NPDES Permit No. DC0000221

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM MUNICIPAL SEPARATE STORM SEWER SYSTEM PERMIT

In compliance with the provisions of the Clean Water Act, 33 U.S.C. §§ 1251 *et seq.*

Government of the District of Columbia
The John A. Wilson Building
1350 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

is authorized to discharge from all portions of the municipal separate storm sewer system owned and operated by the District of Columbia to receiving waters named:

Potomac River, Anacostia River, Rock Creek and stream segments tributary to each such water body

in accordance with the Stormwater Management Program(s) dated January 22, 2016, subsequent updates, and related reports, strategies, effluent limitations, monitoring requirements and other conditions set forth in Parts 1 through 8 herein.

The issuance date of this permit is: May 23, 2018.

The effective date of this permit is: June 22, 2018.

This permit and the authorization to discharge shall expire at midnight, on: June 22, 2023.

Signed this 23 day of May, 2018.

Catharine McManus, Acting Deputy Director
Water Protection Division
U.S. Environmental Protection Agency
Region III

PERMIT FOR THE DISTRICT OF COLUMBIA
MUNICIPAL SEPARATE STORM SEWER SYSTEM

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Part 1. DISCHARGES AUTHORIZED UNDER THIS PERMIT

1.1 MS4 Permit Area

This permit covers all areas within the jurisdictional boundary of the District of Columbia (DC or District) served by or contributing to discharges from the Municipal Separate Storm Sewer System (MS4) owned or operated by the Government of the District of Columbia (the DC MS4). This permit also covers all areas served by or contributing to discharges from MS4s owned or operated by other entities within the jurisdictional boundaries of the District of Columbia unless those areas have separate coverage under a National Pollutant Discharge Elimination System (NPDES) MS4 permit. Hereinafter these areas collectively are referred to as the "MS4 Permit Area".

1.2 Permittee

The "Permittee" is the Government of the District of Columbia. The Permittee has designated the District Department of Energy and Environment (DOEE) as the agency responsible for managing the MS4 Stormwater Management Program (SWMP). If the Permittee designates a different responsible agency, it must notify EPA in writing within one week.

1.3 Authorized Discharges

This permit authorizes all stormwater point source discharges to waters of the United States to, from, and through the DC MS4 that comply with the requirements of this permit. This permit also authorizes the discharge to, from, and through the DC MS4 of stormwater commingled with flows contributed by process wastewater, non-process wastewater, or stormwater associated with industrial activity provided such discharges are authorized under separate NPDES permits.

The receiving waters to which the Permittee is authorized to discharge are: the Potomac River, Anacostia River, Rock Creek, and tributaries to each such waterbody.

This permit authorizes the following non-stormwater discharges to the DC MS4 but only when the specified conditions have been met: discharges resulting from clear water flows, roof drainage, dechlorinated water line flushing, landscape irrigation, ornamental fountains, 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 resident car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and emergency firefighting activities. Such non-stormwater discharges to the MS4 are only authorized where: (1) appropriate stormwater activities and controls required by this permit have been applied; (2) such discharges are managed so that water quality is not further impaired; and (3) the requirements of the federal Clean Water Act, 33 U.S.C. §§ 1251 *et seq.* (CWA or Clean Water Act), and EPA regulations are met.

For any municipal activity associated with industrial activity, as defined by 40 C.F.R. § 122.26, which discharges stormwater to, from, or through the DC MS4, the Permittee shall obtain separate coverage under either: (1) the EPA Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP); or (2) an individual NPDES permit.

1.4 Permittee Authorities and Obligations

1.4.1 Permittee Legal Authority

The Permittee shall use its existing legal authority to control discharges to and from the MS4 in order to prevent or reduce the discharge of pollutants to achieve water quality objectives, including but not limited to, applicable water quality standards, and all provisions of this permit.

1.4.2 Permittee Laws, Regulations and Ordinances

The Permittee shall review and revise, where applicable, building, health, road and transportation, and other codes, standard operating procedures, regulations and ordinances to remove barriers to, and to facilitate the implementation of the following: (1) standards resulting from issuance and implementation of District stormwater regulations; and (2) performance standards and other requirements of this permit.

Nothing in this permit shall be construed to preclude the institution of any legal action or to relieve the Permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable District law, regulation or ordinance identified herein. In the case of "exemptions and waivers" or other exceptions to coverage under District law, regulation or ordinance, Federal law and regulation shall be controlling.

1.4.3 Permittee Fiscal Resources

The Permittee shall provide sufficient finances, staff, equipment and support capabilities to implement the provisions of this permit, including, but not limited to, the Stormwater Management Program required herein. Lack of funding does not constitute a justification for noncompliance with the terms of this permit.

1.5 Discharge Limits

The Permittee must manage, implement, and enforce a SWMP in accordance with the Clean Water Act and corresponding stormwater NPDES regulations, 40 C.F.R. Part 122, to meet the following permit requirements:

1.5.1 Effectively prohibit non-stormwater discharges to, from, and through the MS4, except those authorized by Section 1.3 of this permit and those authorized by another NPDES permit.

1.5.2 Effectively prohibit pollutants in stormwater discharges or other unauthorized discharges to, from, and through the MS4 as necessary to comply with existing District of Columbia Water Quality Standards (DCWQS).

1.5.3 Attain applicable wasteload allocations (WLAs) for each Total Maximum Daily Load (TMDL) established or approved by EPA for each receiving water body consistent with federal requirements at 33 U.S.C. § 1342(p)(3)(B)(iii) and 40 C.F.R. § 122.44(k)(2)-(3) by achieving the following collective numeric WLA attainment milestones established as limits for this permit term.

1.5.3.1 A total number of 1,038 Acres Managed, per the definition in Part 8, shall be attained by the end of this five-year permit term in the MS4 Permit Area, above and beyond what is already implemented in the MS4 Permit Area on the effective date of this permit. This metric is designed to achieve a collective reduction in all TMDL pollutants of concern in stormwater other than trash, per the retention requirements of Sections 3.1 and 3.2 of this permit.

A certain number of the total 1,038 Acres Managed must be located in each of the three major river basins in the MS4 Permit Area, as listed below in Table 1. The remaining 519 Acres Managed can be located in any of those major basins. In addition, at least 62 of the total 1,038 Acres Managed must be located in Public Rights-of Way (PROWs) in the MS4 Permit Area, though these 62 Acres Managed need not be located in any specific major basin.

TABLE 1
Numeric Limits in Acres Managed for this Permit Term

Major Basin	5-Year Limits (Acres Managed)
Anacostia River	307
Potomac River	116
Rock Creek	96
Anywhere in the MS4 Permit Area	519
Total	1,038

The Permittee shall ensure the installation of a minimum of 350,000 square feet of new green roofs in the MS4 Permit Area as a total over the five-year permit term. In addition to the specific requirement in this permit to track implementation in square feet, the Permittee shall also translate square feet of green roofs to Acres Managed, using the Permittee's assigned retention values.

The Permittee shall achieve a minimum net increase of 33,525 trees in the MS4 Permit Area by the end of this five-year permit term. The Permittee shall use a benchmark annual average tree planting rate of 6,705 plantings within the MS4 Permit Area. In addition to the specific requirement in this permit to track the number of trees planted, the Permittee shall also translate number of trees to Acres Managed, using the Permittee's assigned retention values.

1.5.3.2 108,347 pounds of trash shall be captured, removed, or prevented from entering the Anacostia River within the MS4 Permit Area annually per the requirements of Subsection 3.7.1 of this permit.

1.5.4 Comply with all other provisions and requirements contained in this permit, and in plans, schedules, and other deliverables required by this permit.

1.6 Compliance Framework

Compliance with all provisions contained in this permit, including permit limits and final dates for attainment of applicable TMDL WLAs, shall constitute adequate progress toward compliance with DCWQS and WLAs for this permit term.

Part 2. STORMWATER MANAGEMENT PROGRAM PLANNING

2.1 Elements of the Stormwater Management Program (SWMP)

EPA has determined that the SWMP required by this permit will reduce the discharge of pollutants to the maximum extent practicable for this permit term. All strategies, initiatives, schedules, actions and programs required by this permit are elements of the SWMP. The Permittee may combine some or all of the necessary strategies into a single SWMP document, or may maintain elements as separate documents.

The Permittee shall continue to implement, assess and upgrade all of the controls, procedures and control measures required by this permit and in the plans that comprise the SWMP. The Permittee shall ensure that updates to plans and strategies are consistent with all compliance requirements and deadlines contained in this permit. The Permittee shall post current versions of all plans that comprise the SWMP on its website at an easily identifiable location.

2.2 Total Maximum Daily Load (TMDL) Planning

2.2.1 Maintaining and Refining TMDL Databases and Modeling Tools

The Permittee shall continue to update the *Consolidated TMDL Implementation Plan* modeling tool and associated databases, which shall be used in development of revised plans, schedules or strategies. The modeling tool and/or associated databases shall also be used to provide consistent tracking of progress against milestones and benchmarks. Milestone and benchmark databases shall be accessible through a graphical user interface for effective utilization by multiple audiences, including the public.

2.2.2 Milestones and Benchmarks for the Next Permit Term

2.2.2.1 Using information from the Bacteria Source Tracking study required in Subsection 4.4.2 of this permit, the Permittee shall update milestones and benchmarks for implementing controls to attain *E. coli* WLAs. Per the results of the Study, the Permittee may opt to revise existing TMDLs though, pursuant to Subsection 2.2.5.2 of this permit, milestones and

benchmarks must be developed and implemented, as relevant, for existing WLAs until such time as a revised TMDL is approved. As appropriate, efforts to abate high priority sources of bacteria can begin immediately and need not await public notice and comment nor EPA approval of an updated *Consolidated TMDL Implementation Plan.* Consistent with Subsection 2.2.5.4 of this permit, the Permittee shall incorporate any new milestones and benchmarks into the revised *Consolidated TMDL Implementation Plan.*

2.2.2.2 The Permittee shall conduct an investigation for the following TMDL pollutants: chlordane, heptachlor epoxide, dieldrin, DDT, DDE, DDD and PCBs. The investigation shall include measures to identify current sources, including a determination of whether or not these toxic contaminants are largely *in situ* in the sediments of receiving streams rather than in ongoing MS4 discharges. The Permittee shall use data from this investigation, as appropriate, to develop new milestones and benchmarks for implementing controls to attain relevant MS4 WLAs. Consistent with Subsection 2.2.5.4 of this permit, the Permittee shall incorporate any new milestones and benchmarks into the revised *Consolidated TMDL Implementation Plan.*

2.2.2.3 During this permit term, the Permittee shall develop a list of targeted watersheds and targeted implementation approaches to be implemented in the following permit term, and incorporate them into the updated *Consolidated TMDL Implementation Plan*, which shall be made available for public notice and comment and submitted to EPA per the schedule in Section 2.8 of this permit. The revised *Consolidated TMDL Implementation Plan* shall include new milestones and benchmarks for TMDLs that have been modified, for *E. coli* and legacy pollutants, as relevant, and shall also address any comments received from EPA.

2.2.3 Stormwater Fee Options Evaluation

The Permittee shall submit to EPA with the 2020 Annual Report an evaluation of the adequacy of the District's Stormwater Fee for achieving the water quality goals of the permit. The evaluation shall include an assessment of how the Stormwater Fee works in tandem with other financing options.

2.2.4 Analysis of Updating Stormwater Management Regulations

2.2.4.1 The Permittee shall submit to EPA, together with the 2020 Annual Report, an analysis of potential changes to existing stormwater management regulations. The analysis shall explore options identified in the *Consolidated TMDL Implementation Plan*, such as increasing the on-site stormwater retention volume to 2 inches, lowering the threshold for regulated projects, eliminating exemptions for projects that are currently exempt per the District's stormwater regulations, and/or applying a different retention standard to priority watersheds. The assessment shall also include and consider the requirements identified in Section 2.7.

2.2.4.2 Should the Permittee determine that changes to the stormwater management regulations are feasible and warranted, the Permittee shall develop: an implementation strategy that includes public outreach, schedules that may include phasing, and other variables. This analysis and the strategy, if applicable, must be included as a component of the updated SWMP

that is made available for public notice and comment and submitted to EPA per the schedule in Section 2.8 of this permit.

2.2.5 Updating the *Consolidated TMDL Implementation Plan*

2.2.5.1 The Permittee shall update the *Consolidated TMDL Implementation Plan* to incorporate any new or revised TMDL, as approved or established by EPA, to include:

a. A specified schedule for attainment of WLAs that includes final attainment dates and, where applicable, interim milestones and numeric benchmarks.

   i. Numeric benchmarks shall specify annual pollutant load reductions and the extent of control actions to achieve these numeric benchmarks.
   ii. Interim milestones shall be included where final attainment of applicable WLAs requires more than five years. Milestone intervals shall be as frequent as possible but shall in no case be greater than five (5) years.

b. Demonstration using modeling of how each applicable WLA shall be attained using the chosen controls, by the date for ultimate attainment.

c. An associated narrative providing an explanation for the schedules and controls included in the *Consolidated TMDL Implementation Plan.*

2.2.5.2 Unless and until an applicable TMDL is no longer in effect (*e.g.,* withdrawn, reissued or the receiving water is delisted), the *Consolidated TMDL Implementation Plan* must include all elements of Subsection 2.2.5.1 of this permit for each TMDL as approved or established by EPA.

2.2.5.3 Should implementation fall short of any milestone stipulated in this permit, the Permittee shall make appropriate adjustments to the *Consolidated TMDL Implementation Plan* and commence revised implementation within 6 months, unless EPA approves a written request from the Permittee for a different schedule. The Plan modification shall include a description and implementation schedule for the additional controls to achieve the incorporated milestones. The entire Plan need not be submitted to EPA, only the relevant strategies related to adaptive management for missed milestones.

2.2.5.4 As new information (including the results of studies and assessments required in this permit, data on performance of stormwater control measures, improved pollutant estimates, or construction schedules) informs refinement of benchmarks and milestones, the Permittee shall update the *Consolidated TMDL Implementation Plan* such that the timeliest information is available for public notice and submittal to EPA per Subsection 2.2.5.5 of this permit, and for incorporation into the subsequent permit.

2.2.5.5 No later than 15 months prior to the expiration date of this permit, the Permittee shall make available for public notice and comment a fully updated *Consolidated TMDL Implementation Plan* addressing all of the elements required in this permit. No later than 270 days

(9 months) prior to the expiration date of this permit, the Permittee shall submit to EPA the fully updated *Consolidated TMDL Implementation Plan* for review, as part of the application package for permit renewal in Section 2.8 of this permit.

2.3 Inspection Strategy for Regulated On-site and Off-site Control Measures

With the 2019 Annual Report, the Permittee shall submit to EPA an Inspection Strategy for regular inspections of all regulated on-site and off-site stormwater control measures. The Inspection Strategy shall include prioritization for significant or high risk stormwater control measures and structures. Legal mechanisms must be in place to ensure that return to compliance happens expeditiously for all stormwater control measures that are no longer in place or no longer function per design. The strategy may include provisions for third-party inspections, self-reporting and other procedures that provide cost-effective accountability mechanisms to ensure all measures continue to function as designed.

2.4 Public Right-of-Way Optimal Design

With the 2021 Annual Report, for PROW projects that do not include a design process, the Permittee shall submit a determination of standardized designs that optimize cost, performance, community palatability, climate resilience and other relevant factors.

2.5 Evaluation of Pollutant Reductions from Other Activities

2.5.1 Catch Basin Cleaning

During this permit term, the Permittee shall complete a study to determine a method for tracking and estimating the volume of material removed from catch basins during cleaning, and the concentration of targeted pollutants of concern for the purpose of estimating pollutant reductions attributable to catch basin cleaning. The Permittee shall include a summary of the catch basin cleaning study and the method that is selected for estimating pollutant reductions with the revised SWMP Plan submitted to EPA as part of the application package for renewal of the MS4 permit per Section 2.8 of this permit.

2.5.2 Other Controls or Management Measures

At any time during this permit term, the Permittee may submit to EPA for review a method for estimating pollutant reductions from any activity that prevents or reduces stormwater pollutant discharges to receiving waters. The method may include an equivalency translation to "Acres Managed", if appropriate, or may express the reduction in pounds, colonies per liter, or other appropriate metric.

2.6 Development of Alternatives for Ice and Snow Management

The Permittee shall include water quality-related requirements for preventive and control measures in the District Snow and Ice Removal Plan. These measures shall be based on an evaluation of the use, application and removal of anti-icers, chemical deicers, salt, sand, and/or

sand/deicer mixtures in an effort to minimize the impact of these materials on water quality, and consideration of: techniques available for reducing pollution from deicing salts in snowmelt runoff and runoff from salt storage facilities, and the use of porous/permeable surfaces that require less use of deicing materials and activities. Measures included in the District Snow and Ice Removal Plan shall be included in the 2020 Annual Report. Any changes made to snow and ice management having the potential to impact stormwater pollution prevention shall be included in the Updated SWMP Plan per Section 2.9 of this permit.

2.7 Infrastructure Resilience Assessments

Where the Permittee's strategies to improve community resilience intersect with stormwater management provisions in the SWMP, the Permittee shall perform the following activities to ensure that discharges to, from, and through the MS4 are not contributing pollutants to receiving waters.

2.7.1 The Permittee shall review all development and redevelopment proposed in floodplain areas within the MS4 Permit Area to ensure that the site is reasonably protected from flooding so that the construction minimizes the impacts on the water quality of receiving water bodies caused by a flood event.

2.7.2 The Permittee shall review all development and redevelopment proposed within the MS4 Permit Area to assess effects on flood storage or carrying potential of encroachment, alteration, or improvement to any water bodies.

2.7.3 The Permittee shall continue co-leading and supporting the Silver Jackets interagency flood risk management coordination team to ensure that flood management projects and practices are effectively operated and maintained within the MS4 Permit Area and to build public awareness of the impact of flooding on the water quality of receiving water bodies.

2.7.4 The Permittee shall provide input during regulatory reviews to stakeholders developing and implementing flood management projects in areas of known flood hazard, including to promote the implementation of green infrastructure measures along with other control measures, and to coordinate with neighboring jurisdictions to explore a watershed-wide approach in stormwater and flood management within the MS4 Permit Area.

2.7.5 The Permittee shall, when evaluating the need for revised standards in stormwater management, consider factors such as sea level rise, extreme weather, and changing precipitation patterns. The Permittee shall also use this information to determine which stormwater management infrastructure and/or assets need enhancement to ensure optimum performance to achieve compliance with receiving water quality standards.

2.8 Submittals to EPA

The Permittee shall submit SWMP strategies, elements, initiatives and plans to EPA for review and approval according to the schedule in Table 2 below, including providing elements for public comment as indicated in the table.

TABLE 2
SWMP Elements to be submitted to EPA and/or to Public Notice

Element	Deadline for Submittal to EPA	Subject to EPA Approval *	Subject to Formal Public Notice and Comment **
New Planning or Assessment Requirement			
Water Quality Assessment Program QAPP (4.3.1.1)	At the end of the first year of the sampling cycle	No	No
Inspection Strategy for Regulated On-Site and Off-Site Measures (2.3)	With the 2019 Annual Report	No	No
Stormwater Fee Options Evaluation (2.2.3)	With the 2020 Annual Report	No	No
Analysis of Updating the Stormwater Regulations (2.2.4)	With the 2020 Annual Report	No	No
Alternatives for Ice and Snow Management (2.6)	With the 2020 Annual Report	No	No
Bacteria Source Tracking Study (4.4.2)	July 1, 2021 unless EPA approves an alternate schedule	No	No
Public Right-of-Way Optimal Designs (2.4)	With the 2021 Annual Report	No	No
Study to Estimate Pollutant Reductions from Catch Basin Cleaning (2.5.1)	With the Updated SWMP Plan, 270 days before permit expiration date	No	No
Regular Reporting			
Discharge Monitoring Reports (5.1)	Annually via NetDMR	No, but EPA will review for permit compliance and may request changes to the program if warranted.	No
Annual Reporting to EPA (5.2)	No later than December 1 of each year beginning in 2019.		No
Updated Strategies/Plans			
Updated *Consolidated TMDL Implementation Plan* (2.2.5)	270 days before permit expiration date	Yes, but not every time it's updated; only as a part of the SWMP package requesting	Yes, but not every time it's updated; only as a part of the SWMP package requesting permit renewal.

		permit renewal.	
Updated SWMP Plan (2.9)	270 days before permit expiration date	Yes, as part of the SWMP package requesting permit renewal	Yes, as part of the SWMP package requesting permit renewal.
Permit Application for Renewal			
MS4 Permit Application (2.10)	270 days before permit expiration date	No, but EPA reviews for completeness	No

* EPA may choose to comment on any of these plans or assessments.
** The Permittee shall make all of these plans and assessments available on its website.

2.9 Updated SWMP Plan for the Next Permit Term

No later than 15 months prior to the expiration date of this permit, the Permittee shall make available for public notice and comment a fully updated SWMP Plan addressing all of the elements required in this permit. The updated SWMP Plan shall be informed by planning elements of Part 2, implementation efforts in Part 3, and water quality assessments in Part 4 of this permit. No later than 270 days (9 months) prior to the expiration date of this permit the Permittee shall submit to EPA the fully updated plan for review and approval, as part of the application package for permit renewal.

2.10 Application for the Next Permit Term

The Permittee shall develop a permit application based on the findings presented in each of the annual reports submitted during the permitting cycle, and on any feed-back received from EPA and the public. The permit application package must be submitted no later than 270 days (9 months) prior to the expiration date of this permit. The permit application package, which includes the updated SWMP Plan (Section 2.9), and the updated *Consolidated TMDL Implementation Plan* (Subsection 2.2.5), shall propose the next iterative set of objectives for the program and provide an analysis to demonstrate that these objectives shall be achieved in the subsequent permit term.

Part 3. STORMWATER MANAGEMENT PROGRAM IMPLEMENTATION

3.1 Implementing Part 3 of the Permit

Part 3 describes the programs that the Permittee is required to maintain to achieve pollutant reductions, demonstrate progress toward achieving applicable TMDL WLAs, and meet other water quality objectives. Section 3.2 contains programs for which the Permittee maintains a metric for translating pollutant reductions into Acres Managed. Sections 3.3 through 3.7 are programs and practices for which pollutant reductions will be tracked and measured using alternative methods. All of these programs are in place to ultimately reduce pollutant discharges to, from and through the MS4. If, at any time during the permit term, the Permittee develops a

new method for estimating pollutant reductions from any activity that prevents or reduces pollutant discharges, it must submit that new method to EPA as required by Subsection 2.5.2.

3.2 Achievement of the Acres Managed Numeric Limit

3.2.1 Accountability for Retention Measures

The Permittee shall continue to develop, implement, and enforce a program in accordance with this permit that integrates stormwater control measures at the site, neighborhood and watershed levels within the MS4 Permit Area that shall be designed to mimic pre-development site hydrology through the use of on-site stormwater retention measures (*e.g.,* harvest and use, infiltration and evapotranspiration), policies, regulations, ordinances, and incentive programs.

3.2.1.1 The Permittee shall annually post on its website the status of all projects required to comply with the stormwater management regulations, including the total performance volume calculated for the project, the amount of stormwater retention volume achieved on-site, the amount of stormwater retention volume achieved off-site, and the compliance status of each project with an off-site retention volume.

3.2.1.2 The Permittee shall continue to maintain a formal process for site plan reviews and a post-construction verification process (*e.g.,* inspections, submittal of as-builts) to ensure that standards are appropriately implemented.

3.2.1.3 The Permittee shall maintain a database to track plan review, inspection, and the on-site and off-site retention performance of each project subject to this requirement. For projects using off-site retention, the compliance status of those projects with their off-site retention volume shall also be tracked.

3.2.2 Implementing the Standard for Development and Redevelopment for Projects Greater than or Equal to 5,000 Square Feet

The Permittee shall continue to require the design, construction and maintenance of stormwater controls to achieve on-site retention of 1.2" of stormwater from a 24-hour storm with a 72-hour antecedent dry period through evapotranspiration, infiltration and/or stormwater harvesting and use for all public and private development and redevelopment projects that disturb greater than or equal to 5,000 square feet of land area. This requirement shall continue to be implemented in concert with the off-site mitigation program to compensate for any portion of the 1.2" volume to be retained off-site (Stormwater Retention Credits, see Subsection 3.2.3).

3.2.3 Stormwater Retention Credit Program

3.2.3.1 In order to provide for flexibility for those development projects that may not be capable of retaining 1.2" of stormwater runoff on-site, the Permittee shall continue to implement the Stormwater Retention Credit (SRC) off site mitigation program.

3.2.3.2 In order to maximize water quality benefits, if a retention practice was installed prior to July 1, 2013, it will only be eligible to generate SRCs if an application has been submitted within six (6) months after the effective date of the appropriate revisions to the District's stormwater regulations. The Permittee shall initiate appropriate revisions to the regulations within twelve (12) months of the effective date of this permit unless an alternate schedule is approved by EPA.

3.2.3.3 The Permittee shall establish a Stormwater Retention Credit Purchase Agreement Program and establish a program to provide technical and outreach support for green infrastructure site identification for the purpose of SRC generation to improve water quality outcomes. All SRCs purchased by the Permittee shall be retired to achieve additional benefit to District water bodies.

3.2.4 Implementing the Standard for Projects in the Public Right-of-Way

The Permittee shall continue to implement a methodical analysis and decision process for projects in public rights-of-way (PROWs) in order to ensure that the project has exhausted every opportunity to achieve the "maximum extent practicable" (as defined in the District stormwater regulations) on-site stormwater retention volume (SWRv). These projects need not conduct off-site mitigation or purchase SRCs. However, these projects are subject to design and site plan review requirements to ensure "maximum extent practicable" combinations of on-site SWRv, water quality treatment, and design options, including in some situations stormwater management of more than the 1.2" retention volume. Each process shall follow the six design steps described in the District's 2013 *Stormwater Management Guidebook*. In order to take advantage of opportunities for optimum stormwater management, these projects may include non-PROW areas that are disturbed as a part of the reconstruction of existing PROW or to allow pedestrian access alongside existing PROW. These projects shall be posted on the Permittee's website, per the requirements of Subsection 3.2.1.1 of this permit.

3.2.5 Implementing the Standard for Substantial Improvement Projects

The Permittee shall continue to require the design, construction and maintenance of stormwater controls to achieve on-site retention of 0.8" of stormwater from a 24-hour storm with a 72-hour antecedent dry period through evapotranspiration, infiltration and/or stormwater harvesting and use for all development projects where less than 5,000 square feet of soil is disturbed, but where the combined footprint of improved building and land-disturbing activities is greater than or equal to 5,000 square feet and which are undergoing substantial improvement. "Substantial improvement," consistent with District regulations at 21 DCMR § 599, means any repair, alteration, addition, or improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started. The Permittee may allow a portion of the 0.8" volume to be compensated for in an off-site mitigation program consistent with the requirements of Subsection 3.2.3 of this permit.

3.2.6 Stormwater Management Guidebook

The Permittee shall continue to improve and implement the *Stormwater Management Guidebook* for use by land use planners and developers for all projects addressed by this permit, to include up-to-date objectives and specifications for integration of stormwater management technologies, including on-site retention practices.

3.2.7 Green Area Ratio Program

The Permittee shall continue to implement and refine the Green Area Ratio program to improve stormwater management in the MS4 Permit Area while allowing flexibility for developers and designers to meet development standards. The Green Area Ratio Program shall continue to use a scoring system to encourage green technology practices. This shall be achieved through zoning requirements.

3.2.8 Tree Planting

The annual total tree planting shall be calculated as a net increase, such that annual mortality or other loss is also included in the calculation. The Permittee shall ensure that trees are planted and maintained to achieve optimal stormwater retention and tree survival rate, including through requirements for adequately designed and sized tree boxes. Trees shall be planted in accordance with the Planting Specifications issued by the International Society of Arboriculture as appropriate to the site conditions.

3.2.9 Green Roofs

The Permittee shall ensure the installation of a minimum of 350,000 square feet of new green roofs in the MS4 Permit Area as a total over the five-year permit term.

3.2.10 RiverSmart Programs

The Permittee shall continue to implement and refine its suite of RiverSmart programs (Homes; Communities; Schools; Rooftops; Rebates; Targeted Watersheds). These voluntary on-site retention projects are not subject to the 1.2" on-site retention requirement, but they may be used to generate SRCs if they otherwise meet all the requirements for SRCs per Subsections 3.2.1.1 and 3.2.1.3 of this permit, and the District's stormwater regulations.

3.2.11 Stream, Buffer and Floodplain Restoration

The Permittee may take credit for pollutant reductions from stream, buffer or floodplain restoration activities where stream bed load or bank erosion contributes to the nutrient, total suspended solids (TSS) or sediment load in that stream.

3.3 Municipal Operations

3.3.1 Response to Sanitary Sewer Overflow to the MS4

The Permittee shall continue to implement an effective response protocol for overflows of the sanitary sewer system to, from, or through the MS4. The response protocol shall clearly identify District agencies, departments, and authorities responsible for implementing each element of the protocol, and appropriate contact information. The response protocol shall contain, at a minimum, procedures for:

1. Investigating any complaints of a sanitary sewer overflow (SSO) to, from, or through the MS4 within 24 hours of the incident report.
2. Responding to SSOs with containment or other appropriate measures within two hours of the Permittee discovering or confirming an SSO to or through the MS4.
3. Notifying appropriate sewer and public health agencies within two hours of the Permittee discovering of confirming an SSO to, from, or through the MS4.
4. Notifying the public in a timely and effective manner when an SSO to, from, or through the MS4 may adversely affect public health.

This provision in no way authorizes SSOs to or through the MS4.

3.3.2 Industrial Activities at Municipal Operations

3.3.2.1 The Permittee shall ensure that stormwater pollution prevention measures are installed at all District-owned or leased facilities and job sites within the MS4 Permit Area where industrial activities occur or are considered "critical sources", as that term is defined at Part 8 of this permit. For operations that are being leased by third parties that currently have inadequate stormwater pollution prevention measures, a requirement to implement and maintain them must be included in lease agreements as they are established or renewed. For any operation with coverage under the EPA MSGP or an individual NPDES permit, the provisions of the MSGP or individual NPDES permit supersede the requirements of this provision.

3.3.2.2 The Permittee shall ensure that Stormwater Pollution Prevention Plans (SWPPPs) are created and/or regularly updated for District-owned, operated, and leased facilities and all job sites within the MS4 Permit Area where industrial activities occur that could contribute to stormwater pollution, including vehicle maintenance and fueling, storage and washing, or material storage. SWPPPs shall contain the following information as relevant to such facilities:

a. Primary contacts at the facility and/or contacts for the site's pollution prevention team;
b. Description of activities and physical attributes of the exterior elements of the site, including a site map;
c. Summary of potential pollutant sources, including spills and leaks and salt storage;

d. Description of the control measures used to mitigate stormwater pollution, including good housekeeping, maintenance, material management, spill prevention and response, erosion and sediment control measures, and employee training; and
e. Description of the schedules and procedures for implementing stormwater control measures, inspecting the site, and assessing and monitoring pollutants in stormwater discharging from the site.

3.3.2.3 The Permittee shall ensure that facilities with SWPPPs conduct quarterly self-inspections, with more frequent inspections for facilities with high levels and likelihood of contributing to stormwater pollution. Inspections shall consist of walking the site to investigate potential sources of pollution and completing a facility checklist.

3.3.2.4 For wash water at District-owned and operated facilities the Permittee shall eliminate discharges of pollutants to, from, and through the MS4 by implementing any of the following measures: 1) collect and haul off-site for disposal; 2) equip with a pre-treatment device; or 3) redirect to the sanitary sewer in accordance with District regulations and requirements. Wash water includes water from washing vehicles and equipment, water from washing building exteriors when it contains soap and other pollutants, and the dumping of wash water used in the interior of buildings.

3.3.2.5 The Permittee shall regularly perform inspection, maintenance and repair of stormwater controls at District-owned or operated facilities, including green infrastructure, filtration and separation systems, and stormwater storage structures, consistent with the schedules in the SWPPPs.

3.3.2.6 The Permittee shall maintain a database inventory of all municipal operations that conduct industrial activities or are considered critical sources, and provide such inventory to EPA upon request.

3.3.2.7 The Permittee shall retain records, as part of the database system, to demonstrate compliance with the requirements of Subsection 3.3.2 of this permit. Records shall be maintained for employee training, inspections and follow-up, spills and major leaks, and contracts used to implement stormwater control measures, monitor stormwater, and provide regular maintenance of control measures.

3.3.3 Pesticide, Herbicide and Fertilizer Use

3.3.3.1 The Permittee shall continue to implement control measures to manage pollutant discharges associated with the storage and application of pesticides, fertilizers, herbicides, the use of toxic substances, and runoff from landscape irrigation according to an integrated pest management (IPM) Program. The IPM Program shall be an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, use of resistant varieties, and use of low or no chemical and irrigation input landscapes, in accordance with the provisions of this permit, procedures and practices described in the SWMP and applicable regulations.

3.3.3.2 The Permittee shall continue to utilize IPM controls to reduce pollutants related to the storage and application of pesticides, herbicides, and fertilizers applied by its employees, contractors or agents to public rights-of-way, parks, and other District-owned or leased property to ensure that:

a. Pesticides and herbicides are used only if monitoring indicates that they are needed according to established guidelines;
b. Fertilizers are used only when soil tests indicate that they are necessary, and only in minimum amounts and for needed purposes (e.g., seed germination);
c. Treatments are made with the purpose of removing only the target organism;
d. Pest controls are selected and applied in a manner that minimizes risks to human health, beneficial non-target organisms, and the environment;
e. No pesticides, herbicides, or fertilizers are applied to an area immediately prior to an expected rain event, or during or immediately following a rain event, or when water is flowing off the area;
f. No banned or unregistered pesticides or herbicides are stored or applied;
g. All staff applying pesticides or herbicides are certified or are under the direct supervision of a pesticide or herbicide applicator certified in the appropriate category;
h. Procedures are implemented to encourage the retention and planting of native and/or non-invasive, naturalized vegetation to reduce water, pesticide, herbicide, and fertilizer needs;
i. Pesticides, herbicides, and fertilizers are stored indoors or under cover on paved surfaces or enclosed in secondary containment and storage areas inspected regularly to reduce the potential for spills; and
j. Landscapes that maximize on-site retention of stormwater, while minimizing mowing, chemical inputs and irrigation are given preference for all new landscape installation.

3.3.3.3 The Permittee shall continue to use Geographic Information System (GIS) layers showing public land and sewersheds, as well as background data, to identify priority areas for a targeted strategy to reduce the sources of pesticides, herbicides, and fertilizers that contaminate the stormwater runoff to, from, and through the MS4.

3.3.4 Catch Basin Operation and Maintenance

3.3.4.1 Until such time as the provisions of Subsection 3.3.4.3 are fully implemented, the Permittee shall continue to operate a catch basin maintenance program that ensures that each catch basin within the MS4 Permit Area is inspected and, if found to require cleaning, cleaned at least once annually during the life of the permit, with allowances within a reasonable margin of error for logistical obstacles.

3.3.4.2 As part of its catch basin maintenance program, the Permittee shall, within 12 months of the effective date of this permit, develop and implement a GIS-based mobile field application for asset management and tracking maintenance activities.

3.3.4.3 Based on data collected using the mobile field application, the Permittee shall implement changes to catch basin cleaning frequencies for specific portions of the MS4 Permit Area and update the SWMP Plan accordingly.

3.3.5 Storm Drain Outfall Operation and Maintenance

The Permittee shall implement the District's outfall repair plan to ensure that outfalls in poor repair do not impair water quality. During this permit term, the Permittee shall repair 50 outfalls in need of repair. The Permittee may substitute a portion of outfall repairs with stream restoration with a demonstration (i.e., pollutant reduction estimates) that the in-stream water quality benefits of restoration exceed those derived from outfall repairs.

3.3.6 Street Sweeping

The Permittee shall conduct street sweeping on a minimum of 8,000 road miles annually within the MS4 Permit Area. Within 18 months of the effective date of this permit, the Permittee shall implement a georeferencing-based street sweeping system and provide GIS analysis to EPA with a more accurate estimate of street miles swept annually.

3.3.7 Transportation and Utility Construction Activities

The Permittee shall ensure that standard and emergency utility/road repair projects limit the amount of soil disturbance to only what is necessary to affect the repair. The projects shall implement basic soil erosion/sedimentation control measures and remove silt from dewatering prior to discharge. In addition, stormwater conveyances which are denuded shall be re-sodded, reseeded and mulched, or otherwise stabilized for rapid revegetation, and these areas must have effective erosion control until stabilized.

3.3.8 Snow and Ice Management

3.3.8.1 The Permittee shall continue to manage the application of anti-icers, chemical deicers, salt, sand, and/or sand/deicer mixtures to minimize the impact of these materials on water quality.

3.3.8.2 Per the requirement to include water quality requirements for controls and prevention in the District Snow and Ice Removal Plan described in Section 2.6 of this permit, the Permittee shall begin implementing new ice and snow management procedures and practices no later than December 1, 2020.

3.3.8.3 The Permittee shall continue to implement and update a program to ensure that excessive quantities of snow and ice control materials do not enter the District's water bodies. Except when the Permittee determines that the foremost concern of snow removal activities is public health and safety, the Permittee shall avoid snow dumping or storage in areas adjacent to water bodies, wetlands, or areas near public or private drinking water wells which would ultimately discharge to, from, or through the MS4.

3.4 Critical Sources

3.4.1 Inventory of Critical Sources and Source Controls

3.4.1.1 The Permittee shall continue to maintain an up-to-date inventory or database of all facilities, including federal facilities, that are Critical Sources of stormwater pollution as defined at Part 8 of this permit.

3.4.1.2 The Permittee shall include in the Critical Source inventory the following minimum fields of information for each Critical Source:

a. Name of facility and name of owner/ operator;
b. Address of facility or operation;
c. Size of facility or operation;
d. Activities conducted at the facility or operation that could impact stormwater;
e. Stormwater management controls, including spill prevention and response measures; and
f. Inspection and maintenance schedules, dates, and findings.

3.4.2 Inspection of Critical Sources

Unless otherwise covered under the *Multi-Sector General Permit (MSGP) for Stormwater Discharges Associated with Industrial Activity* or an individual permit, the Permittee shall continue to inspect all Critical Sources in the MS4 Permit Area that are identified in the Critical Source Inventory at least two times during the five-year term of this permit. Critical Sources covered under a MSGP or individual permit shall be inspected according to the EPA-approved *Compliance Monitoring Strategy*.

3.4.3 Compliance Assurance

At each Critical Source, the Permittee shall verify that the operator is implementing a control strategy sufficient to protect water quality, including all maintenance and spill prevention and response measures. Where the Permittee determines that existing measures are not adequate to protect water quality, the Permittee shall require and enforce additional site-specific controls sufficient to protect water quality.

3.5 Construction Activities

3.5.1 Erosion and Sediment Control Regulations

The Permittee shall continue to implement the District's Erosion and Sediment Control Regulations for all projects that are 50 square feet and larger, consistent with current policies and regulations, to reduce the discharge of pollutants from construction activities.

3.5.2 Plan Review and Approval

The Permittee shall continue to implement the review and approval process for erosion and sediment control plans. Also, the Permittee shall ensure that all construction activities impacting one acre or greater, or less than one acre when part of a larger common plan of development or sale that is one acre or greater, are not authorized until the Permittee receives documentation that the construction activity has received coverage under EPA's NPDES General Permit for Discharges from Construction Activities (CGP).

3.5.3 Inspections

The Permittee shall continue to implement inspection procedures, including but not limited to inspection of permitted construction sites that disturb more than 5,000 square feet of soil, as follows:

a. Pre-construction meeting to review soil and sediment control measures;
b. Initial site inspection to verify proper installation and maintenance of sediment and erosion control measures;
c. Other inspections, as necessary, to ensure compliance with relevant standards and requirements; and
d. Final inspection to verify proper installation of stormwater control measures following final stabilization of the project site.

The Permittee shall ensure that construction activity inspectors prioritize inspections in targeted areas, such as sites discharging to water quality-impaired waters, sites near surface waters, areas undergoing rapid development, large construction sites, and sites with a history of non-compliance.

3.5.4 Enforcement

When a violation of local erosion and sediment control regulations occurs, the Permittee shall follow existing enforcement procedures and practices using standardized reports as part of the inspection process to provide accurate record-keeping of inspections of construction sites.

3.6 Illicit Discharges and Illegal Disposal

3.6.1 Illicit Discharges

The Permittee shall continue to implement and refine the procedures and practices implemented to detect, eliminate, and prevent illicit discharges.

3.6.1.1 The Permittee shall continue to refine and update the inventory of all outfalls in the MS4 Permit Area, including any changes to the identification and mapping of existing permitted outfalls. This inventory shall be integrated with GIS, and shall include size, type, location (GPS coordinates), condition, receiving water, date of last inspection, and information pertaining to the facility or facilities that discharge to each outfall (including name, address, and

description of the facility using SIC or similar code). The Permittee shall use this information to develop updated maps of outfalls and sewersheds for use in the field conducting outfall inspections and for subsequent desktop analysis of any discharges.

3.6.1.2 The Permittee shall continue to conduct regular dry weather screening inspections in target areas, per the procedures in Section 4.4 of this permit.

3.6.1.3 The Permittee shall continue to maintain a system for reporting illicit discharges and providing immediate responses to those reports.

3.6.1.4 The Permittee shall continue to issue fines and undertake additional enforcement procedures, as necessary, to eliminate illicit discharges.

3.6.1.5 The Permittee shall continue to implement procedures to prevent, contain, and respond to spills that may discharge to, from, or through the MS4.

3.6.1.6 The Permittee shall maintain a database of all identified illicit discharges and information on their elimination.

3.6.2 Illegal Disposal

The Permittee shall continue to implement the prohibition against the disposal or dumping of used motor vehicle fluids, household hazardous wastes, grass clippings, leaf litter, and animal waste to, from, or through the MS4. The Permittee shall ensure the implementation of programs to collect used motor vehicle fluids (at a minimum oil and anti-freeze) for recycle, reuse, and proper disposal and to collect household hazardous waste materials (including paint, solvents, pesticides, herbicides, and other hazardous materials) for recycle, reuse, or proper disposal. The Permittee shall ensure that such programs are readily available within the District, and that they are publicized and promoted on a regular basis, pursuant to Public Education provisions at Section 3.10 of this permit. The Permittee, including the Metropolitan Police Department and Department of Public Works, shall continue to enforce against illegal dumping.

3.7 Targeted Pollutant Controls

The Permittee shall continue to ensure implementation of local source control programs to support attainment of identified water quality objectives including TMDL wasteload allocations for trash, polyaromatic hydrocarbons, nitrogen, phosphorus, multiple metals, and toxics.

3.7.1 Trash Prevention and Removal

3.7.1.1 The Permittee shall continue to attain the capture, prevention, or removal of 108,347 pounds of trash annually from the Anacostia River, as determined in the Anacostia River Watershed Trash TMDL, as a specific single-year measure, using a combination of trash traps and other structural controls, clean-ups, hotspot sweeping, skimmer boat activities, and prevention measures (e.g., education and outreach, policies focused on specific types of trash).

3.7.1.2 The Permittee shall continue to participate in the Anacostia Trash multi-jurisdictional collaboration to align metrics for tracking and reporting on trash reduction and removal with adjacent jurisdictions.

3.7.1.3 The Permittee shall apply the technologies and other activities developed in the Anacostia River Watershed Trash TMDL efforts throughout the entire MS4 Permit Area.

3.7.2 Disposable Bag Fee

The Permittee shall continue to implement the Anacostia Clean Up and Protection Act of 2009.

3.7.3 Polystyrene Foam Food Containers Ban

The Permittee shall continue to implement the District's ban on certain polystyrene foam food containers.

3.7.4 Coal Tar Ban

The Permittee shall continue to implement the District's ban on coal tar pavement products, and conduct public outreach and enforcement activities.

3.7.5 Restriction on Phosphorus in Lawn Fertilizers

The Permittee shall continue to implement the District's program on phosphorus lawn fertilizer restrictions.

3.7.6 Hazardous Waste Collection

The Permittee shall continue to implement a hazardous waste collection program.

3.7.7 Leaf and Yard Waste Collection

The Permittee shall continue to implement a leaf and yard waste collection program.

3.8 Operation and Maintenance of Stormwater Control Measures

3.8.1 District-Operated Stormwater Control Measures

The Permittee shall continue to improve and implement operation and maintenance protocols, policies, and guidance for all District-owned and operated stormwater control measures, including maintenance needs and triggers, inspection frequencies, and a tracking system to document relevant information.

3.8.2 Non-District-Operated Stormwater Control Measures

The Permittee shall continue to improve and implement operation and maintenance (O&M) protocols, policies, guidance, ordinances, codes, inspections, and other accountability measures for all stormwater control practices on non-District-controlled property. Such accountability measures may include combinations of deed restrictions, ordinances, maintenance agreements, or other policies deemed appropriate by the Permittee. The Permittee shall also include a long-term verification process of O&M, which may include municipal inspections, third-party inspections, owner/operator certifications on a frequency deemed appropriate by the Permittee, and/or other mechanisms. The Permittee must continue to maintain an electronic inventory of practices on private property and O&M information for each such stormwater control measure.

3.9 Stormwater Training

For all activities included in Section 3.3 of this permit, the Permittee shall continue to implement an on-going training program for those employees, contractors, subcontractors and agents specified below, and any other individuals whose job functions may impact stormwater program implementation. The training program shall address the following items as relevant to specific job responsibilities: (i) the importance of protecting water quality; (ii) the requirements of this permit; (iii) design, performance, operation and maintenance standards; (iv) inspection procedures; (v) the selection of appropriate stormwater control measures; (vi) ways that job activities are to be performed in order to prevent or minimize impacts to receiving waters; and (vii) procedures for tracking, inspecting, and reporting – including potential illicit discharges.

In addition, the Permittee shall continue training developers and other relevant stakeholders on the requirements of District stormwater regulations and the *Stormwater Management Guidebook*. As appropriate, the Permittee may combine this training with training on other relevant topics, such as climate change.

In accordance with Table 3 below, the Permittee shall ensure that the training program includes those employees, contractors, subcontractors and agents who work in the following areas, and others as deemed necessary:

TABLE 3
Training for Stormwater Management and Pollution Prevention

Duties of Person to be Trained	**Training Areas**
Municipal water treatment and waste water treatment	• Impacts of stormwater pollution and sources of runoff and pollutants • The requirements of this permit • Overview of what is in facility SWPPP • Spill response, good housekeeping, and material control measures • O&M of stormwater controls • Inspection and reporting procedures
Relevant employees at all District industrial facilities	

Municipal Planning Transportation planning and engineering	• Plan Review • Planning design, installation, and/or operation and maintenance of stormwater control measures
Road and utility crews	• Street sweeping • Catch basin cleanout • Spill prevention and response • Snow and ice removal • Soil erosion and sedimentation control, including dewatering controls • Relevant operation and maintenance of stormwater controls
Construction-related activities (plan review, design, etc.)	Erosion and sedimentation controls, including proper dewatering
Inspectors	Everything listed in the table above and specialized inspection area subject matter
Parks and Recreation Department	Relevant stormwater control measures, with emphasis on herbicides, pesticides, fertilizers, irrigation and other relevant areas
Garage and mechanic crew Fleet maintenance	• Vehicle/boat washing • Fueling • Storage, use, and disposal of critical materials • Spill prevention and response
Fire and police departments	• Issues related to emergency response • Spill prevention and response • Illegal disposal
Facility and building maintenance and janitorial	• Management and maintenance of facility grounds and exteriors, including stormwater controls • Storage, use, and disposal of critical materials • Spill prevention and response • Snow and ice removal
Builders, design professionals, regulators, resource agencies and stakeholders focused on stormwater management/green technology practices	• Design methods for integration of stormwater management/green technology measures at various project scales • Guidance on performance of various types of stormwater management/green technology practices measures in the MS4 Permit Area • Use of the Permittee's database for submitting plan details • Use of the District's Off-site Retention Program

The Permittee shall provide follow up and refresher training at a minimum of one time every twelve months, and shall include any changes in procedures, techniques, or requirements.

3.10 Targeted Public Education

The Permittee shall continue to refine and deliver targeted education efforts and to measure the understanding and adoption of selected targeted behaviors among the targeted audiences, in accordance with the metrics contained in Table 4 below. The Permittee shall identify metrics for educational targets that do not have them, and begin reporting on such metrics in the first annual report during this permit term. As new, more informative metrics are developed they may supplement or replace the existing metrics. The Permittee shall use the resulting measurements to direct education and outreach resources most effectively, as well as to evaluate changes in adoption of the targeted behaviors.

Table 4
Public Education Initiatives and Metrics

Education Targets and Objectives	**Metrics**
General Public	
General sources of stormwater pollution and impacts of stormwater flows into surface waters	Number of views of DOEE's stormwater website content
Source control practices and environmental stewardship actions in landscaping and rainwater reuse	Adoption of stormwater practices by target audiences through the RiverSmart Program
A household hazardous waste education and outreach program to control illicit discharges to the MS4	• Level of participation in HHW collection program • Utilization of illicit discharge reporting system
Vehicle maintenance stormwater control measures, including car washing practices	
Stormwater control measures for removing ice from sidewalks and roads	
Meaningful watershed educational experiences and other education for District youth and teachers	• Number of District youth receiving environmental education • Number District teachers receiving environmental education training
Litter Prevention Campaign	Evaluation of the effectiveness of the Litter Prevention Campaign
Business and Industry	
Impacts of increased stormwater flows and pollution into receiving water bodies and sources of runoff and pollutants	Number of views of DOEE's stormwater website content

Stormwater control measures for use and storage of automotive chemicals, pesticides, hazardous cleaning supplies, and other materials	Track compliance and noncompliance at industrial and critical source operations
Impacts of illicit discharges and how to prevent and report them	Utilization of illicit discharge reporting system
Stormwater permitting requirements and pollution prevention plans that require development of stormwater control measures	Number/percentage of industrial facilities with SWPPPs
Homeowners and Residents	
Impacts of increased stormwater flows and pollution into receiving water bodies	Number of views of DOEE's stormwater website content
Runoff reduction techniques, including landscape design, site design, on-site retention, pervious paving, retention of forests and mature trees	Adoption of stormwater practices by target audiences through the RiverSmart Program
Monitoring and maintenance of on-site stormwater control measures	
Yard care and landscaping techniques that protect water quality, including fertilizer application	
Swimming pool discharge and maintenance	
Education materials, signage and pet waste bags and repositories at dog parks and other high pet traffic areas	
Engineers, Contractors, Developers, Construction Operators, Review Staff and Land Use Planners	
Impacts of increased stormwater flows into receiving water bodies	Number of views of DOEE's stormwater website content
Technical standards for stormwater regulations including, but not limited to, the following: i. Construction site sediment and erosion control ii. Stormwater Retention Volume iii. Water Quality Treatment Volume iv. Extreme flood requirements v. Green Area Ratio requirements vi. Public Right-of-Way requirements	• Attendance at stormwater workshops and trainings • Numbers/trends in site plan submittals consistent with requirements
Runoff reduction techniques, including site design, on-site reduction, pervious pavement, alternative parking lot design, retention of forests and mature trees	
Stormwater treatment and flow controls	
How to utilize the online Stormwater Database	Track successful use of the Database

Part 4. WATER QUALITY ASSESSMENT

4.1 Water Quality Assessment Program

4.1.1 Assessment Program Objectives

The Permittee shall establish a long-term assessment program to meet the following objectives:

4.1.1.1 Make wet weather loading estimates of pollutants to, from, and through the DC MS4 to receiving waters.

4.1.1.2 Evaluate the health of receiving waters within the context of assessing the impacts of MS4 discharges.

4.1.1.3 Perform additional monitoring as necessary to identify additional sources of pollution and track progress towards meeting WLAs.

4.1.2 Assessment Program Overview

Table 5 provides an overview of the types and frequencies of monitoring that the Permittee shall conduct.

TABLE 5
Overview of the Water Quality Assessment Program

Monitoring Element	**Frequency**	Year 1				Year 2				Year 3				Year 4				Year 5			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Wet Weather Monitoring	3 events each year																				
Dry Weather Screening	On a rolling basis so that each outfall is inspected once in the permit term																				
Macro-invertebrates	Once during spring index period each year																				
Habitat	Once during summer of the first year, then on an as-needed basis																				
Geomorph-ology	Once during summer of the first year, then on an as-needed basis																				
Receiving Water Quality	Once each month																				
Trash	3 wet weather events each year																				

4.1.3 Requirements Common to all Assessment Program Elements

4.1.3.1 The Permittee shall ensure that all analyses are performed in accordance with analytical methods approved under 40 C.F.R. Part 136 and subsequent amendments. When there is not an approved analytical method the Permittee may use any method supported by relevant scientific literature, but must provide a description of the method in the Quality Assurance Program Plan (QAPP).

4.1.3.2 The Permittee is authorized to use a more current or sensitive detection method than the one identified in 40 C.F.R. Part 136 if one exists for a particular parameter, including but not limited to PCBs (Method 1668B) and mercury (Method 1631E). If used, the Permittee shall report the alternative method for compliance reporting and monitoring purposes in the QAPP.

4.1.3.3 The Permittee shall continue to select and use appropriate flow measurement devices and methods consistent with accepted scientific practices to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device.

4.1.3.4 The Permittee shall continue to retain records of all monitoring information, including all calibration and maintenance records, for a period of at least five (5) years from the date of such sample, measurement, or report. Records of monitoring information shall include the items contained in Table 6 below:

TABLE 6
Monitoring and Assessment Records Retention

Date, exact location, time, and methods of sampling measurements
Individual(s) who performed the sampling measurements
Date(s) analyses were performed
Individual(s) who performed the analyses
Analytical techniques or methods used
Results of such analyses

4.2 Wet Weather Discharge Monitoring

4.2.1 Pollutants, Collection Methods and Frequencies

The Permittee shall conduct wet weather discharge monitoring for all of the pollutants in Table 7 for a minimum of three wet weather events, as defined in Subsection 4.2.4 of this permit, each year.

TABLE 7
Wet Weather Discharge Sample Parameters and Collection Methods

Pollutant	**Collection Method**
Total suspended solids	Composite Sample
Total nitrogen	Composite Sample
Total phosphorus	Composite Sample
Copper	Composite Sample
Lead	Composite Sample
Zinc	Composite Sample
Cadmium	Composite Sample
E. coli	Grab Sample

4.2.2 Associated *in situ* Sampling

When conducting the wet weather discharge monitoring required by Subsection 4.2.1 above, the Permittee shall also collect *in situ* samples for water temperature, dissolved oxygen, conductivity, pH, and hardness in order to provide the necessary information for appropriate interpretation of wet weather data.

4.2.3 Sampling Locations

The Permittee shall conduct wet weather discharge monitoring at all continuous record sites and all stratified random sites as specified in Table 8 below. Stratified random "oversample" sites, identified in the QAPP required by Subsection 4.3.1.1 of this permit, may permanently replace a stratified random site from the same watershed should conditions warrant. The Permittee may substitute stratified random sites for oversample sites not included in Table 8, but must explain and justify those substitutions. Continuous record sites may also be adjusted with sufficient justification.

TABLE 8
Sampling Locations for Wet Weather Discharge Monitoring

Sampling Location	Watershed	Type of Site
Tributary to Anacostia – Gallatin Street & 14th Street NE	Anacostia River	Continuous Record
Oxon Run – Mississippi Ave and 15th St. SE	Potomac River	Continuous Record
Soapstone Creek – Connecticut Avenue and Albemarle Street NW	Rock Creek	Continuous Record
Outfall 1080 – Ft. Davis	Anacostia River	Stratified Random
Outfall 1072 – Ft. Dupont	Anacostia River	Stratified Random
Outfall 950 – Tributary to Potomac	Potomac River	Stratified Random
Outfall 103 – Oxon Run	Potomac River	Stratified Random
Outfall 887 – Luzon Branch	Rock Creek	Stratified Random
Outfall 901 – Tributary to Pinehurst Branch	Rock Creek	Stratified Random

4.2.4 Qualifying Wet Weather Events

4.2.4.1 The Permittee shall collect all samples from a discharge resulting from a storm event that is greater than 0.1 inches in predicted precipitation and that occurs at least 72 hours from the end of a previous event with at least 0.1 inches of measured rainfall within the MS4 Permit Area.

4.2.4.2 The Permittee shall maintain the following records regarding wet weather sampling: (i) date and duration (in hours) of the storm events sampled; (ii) rainfall measurements or estimates (in inches) of the storm event which generated the sampled runoff; (iii) the duration (in hours) between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and (iv) a calculated flow estimate of the total volume (in gallons) and nature of the discharge sampled.

4.3 Receiving Water Assessments

4.3.1 Establishing a Receiving Waters Assessment Program and Baselines

4.3.1.1 The Permittee shall develop a QAPP to support all elements of the receiving waters assessment program. The Permittee shall complete a comprehensive draft QAPP prior to beginning field sampling and assessments required by this permit, but may adjust the QAPP throughout the first year of the sampling cycle. The Permittee shall submit a final QAPP to EPA at the end of the first year of the sampling cycle.

4.3.1.2 The Permittee shall ensure that all receiving water assessment activities required by this permit adhere to those established by the Maryland Biological Stream Survey (MBSS), with any adjustments to the protocol documented in the QAPP, including the identification of specific reference streams, as relevant.

4.3.1.3 The Permittee shall ensure that receiving water assessments are conducted at no fewer than eighteen (18) wadeable stream sites selected through a combination of targeted and randomized sampling approaches. The Permittee may replace one or more of the original locations with one or more of the oversample sites.

4.3.1.4 The Permittee shall ensure that upstream and downstream photographs are taken at each site at the time each sample is collected or assessment is conducted.

4.3.1.5 The Permittee shall ensure that current and recent weather (*i.e.,* within the past 24 hours) is recorded for each sampling and assessment activity.

4.3.1.6 The Permittee shall ensure that all monitoring activities are conducted within the same 75-meter stream reach per site, unless site conditions preclude such monitoring as documented by the Permittee.

4.3.1.7 The Permittee shall ensure that all sampling and data collection protocols have associated field data sheets, quality assurance/quality control (QA/QC) procedures, and chain of

custody forms (as appropriate). Data collection may be recorded digitally with electronic back-up procedures.

4.3.1.8 During the first-year field assessments, the Permittee shall collect the information contained in Table 9 below to inform the SWMP and to identify situations or problems that may require follow-up.

TABLE 9
Associated Factors in the Receiving Water Assessment

Information	**Description**
Utilities	Type of pipe or outfall (e.g., sanitary, stormwater) and the potential impact to the stream based on current condition.
Obstructions	Any material, natural or manmade, obstructing the stream channel and the perceived impact.
Erosion points	Impacts within or along the stream channel, such as head cuts or bank erosion.
Dump Sites	Locations where dumping of trash or disposal of liquid or solid materials is occurring.
Crossings	Locations along the stream channel where flow is being impacted due to a structure (e.g., bridge) or modification of the stream channel (e.g., berm) that allows crossing.
Buffer deficiencies	Areas along the stream where the stream's vegetative buffer has been removed and has been replaced with other materials, such as lawn, a parking lot, etc.

4.3.1.9 During the Permit term the Permittee shall develop and maintain a central geodatabase that can store locational information and data sets. Metadata for all data sets shall be recorded.

4.3.2 Water Quality Sampling

The Permittee shall sample receiving waters for the indicator parameters in Table 10 at the frequency identified in the QAPP. Frequency generally is targeted to at least one time every month per the overview provided in Table 5. However, sampling frequencies for specific parameters shall be refined during the first monitoring season, and must be specifically documented and explained in the QAPP. Thereafter, sampling frequencies shall be consistent for the remainder of the permit term. Sampling and analysis procedures shall be performed according to the QAPP required by Subsection 4.3.1.1 of this permit.

TABLE 10
Receiving Water Quality Sampling Parameters

Total nitrogen	Total phosphorus	*E. coli*
Total Suspended Solids	Water Temperature	Dissolved Oxygen
Conductivity	Chloride	

4.3.3 Benthic Macroinvertebrate Sampling

The Permittee shall sample for benthic macroinvertebrates during the spring index period (March 1 through April 30) each year using the MBSS protocols and according to the QAPP required by Subsection 4.3.1.1 of this permit. Sampling must be implemented on a rolling basis such that each site will be sampled bi-annually.

4.3.4 Geomorphology Assessment

The Permittee shall conduct geomorphological assessments during the summer index period (June 1 through September 30) using a Rosgen Level 1 or other appropriate classification system and according to the QAPP required by Subsection 4.3.1.1 of this permit. Long-term sampling frequencies shall be established at no less than once every five years. As data for purposes of evaluating long-term trends accumulate, frequency of sampling may be reevaluated and a revised sampling schedule proposed to EPA in the revised SWMP submitted with the renewal application per Section 2.10 of this permit.

4.3.5 Habitat Assessment

The Permittee shall assess certain habitat metrics during the spring index period (March 1 through April 30) in association with macroinvertebrate sampling, and other habitat metrics during the summer index period (June 1 through September 30), in association with the geomorphological assessment per the MBSS protocols and according to the QAPP required by Subsection 4.3.1.1 of this permit. Assessments shall occur in the first full calendar year of this permit cycle. Long-term sampling frequencies shall be established at no less than one time every five years. As data for purposes of evaluating long-term trends accumulate, frequency of sampling may be reevaluated and a revised sampling schedule proposed to EPA in the revised SWMP submitted with the renewal application per Section 2.10 of this permit.

4.4 Dry Weather Screening and Source Identification

4.4.1 Identifying Dry Weather Flows and Sources

4.4.1.1 The Permittee shall ensure that field crews visually assess each MS4 outfall using DOEE's Dry Weather Outfall Inspection Form, documenting outfall identification, location and physical characteristics such as the presence of odor, oily sheen, turbid discharge and floatables, and any other dry weather flows. Photos, forms and notes on changes since the previous inspection shall be linked to the outfall database.

4.4.1.2 Frequency of visual monitoring shall be based on a priority system that balances knowledge of prior problems, priority areas in the MS4 Permit Area, and other factors. All outfalls shall be visually inspected at least one time during the permit term.

4.4.1.3 All dry weather flows identified during inspections that are not immediately identifiable shall be followed up-line in an attempt to determine the source.

4.4.1.4 If visual monitoring indicates that there is no measurable dry weather flow, but there is evidence of intermittent discharge (*e.g.,* staining, small trickle, algal growth), the Permittee shall revisit the outfall within three (3) days of the previous visual monitoring to check for measurable flow.

4.4.1.5 If the source cannot be identified from visual observations, the Permittee shall take *in situ* screening samples to help identify the source(s) of the flow.

4.4.1.6 If the source cannot be identified through visual or in-field chemical screening methods, the Permittee shall conduct a desktop analysis, involving cross-referencing with other dry weather flows, the database of critical sources and other applicable information. Follow-up investigations may include dye testing, video inspection, evaluation of facilities in the sewershed, and additional sampling.

4.4.2 Bacteria Source Tracking

During the permit term, the Permittee shall conduct a bacteria source tracking study to identify sources of bacteria in the MS4 Permit Area where *E. coli* WLAs have not yet been attained and where waters are impaired by *E. coli*. The sampling design must be sufficient to ensure that adequate data will be available to develop an effective strategy to prioritize and target sources and causes in order to eliminate or reduce *E. coli* in stormwater discharges to District surface waters. This includes having enough information to inform the development of milestones and benchmarks per Subsection 2.2.2.1 of this permit. The study shall be completed and submitted to EPA by July 1, 2021 unless EPA approves an alternate schedule.

4.5 Trash Monitoring

4.5.1 Trash Trap Monitoring

In compliance with the previous permit, the Permittee submitted a trash monitoring strategy for EPA review and approval. During the course of the previous permit, a workgroup was formed by all of the jurisdictions in Maryland and DC impacted by the Anacostia Trash TMDL to ensure that consistent tracking/monitoring was performed to demonstrate compliance with the WLAs in the TMDL. As a result of that Regional Strategy, the Permittee submitted a revised monitoring strategy to EPA, which was accepted. Per that strategy, the Permittee is required to perform the following activities to ensure that compliance with the water quality objectives of the Anacostia Trash TMDL are met.

4.5.1.1 The Permittee shall continue to sample all existing and new trash traps located in the MS4 Permit Area of the District's waterbodies and at outfalls at least four (4) times per year for weight and counts of different types of trash.

4.5.1.2 Existing or new trash traps shall be stationary control measures installed as necessary at outfalls in the MS4 Permit Area. Each installed trap shall be maintained on a weekly basis and after a major storm event, in order to prevent traps from reaching or exceeding capacity.

4.5.1.3 The Permittee shall collect and record wet weight and counts for different materials from trash captured by each trap. The Permittee shall capture data on weight and count, at a minimum, for the following trash types: food wrappers, beverage containers, plastic bags, foam products (including food and non-food related products made of polystyrene), tires and plastic balls.

4.5.1.4 For purposes of assessing compliance with the Anacostia Trash TMDL, data shall be reported in the Annual Report on the amount of trash captured by trash traps located at outfalls in the MS4 Permit Area.

4.5.2 Transect Monitoring

4.5.2.1 The Permittee shall continue to participate in the Anacostia Trash multi-jurisdictional collaboration to align metrics for tracking and reporting on trash reduction and removal.

4.5.2.2 The Permittee shall sample 500-foot transects at thirteen (13) locations in the Rock Creek, Potomac River, and Anacostia River watersheds at least two times per year. Data on trash weight shall be collected at six (6) of these sites, and data on count shall be collected at all thirteen (13) sites.

4.5.2.3 These data shall be used to assess effectiveness of District trash reduction initiatives, including the bag fee and the foam ban, as well as to inform future policy decisions related to trash.

4.6 Data Synthesis

4.6.1 Programmatic Indicators

The Permittee shall evaluate the effectiveness of the SWMP using multiple programmatic indicators linked to the requirements in Part 3 of this permit. The Annual Reporting Template in Appendix A of this permit identifies the programmatic indicators used to evaluate the success of implementing stormwater control measures.

4.6.2 Watershed Indicators

The Permittee shall also evaluate the effectiveness of the SWMP using multiple watershed indicators linked mostly to the assessment requirements of Part 4 of this permit, and the synthesis of those data through analysis and modeling.

4.6.2.1 The Permittee shall estimate annual cumulative pollutant loadings for all pollutants listed in Table 7 of this permit.

4.6.2.2 The Permittee shall estimate annual progress towards all numeric limits in Subsection 1.5.3.1 of this permit for acres managed and pounds of trash in the Anacostia River Watershed.

4.6.2.3 Using all other data and information collected per the water quality assessment requirements of Part 4 of this permit, the Permittee shall establish a multi-faceted suite of indicators to be reported over multiple permit terms. These indicators shall address discharge quality as well as receiving water quality. These indicators shall balance current status with long-term trends in order to determine elements of the program that are effective and those needing additional improvement. This suite of indicators shall be developed in consultation with EPA and other stakeholders and finalized with submittal of the updated SWMP submitted to EPA as part of the application package for permit renewal per Section 2.10 of this permit. These indicators shall be established as long-term metrics for the SWMP and may be included as requirements in future permits.

4.6.3 Assessing Strengths and Weakness of the Program

4.6.3.1 In each annual report the Permittee shall provide a short synthesis of areas of the program deemed effective with ongoing effort, and areas where additional strategies are needed to effectively address certain pollutants or sources, supported by interpretation of both programmatic and watershed indicators. Conclusions shall be based on interpretations of the indicators.

4.6.3.2 With the annual report in the fourth year of the permit the Permittee shall provide a synopsis of progress made towards meeting all WLAs allocated to the DC MS4, and a summary of program elements that shall be enhanced in the updated SWMP in order to make timely progress towards the water quality objectives of this permit and meeting the District's water quality standards.

4.7 Data Management

4.7.1 Database Organization

The Permittee shall maintain database systems to ensure long-term integrity of information and effective and nimble data storage, management, and retrieval.

4.7.2 Data Stewardship

The Permittee shall ensure that all relevant databases are stewarded by data managers who shall ensure consistency and accountability in data quality assurance, entry, and maintenance.

Part 5. REPORTING REQUIREMENTS

5.1 Discharge Monitoring Reports

Discharge Monitoring Reports (DMRs) must include all analytical results of all discharge monitoring described in Part 4 of this permit.

The Permittee shall submit DMRs on an annual basis via NetDMR (http://www.epa.gov/netdmr/). DMRs are due each year no later than December 1, and shall include all data for the yearly sampling cycle July 1 through June 30.

5.2 Annual Reporting to EPA

5.2.1 Annual Report Schedule

The annual reporting cycle shall cover the period of July 1 through June 30 of each year. The Permittee shall submit an Annual Report to EPA no later than December 1 of each year starting with December 1, 2019

5.2.2 Annual Report Template

The Annual Report shall follow the format and include the content of the Annual Report Template in Appendix A of this permit. The Permittee is encouraged to use the fillable PDF version of this template provided by EPA for each Annual Report. The Permittee shall post the Annual Report on the DOEE website on or about the same time as it is submitted to EPA.

5.3 Reporting to the Public

5.3.1 Stormwater Program Dynamic Web-based Graphical Interface

The Annual Report shall be supplemented by a web-based graphical interface, e.g., ArcGIS story map, specifically designed to provide data and information to District residents and other stakeholders in a format most useful and accessible to these audiences. The Permittee shall make this graphical interface available on or through its website no later than one month following the due date of the first Annual Report. Subsequent updates shall occur annually within one month following submittal of each Annual Report. The initial graphical interface shall include the following types of information linked through a GIS-referenced set of maps: locations of all stormwater control measures in the MS4 Permit Area, sortable by type/function, drainage area, storage volume and installation date; data on stormwater retention credits certified in the MS4 Permit Area; statistics on implementation of specific types of management practices such as green roofs and trees; TMDL WLAs by stream segment and by pollutant; and monitoring locations linked to monitoring data. The graphical interface shall be refined over time to supplement this information with other data and syntheses, visual aids such as photos, graphs, and charts, multimedia content such as videos, and external links to other relevant information.

5.3.2 Website Information Repository

The Permittee shall make available to the public on the DOEE website the most recent or updated version of all documents, reports, and assessments in a format that is easily accessible and logically navigable. Consistent with Section 2.1 of this permit, this shall include all documents and reports considered part of the SWMP, at a minimum: SWMP Plan; *Consolidated TMDL Implementation Plan Report*; *Revised Monitoring Program*; *District of Columbia Urban Tree Canopy Plan.* Consistent with Section 2.8 of this permit, this shall include all plans and assessments in Table 2. Consistent with Subsection 5.2.2 of this permit, this shall include the Annual Reports. The Permittee may choose to incorporate any portion of the information in these documents and assessments into the story map, post them as separate documents, or a combination of both.

5.3.3 Permit Limit and Benchmark Progress

The Permittee shall publicly report on annual progress toward all numeric limits in this permit and all benchmarks in the *Consolidated TMDL Implementation Plan* in a readily-understandable format. This reporting may be included as part of the graphical interface, or combinations of graphical interface, Annual Reports and other assessments, as long as the public is able to understand and track progress.

Part 6. STANDARD PERMIT CONDITIONS FOR NPDES PERMITS

6.1 Incorporation by Reference

All conditions applicable to NPDES permits contained in 40 C.F.R. §§ 122.41 and 122.42(c), which are not expressed in this Permit, are incorporated herein by reference.

6.2 Duty to Comply

6.2.1 The Permittee must comply with all conditions of this permit. Noncompliance with any provision of this permit constitutes a violation of the Clean Water Act and may result in an enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

6.2.2 Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Clean Water Act.

6.2.3 Pursuant to the Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015 and implementing regulations at 40 C.F.R. Part 19, as well as Section 309(g)(2)(B) of the Clean Water Act, 33 U.S.C. § 1319(g)(2)(B), any person who has violated any NPDES permit condition or limitation after November 2, 2015 where the penalties are assessed after January 15, 2018, is liable for an administrative penalty not to exceed $21,393 per day for each day of violation up to a total penalty amount of $267,415. 83 Fed. Reg. 1190 (Jan. 10, 2018).

6.3 Duty to Reapply

If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, it must apply for and obtain a new permit. The Permittee shall submit the application for renewal at least 270 days before the expiration date of this permit.

6.4 Duty to Mitigate

The Permittee shall take all reasonable steps to minimize or prevent any discharge or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

6.5 Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee 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 a Permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

6.6 Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause for the reasons described at 40 C.F.R. § 122.64. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

6.7 Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

6.8 Duty to Provide Information

The Permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

6.9 Inspection and Entry

The Permittee shall allow EPA, or an authorized representative (including an authorized contractor acting as a representative of the Director), upon presentation of credentials and other documents as may be required by law, to:

1. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this permit;

2. Have access to and copy, at reasonable times, any records that must be maintained under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), processes, or operations regulated or required under this permit; and

4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

6.10.1 Monitoring and Records.

6.10.2 Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

6.10.3 The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

6.10.3 Records of monitoring information shall include:

a. The date, exact place, and time of sampling or measurements;
b. The individual(s) who performed the sampling or measurements;
c. The date(s) analyses were performed;
d. The individual(s) who performed the analyses;
e. The analytical techniques or methods used; and
f. The results of such analyses.

6.10.4 Monitoring must be conducted according to test procedures approved under 40 C.F.R Part 136 unless another method is required under 40 C.F.R. Chapter I.

6.10.5 The Clean Water Act provides that any person who falsifies, 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 and/or imprisonment.

6.11 Signatory Requirement

6.11.1 All applications, reports, and information submitted to EPA shall be signed and certified by either a principal executive officer or ranking elected official, or a duly authorized representative of that person.

6.11.2 A person is a duly authorized representative only if: (i) the authorization is made in writing by a person described above; (ii) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity (a duly authorized representative may thus be either a named individual or any individual occupying a named position); and (iii) the written authorization is submitted to EPA.

6.11.3 If an authorization under the preceding paragraph is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, the

Permittee must submit a new notice satisfying the requirements of this paragraph to EPA prior to or together with any reports, information, or applications to be signed by an authorized representative.

6.11.4 *Certification.* Any person signing a document required by this Permit shall make the following certification:

> I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

6.12 Reporting Requirements

6.12.1 *Anticipated non-compliance.* The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in non-compliance with permit requirements.

6.12.2 *Monitoring reports.* Monitoring results shall be reported at the intervals specified elsewhere in this permit.

6.12.3 *Compliance schedules.* Reports of compliance or non-compliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

6.12.4 *Twenty-four hour reporting.*

6.12.4.1 The Permittee shall report any non-compliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee becomes aware of the circumstances. A written report shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The report shall contain a description of the non-compliance and its cause; the period of non-compliance, including exact dates and times, and if the non-compliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the non-compliance. For non-compliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (combined sewer overflows, sanitary sewer overflows, or bypass events), type of sewer overflow structure (*e.g.,* manhole, combine sewer overflow outfall), discharge volumes untreated by the treatment work s treating domestic sewage, types of human health and environmental impacts of the sewer overflow event, and whether the non-compliance was related to wet weather. As of December 21,

2020 all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events submitted in compliance with this section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this section and 40 C.F.R. Part 3 (including, in all cases, subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, the Permittee may be required to electronically submit reports related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section by a particular permit or if required to do so by state law. The Director may also require the Permittee to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section.

6.12.4.2 The following shall be included as information which must be reported within 24 hours under this paragraph.

i. Any unanticipated bypass which exceeds any effluent limitation in the permit. (See 40 C.F.R. § 122.41(g))
ii. Any upset which exceeds any effluent limitation in the permit.
iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within 24 hours. (See 40 C.F.R. § 122.44(g))

The Director may waive the written report on a case-by-case basis for reports under Subsection 6.1.2.4 of this permit if the oral report has been received within 24 hours.

6.12.4 *Electronic reporting.* The Permittee shall electronically submit the required NPDES information (as specified in Appendix A to 40 C.F.R. Part 127) to EPA Region III as specified in Part 5 of this permit. For all documents required by this Permit that are submitted electronically, any person providing the electronic signature for such documents shall ensure that all of the relevant requirements of 40 C.F.R. Part 3 (including, in all cases, subpart D to part 3) (Cross-Media Electronic Reporting); 40 C.F.R. § 122.2; and 40 C.F.R. Part 127 (NPDES Electronic Reporting Requirements) are met for that submission.

6.13 Upset

6.13.1 *Definition. Upset* means an exceptional incident in which there is unintentional and temporary non-compliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

6.13.2 *Effect of an upset.* An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the conditions of Subsection 6.13.3 of this permit are met. No determination made during administrative review

of claims that non-compliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

6.13.3 *Conditions necessary for a demonstration of upset.* A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, that:

a. An upset occurred and that the Permittee can identify the cause(s) of the upset;
b. The permitted facility was at the time being properly operated;
c. The Permittee submitted notice of the upset as required in this section (24-hour notice); and
d. The Permittee complied with any remedial measures required by 40 C.F.R. § 122.41(d).

6.13.4 *Burden of proof.* In any enforcement proceeding the Permittee seeking to establish the occurrence of an upset has the burden of proof.

Part 7. OTHER REQUIREMENTS

7.1 National Historic Preservation Act of 1966, 54 U.S.C. §§ 300101 *et seq.*

Consultation with the District of Columbia State Historic Preservation Officer (DC SHPO) in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations at 36 C.F.R. Part 800 has resulted in a determination that the activities required by the permit will have no adverse effect on historic properties provided that the following conditions are met:

a. All of the projects undertaken pursuant to the permit will be subject to review by the DC SHPO as part of the local historic preservation review process revised in accordance with any DC SHPO and/or DC Historic Preservation Review Board comments, as applicable, pursuant to local DC historic preservation legislation;
b. The Permittee will ensure that, for any projects that it intends to implement directly, it will coordinate early with the DC SHPO and revise those projects as necessary to avoid adverse effects on historic properties; and
c. EPA and the Permittee will consult with the DC SHPO pursuant to 36 C.F.R. Part 800 if requested by the DC SHPO, especially for any projects involving adverse effects on historic properties that are of particular concern to the DC SHPO.

If an alternate Historic Preservation procedure is approved by EPA in writing during the term of this permit, the alternate procedure will become effective after its approval.

7.2 Endangered Species Act, 16 U.S.C. Chapter 35

Per the requirements under Section 7 of the Endangered Species Act (50 C.F.R. Part 402; 16 U.S.C. § 1536(c)), EPA submitted a Biological Evaluation and Finding of Not Likely to Adversely Affect to the U.S. Fish and Wildlife Service (FWS) and The National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries). As a result of

this consultation, NOAA Fisheries concurred with EPA's conclusion that the proposed permit is not likely to adversely affect any ESA listed species and/or designated critical habitat. Additionally, FWS concurred that no proposed or federally listed endangered or threatened species are known to exist in the project area.

Part 8. PERMIT DEFINITIONS

Terms that are not defined in this Part 8 shall have the meaning accorded them with precedence according to the following authorities in the order listed: section 502 of the Clean Water Act, 33 U.S.C. §§ 1251 *et seq.*; Clean Water Act implementing regulations, 40 C.F.R. Part 122; or as in common usage.

"Acres Managed" is the metric established for this permit to measure and track implementation of stormwater control measures. One "Acre Managed" is one acre of land treated by stormwater control measures to the applicable standard established in the Permittee's stormwater regulations or consistent with the relevant voluntary program. The basis for this metric is established for measures that provide on-site retention for a given drainage area, standardized by acres. However, not all stormwater control measures provide on-site retention; therefore, where equivalencies can be established for other types of stormwater control measures, those outcomes may be converted to "Acres Managed", per Subsection 2.5.2 of this permit.

Example 1: A development project required to meet the 1.2-inch retention standard for Development and Redevelopment $\geq$ 5,000 square feet (Subsection 3.2.2) implements 1.2 inches of retention across 5 acres, through any combination of on-site and/or off-site retention controls = five (5) "acres managed".

Example 2: A Public Right-of-Way Project subject to the District's "MEP" process (Subsection 3.2.4) implements 1.8 inches of on-site retention across 2 acres = two (2) "acres managed".

Example 3: A Public Right-of-Way Project subject to the District's "MEP" process (Subsection 3.2.4) implements 0.9 inches of on-site retention across 2 acres = two (2) "acres managed".

Example 4: A redevelopment project required to meet the 0.8-inch on-site retention standard for Substantial Improvement Projects (Subsection 3.2.5) across one half-acre, through any combination of on-site and off-site retention controls = one half (0.5) "acre managed".

Example 5: A homeowner voluntarily implementing porous pavement through the District's RiverSmart Homes Program (Subsection 3.2.10) achieves 0.6 inches of on-site retention across one quarter acre = one quarter (1/4) "acre managed".

"Annual Report" refers to the report that the Permittee is required to submit annually pursuant to Section 5.2 of this permit.

"Benchmark" as used in this permit is a quantifiable goal or target to be used to assess progress toward "milestones" (see separate definition) and WLAs, such as a numeric goal for stormwater control measure implementation. If a benchmark is not met, the Permittee should take appropriate corrective action to improve progress toward meeting milestones or other objectives. Benchmarks are intended as an adaptive management aid and generally are not considered to be enforceable.

"Consolidated TMDL Implementation Plan" is the ongoing and adaptive management strategy, initially required by the District's 2011 MS4 permit, that describes stormwater control measures and timelines for all TMDLs that include WLAs to the District MS4.

"Critical Sources" are those activities and operations that make, use, store, transport or dispose of materials or substances that have the potential to become pollutants in stormwater discharges, specifically:

a. Commercial vehicular service activities, *e.g.,* washing, maintenance and fueling, including mobile operations.
b. Dry cleaners.
c. Aircraft or ship/boat maintenance and fueling activities.
d. Facilities conducting industrial activities, as defined at 40 C.F.R. § 122.26(b)(14), except for 40 C.F.R. § 122.26(b)(14)(x).
e. Facilities utilizing any material designated as a Hazardous Substance pursuant to 40 C.F.R. Part 116, in quantities exposed to stormwater that could cause or contribute to an exceedance of water quality standards or a water quality impairment.

"CWA" means Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972), 33 U.S.C. §§ 1251 *et seq.*

"Director" means the Regional Administrator of EPA or an authorized representative.

"Discharge" for the purpose of this permit, unless indicated otherwise, refers to discharges to, from or through the Municipal Separate Storm Sewer System (MS4).

"Discharge Monitoring Report (DMR)" is the reporting system and format for providing monitoring data to EPA.

"EPA" means the US Environmental Protection Agency Region III.

"Green Area Ratio Program" is the landscaping program codified in District zoning regulations (Title 11 DCMR) Chapter 34, to increase the quantity and quality of environmental performance of the urban landscape.

"Green Roof" is a roof system that stores rainwater where the water is taken up by plants and/or transpired into the air.

"Green Technology Practices" means stormwater control measures that are used to mimic pre-

development site hydrology by using site design techniques that retain stormwater on-site through infiltration, evapotranspiration, harvest and use.

"Guidance" means assistance in achieving a particular outcome or objective.

"Illicit connection" means any man-made conveyance connecting an illicit discharge directly to a MS4.

"Illicit discharge" means any discharge to a MS4 that is not composed entirely of stormwater except discharges pursuant to an NPDES permit (other than the NPDES permit for discharges from the MS4) and discharges resulting from firefighting activities, pursuant to 40 C.F.R. § 122.26(b)(2).

"Maryland Biological Stream Survey (MBSS)" is the Maryland Department of Natural Resources program and set of protocols for assessing and evaluating ecological resources in Maryland's streams and rivers.

"Maximum Extent Practicable" is an iterative standard applied by the permitting authority upon the issuance or reissuance of an MS4 permit, to optimize permit conditions in such a way as to balance water quality objectives with implementation feasibility. Permit requirements are meant to be robust and challenging, but still technically and economically practicable. See 64 Fed. Reg. 68754 (Dec. 8, 1999).

"Milestone" as used in this permit is an interim step toward attainment of a WLA that upon incorporation into the permit will become an enforceable limit or requirement to be achieved by a stated date. A milestone should be expressed in numeric terms, i.e. as a volume reduction, pollutant load, specified implementation action or set of actions or other objective metric, when possible and appropriate.

"MS4" or "Municipal Separate Storm Sewer System" means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

(i) 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;

(ii) Designed or used for collecting or conveying storm water;

(iii) Which is not a combined sewer; and

(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 C.F.R. § 122.2.

"On-Site Retention" means the use of soils, vegetation, water harvesting and other mechanisms

and practices to retain a target volume of stormwater on a given site through the functions of: pore space and surface ponding storage; infiltration; reuse; and/or evapotranspiration.

"Performance standard" means, for purposes of this permit, a measure or provision for attainment of an outcome or objective.

"Permittee" is the Government of the District of Columbia.

"Programmatic Indicators" are metrics to evaluate specific aspects of program implementation such as numbers/types of control measures installed, number of inspections performed, or number of illicit connections identified and corrected.

"Public Right-of-Way (PROW)" is the surface, the air space above the surface (including air space immediately adjacent to a private structure located on public space or in a PROW), and the area below the surface of any public street, bridge, tunnel, highway, railway track, lane, path, alley, sidewalk, or boulevard, where a property line is the line delineating the boundaries of public space and private property.

"RiverSmart" is a series of District programs that facilitates the implementation of voluntary stormwater management measures. For more information see: http://doee.dc.gov/service/get-riversmart.

"Stormwater" means storm water runoff, snow melt runoff, and surface runoff and drainage.

"Stormwater Control Measure" or Control Measure is a management practice, structure or policy that captures, diverts or manages the volume of stormwater or minimizes or eliminates the concentrations of pollutants in stormwater discharges.

"Stormwater Retention Credit (SRC)" is one gallon of retention capacity for one year, as certified by the District Department of Environment and Energy.

"Stormwater Management Program (SWMP)" is a multi-faceted program that includes all activities to meet the requirements of the permit to prevent and mitigate the effects of stormwater discharges via the MS4 on the physical, chemical and biological integrity of receiving waters.

"Stormwater Management Program (SWMP) Plan" is the collection of all strategies, plans and schedules that describe and document the SWMP.

"Stormwater Retention Volume (SWRv)" is the volume of stormwater from a site for which the site is required to achieve retention.

"Wasteload Allocation" means the portion of a receiving water's loading capacity that is allocated to one or more of its existing or future point sources.

"Water quality standards" refers to the District of Columbia's Surface and Ground Water Quality Standards codified at Code of District of Columbia Regulations §§ 21-1100 *et seq.*, which are

effective on the date of issuance of the permit and any subsequent amendments that may be adopted and approved during the life of this permit.

"Waters of the United States" is defined at 40 C.F.R. § 122.2.

"Watershed Indicators" are metrics used to evaluate specific aspects of ecological health, such as macroinvertebrate community diversity, geomorphological indices or water quality data.