimore County permit.

EPA's objection to the draft permit and identification of revisions needed before EPA can remove the objection, *see* 40 C.F.R. § 123.44(b)(2)(ii), are described below:

1. **<u>Water Quality Standards</u>**

Federal regulations require that all NPDES permits contain limitations to control discharges which may cause, have the reasonable potential to cause or contribute to an excursion above water quality standards. 40 C.F.R. §122.44(d)(1)(i). Part VI of the draft Baltimore County permit (Enforcement and Penalties) contains general language related

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to "minimizing" and "preventing to the MEP" contamination or physical alteration of waters of the state; however, it does not actually prohibit water quality exceedances. Please refer to EPA's suggested language in our comments of June 14, 2012 and also consider the recommendation made therein that the language be contained in the first part of the permit and not placed in a later section that would get lost among standard conditions and boilerplate language.

MDE may also wish to refer to the 2011 previously approved Frederick County permit (p.7), which contains the following provision: "Frederick County shall annually provide watershed assessments, watershed implementation plans, opportunities for public participation, and TMDL compliance status *as required below to ensure that water quality standards are met for all water bodies in the County.*" (emphasis added) The italicized language, which was omitted from the Baltimore County permit, would also be appropriate to ensure attainment of water quality standards as well as consistency with federal regulations.

In order to resolve this portion of our objection, MDE must add the language recommended by EPA via the enclosed marked-up permit, the Frederick County language listed above, or similar acceptable language.

2. <u>Chesapeake Bay TMDL</u>

In 2010, EPA issued a document entitled "Urban Stormwater Approach for the Mid-Atlantic Region and the Chesapeake Bay Watershed" (herein after "Urban Stormwater Approach"; available at: http//www.epa.gov/reg3wapd/pdf/pdf_chesbay/MS4GuideR3final07_29_10.pdf), which outlines the standards that permitting authorities within Region III are expected to adopt to ensure that MS4 permits will contribute to meeting the water quality objectives of the Clean Water Act, including relevant wasteload allocations (WLAs). One such expectation is that "[p]ermits implementing Chesapeake Bay watershed WLAs should also include specific two year milestones, and the reporting requirements to determine if these milestones are being met." The Baltimore County draft permit does not contain sufficient requirements for Chesapeake Bay milestones and related reporting requirements. The section of the Baltimore County permit that relates to the Chesapeake Bay (Part V.A) provides background and generalities about the NPDES program related to the Chesapeake Bay TMDL; however, it fails to explicitly state what steps the permittee must actually take to comply with the TMDL.

EPA's permit review has concluded that although the 20% restoration strategy in the draft permit does present a Bay milestone (and apparently constitutes partial compliance with Maryland's Watershed Implementation Plan), it is not adequately expressed in the Baltimore County draft permit. EPA included recommended language in our marked-up permit at Part VI.A that would clearly state that by requiring a 20% reduction, compliance with the TMDL can be reasonably achieved for this permit term.

In order to resolve this portion of our objection, the permit shall be revised to include the recommended provision.

3. Backsliding

Backsliding is prohibited in NPDES permits. *See* Section 402(o) of the CWA, 33 U.S.C. § 1342(o) ("[A} permit may not be renewed, reissued, or modified on the basis of effluent guidelines...subsequent to the original issuance of such a permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit..."). *See also* 40 C.F.R. § 122.44(l). Allowing additional time to complete a task that was required by the previous permit constitutes a less stringent condition and violates the prohibition against anti-backsliding.

The draft Baltimore County permit contains a number of provisions which violate this principle. For example, the draft permit requires the permittee to, *inter alia*: (1) establish or implement a management program in areas served by the County's MS4 (Part III.D.1-3, at pp. 2-4); and (2) establish and publicize a compliance hotline for the public reporting of suspected illicit discharges (Part III.D.6.a). These same requirements are contained in Baltimore County's current permit. Baltimore County cannot be allowed an additional permit term to complete tasks that were required under the previous permit.

In order to resolve this portion of our objection, MDE must revise the draft permit to include new and updated permit requirements that will expand upon the tasks required by the current permit. For example, instead of requiring that a hotline be established as was required by the previous permit, this permit should include a provision to track the amount of calls received and actions taken in response to those calls. EPA's enclosed marked permit and comments to MDE reflect proposed language that would be acceptable to resolve this concern.

4. Industrial / Commercial Monitoring

Part III.C of the draft Baltimore County permit requires source identification of pollutants in certain categories of stormwater runoff County-wide. However, this requirement is insufficient because the draft permit does not specifically include the category of industrial and commercial sources. An inventory of industrial and commercial sites which could contribute pollutants to receiving waters is integral to compliance with the requirement under federal regulations that stormwater management programs for a description of "[d]escribe a monitoring program for storm water discharges associated with the industrial facilities identified in paragraph (d)(2)(iv)(C)..." 40 C.F.R. § 122.26 (d)(2)(iv)(C)(*2*).

EPA provided recommended language in Part IV.C, Part IV.D.3.b, and Part V.A.2 of the marked-up permit submitted to MDE. In order to resolve this portion of our objection, MDE must revise the permit in accordance with those recommendations.

EPA also suggests the following recommendations for inclusion in the County's permit.

1. **Education**

In Part IV.D.1 of the enclosed EPA marked-up permit (Management Programs), EPA recommended adding an additional section for staff training that includes requirements for new technology, implementing pollution prevention, good housekeeping, inspections and permit requirements. EPA believes this will improve employee efficiency and awareness during inspections while ensuring continued and thorough maintenance of the stormwater program.

2. **Maximum Extent Practicable**

Throughout EPA's permit mark up, we requested removing the use of the phrase "maximum extent practicable" or "MEP". EPA has a number of concerns about inclusion of this language: it is imprecise in its interpretation and thus makes enforcing the terms of the permit more difficult; it could lead to backsliding; and it rightfully is a determination to be made by the permitting authority in the permit's terms. All references to MEP, with the exception of the requirement that the permittee develop and implement the "Stormwater Management Act of 2007 and Environmental Site Design to the MEP" should be modified.

EPA looks forward to working cooperatively with MDE to resolve the remaining issues in an expeditious manner. Until the issues are resolved, however, in accordance with 40 C.F.R §122.4(c), MDE may not issue the Baltimore County MS4 permit without written authorization from EPA.

If you have any questions, please contact me, or Evelyn S. MacKnight, Chief, NPDES Permits Branch, at (215) 814-5717.

Sincerely,

Jon M. Capacasa, Director
Water Protection Division

Enclosure

cc: Brian Clevenger, MDE
Vincent J. Gardina, Baltimore County

MARYLAND DEPARTMENT OF THE ENVIRONMENT

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

MUNICIPAL SEPARATE STORM SEWER SYSTEM DISCHARGE PERMIT

PART I. IDENTIFICATION

A. Permit Number: 11-DP-3317 MD0068314

B. Permit Area

This permit covers all stormwater discharges from the municipal separate storm sewer system (MS4) owned or operated by Baltimore County, Maryland.

C. Effective Date: December 23, 2013

D. Expiration Date: December 22, 2018

PART II. DEFINITIONS

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.

PART III. WATER QUALITY

The permittee 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.

PART IV. STANDARD PERMIT CONDITIONS

A. Permit Administration

Baltimore 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.

B. Legal Authority

Baltimore 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.

C. Source Identification

Sources of pollutants in stormwater runoff countywide shall be identified and linked to specific water quality impacts on a watershed basis. The source identification process shall be used to develop watershed restoration plans. The following 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:

1. Storm drain system: all infrastructure, major outfalls, inlets, and associated drainage areas delineated;

2. Industrial and commercial sources: industrial and commercial land uses and sites that the County has determined have the potential to contribute significant pollutants;

3. Urban best management practices (BMPs): stormwater management facility data including outfall locations and delineated drainage areas;

4. Impervious surfaces: public and private land use delineated, controlled and uncontrolled impervious areas based on, at a minimum, Maryland's hierarchical eight-digit sub-basins;

5. Monitoring locations: locations established for chemical, biological, and physical monitoring of watershed restoration efforts and the *2000 Maryland Stormwater Design Manual*; and

6. Water quality improvement projects: projects proposed, under construction, and completed with associated drainage areas delineated.

D. Management Programs

The following management programs shall be implemented in areas served by Baltimore County's MS4s. These management programs are designed to control stormwater discharges to the maximum extent practicable (MEP) and shall be maintained for the term of this permit. Additionally, these programs shall be integrated with other permit requirements to promote a comprehensive adaptive approach toward solving water quality problems. The County shall modify these programs according to needed program improvements identified as a result of periodic evaluations by MDE.

1. Stormwater Management

An acceptable stormwater management program shall continue to be maintained in accordance with the Environment Article, Title 4, Subtitle 2, Annotated Code of Maryland. Activities to be undertaken by the County shall include, but not be limited to:

a. Implementing the stormwater management design policies, principles, methods, and practices found in the latest version of the *2000 Maryland Stormwater Design Manual*. This includes:

   i. Complying with the Stormwater Management Act of 2007 (Act) by implementing environmental site design (ESD) to the MEP for new and redevelopment projects;
   ii. 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; and
   iii. Reporting annually the modifications that have been 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.

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.

c. Maintaining 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 Baltimore County.

d. Conducting 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.

2. Erosion and Sediment Control

An acceptable erosion and sediment control program shall continue to be maintained and implemented in accordance with the Environment Article, Title 4, Subtitle 1, Annotated Code of Maryland. Activities to be undertaken by Baltimore County shall include, but not be limited to:

a. Implementing program improvements identified in any MDE evaluation of the County's erosion and sediment control enforcement authority;

b. At least three times per year, conducting responsible personnel certification classes to educate construction site operators regarding erosion and sediment control compliance;

c. Program activity shall be recorded on MDE's annual report database and submitted as required in PART V of this permit; and

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.

3. Illicit Discharge Detection and Elimination

Baltimore 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.

4. Trash and Litter

Baltimore County drains to at least two major water bodies (the Middle Branch and Northwest Branch of the Patapsco River) determined to be impaired by trash. The trash and litter section of this permit is to assist in efforts to address water quality improvements. Increases in trash discharges to receiving waters have become a growing concern both nationally and within Maryland. This section requires Baltimore County to evaluate current trash and litter control efforts; develop strategies to reduce trash, floatables, and debris within those areas draining to the Middle Branch and Northwest Branch of the Patapsco River; and bolster public education.

a. Within one year of permit issuance, the County shall inventory and evaluate all current trash and recyclable pick-up operations, litter control programs, and public outreach efforts. The analysis shall identify opportunities for improving overall efficiency, especially in the Middle Branch and Northwest Branch of the Patapsco River.

b. Within one year of permit issuance, develop and implement a public education and outreach campaign with specific performance goals, and corresponding deadlines to initiate or increase residential and commercial recycling rates, improve trash management, and reduce littering. The strategy shall include:

i. Educating the public on the importance of reducing, reusing, and recycling;
ii. Disseminating information by using signs, articles, and other media outlets;
iii. Promoting educational programs in schools, businesses, community associations, etc.; and
iv. Providing the strategy to interested parties upon request.

c. Evaluating annually the effectiveness of the education program.

d. Within one year of the Environmental Protection Agency's (EPA) approval of a trash TMDL for the Middle Branch and Northwest Branch of the Patapsco River,

implement those program improvements identified in PART IV.D.4.a above and any additional programs needed to address the TMDL.

e. Submit annually, a report which details progress toward implementing the trash reduction strategies. 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.

5. Property Management and Maintenance

a. Baltimore 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.

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

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

6. Public Education

Baltimore County shall continue to implement a public education and outreach program to reduce stormwater pollutants. Outreach efforts may be integrated with other aspects of the County's activities. These efforts are to be documented and summarized in each annual report. The County shall continue to implement a public outreach and education campaign with specific performance goals and deadlines to:

a. Maintain a compliance hotline or similar mechanism for public reporting of water quality complaints, including suspected illicit discharges, illegal dumping, and spills.

b. Provide information to inform the general public about the benefits of:

i. Increasing water conservation;
ii. Residential and community stormwater management implementation and facility maintenance;
iii. Proper erosion and sediment control practices;
iv. Increasing proper disposal of household hazardous waste;
v. 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.);
vi. Residential car care and washing; and
vii. Proper pet waste management.

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.

E. Restoration Plans and Total Maximum Daily Loads

In compliance with §402(p)(3)(B)(iii) of the CWA, MS4 permits must require stormwater controls to reduce the discharge of pollutants to the MEP. By regulation at 40 CFR §122.44, BMPs and programs implemented pursuant to this permit must be consistent with applicable WLAs developed under EPA approved TMDLs (see list of EPA approved TMDLs attached and incorporated as Attachment B).

Baltimore County shall annually provide watershed assessments, restoration plans, opportunities for public participation, and TMDL compliance status to MDE. A systematic assessment shall be conducted and a detailed restoration plan developed for all watersheds within Baltimore County. As required below, watershed assessments and restoration plans shall include a thorough water quality analysis, identification of water quality improvement opportunities, and a schedule for BMP and programmatic implementation to meet stormwater WLAs included in EPA approved TMDLs.

1. Watershed Assessments

a. By the end of the permit term, Baltimore 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.

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.

2. Restoration Plans

a. Within one year of permit issuance, Baltimore 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.

By the end of this permit term, Baltimore 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.

b. Within one year of permit issuance, Baltimore 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, Baltimore 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.

3. Public Participation

Baltimore 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. Baltimore 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 stormwater watershed 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.

4. TMDL Compliance

Baltimore 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. Baltimore 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;

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

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

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

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.

F. Assessment of Controls

Baltimore County and ten other municipalities in Maryland have been conducting discharge characterization monitoring since the early 1990s. From this expansive monitoring, a statewide database has been developed that includes hundreds of storms across numerous land uses. Analyses of this dataset and other research performed nationally effectively characterize stormwater runoff in Maryland for NPDES municipal stormwater purposes. To build on the existing information and to better track progress toward meeting TMDLs, better data are needed on ESD performance and BMP efficiencies and effectiveness.

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 Windlass Run watershed to assess the implementation of the latest version of the *2000 Maryland Stormwater Design Manual.* Specific monitoring requirements are described below.

1. Watershed Restoration Assessment

Baltimore County shall continue monitoring in the Scotts Level 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 an associated in-stream station, or other locations based on a study design approved by MDE, shall be monitored. The minimum criteria for chemical, biological, and physical monitoring are as follows:

a. Chemical Monitoring:

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;

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;

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

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.

b. Biological Monitoring:

i. Benthic macroinvertebrate samples shall be gathered each Spring between the outfall and in-stream stations or other practical locations based on an MDE approved study design; and

ii. The County shall use the EPA Rapid Bioassessment Protocols (RBP), Maryland Biological Stream Survey (MBSS), or other similar method approved by MDE.

c. Physical Monitoring:

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

ii. A stream habitat assessment shall be conducted using techniques defined by the EPA's RBP, MBSS, or other similar method approved by MDE; and

iii. A hydrologic and/or hydraulic model shall be used (e.g., TR-20, HEC-2, HEC-RAS, 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.

d. 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 V below;

ii. Chemical, biological, and physical monitoring results and a combined analysis for the approved monitoring locations; and

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

2. Stormwater Management Assessment

The County shall continue to monitor the Windlass Run watershed or, select and submit for MDE's approval an alternative project for determining the effectiveness of stormwater management practices for stream channel protection. Physical stream monitoring protocols shall include:

a. An annual stream profile and survey of permanently monumented cross-sections in the Windlass Run to evaluate channel stability in conjunction with surrounding and on-going commercial development;

b. 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; and

c. A hydrologic and/or hydraulic model shall be used (e.g., TR-20, HEC-2, HEC-RAS, 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.

G. Program Funding

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.

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.

PART V. PROGRAM REVIEW AND ANNUAL PROGRESS REPORTING

A. Annual Reporting

1. Annual progress reports, required under 40 CFR 122.42(c), will facilitate the long-term assessment of Baltimore County's NPDES stormwater program. The County shall submit annual reports on or before the anniversary date of this permit and post these reports on the County's website. All information, data, and analyses shall be based on the fiscal year and include:

a. The status of implementing the components of the stormwater management program that are established as permit conditions including:

i Source Identification;

ii Stormwater Management;
iii Erosion and Sediment Control;
iv Illicit Discharge Detection and Elimination;
v Trash and Litter;
vi Property Management and Maintenance;
vii Public Education;
viii Watershed Assessment;
ix Restoration Plans;
x TMDL Compliance;
xi Assessment of Controls; and
xii Program Funding.

b. A narrative summary describing the results and analyses of data, including monitoring data that is accumulated throughout the reporting year;

c. Expenditures for the reporting period and the proposed budget for the upcoming year;

d. A summary describing the number and nature of enforcement actions, inspections, and public education programs;

e. The identification of water quality improvements and documentation of attainment and/or progress toward attainment of benchmarks and applicable WLAs developed under EPA approved TMDLs; and

f. The identification of any proposed changes to the County's program when WLAs are not being met.

2. To enable MDE to evaluate the effectiveness of permit requirements, the following information shall be submitted in a format consistent with Attachment A:

a. Storm drain system mapping (PART IV.C.1.);

b. Urban BMP locations (PART IV.C.3.);

c. Impervious surfaces (PART IV.C.4.);

d. Water quality improvement project locations (PART IV.C.6.);

e. Monitoring site locations (PART IV.C.5.);

f. Chemical monitoring results (PART IV.F.1.);

g. Pollutant load reductions (PART IV.E.4. and IV.F.1);

h. Biological and habitat monitoring (PART IV.F.1.);

i. Illicit discharge detection and elimination activities (PART IV.D.3.);

j. Erosion and sediment control and stormwater program information (PART IV.D.1 and IV.D.2.);

k. Grading permit information - quarterly (PART IV.D.2.);

l. Fiscal analyses - cost for NPDES related implementation (PART IV.G.).

3. Because this permit uses an iterative approach to implementation, the County must evaluate the effectiveness of its programs in each annual report. BMP and program modifications shall be made within 12 months if the County's annual report does not demonstrate compliance with this permit and show progress toward meeting WLAs developed under EPA approved TMDLs.

B. Program Review

In order to assess the effectiveness of the County's NPDES program for eliminating non-stormwater discharges through the illicit connection program and reducing the discharge of pollutants to protect water quality, MDE will review program implementation, annual reports, and periodic data submittal. Procedures for the review of local erosion and sediment control and stormwater management programs exist in Maryland's sediment control and stormwater management laws. Additional evaluations may be conducted at MDE's discretion to determine compliance with permit conditions.

C. Reapplication for NPDES Stormwater Discharge Permit

This permit is effective for no more than 5 years, unless administratively continued by MDE. Continuation or reissuance of this permit beyond this permit term will require Baltimore County to reapply for NPDES stormwater discharge permit coverage in its fourth year annual report. Failure to reapply for coverage constitutes a violation of this permit.

As part of this reapplication process, Baltimore County shall submit to MDE an executive summary of its NPDES stormwater management program that specifically describes how the County is meeting the overall goal to ensure that each County watershed has been thoroughly evaluated and its progress in implementing water quality improvements. This application shall be used to gauge the effectiveness of the County's NPDES stormwater program and will provide guidance for developing future permit conditions. At a minimum, the application summary shall include:

1. Baltimore County's NPDES stormwater program goals;

2. Program summaries for the permit term regarding:

a. Illicit discharge detection and elimination results;

b. Restoration plan status including County totals for impervious acres, impervious acres controlled by stormwater management, the current status of water quality improvement projects and acres managed, and documentation of progress toward

meeting stormwater WLAs developed under EPA approved TMDLs;

c. Pollutant load reductions as a result of this permit and an evaluation of whether TMDLs are being achieved;

d. Impervious acres compared to the baseline and twenty percent restoration requirement in PART IV.E.2.a.; and

e. Other relevant data and information for describing County programs;

3. Program operation and capital improvement costs for the permit term; and

4. Descriptions of any proposed permit condition changes based on analyses of the successes and failures of the County's efforts to comply with the conditions of this permit.

PART VI. SPECIAL PROGRAMMATIC CONDITIONS

A. Chesapeake Bay Restoration by 2025

A Chesapeake Bay TMDL has been developed by the EPA for the six Bay States (Delaware, Maryland, New York, Pennsylvania, Virginia, and West Virginia) and the District of Columbia. The TMDL describes the level of effort that will be necessary for meeting water quality criteria and restoring Chesapeake Bay. This permit is requiring compliance with the Chesapeake Bay TMDL through the use of a strategy that calls for the restoration of twenty percent of previously developed impervious land with little or no controls within this five year permit term as described in Maryland's Watershed Implementation Plan. The TMDL is an aggregate of nonpoint sources or the load allocation (LA), and point sources or WLA, and a margin of safety. The State is required to issue NPDES permits to point source discharges that are consistent with the assumptions of any applicable TMDL, including those approved subsequent to permit issuance.

Urban stormwater is defined in the CWA as a point source discharge and will subsequently be a part of Maryland's WLA. The NPDES stormwater permits can play a significant role in regulating pollutants from Maryland's urban sector and in the development of Chesapeake Bay Watershed Implementation Plans. Therefore, Maryland's NPDES stormwater permits issued to Baltimore County and other municipalities will require coordination with MDE's Watershed Implementation Plan and be used as the regulatory backbone for controlling urban pollutants toward meeting the Chesapeake Bay TMDL by 2025.

B. Comprehensive Planning

Baltimore County shall cooperate with other agencies during the completion of the Water Resources Element (WRE) as required by the Maryland Economic Growth, Resource Protection and Planning Act of 1992 (Article 66B, Annotated Code of Maryland). Such cooperation shall entail all reasonable actions authorized by law and shall not be restricted by the responsibilities attributed to other entities by separate State statute, including but not limited to reviewing and approving plans and appropriating funds.

PART VII. ENFORCEMENT AND PENALTIES

A. Discharge Prohibitions and Receiving Water Limitations

Baltimore County shall prohibit non-stormwater discharges through its MS4. NPDES permitted non-stormwater discharges are exempt from this prohibition. Discharges from the following will not be considered a source of pollutants when properly managed: water line flushing; landscape irrigation; diverted stream flows; rising ground waters; uncontaminated ground water infiltration to separate storm sewers; uncontaminated pumped ground water; discharges from potable water sources; foundation drains; air conditioning condensation; irrigation waters; springs; footing drains; lawn watering; individual residential car washing; flows from riparian habitats and wetlands; de-chlorinated swimming pool discharges (not including filter backwash); street wash water; and fire fighting activities.

Consistent with § 402(p)(3)(B)(iii) of the CWA, the County shall take all reasonable steps to minimize or prevent the contamination or other alteration of the physical, chemical, or biological properties of any waters of the State, including a change in temperature, taste, color, turbidity, or odor of the waters or the discharge or deposit of any organic matter, harmful organism, or liquid, gaseous, solid, radioactive, or other substance into any waters of the State, that will render the waters harmful to:

1. Public health, safety, or welfare;

2. Domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial use;

3. Livestock, wild animals, or birds; and

4. Fish or other aquatic life.

B. Duty to Mitigate

Baltimore County shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

C. Duty to Comply

Baltimore County shall be responsible for complying with all conditions of this permit. Other entities may be used to meet various permit obligations provided that both the County and the other entity agree contractually. Regardless of any arrangement entered into however, the County remains responsible for permit compliance. In no case may this responsibility or permit compliance liability be transferred to another entity.

Failure to comply with a permit provision constitutes a violation of the CWA and is grounds for enforcement action; permit termination, revocation, or modification; or denial of a permit renewal application. The County shall comply at all times with the provisions of the

Environment Article, Title 4, Subtitles 1, 2, and 4; Title 7, Subtitle 2; and Title 9, Subtitle 3 of the Annotated Code of Maryland.

The County shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the County to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the County only when the operation is necessary to achieve compliance with the conditions of the permit.

D. Sanctions

1. Penalties Under the CWA - Civil and Criminal

Section 309(g)(2) of the CWA, 33 USC §1319(g)(2) provides that any person who violates any permit condition is subject to a civil penalty not to exceed $10,000 per day for each violation, not to exceed $125,000. Pursuant to the Civil Monetary Penalty Inflation Adjustment Rule, 40 CFR Part 19 (effective January 12, 2009), any person who violates any NPDES permit condition or limitation after January 12, 2009 is liable for an administrative penalty not to exceed $16,000 per day for each such violation, up to a total penalty of $177,500. Pursuant to Section 309(c) of the CWA, 33 USC §1319(c), any person who negligently violates any permit condition is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than 1 year, or both. Any person who knowingly violates any permit condition is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than 3 years, or both.

2. Penalties Under the State's Environment Article - Civil and Criminal

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the County from civil or criminal responsibilities and/or penalties for a violation of Title 4, Title 7, and Title 9 of the Environment Article, Annotated Code of Maryland, or any federal, local, or other State law or regulation. Section 9-342 of the Environment Article provides that a person who violates any condition of this permit is liable to a civil penalty of up to $10,000 per violation, to be collected in a civil action brought by MDE, and with each day a violation continues being a separate violation. Section 9-342 further authorizes the MDE to impose upon any person who violates a permit condition, administrative civil penalties of up to $5,000 per violation, up to $50,000.

Section 9-343 of the Environment Article provides that any person who violates a permit condition is subject to a criminal penalty not exceeding $25,000 or imprisonment not exceeding 1 year, or both for a first offense. For a second offense, Section 9-343 provides for a fine not exceeding $50,000 and up to 2 years imprisonment.

The Environment Article, §9-343, Annotated Code of Maryland, provides that any person who tampers with, or knowingly renders inaccurate any monitoring device or method

required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $50,000 per violation, or by imprisonment for not more than 2 years per violation, or both.

The Environment Article, §9-343, Annotated Code of Maryland, provides that any person who knowingly makes any false statement, representation, or certification in any records or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $50,000 per violation, or by imprisonment for not more than 2 years per violation, or both.

E. **Permit Revocation and Modification**

1. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the County for a permit modification or a notification of planned changes or anticipated noncompliance does not stay any permit condition. A permit may be modified by MDE upon written request by the County and after notice and opportunity for a public hearing in accordance with and for the reasons set forth in COMAR 26.08.04.10.

After notice and opportunity for a hearing and in accordance with COMAR 26.08.04.10, MDE may modify, suspend, or revoke and reissue this permit in whole or in part during its term for causes including, but not limited to the following:

a. Violation of any terms or conditions of this permit;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;

c. A change in any condition that requires either a temporary reduction or elimination of the authorized discharge;

d. A determination that the permitted discharge poses a threat to human health or welfare or to the environment and can only be regulated to acceptable levels by permit modification or termination;

e. To incorporate additional controls that are necessary to ensure that the permit requirements are consistent with any applicable TMDL WLA allocated to the discharge of pollutants from the MS4; or

f. As specified in 40 C.F.R §§122.62, 122.63, 122.64, and 124.5.

2. Duty to Provide Information

The County shall furnish to MDE, within a reasonable time, any information that MDE may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit; or to determine compliance with this permit. The County shall also furnish to MDE, upon request, copies of records required to be kept by this permit.

F. Inspection and Entry

Baltimore County shall allow an authorized representative of the State or EPA, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter the permittee's premises where a regulatory activity is located or conducted or where records must be kept under the conditions of this permit;

2. Have access to and obtain copies at reasonable times of any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times, without prior notice, any construction site, facility, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location.

G. Monitoring and Recordkeeping

Unless otherwise specified by this permit, all monitoring and records of monitoring shall be in accordance with 40 CFR Part 122.41(j).

H. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, State, or local law or regulations.

I. Severability

The provisions of this permit are severable. If any provision of this permit shall be held invalid for any reason, the remaining provisions shall remain in full force and effect. If the application of any provision of this permit to any circumstance is held invalid, its application to other circumstances shall not be affected.

J. **Signature of Authorized Administrator and Jurisdiction**

Each application, report, or other information required under this permit to be submitted to MDE shall be signed as required by COMAR 26.08.04.01-1. Signatories shall be a principal executive officer, ranking elected official, or other duly authorized employee.

Jay G. Sakai, Director
Water Management Administration

12/23/13
Date

Attachment A
Annual Report Databases

As part of the NPDES annual reporting process, permittees are required to complete databases for storm drain systems, urban best management practices, impervious surfaces, watershed restoration, monitoring site locations, chemical monitoring, pollutant load reductions, biological monitoring, illicit discharge detection, erosion and sediment control responsible personnel training, quarterly grading permit summaries, and fiscal analyses. For compatibility purposes, databases should be submitted in Access or Excel. Any file in a format other than Access or Excel is to be submitted in a "*.dbf" format. Examples of databases and definitions for each category are provided below. If there are any questions regarding the compatibility of databases, please contact the Water Management Administration's Sediment, Stormwater, and Dam Safety Program at (410) 537-3543.

MDE is utilizing Environmental System Research Institute (ESRI) Arc Geographic Information System (ArcGIS) technologies to track and update all collected datasets and integrate them spatially. GIS datasets shall be submitted in an ESRI Geodatabase or shapefile format, (i.e., "*.shp"). All datasets shall conform to the Maryland State Geographic Information Committee standard – North American Datum (NAD), 1983 Maryland State Plane Coordinate System in "meter" units. Location information collected by global positioning systems (GPS) for the purposes of populating the GIS datasets shall be accurate to the sub-meter (+/- 1 meter) level for acceptable mapping. Additionally, each table below requires a "unique identifier" which is necessary for linking GIS mapping locations to datasets with further descriptions (i.e., outfall dimensions, BMP type, chemical results, etc.).

A. Storm Drain System Mapping Associated with GIS Coverage (PART III.C.1.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
OUTFALL_ID	TEXT	15	Unique outfall ID
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Northing
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Easting
DIM_OUTFL	NUMBER	3	Outfall Dimensions in inches
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
TYPE_OUTFL	TEXT	3	Outfall Type (RCP,CMP, PVC)
DRAIN_AREA	NUMBER	8	Drainage area to outfall (acres)[1]
LAND_USE	NUMBER	3	Predominant land use[2]

[1] GIS shapefile required
[2] Use attached Maryland Office of Planning land use codes.

B. Urban Best Management Practices (BMPs) Associated with GIS Coverage (PART III.C.2.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
STRU_ID	TEXT	8	Unique structure ID[5]
PERMIT_NO	TEXT	10	Unique permit number
STRU_NAME	TEXT	60	Structure name
ADDRESS	TEXT	50	Structure address
CITY	TEXT	15	Structure address
STATE	TEXT	2	Structure address
ZIP	NUMBER	10	Structure address
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Northing
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Easting
ADC_MAP	TEXT	5	ADC map book coordinate (optional if BMP has MD Northing\Easting)
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code

STRU_TYPE	TEXT	10	Identify structure or BMP type[3]
LAND_USE	NUMBER	3	Predominant land use[2]
CON_PURPOSE	TEXT	4	New development (NEWD), Redevelopment (REDE), or Restoration (REST)
DRAIN_AREA	NUMBER	8	Structure drainage area (acres)[1]
IMP_ACRES	NUMBER	8	Structure impervious drainage area (acres) [1]
TOT_DRAIN	NUMBER	8	Total site area (acres)
WQ_VOLUME	NUMBER	8	Volume of rainfall depth in inches managed by the practice
RCN	NUMBER	5	Runoff curve number (weighted)
ON_OFF_SITE	TEXT	3	On or offsite structure
APPR_DATE	DATE/TIME	8	Permit approval date
BUILT_DATE	DATE/TIME	8	Construction completion date
INSP_DATE	DATE/TIME	8	Record most recent inspection date
GEN_COMNT	TEXT	60	General comments
LAST_CHANGE	DATE/TIME	8	Date last change made to this record

[1] GIS shapefile required
[2] Use attached Maryland Office of Planning land use codes
[3] Use attached urban BMP type code
[5] Use attached unique structure identification codes

C. Impervious Surfaces Associated with GIS Coverage (PART III.C.3.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
IMP_ACREAGE	NUMBER	8	Total impervious acreage in watershed[1]
IMP_CONTROLLED	NUMBER	8	Impervious acreage controlled to the maximum extent practicable[1]
IMP_BASELINE	NUMBER	8	Impervious acreage not controlled to the maximum extent practicable[1, 2]
RESTORATION_P	NUMBER	8	Impervious acreage proposed for watershed restoration[1]
RESTORATION_UC	NUMBER	8	Impervious acreage under construction for watershed restoration[1]
RESTORATION_C	NUMBER	8	Impervious acreage completed (since program inception)[1]

[1] GIS shapefile required
[2] Fixed baseline based on MDE Guidance and approval

D. Water Quality Improvement Project Locations Associated with GIS Coverage (PART III.C.5.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
STRU_ID	TEXT	8	Unique structure ID[5]
STRU_NAME	TEXT	60	Structure name
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Northing
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Easting
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
STRU_TYPE	TEXT	10	Identify structure or BMP type[3]
LAND_USE	NUMBER	3	Predominant land use[2]
DRAIN_AREA	NUMBER	8	Structure drainage area (acres)[1]
IMP_ACRES	NUMBER	8	Structure impervious drainage area (acres) [1]
WQ_VOLUME	NUMBER	8	Volume of rainfall depth in inches managed by the practice
LINEAR_FT	NUMBER	8	Use this field for stream restoration or shoreline protection
POUNDS_TN	NUMBER	8	Use this field for street sweeping or inlet cleaning
POUNDS_TP	NUMBER	8	Use this field for street sweeping or inlet cleaning
POUNDS_TSS	NUMBER	8	Use this field for street sweeping or inlet cleaning
APPR_DATE	DATE/TIME	8	Permit approval date
BUILT_DATE	DATE/TIME	8	Construction completion date
INSP_DATE	DATE/TIME	8	Record most recent inspection date
GEN_COMNT	TEXT	60	General comments

LAST_CHANGE	DATE/TIME	8	Date last change made to this record

[1] GIS shapefile required
[2] Use attached Maryland Office of Planning land use codes
[3] Use attached urban BMP type code
[5] Use attached unique structure identification codes

E. Monitoring Site Locations Associated with GIS Coverage (PART III.C.4.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
STATION	TEXT	30	Unique station ID
OUTFALL_OR_INSTREAM	TEXT	10	Outfall or instream station
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Northing
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 meters) Easting
DRAIN_AREA	NUMBER	8	Drainage area in acres[1]

[1] GIS shapefile required

E.1. Monitoring Site Locations - Use for Multiple Land Use Values in the Drainage Area

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
STATION	TEXT	30	Name of station (associated with unique station ID in section E.)
LAND_USE_RANK	NUMBER	8	Ranking of land use from predominant to least
LAND_USE	NUMBER	3	Identify land use[2]
DRAIN_AREA	NUMBER	8	Drainage area in acres[1]

[1] GIS shapefile required
[2] Use attached Maryland Office of Planning land use codes

E.2. Monitoring Site Locations - Use for Multiple Stormwater BMPs in the Drainage Area

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
STATION	TEXT	30	Name of station (associated with unique station ID in section E.)
BMP_RANK	NUMBER	5	Ranking of BMPs from predominant to least
STRU_TYPE	TEXT	10	Identify structure or BMP type[3]
BMP_DESCRIPTION	TEXT	60	Brief description of BMP
DRAIN_AREA	NUMBER	8	Drainage area in acres treated by BMP[1]

[1] GIS shapefile required
[3] Use attached urban BMP type code.

F. Chemical Monitoring (PART III.F.1.)

Column Name	Data Type	Length	Description
JURISDICTION	TEXT	50	Monitoring jurisdiction name
EVENT_DATE	DATE/TIME	8	Date of storm event
EVENT_TIME	DATE/TIME	8	Time monitoring begins
STATION	TEXT	30	Station name (associated w/ unique station ID in section E.)
OUTFALL_OR_INSTREAM	TEXT	10	Outfall or instream station
STORM_OR_BASEFLOW	TEXT	10	Storm or base flow sample
DEPTH	NUMBER	5	Depth of rain in inches
DURATION	NUMBER	5	Duration of event in hours and minutes
INTENSITY	NUMBER	5	Intensity = depth/duration
TOTAL_STORM_FLOW_VOLUME	NUMBER	5	Total storm flow volume in gallons

WATER_TEMP	NUMBER	5	Flow weighted average of water temperature (Fahrenheit)
pH	NUMBER	5	Flow weighted average of pH
BOD_dt	NUMBER	5	Biological Oxygen Demand detection limit used in analysis
BOD_EMC0	NUMBER	5	EMC for Biological Oxygen Demand in mg/l using (0)*
BOD_EMC_dt	NUMBER	5	EMC for Biological Oxygen Demand in mg/l using (dt)**
TKN_dt	NUMBER	5	Total Kjeldahl Nitrogen detection limit used in analysis
TKN_EMC0	NUMBER	5	EMC for Total Kjeldahl Nitrogen in mg/l using (0)*
TKN_EMC_dt	NUMBER	5	EMC for Total Kjeldahl Nitrogen in mg/l using (dt)**
NITRATE+NITRITE_dt	NUMBER	5	Record Nitrate + Nitrite detection limit used in analysis
NITRATE+NITRITE_EMC0	NUMBER	5	Enter EMC for Nitrate + Nitrite in mg/l using (0)*
NITRATE_EMC_dt	NUMBER	5	Enter EMC for Nitrate + Nitrite in mg/l using (dt)**
TOTAL_PHOSPHORUS_dt	NUMBER	5	Record Total Phosphorus detection limit used in analysis
TOTAL_PHOSPHORUS_EMC0	NUMBER	5	Enter EMC for Total Phosphorus in mg/l using (0)*
TOTAL_PHOSPHORUSEMC_dt	NUMBER	5	Enter EMC for Total Phosphorus in mg/l using (dt)**
TSS_dt	NUMBER	5	Total Suspended Solids detection limit used in analysis
TSS_EMC0	NUMBER	5	EMC for Total Suspended Solids in mg/l using (0)*
TSS_EMC_dt	NUMBER	5	EMC for Total Suspended Solids in mg/l using (dt)**
TOTAL_COPPER_dt	NUMBER	5	Record Total Copper detection limit used in analysis
TOTAL_COPPER_EMC0	NUMBER	5	Enter EMC for Total Copper in ug/l using (0)*
TOTAL_COPPER_EMC_dt	NUMBER	5	Enter EMC for Total Copper in ug/l using (dt)**
TOTAL_LEAD_dt	NUMBER	5	Record Total Lead detection limit used in analysis
TOTAL_LEAD_EMC0	NUMBER	5	Enter EMC for Total Lead in ug/l using (0)*
TOTAL_LEAD_EMC_dt	NUMBER	5	Enter EMC for Total Lead in ug/l using (dt)**
TOTAL_ZINC_dt	NUMBER	5	Record Total Zinc detection limit used in analysis
TOTAL_ZINC_EMC0	NUMBER	5	Enter EMC for Total Zinc in ug/l using (0)*
TOTAL_ZINC_EMC_dt	NUMBER	5	Enter EMC for Total Zinc in ug/l using (dt)**
HARDNESS_dt	NUMBER	5	Record detection limit used in analysis
HARDNESS_EMC0	NUMBER	5	Enter EMC for Hardness in ug/l using (0)*
HARDNESS_EMC_dt	NUMBER	5	Enter EMC for Hardness in ug/l using (dt)**
TPH_dt	NUMBER	5	Record detection limit used in analysis
TPH_EMC0	NUMBER	5	EMC for Total Petroleum Hydrocarbons in mg/l using (0)*
TPH_EMC_dt	NUMBER	5	EMC for Total Petroleum Hydrocarbon in mg/l using (dt)**
ENTEROCOCCI_dt	NUMBER	5	Record detection limit used in analysis
ENTEROCOCCI_EMC0	NUMBER	5	EMC for enterococci in MPN/100 using (0)*
ENTEROCOCCI_EMC_dt	NUMBER	5	EMC for enterococci in MPN/100 using (dt)**
ECOLI_dt	NUMBER	5	Record E. Coli detection limit used in analysis
ECOLI_EMC0	NUMBER	5	Enter EMC for E. Coli in MPN/100ml using (0)*
ECOLI_EMC_dt	NUMBER	5	Enter EMC for E. Coli in MPN/100ml using (dt)**
LOCAL_CONCERN1_dt	NUMBER	5	Record detection limit used in analysis
LOCAL_CONCERN1_EMC0	NUMBER	5	Enter EMC for in mg/l using (0)*
LOCAL_CONCERN1_EMC_dt	NUMBER	5	Enter EMC for in mg/l using (dt)**
LOCAL_CONCERN2_dt	NUMBER	5	Record detection limit used in analysis
LOCAL_CONCERN2_EMC0	NUMBER	5	Enter EMC for in mg/l using (0)*
LOCAL_CONCERN2_EMC_dt	NUMBER	5	Enter EMC for in mg/l using (dt)**
LOCAL_CONCERN3_dt	NUMBER	5	Record detection limit used in analysis
LOCAL_CONCERN3_EMC0	NUMBER	5	Enter EMC for in mg/l using (0)*
LOCAL_CONCERN3_EMC_dt	NUMBER	5	Enter EMC for in mg/l using (dt)**
GEN_COMNT	TEXT	50	Monitoring comments/documentation

key: **mg/l** = milligrams per liter ***u*g/l** = micrograms per liter **MPN** = most probable number per 100 milliliters
*** EMC (0)** = Flow weighted averages for three discrete samples representative of a storm using zero (0) for any discrete samples recorded less than the detection limit.

** **EMC (dt)** = Flow weighted averages for three discrete samples representative of a storm using the detection limit value (dt) for any discrete samples recorded less than the detection limit.

G. Pollutant Load Reductions Associated with GIS Coverage (PART III.E.4. and III.F.1.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
TN_RUNOFF	NUMBER	10	(TKN) + (Nitrate + Nitrite) load before treatment (lbs/year)
TN_CONTROLLED	NUMBER	10	(TKN) + (Nitrate + Nitrite) treated by BMPs (lbs/year)
TP_RUNOFF	NUMBER	10	TP load before treatment (lbs/year)
TP_CONTROLLED	NUMBER	10	TP treated by BMPs (lbs/year)
TSS_RUNOFF	NUMBER	10	TSS load before treatment (lbs/year)
TSS_CONTROLLED	NUMBER	10	TSS treated by BMPs (lbs/year)

G.1. Additional Pollutants - Use for Multiple Pollutant Entries

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
POLLUTANT	TEXT	20	Identify additional pollutants for impaired water (TMDLs)
WLA_RUNOFF	NUMBER	10	WLA for an approved TMDL before treatment (lbs/year)
WLA_CONTROLLED	NUMBER	10	Waste load for an approved TMDL treated by BMPs (lbs/year)

H. Biological and Habitat Monitoring (PART III.F.1.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
STATION	TEXT	30	Unique station ID
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 Meters) Northing
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 Meters) Easting
DRAIN_AREA	NUMBER	8	Drainage area in acres
BIBI	NUMBER	4	Benthic index of biological indicators
EMBEDDEDNESS	NUMBER	4	Rapid bioassessment protocol score for embeddedness
EPIFAUNAL	NUMBER	4	Rapid bioassessment protocol score for epifaunal
HABITAT	NUMBER	4	Rapid bioassessment protocol score for habitat
LAND_USE	NUMBER	3	Predominant land use[2]

[2] Use attached Maryland Office of Planning land use codes

I. Illicit Discharge Detection and Elimination (PART III.D.3.)

Column Name	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
OUTFALL_ID	TEXT	15	Unique outfall ID used in Section A. database
SCREEN_DATE	DATE/TIME	8	Field screening date
TEST_NUM	NUMBER	5	Initial screening, follow-up test, 3rd, etc.
LAST_RAIN	DATE/TIME	8	Date of last rain > 0.10”
TIME	DATE/TIME	8	Field screening time
OBSERV_FLOW	TEXT	3	Was flow observed? (yes/no)
CFS_FLOW	NUMBER	5	Flow rate in cubic feet per second (CFS)
WATER_TEMP	NUMBER	5	Water temperature (Fahrenheit)
AIR_TEMP	NUMBER	5	Air temperature in (Fahrenheit)

CHEM_TEST	TEXT	3	Was chemical test performed? (yes/no)
pH	NUMBER	5	pH meter reading
PHENOL	NUMBER	5	Milligrams per Liter (mg/l)
CHLORINE	NUMBER	5	mg/l
DETERGENTS	NUMBER	5	mg/l
COPPER	NUMBER	5	mg/l
ALGAEGROW	TEXT	3	Was algae growth observed? (yes/no)
ODOR	TEXT	2	Type of odor[4]
COLOR	TEXT	2	Discharge color[4]
CLARITY	TEXT	2	Discharge clarity [4]
FLOATABLES	TEXT	2	Floatables in discharge[4]
DEPOSITS	TEXT	2	Deposits in outfall area[4]
VEG_COND	TEXT	2	Vegetative condition in outfall area[4]
STRUCT_COND	TEXT	2	Structural condition of outfall[4]
EROSION	TEXT	2	Erosion in outfall area[4]
COMPLA_NUM	TEXT	3	Is screening complaint driven? (yes/no)
ILLICIT_Q	TEXT	3	Was illicit discharge found? (yes/no)
ILLICIT_ELIM	TEXT	3	Was illicit discharge eliminated? (yes/no)

[4] Use Attached Pollution Prevention Activities Codes

J. Responsible Personnel Certification Information (PART III.D.2.)

Column Name	Data Type	Length	Description*
PREFIX	TEXT	2	Mr, Ms
FIRSTNAME	TEXT	15	First name
LASTNAME	TEXT	15	Last name
ADDRESS	TEXT	50	Full address
CITY	TEXT	15	City
STATE	TEXT	2	State
ZIP	NUMBER	10	Zip code
DATE	DATE/TIME	8	Date of class
PHONE	NUMBER	10	Phone number
CERT_NUM	NUMBER	6	Certification number as provided by MDE
COMPANY	TEXT	30	Employer
INSTRUCTOR	TEXT	20	Instructor's last name

* Do not use all caps

K. Quarterly Grading Permit Information Associated with GIS Coverage (PART III.D.2.)

Column Name	Data Type	Length	Description
SITE_NAME	TEXT	60	Construction site name
SITE_OWNER	TEXT	60	Construction site owner
OWNER_ADDRESS	TEXT	50	Owner address
OWNER_CITY	TEXT	15	Owner address
OWNER_ZIP	NUMBER	10	Owner zip code
SITE_ADDRESS	TEXT	50	Site address
SITE_CITY	TEXT	15	Site address
SITE_ZIP	NUMBER	10	Site zip code
MD_NORTH	NUMBER	8	Maryland grid coordinate (NAD 83 meters) – site
MD_EAST	NUMBER	8	Maryland grid coordinate (NAD 83 meters) – site
WATERSHED_CODE	NUMBER	20	Maryland 8 or 12-digit hydrologic unit code
DIST_AREA	NUMBER	8	Disturbed area of site in acres[1]
GRAD_PERMIT	TEXT	50	Local grading permit number

APPR_DATE	DATE/TIME	8	Grading Permit approval date
LAND_USE	NUMBER	3	Predominant land use[2] (built)

[1] GIS shapefile required
[2] Use attached Maryland Office of Planning land use codes

L. Fiscal Analyses (PART III.G.)

Permit Condition	Data Type	Length	Description
YEAR	NUMBER	4	Annual report year
LEGAL_AUTH	NUMBER	13	Total annual cost for legal authority
SOURCE_ID	NUMBER	13	Total annual cost for source ID
SW_MANAGEMENT	NUMBER	13	Total annual cost for stormwater management
EROS_SED_CON	NUMBER	13	Total annual cost for erosion and sediment
ILLICIT_DET/ELIM	NUMBER	13	Total annual cost for illicit det/elimination
TRASH_ELIM	NUMBER	13	Total annual cost for trash elimination
PROP_MANAGEMENT	NUMBER	13	Total annual cost for property management
INLET_CLEAN	NUMBER	13	Total annual cost for inlet cleaning
STRT_SWEEP	NUMBER	13	Total annual cost for street sweeping
RD_MAINT_OTHER	NUMBER	13	Total annual cost for road maintenance - other
PUB_EDUCATION	NUMBER	13	Total annual cost for public education
WATERSHED_ASSESS	NUMBER	13	Total annual cost for watershed assessment
WATERSHED_RESTOR	NUMBER	13	Total annual cost for watershed restoration
CHEM_MON_ASSESS	NUMBER	13	Total annual cost for chemical monitoring
BIO_MON_ASSESS	NUMBER	13	Total annual cost for biological monitoring
PHYS_STRM_ASSESS	NUMBER	13	Total annual cost for physical assessment
MANUAL_MON	NUMBER	13	Total annual cost for design manual monitorin
TMDL_ASSESS	NUMBER	13	Total annual cost for tmdl assessment
TOTAL_NPDES_FUNDS	NUMBER	13	Total annual cost for total npdes program

[2]MDP Land Use/Land Cover

10 Urban Built-up

- **11 Low Density Residential –** Detached single family/duplex dwelling units, yards, and associated areas. Areas of more than 90 percent single family/duplex dwelling units, with lot sizes less than five acres but at least one-half acres (.2 dwelling units/acre to 2 dwelling units/acre).

- **12 Medium Density Residential –** Detached single family/duplex, attached single unit row housing, yards, and associated areas. Areas of more than 90 percent single family/duplex units and attached single unit row housing, with lot sizes of less than one-half acre but at least one-eighth acre (2 dwelling units/acre to 8 dwelling units/acre).

- **13 High Density Residential –** Attached single unit row housing, garden apartments, high rise apartments/condominiums, mobile home and trailer parks. Areas of more than 90 percent high density residential units, with more than 8 dwelling units/acre.

- **14 Commercial –** Retail and wholesale services. Areas used primarily for the sale of products and services, including associated yards and parking areas.

- **15 Industrial –** Manufacturing and industrial parks, including associated warehouses, storage yards, research laboratories, and parking areas.

- **16 Institutional –** Elementary and secondary schools, middle schools, junior and senior high schools, public and private colleges and universities, military installations (built-up areas only, including buildings and storage, training, and similar areas) churches and health facilities, correctional facilities, and government offices and facilities that are clearly separable from the surrounding land cover.

- **17 Extractive –** Surface mining operations, including sand and gravel pits, quarries, coal surface mines, and deep coal mines. Status of activity (active vs. abandoned) is not distinguished.

- **18 Open Urban Land –** Urban areas whose use does not require structures, or urban areas where non-conforming uses characterized by open land have become isolated. Included are golf courses, parks, recreation areas (except associated with schools or other institutions), cemeteries, and entrapped agricultural and undeveloped land within urban areas.

- **191 Large Lot Subdivision (Agriculture) –** Residential subdivisions with lot sizes less than 20 acres but at least 5 acres, with a dominant land cover of open fields or pasture.

- **192 Large Lot Subdivision (Forest) -** Residential subdivisions with lot sizes less than 20 acres but at least 5 acres, with a dominant land cover of deciduous, evergreen or mixed forest.

20 Agriculture

- **21 Cropland –** Field and forage crops.

- **22 Pasture –** Land used for pasture, both permanent and rotated: grass.

- **23 Orchards/Vineyards/Horticulture** – Areas of intensively managed commercial bush and tree crops, including areas used for fruit production, vineyards, sod and seed farms, nurseries, and green houses.

- **24 Feeding Operations** – Cattle or hog feeding lots, poultry houses, and holding lots for animals, and commercial fishing areas (including oyster beds).

- **241 Feeding Operations** – Cattle or hog feeding lots, poultry houses, and holding lots for animals.

- **242 Agricultural Building** – Breeding and training facilities, storage facilities, built-up areas associated with a farmstead, small farm ponds, and commercial fishing areas.

- **25 Row and Garden Crops** – Intensively managed track and vegetable farms and associated areas.

40 Forest

- **41 Deciduous Forest** – Forested areas in which the trees characteristically lose their leaves at the end of the growing season. Included are such species as oak, hickory, aspen, sycamore, birch, yellow poplar, elm, maple, and cypress.

- **42 Evergreen Forest** - Forested areas in which the trees are characterized by persistent foliage throughout the year. Included are such species as white pine, pond pine, hemlock, southern white cedar, and red pine.

- **43 Mixed Forest** – Forested areas in which neither deciduous or evergreen species dominate, but in which there is a combination of both types.

- **44 Brush** – Areas that do not produce timber or other wood products but may have cut-over timber stands, abandoned agriculture fields, or pasture. These areas are characterized by vegetation types such as sumac, vines, rose, brambles, and tree seedlings.

50 Water – Rivers, waterways, reservoirs, ponds, bays, estuaries, and ocean.

60 Wetlands – Forested and non-forested wetlands, including tidal flats, tidal and non-tidal marshes, and upland swamps and wet areas.

70 Barren Land

- **71 Beaches** – Extensive shoreline areas of sand and gravel accumulation, with no vegetative cover or other land use.

- **72 Bare Exposed Rock** – Areas of bedrock exposure, scarps, and other natural accumulations of rock without vegetative cover.

73 Bare Ground – Areas of exposed ground caused naturally, by construction, or other cultural processes.

[3] Glossary of Stormwater BMP Structure Types and Practices Reported to MDE

Structural BMPs			
Structure Type	**Code**	**Structure Function**	**Chesapeake Bay Program Classification**
Artificial Wetlands (See Shallow Marsh also)	SM	A structure with a permanent shallow pool planted with wetland vegetation often designed to provide extended detention.	Wet Pond & Wetlands
Attenuation swale or dry swale	SW	Open drainage channel designed to detain and promote the filtration of stormwater runoff through underlying fabricated soil media (see Grassed Swale or SW).	Filtering Practice
Bio-retention	BR	Landscape designed such that stormwater runoff collects in shallow depressions before filtering through fabricated planting soil media .	Filtering Practice
Check Dam	CD	A small dam constructed in a gully or other small waterway to decrease flow velocity (by reducing the channel gradient), minimize scour, & promote deposition of sediment.	Filtering Practice
Detention Structure (Dry Pond)	DP	Designed to store runoff without a permanent pool.	Dry Detention Pond & Hydrodynamic Structure
Dry Well	DW	An infiltration trench variant designed to exclusively accommodate rooftop runoff.	Infiltration Practice
Extended Detention Structure (Two types):	ED	Designed to temporarily detain a portion of runoff for 24 hrs after a storm using a fixed orifice to regulate outflow at a specific rate, allowing solids & associated time to settle out.	Dry Extended Detention Pond
Extended Detention Structure, Dry	EDSD	Designed for the temporary storage of runoff associated with at least a 24 hr 1-year storm without creating a permanent pool of water.	Dry Extended Detention Pond
Extended Detention Structure, Wet	EDSW	Designed for the storage of runoff associated with at least a 24 hr 1-year storm. The detained water drains partially & the remaining portion creates a permanent pool .	Dry Extended Detention Pond or Wet Pond & Wetlands
Filter Strip	FS	Vegetated land designed to intercept sheet flow from upstream development.	Filtering Practice
Flow Splitter	FlSp	Hydraulic structure designed either to divert a portion of stream flow to a BMP located away from a channel, direct stormwater to a parallel pipe system or bypass a portion of base flow around a pond .	Not a WQ BMP
Flood Management Area	FLOOD	10 year storm overbank flood protection	Not a WQ BMP
Forebay	FOREBAY	Storage structure adjoining a SWM BMP inlet designed to trap coarse sediments and thereby lessen their accumulation in the main treatment area .	Dry Detention Pond & Hydrodynamic Structure
Gabion	GABION	A large rectangular box made of heavy gauge wire mesh which holds cobbles and boulders for changing stream flow patterns, bank stabilization, and erosion control.	Filtering Practice
Grass Swale	SW	Open vegetated channel used to convey runoff and provide treatment by filtering pollutants and sediment.	Filtering Practice
Hydrodynamic Structure such as 1) Oil grit separator 2) Bay Saver© 3) Stormceptor©	 OGS BS SC	An engineered structure used to separate sediments and oils from stormwater runoff using gravitational separation and/or hydraulic flow.	Dry Detention Pond & Hydrodynamic Structure
Infiltration Basin	IB	Designed to allow stormwater to infiltrate into permeable soils. It differs from a retention structure in that it may include a back-up underdrain pipe to ensure eventual removal of standing water.	Infiltration Practice

Infiltration Trench (Three types):	IT	An excavated trench that has been backfilled with exposed or unexposed stones to form an underground reservoir (Also see Dry Well).	Infiltration Practice
Complete Exfiltration	ITCE	Runoff can only exit the trench by exfiltrating through the stone reservoir into the underlying soil	
Partial Exfiltration	ITPE	Runoff exits the trench by exfiltrating a) through the stone reservoir into the underlying soil, and b) via a perforated underdrain at the bottom of the trench that diverts runoff to a central outlet.	
Water Quality Exfiltration	ITWQE	Storage volume is set to receive only the first $\frac{1}{2}$" of runoff (first flush) from an impervious area of the watershed.	
Landscape	LANDSCAPE	Impervious area reduction (Thus far, only Prince Georges County has submitted reports of this practice).	Filtering Practice
Level Spreader	LS	A device for distributing stormwater uniformly over the ground surface as sheet flow to prevent concentrated, erosive flow and promote infiltration.	Infiltration Practice
Micropool (Reported by various jurisdictions before the standardization of codes)	MP	A smaller permanent pool used in a stormwater pond to mitigate the thermal impacts of a larger pond, impacts on existing wetlands, or compensate for lack of topographic relief.	Wet Pond & Wetlands
Observation well	OBS_WELL	A test well installed in an infiltration trench to monitor draining time after installation.	Not a SWM BMP – Observation Well
Other	OTH	A stormwater facility that is known to have been implemented but whose type cannot definitively be identified at the time of submitting a Notice of Construction Completion report to MDE.	Defaults to Dry Detention Pond & Hydrodynamic Structure, evaluated as the least efficient class of facilities in removing TSS, TN, and TP from stormwater runoff.
Porous Pavement	PP	A porous asphalt surface designed to have bearing strength similar to conventional asphalt but provides a rapid conduit for runoff to reach a subsurface stone reservoir.	Infiltration Practice
Retention Pond (See Wet Pond/WP)	WP	A structure with a permanent pool of water for treating incoming storm runoff.	Wet Pond & Wetlands
Sand Filter	SF	A bed of sand to which the first flush of runoff is diverted. Water leaving the filter is collected in underground pipes & returned to a waterway. A layer of peat, limestone, and/topsoil may be added to improve removal efficiency.	Filtering Practice
Shallow Marsh	SM	A structure with a permanent shallow pool planted with wetland vegetation often designed to provide extended detention.	Wet Pond & Wetlands
Underground Storage	UGS	Vault like structure designed for the temporary storage of storm flow.	Dry Detention Pond & Hydrodynamic Structure
Vegetated Buffer	VB	A vegetated protective zone of variable width located along both sides of a waterway.	Filtering Practice
Water Quality Inlet	OGS	See Hydrodynamic Structure-Oil Grit Separator.	Dry Detention Pond & Hydrodynamic Structure
Wet Pond	WP	A structure with a permanent pool of water for treating incoming storm runoff.	Wet Pond & Wetlands

Environmental Site Design Practices			
Practice Type	**Code**	**Function**	**Chesapeake Bay Program Classification**
Environmental Site Design -- alternative surfaces, non-structural and micro-scale practices may be grouped as a comprehensive stormwater design system and identified singlely as ESD.	ESD	A comprehensive design strategy for maintaining predevelopment runoff characteristics and protecting natural resources is available. This strategy relies on integrating site design, natural hydrology, and smaller controls to capture and treat runoff.	Stormwater to the MEP
Alternative Surfaces			
1) Green Roof	ESDGR	Alternative surface used in place of traditional flat or pitched roofs to reduce runoff.	Stormwater to the MEP
2) Permeable Pavements	ESDPERMP	Any of the available materials that are used to replace traditional pavements (e.g., asphalt, concrete) and reduce runoff.	
3) Reinforced Turf	ESDRTRF	Grassed or gravel area with open, load-bearing matrix for structural integrity.	
Nonstructural Practices			
1) Disconnection of Rooftop Runoff	ESDRTD	Rooftop runoff is disconnected and then directed to a pervious area where it either infiltrates or is filtered.	Stormwater to the MEP
2) Disconnection of Non-Rooftop Runoff	ESDNRTD	Runoff from surface impervious areas is disconnected and then directed to a pervious area where it either infiltrates or is filtered. Examples: Overland sheetflow, permeable pavers, rain gardens and small scale filters.	
3) Sheetflow to Conservation Areas	ESDSFNAC	Runoff is discharged to a natural conservation or buffer area (e.g. stream buffers, forest buffers) through overland flow.	
Micro-Scale Practices			
1) Rainwater Harvesting	ESDRH	These practices intercept and store rainfall for future use.	Stormwater to the MEP
2) Submerged Gravel Wetlands	ESDSGW	Small-scale filter using wetland plants and a gravel media to provide treatment.	
3) Landscape Infiltration	ESDIL	Combination of landscape features with infiltration practices.	
4) Infiltration Berms	ESDIB	Series of small berms used in sloped areas to detain, infiltrate, and filter runoff.	
5) Dry Wells	ESDDW	An infiltration trench variant designed to exclusively accommodate rooftop runoff.	
6) Micro-Bioretention	ESDMB	Small, vegetated filter used to capture and treat runoff from adjacent impervious areas.	
7) Rain Gardens	ESDRG	Shallow landscaped feature used to detain and filter runoff and used primarily in residential applications.	
8) Swales	ESDSW	Channels that provide conveyance, water quality treatment and flow attenuation of runoff. Variants include the grassed swale, bio-swale, and wet swale.	
9) Enhanced Filters	ESDEF	A modification applied to other filters that increase nutrient removal and groundwater recharge.	

Alternative MS4 BMPs			
Practice Type	**Code**	**Description**	**Chesapeake Bay Program Classification**
Mechanical Street Sweeping	MSS	Removes the buildup of pollutants that have been deposited along the street or curb using a mechanical sweeper truck	Street Sweeping, Mechanical
Regenerative/Vacuum Street Sweeping	VSS	Removes the buildup of pollutants that have been deposited along the street or curb using a vacuum-assisted sweeper truck	Street Sweeping, Regenerative
Nutrient Management	NM	Comprehensive nutrient management plan for reducing and or eliminating fertilizer use	Nutrient Management
Grass/Meadow Buffers	GMB	An area of trees at least 35 feet wide on one side of a stream, usually accompanied by infrequently-mowed grass, meadow flora species, and other vegetation that is adjacent to a body of water	Urban Grass/Meadow Buffers
Forest Buffers	FB	An area of trees at least 35 feet wide on one side of a stream, usually accompanied by trees, shrubs, and other vegetation that is adjacent to a body of water	Urban Forest Buffers
Impervious Surface Elimination (to Pervious)	IMPP	Pollutant load reduction expected when land cover is converted from impervious to pervious	Land Cover Change
Impervious Surface Elimination (to Forest)	IMPF	Pollutant load reduction expected when land cover is converted from impervious to forest	Land Cover Change
Planting Trees or Forestation on Pervious Urban	FPU	100 trees per acre or greater is necessary with at least 50% of the trees being 2 inches or greater in diameter at 4 ½ feet above ground level (an aggregate of smaller sites may be used)	Land Cover Change
Catch Basin Cleaning	CBC	Routine cleanouts performed on targeted infrastructure that have high accumulation rates	Street Sweeping
Storm Drain Vacuuming	SDV	Routine vacuuming performed on targeted infrastructure that has high accumulation rates	Street Sweeping
Stream Restoration	STRE	Stream restoration includes re-establishing a stable channel; reconnecting the stream with the floodplain; introducing habitat features such as step-pools, woody debris, or riparian vegetation; and integrating structural approaches such as rock walls or riprap.	Urban Stream Restoration
Shoreline Stabilization	SHST	These practices apply to the shoreline of the Chesapeake and Atlantic Coastal Bays and tidal rivers. Nonstructural practices or living shorelines include tidal marsh creation and beach nourishment; structural practices include stone revetments, breakwaters, or groins.	Shoreline Stabilization
Septic Pumping	SEPP	Implementation of septic system pumping	Septic Pumping
Septic Denitrification	SEPD	Implementation of enhanced denitrification technology	Septic Denitrification
Septic Connections to WWTP	SEPC	Removal of septic system and waste stream connection made to a waste water treatment plant.	Septic Connection to WWTP
Education	EDU	Education	To Be Determined
Sub-Soiling	SUB	Sub-Soiling	To Be Determined
Trash Removal	TRA	Trash Removal	To Be Determined
Pet Waste Management	PET	Pet Waste Management	To Be Determined
Outfall Stabilization	OUTS	Outfall Stabilization	To Be Determined
Floodplain Restoration	FPRES	Floodplain Restoration	To Be Determined
River Bank Stabilization	RBS	River Bank Stabilization	To Be Determined
Bio-Reactor Carbon Filter	BRCF	Bio-Reactor Carbon Filter	To Be Determined
Disconnection of Illicit Discharges	DID	Disconnection of Illicit Discharges	To Be Determined

Alternative MS4 BMPs (Continued)			
Practice Type	**Code**	**Description**	**Chesapeake Bay Program Classification**
Step Pool Storm Conveyance	SPSC	Step Pool Storm Conveyance; if used as a filtration practice, the pollutant removal efficiencies for micro-bioretention can be applied to the drainage area treated.	To Be Determined

Policy Decision			
Policy	**Code**	**Description**	**Chesapeake Bay Program Classification**
Exemption	EXEMPT	Land development activities that are not subject to the stormwater management requirements.	Not a SWM BMP
Variance	VARIANCE	A modification of the minimum stormwater management requirement if site conditions are such that strict adherence to the Guidelines would impose unnecessary hardship on the applicant without fulfilling the intent of the Guidelines.	Not a SWM BMP
Waiver	WAIVER	Exemption from stormwater management requirements granted to an applicant for a specific project based on a review by MDE.	Not a SWM BMP

[4] Pollution Prevention Activities Codes

21. **ODOR:** None(N), Sewage (SE), Sulfur (S), Oil (IL), Gas (G), Rancid-Sour (RS), Other (O)

22. **COLOR:** Clear (C), Yellow (Y),Brown (B), Green (GR), Red (R), Gray (G), Other (O)

23. **CLARITY:** Clear (C), Opaque (OP), Cloudy (CD), Other (O)

24. **FLOATABLES:** None (N), Oil Sheen (OS), Sewage (SE), Trash (T), Other (O)

25. **DEPOSITS:** None (N), Sediment (S), Oil (IL), Other (O)

26. **VEG_COND.:** Normal (N), Excessive Growth (EG), Inhibited Growth (IG), Other (O)

27. **STRUCT_COND**: Normal (N), Concrete Cracking (CC), Concrete Spalling (SP), Other (O)

28. **EROSION**: None (N), Moderate (M), Severe (S)

[5]Unique Structure Identification Codes

Each stormwater best management structure or water quality improvement project will need a unique identification code. For management of these data Statewide it is necessary that these codes also indicate the jurisdiction where they are implemented. Please use the County, City, or State abbreviations listed below as part of each structures unique identification code.

Anne Arundel County	AA
Baltimore City	BC
Baltimore County	BA
Carroll County	CA
Charles County	CH
Frederick County	FR
Harford County	HA
Howard County	HO
Prince George's County	PG
Montgomery County	MO
Maryland State Highway Administration	SHA

Attachment B
EPA Approved Total Maximum Daily Loads (TMDLs)
Baltimore County

This NPDES permit requires Baltimore County to submit an annual TMDL assessment report evaluating the effectiveness of the County's restoration plans and progress made in achieving compliance with EPA approved TMDLs. Similarly, by regulation at 40 CFR §122.44, EPA further requires that stormwater controls and programs implemented pursuant to this NPDES permit be consistent with applicable WLAs developed under any approved TMDLs. The following is a list of approved TMDLs applicable to Baltimore County:

Basin Name	8-digit Basin Number	Impairment	Year	Comments
Loch Raven Reservoir	02130805	Bacteria	2009	Local
Loch Raven Reservoir	02130805	Mercury	2004	Local
Loch Raven Reservoir	02130805	Nutrients & Sediments	2007	Local
Prettyboy Reservoir	02130806	Bacteria	2009	Local
Prettyboy Reservoir	02130806	Mercury	2004	Local
Prettyboy Reservoir	02130806	Nutrients	2007	Local
Back River	02130901	Bacteria	2007	Local
Back River Oligohaline	02130901	Chlordane	1999	Local
Back River Oligohaline	02130901	Nutrients & Sediments	2005 / 2010	Local / Bay TMDL
Patapsco River Mesohaline	02130903	Bacteria	2011	Local
Patapsco River Mesohaline	02130903	Chlordane	2001	Local
Patapsco River Mesohaline	02130903	Nutrients & Sediments	2007 / 2010	Local / Bay TMDL
Jones Falls	02130904	Bacteria	2008	Local
Jones Falls	02130904	Chlordane	2001	Local
Jones Falls	02130904	Sediments	2011	Local
Gwynns Falls	02130905	Bacteria	2007	Local
Gwynns Falls	02130905	Sediments	2010	Local
Patapsco River Lower N. Branch	02130906	Bacteria	2009	Local
Patapsco River Lower N. Branch	02130906	Sediments	2011	Local
Liberty Reservoir	02130907	Bacteria	2009	Local
Chesapeake Bay Mainstem 1 Tidal Fresh	02139996, 02130609, 02130705	Nutrients & Sediments	2010	Bay TMDL
Chesapeake Bay Mainstem 2 Oligohaline	02139996, 02139997, 02130611, 02130705, 02130901	Nutrients & Sediments	2010	Bay TMDL
Chesapeake Bay Mainstem 3 Mesohaline	02139997, 02139998, 02130511, 02130505, 02130903	Nutrients & Sediments	2010	Bay TMDL
Gunpowder River Oligohaline	02130801, 02130802, 02130803, 02130804	Nutrients & Sediments	2010	Bay TMDL
Middle River Oligohaline	02130801, 02130807	Nutrients & Sediments	2010	Bay TMDL