GOVERNMENT OF THE
DISTRICT OF COLUMBIA

Municipal Separate Storm Sewer System

NPDES Permit No. DC0000221

2014
MS4 Annual Report

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Prepared by:

District Department of the Environment

Tommy Wells, Acting Director

DISTRICT DEPARTMENT OF THE ENVIRONMENT

green forward

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List of Acronyms and Abbreviations

AFF	Alice Ferguson Foundation
AFV	Alternative Fuel Vehicle
AWS	Anacostia Watershed Society
BMP	Best Management Practice
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CSS	Combined Sewer System
CWA	Clean Water Act
DCMR	District of Columbia Municipal Regulations
DCPS	District of Columbia Public Schools
DCRA	Department of Consumer and Regulatory Affairs
DDOE	District Department of the Environment
DDOT	District Department of Transportation
DGS	Department of General Services
DOH	Department of Health
DPR	Department of Parks and Recreation
DPW	Department of Public Works
EPA	United States Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FY	Fiscal Year (October–September)
GAR	Green Area Ratio
GIS	Geographic Information System
GPS	Global Positioning System
GSA	General Services Administration
HWD	District Department of the Environment Hazardous Waste Division
IPM	Integrated Pest Management
LID	Low Impact Development
MWEE	Meaningful Watershed Education Experience
MOU	Memorandum of Understanding
MS4	Municipal Separate Storm Sewer System
NOI	Notice of Infraction
NOV	Notice of Violation

NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NWS	National Weather Service
OCC	Office of the Clean City
OCTO	Office of the Chief Technology Officer
OP	Office of Planning
Permit	National Pollutant Discharge Elimination System Permit
PROW	Public Right-of-Way
RCRA	Resource Conservation and Recovery Act
RSR	RiverSmart Rewards
SRC	Stormwater Retention Credit
SWAP	Stormwater Advisory Panel
SWEEP	Solid Waste Education and Enforcement Program
SWM	Stormwater Management
SWMD	District Department of the Environment Stormwater Management Division
SWMP	Stormwater Management Plan
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load
TWG	Technical Working Group
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WLA	Wasteload Allocation
WPD	Watershed Protection Division
WQD	District Department of the Environment Water Quality Division

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DISTRICT OF COLUMBIA

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

MUNICIPAL SEPARATE STORM SEWER SYSTEM DISCHARGE PERMIT ANNUAL REPORT

1 INTRODUCTION

1.1 Background

The Government of the District of Columbia (the District) submits this Annual Report on stormwater pollution control for fiscal year (FY) 2014 (October 1, 2013 through September 30, 2014). This report documents activities required to fulfill the requirements of the District of Columbia's National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit No. DC0000221 (Permit), reissued on October 7, 2011 and modified November 9, 2012, as well as additional activities undertaken by the District's stormwater management program to reduce pollutant loadings from the MS4 to the Potomac and Anacostia Rivers and their tributaries. The activities described in the Annual Report meet the reporting requirements of Section 6.2.1of the Permit and serve as a review of program implementation and compliance. This report also contains the Discharge Monitoring Report (DMR) for interim monitoring, Section 5. The District Department of the Environment (DDOE) compiled this report with assistance and input from the District of Columbia Water and Sewer Authority (DC Water), the Department of Public Works (DPW), the District Department of Transportation (DDOT), and the Department of General Services (DGS).

1.2 Authorized Discharges

The MS4 Permit allows discharges of stormwater from the MS4 to the Potomac and Anacostia Rivers and their tributaries that comply with the requirements of the MS4 Permit. The Purpose of the District's MS4 Program is to reduce the pollutant loading from the MS4 to receiving waters, and to contribute towards meeting the District water quality standards and the approved Total Maximum Daily Loads (TMDL).

1.3 Limitations of Coverage

The District continues to prohibit, through the implementation of the MS4 Program described in this report, non-stormwater discharges into the MS4. Along with the MS4 Program implementation the District has removed the "waivers and exemption" provision that previously existed in its regulations at 21 DCMR § 528.

1.4 Discharge Limitations

The District continues to manage, implement and enforce a stormwater management program in accordance with all federal and local laws and regulations.

The District will continue to meet the requirements of the Permit, including attaining each annual numeric performance requirement, and making progress toward each five-year numeric performance requirement. Overall, the District has met or is on track to meet the Permit's requirements.

2 LEGAL AUTHORITY, RESOURCES AND STORMWATER PROGRAM ADMINISTRATION

2.1 Legal Authority

As required by Section 2 of the MS4 Permit the District developed and maintains the legal authority to control stormwater pollution within the MS4 drainage area.

The legal authority is established by the following laws and regulations:

- **MS4 Program Activities:**
  - The Comprehensive Stormwater Management Enhancement Amendment Act of 2008, effective July 1, 2009 (D.C. Official Code § 8-151.51 et seq.)
  - The District Department of the Environment Establishment Act of 2005, effective February 15, 2006 (D.C. Law 16-51, as amended; D.C. Official Code §§ 8-151.01 et seq. (2008 Repl. & 2012 Supp.))
  - The Water Pollution Control Act of 1984, effective March 16, 1985 (D.C. Law 5-188; D.C. Official Code §§8-103.01 et seq.(2008 Repl. & 2012 Supp.)), as amended
- **Soil and Sediment Control:**
  - The Water Pollution Control Act of 1984, effective March 16, 1985 (D.C. Law 5-188; D.C. Official Code 8-103.07 et seq. (2008 Repl. & 2012 Supp.))
  - The Soil Erosion and Sedimentation Control Act of 1977, effective Sept. 28, 1977 (21 DCMR §§ 500-507; 21 DCMR §§ 40-48)
- **Illicit Discharge and Dumping:**
  - The Water Pollution Control Act of 1984, effective March 16, 1985 (D.C. Law 5-188; D.C. Official Code 8-103.07 et seq. (2008 Repl. & 2012 Supp.)), as amended
- **Plastic Bag Fee and Enforcement:**
  - The Anacostia River Clean Up and Protection Act of 2009, effective September 23, 2009 (D.C. Law 18-55; D.C. Official Code § 2-1226.51 *et seq*.)
- **Coal Tar-Based Pavement Product Ban:**
  - Comprehensive Stormwater Management Enhancement Amendment Act of 2008, effective July 1, 2009 (D.C. Official Code § 8-151.81)

- **Pesticide and Fertilizer Control:**
  - Section 12(a) of the Pesticide Operations Act of 1977, effective April 18, 1978 (D.C. Law 2-70; D.C. Official Code § 8-411(a) (2001))
  - The Pesticide Education and Control Amendment Act of 2012, effective on October 23, 2012 (D.C. Official Code § 8-431 et seq)
  - Section 103(b)(1)(B)(ii)(II) of the District Department of the Environment Establishment Act of 2005, effective February 15, 2006 (D.C. Law 16-51; D.C. Official Code § 8-151.03(b)(1)(B)(ii)(II) (2012 Repl.))
- **Polystyrene Ban:**
  - The Sustainable DC Omnibus Amendment Act of 2014, effective January 1, 2016 (D.C. Act 20-385)
- **DC Solid Waste Management and Recycling:**
  - Title 21 DCMR, Chapter 7, Chapter 8 and Chapter 20

Further authority is established by the following regulations:

- As required by Section 2.1.2, the District finalized the 2013 Stormwater Management Soil Erosion and Sediment Control (2013 Stormwater Rule) on Friday, July 19, 2013. The 2013 Stormwater Rule amended Chapter 5 (Water Quality) of Title 21 (Water and Sanitation) § 500 to 545 and 599, and §§ 546, 547, and 552 of the District of Columbia Municipal Regulations (DCMR).

- As required by Section 2.1.4 of the MS4 Permit, the District has drafted and amended environmental legislation and regulations to remove barriers to implanting the 2013 Stormwater Rule and other Permit required performance standards.

Additional legal authorities are discussed throughout the report where the activities are addressed.

2.2 Fiscal Resources

The District's Stormwater Permit Compliance Amendment Act of 2000 requires each agency to budget and fund costs for stormwater management activities that they were required to carry out prior to April 20, 2000. Those agencies continue to budget and fund those stormwater management activities listed in Table 1. Additionally, the District coordinates internally to spend special purpose revenue funds and to set the budget. The revenue target set in 2010, at the beginning of the Permit term, is still adequate to meet Permit requirements. The District will reevaluate this analysis for the updated SWMP, which will reflect any changes to the MS4 Program or revenue, required by Section 6.2.1.p of the MS4 Permit.

The Enterprise Fund

As required by Section 2.2 of the MS4 Permit the District has a dedicated funding source for MS4 Permit implementation. The District's Stormwater Permit Compliance Amendment Act of 2000 also established a Stormwater Permit Compliance Enterprise Fund (Enterprise Fund) to

provide revenue to implement and administer activities directly required by the MS4 Permit. The Enterprise Fund generates approximately $13,000,000 per year that is utilized to substantively fulfill the requirements of the MS4 Permit. DDOE will continue current activities to manage stormwater pollution and encourage improved stormwater management techniques. This law also requires District agencies to maintain budget allocations that support baseline levels of effort for activities that control pollution from stormwater discharges from the MS4. This funding is derived from each agency's general obligation budget.

The Anacostia River Clean Up and Protection Fund

The Anacostia River Clean Up and Protection Act (Bag Law) requires all District businesses selling food or alcohol to charge $.05 for each disposable paper and plastic carryout bag. The law allows businesses to keep $.01 (or $.02 if it offers a rebate when customers bring their own bag), and the remaining $.03 or $.04 is deposited in to the Anacostia River Clean Up and Protection Fund. This fund generates approximately $2,000,000 per year and is used to implement watershed education programs, stream restoration, trash retention projects, and to purchase and distribute reusable bags to District residents. Many of these activities also support the Districts compliance with the MS4 Permit.

MS4 Program Budget and Expenditures

The District expends Enterprise Funds, Anacostia River Clean Up and Protection Funds, and general obligation funds to fulfill its FY 2014, see Table 2. DDOE budgets Enterprise Funds solely for activities that are specific to the MS4 Permit compliance. DDOE and other District agencies also allocate additional funds to complete baseline municipal activities that are necessary to control pollution in MS4 discharges. The current level of funding is sufficient to fully comply with the Permit requirements. The Enterprise Fund budget for FY 2015 provides for capital construction costs, operation and maintenance (O&M) of structural controls, and programmatic activities. Table 1 provides a summary of the budget for FY 2015 MS4 Permit-required programs. It is important to note that the budget includes capital funds that are often expended over multiple years. Table 2 provides a summary of the Enterprise Fund expenditures for FY14 for Permit required deliverables. Tables 1 and 2 meet the requirements of Section 6.2.1.k of the MS4 Permit.

Table 1 FY 2015 Budget

Permit Section	Topic	FY 2015 Budget
	General MS4 Permit Management	$3,650,000
4.1	Standard for Long-Term Stormwater Management	$500,000
4.1	Impervious Surface Retrofits, bioretention, green roofs, outfall repairs, tree canopy and other capital investments	$4,270,000
4.1	Green Landscape Incentives / RiverSmart Programs	$3,700,000
4.2	Operation and Maintenance of Stormwater Capture Practices	$500,000
4.3	Management of District Government Areas	$100,000
4.3	Enhanced Street Sweeping	$550,000
4.4	Management of Commercial Institutional Areas	$200,000
4.5	Management of Industrial Facilities and Spill Response	$200,000
4.6	Stormwater Management for Construction Sites	$915,000
4.7	Illicit Discharges and Improper Disposal	$200,000
4.8	Flood Control Practices	$100,000
4.9	Public Education and Public Participation	$950,000
4.1	TMDL Wasteload Allocation Planning and Implementation	$1,700,000
4.1	Trash TMDL Implementation	$600,000
5.1	Revised Monitoring Program	$600,000
5.2	Interim Monitoring	$350,000
Total		**$19,085,000**

Table 2 FY14 MS4 Program Expenditures by Program

Activity	Fund Source	Total
MS4 Monitoring, TMDL development, and IDDE	Stormwater Enterprise Fund	$1,126,972
Construction plan review, construction and maintenance inspection, and restoration project management	Stormwater Enterprise Fund	$830,477
Pubic Space Green Infrastructure Programs and trees	Stormwater Enterprise Fund	$1,850,991
Green Infrastructure Retrofits (nonpublic space) and education	Stormwater Enterprise Fund	$1,514,411
MS4 program administration, program implementation, regulatory development and fee collection	Stormwater Enterprise Fund	$2,093,945
Enhance street sweeping, hazardous waste collection and outreach	Stormwater Enterprise Fund	$537,000
Contracts - TMDL implementation planning, revised monitoring planning, catch basin cleaning, catch basin optimation planning and outfall survey	Stormwater Enterprise Fund	$2,215,253
Other related expenses (legal and office expenses)	Stormwater Enterprise Fund	$368,802
Stream restoration and design	Bag Law Fund	$57,746
Trash reduction, green infrastructure installation and environmental education	Bag Law Fund	$677,959
Total FY14 Expenditures		**$11,273,556**

2.3 Stormwater Management Program Administration and Permitee Responsibility

DDOE was designated by the District Department of the Environment Establishment Act of 2005, D.C. Official Code 8-151.01 *et seq*, as the MS4 Permit Administrator and assumed this responsibility in February of 2007. On February 13, 2009, the District submitted to the United States Environmental Protection Agency (EPA) Region III an application for renewal of its MS4 Permit. A draft of the District's next MS4 Permit was issued on April 19, 2010. The District submitted comments on the draft MS4 Permit for EPA's consideration on June 20, 2010. EPA issued the final permit on October 12, 2011 and became effective on January 22, 2012. On November 9, 2012, EPA finalized limited modifications to the MS4 Permit to (1) provide additional public notice and input on the permittee's development of the Consolidated Total Maximum Daily Load (TMDL) Implementation Plan; (2) clarify and provide accountability for specific water quality-related outcomes, specifically on the content and timelines for the Consolidated TMDL Implementation Plan; (3) clarify that the District is the sole permittee; and (4) clarify that the District needs to notify the public of a sanitary sewer system overflow.

Read more about DDOE's stormwater permit at the following links:

- MS4 Permit Administration, http://ddoe.dc.gov/service/separate-storm-sewer-system-ms4-permit
- MS4 Permit, http://www.epa.gov/reg3wapd/pdf/pdf_npdes/stormwater/DCMS4/FinalPermit2011/DCMS4permit2011.pdf
- Final Signed Limited Modification to the DC MS4 Permit, http://www.epa.gov/reg3wapd/pdf/pdf_npdes/stormwater/DCMS4/MS4FinalLimitedModDocument/FinalSignedDCMS4LimitedMod%2011_9_12.pdf

DDOE partners with the Department of General Services (DGS), Department of Public Works (DPW), Department of transportation (DDOT) and DC Water to implement Permit activities. DDOE has executed independent MS4 MOUs with these agencies which specify activities to be implemented by the agencies as required under the Permit and specify reimbursement amounts for implementation of these activities. Copies of these MOUs are included in Appendix A of this report. An overview of District agency responsibilities for MS4 permit compliance is shown in Table 1. This table summarizes the Matrix of Responsibilities from the MOU executed on December 14, 2000, and updated in 2008, which assigned responsibilities District Agencies for compliance with the Permit. The Matrix of Responsibilities and the 2000 MOU have also been included in Appendix A.

Table 3 Agencies Responsible for District MS4 Permit Compliance

Responsible Agency	Compliance Activity
DDOE	MS4 program administration Source identification Wet/dry weather monitoring program Wet weather screening program Flood control projects review Construction management and plan review Pollutant control from hazardous waste sites Pesticide, herbicide, and fertilizer application Promoting LID practices Illicit discharge detection Sediment erosion control Inspection/enforcement
DC Water	Floatables reduction program Pollution prevention Operation and maintenance of sewer infrastructure Catch basin cleaning Illicit discharge detection
DPW	Street sweeping Seasonal leaf and holiday tree collection program Pollution prevention Household hazardous waste collection De-icing and snow removal Stormwater management at municipal waste transfer stations
DDOT	Pollutant reduction from vehicles and roadways Pollution prevention LID practices in public right-of-way
DGS	LID practices on District-owned properties Pollution prevention
OP	Planning for neighborhoods, public facilities, parks and open spaces, etc. Urban design and land use review

The District has a number of mechanisms in place to ensure that coordination across all agencies with responsibilities to implement Permit provisions occurs. Specifically, DDOE coordinates the District's MS4 Technical Workgroup (TWG) and the cabinet-level Storm Water Advisory Panel (SWAP).

The goal of the SWAP is to improve water quality of the Anacostia and Potomac Rivers through strategic and collaborative implementation of shared responsibilities under the District's MS4 Permit. This is a cabinet-level group of District agencies with stormwater management responsibilities. The SWAP was established by the Comprehensive Stormwater Management Enhancement Amendment Act of 2009 and is chaired by DDOE's Director. SWAP provides a forum for coordinating agency stormwater responsibilities and executive decision-making to overcome obstacles and resolve disputes. The group, which is required to meet at least twice per year, met on June 25, 2014 and September 24, 2014. The TWG is required to meet monthly to provide ongoing, staff-level coordination on stormwater issues.

Every year during the MOU and budget process the District assesses the need to add new agencies and group to the TWG and SWAP. In FY14 no new critical partners were identified. Additionally, DDOE continues to hold quarterly meetings with Non-governmental organizations (NGOs) to discuss partnership opportunities.

3 STORMWATER MANAGEMENT PROGRAM (SWMP) PLAN

The District continues to implement, assess, and upgrade all the controls and management practices described in the MS4 Permit and 2009 Stormwater Management Plan (SWMP). The Consolidated TMDL Implementation Plan, due to EPA in May 2015, will drive the District's determination of any future implementation needs that may need to be addressed in the updated SWMP, a requirement of Section 6.2.1.h of the MS4 Permit. This plan will also establish the framework for tracking the effects of stormwater management in the District, a requirement of Section 6.2.l.j of the MS4 Permit. Section 6.2.1.c of the MS4 Permit requires an assessment of the effectiveness of controls established by the SWMP. This requirement is fulfilled by Tables 9 and 10 which detail pollutant load and stormwater volume reductions.

The District is required by Section 6.2.1.a and Section 3 of the MS4 Permit to comply with all schedules of compliance. Table 4 includes program elements and strategies the District is required to submit to the EPA for review and approval.

Table 4 Stormwater Management Program Submittal Dates

Element	Required Submittal Date	Actual Submittal Date
Anacostia River Watershed Trash Reduction Calculation Methodology	01/22/2013	01/22/2013
Tree Canopy Strategy	01/22/2013	01/22/2013
Catch Basin Operation and Maintenance Plan	07/22/2013	07/05/2013
Outfall Repair Schedule	07/22/2013	07/05/2013
Updated Stormwater Regulations	07/22/2013	07/19/13
Stormwater Retention Standards for Substantial Improvement Projects	07/22/2013	07/19/13
Off-Site Mitigation/ Fee-in-Lieu Program	07/22/2013	07/19/13
Stormwater Management Guidebook	07/22/2013	07/19/13
Retrofit Program	01/22/2014	01/22/2014
Revised Monitoring Program	05/09/2015	Ongoing
Consolidated TMDL Implementation Plan	05/09/2015	Ongoing
Revised Stormwater Management Program Plan for Public Comment	1/22/2015	Ongoing
Final Revised Stormwater Management Program Plan	01/22/2016	Ongoing

At the time of submission of the 2014 Annual Report the District was finalizing a copy of the Draft Revised Stormwater Management Plan (SWMP) for Public Comment. The District will be publishing the Draft SWMP for public comment and as available will be found on the on the DDOE website at www.ddoe.dc.gov. The Public Comment notice will be available on the DC Register at http://www.dcregs.dc.gov/.

4 IMPLEMENTATION OF STORMWATER CONTROL MEASURES

4.1 Standard for Long-Term Stormwater Management

The District continues to implement and enforce a program in accordance with the MS4 Permit and the District Stormwater Management Plan (SWMP). The Stormwater Management Program is using retention practices to reduce stormwater runoff by mimicking natural landscapes through green roofs, bioretention, pervious pavers and other stormwater runoff reducing green infrastructure. The implementation of these activities, policies, and incentive programs are described throughout the 2014 Annual Report.

Table 5 details the District's compliance with the MS4 Permit's numeric performance standards.

Table 5 Numeric Performance Standards and Compliance

Numeric Requirement	Time Period	FY 2014 Achievement	Achievements to Date
Retrofit 18,000,000 square feet of impervious surfaces	Permit term	663,608 square feet	2,347,682 square feet[1]
Retrofit 1,500,000 square feet of impervious surfaces in the transportation right-of-way	Permit term	234,912 square feet	779,142 square feet
Plant 4,150 trees within the MS4 area (net increase)	Annually	6,413 trees	18,578 trees
Install 350,000 square feet of green roofs on District properties	Permit term	148,908 square feet	752,013 square feet
Remove 103,188 lbs. of trash annually from the Anacostia River	By the fifth year of the permit	91,471 pounds	186,960 pounds

1 Discussion on District retrofit program and retrofit calculation is found in Section 4.1.5.4.

4.1.1 Standards for Stormwater Discharges from Development

DDOE finalized the 2013 Rule on Stormwater Management and Soil Erosion and Sediment Control (2013 Stormwater Rule) on Friday, July 19, 2013.

The 2013 Stormwater Rule satisfies the requirements of Section 4.1.1 of the MS4 Permit, which requires the District to implement a 1.2-inch stormwater retention standard for land-disturbing activities, a lesser retention standard for substantial improvement projects, and provisions for regulated sites to satisfy these standards offsite. The 2013 Stormwater Rule also includes the Stormwater Retention Credit (SRC) trading program, which allows property owners to generate and sell SRCs by installing green infrastructure that has the capacity to retain stormwater and thereby reduce the runoff that harms District streams and rivers. More information on the SRC trading program can be found in sections 2.1.2 and 2.1.3 of this report.

To view the 2013 Stormwater Rule and the 2013 Stormwater Management Guidebook (2013 SWMG): http://ddoe.dc.gov/swregs

DDOE continues to hold training sessions for the public, DDOE staff, and sister agency staff.

FY 2015 Goals: Additional trainings for District staff and the public will continue to be held throughout FY 2015.

4.1.2 Code and Policy Consistency, Site Plan Review, Verification and Tracking

As required by Section 4.1.2 of the MS4 Permit, the District has drafted and amended environmental legislation and regulations to remove barriers to the implementation of the retention performance standards. DDOE has also designed the 2013 Stormwater Rule to work in concert with other sustainability initiatives in the District, including OP's development of Green Area Ratio requirements under the zoning code. Along with code and policy revisions, the District maintains a plan review erosion control program for new construction coupled with a field inspection program to ensure compliance with District erosion control and stormwater management regulations.

The Green Area Ratio

The Green Area Ratio (GAR) is a zoning regulation that integrates sustainable landscape elements into parcel site design to promote greater livability, ecological function, and climate adaptation in the urban environment. The GAR sets minimum lot coverage standards for landscaping and site design features in site construction. The GAR assigns a weighted score to a building site based on the types of landscape and site design features that are implemented and the amount of area the features cover. The minimum GAR score needed to reach compliance is determined based on the zoning district of the site. With limited exceptions, sites that require a Certificate of Occupancy must submit a GAR plan as part of the building permit application. These sites include new building construction, additions and interior renovations where the cost of work exceeds 100 percent of the assessed land value. The Green Area Ratio became effective on October 1, 2013. In FY 2014 DDOE held 10 training sessions to the public and agency about the GAR. More information, including the GAR Guidebook and forms, can be found at http://green.dc.gov/GAR.

Green Building Act

The Green Building Act of 2006 requires all non-residential District public buildings to meet the U.S. Green Building Council's LEED certification standards for environmental performance at the "Silver" level or higher. District-owned or -financed residential projects 10,000 square feet or larger must meet or exceed the Green Communities certification standard. Beginning January 2012, all new private development projects 50,000 square feet or larger are required to meet LEED certification at the "Certified" level or higher. More information about the Green Building Act of 2006 can be found at http://green.dc.gov/publication/green-building-act-2006.

Low Impact Development and Green Infrastructure Design Standards

DDOT issued Green Infrastructure (GI) Standards in April 2014 to use on all public and private projects. The DDOT GI Standards include standard designs for bioretention, permeable pavements, and tree space design in the ROW. The DDOT Green Book contains 40 design drawings, 73 pages of material and construction specifications, a 28 page design manual, 33 pages of plant lists for bioretention areas and street trees, and standard maintenance schedules. The illustrated "Greening DC Streets" guide is a non-technical guide to educate residents, leaders, and stakeholders on opportunities and challenges in constructing GI in the District ROW. The standards, guide, and fact sheets on DDOT's projects can be downloaded from www.ddot.dc.gov/greeninfrastructure.

DDOT resolved many challenging design and construction issues in developing the GI standards, but many challenges remain in making GI a standard practice in the streetscape. DDOT established pedestrian safety guidelines around depressed stormwater capture areas in the urban streetscape. Curb wall designs were created to allow depressed planters for stormwater ponding and ensure the street and sidewalk remain stable. Protocols have been established for soil testing to determine infiltration of existing soils, but challenges remain in ensuring proper drainage. Underdrains must be connected to the sewer system through an inlet, manhole, or direct connect, however the sewer authority limits the connection options. DDOT has had difficulty in finding soil suppliers that will provide the bioretention soil mix and testing results per the new specifications. DDOT is validating the GI standards in the RiverSmart Washington project and lessons learned will be incorporated into updated standards and projects. More information about RiverSmart Washington can be found at http://ddot.dc.gov/publication/riversmart-washington.

DDOT offered several training sessions for staff, District agencies, and the public on the new GI standards and how to use them to meet the new stormwater regulations. A full list of FY14 trainings is as follows. In FY15, DDOT will offer additional refresher and full day trainings on the GI standards for design staff and create and offer a new training with DDOE for construction staff.

Training for DDOT Staff, Partner Agencies, & Public on Green Infrastructure Standards in FY 2014

- Trainings for DDOT Design Project Managers & consultant designers on stormwater regulations, GI Standards, and MEP process (October 22, 30, & December 16, 159 attendees)
- Conducted training on DDOT GI Standards for DC Building Industry Association, ABC (Builders & Contractors) and Apartment Owners Association (May 21, 2014)
- "Green Infrastructure (GI/LID) Design Standards" to DDOT Interagency meeting (June 30, 2014) (attendance by: OP, DDOE, NPS, NCPC, CFA, WMATA, DPR)
- Bioretention Maintenance Training Course sponsored by DDOT & offered through University of District of Columbia. Four sessions offered to landscape and maintenance contractors, supervisors, and workers (October 2013, July, August, & September 2014)
- Stormwater Regulations overviews to DDOT Teams
    - Asset Management (October 1, 2013)
    - Urban Forestry (October 8, 2013)
    - Public Space Regulations Administration (January 16, 2014)
    - Progressive Transportation Services Administration (April 2, 2104)

Sustainable DC

Sustainable DC is a planning effort that is led by DDOE and the Office of Planning (OP) and includes the public and subject matter experts to make the District the most sustainable city in the United States. The Sustainable DC Act of 2012 was signed into January 2013 and the Sustainable DC Act of 2014 was signed July 2014. Together, the acts remove obstacles and provide incentives to further the goals and actions in Sustainable DC as well as codify several important subtitles such as launching an environmental literacy program and banning Styrofoam starting in 2016. More information about Sustainable DC can be found at **http://sustainable.dc.gov/**.

Site Plan Review, Verification and Tracking

In FY 2014, DDOE began development of a database to manage submission, review, and inspection of Stormwater Management Plans, Erosion and Sediment Control Plans, and Green Area Ratio Plans. The database will also incorporate all functions of the interim database that has been used for the SRC Trading and RiverSmart Rewards (RSR) programs. As required by Section 4.1.2 of the MS4 Permit this database will track the on-site retention performance of each project subject to the 2013 Stormwater Rule.

Members of the public will use the database to submit information to DDOE as part of the plan review and approval process. The database tracks each site's regulatory obligations and

compliance, including off-site retention achieved with SRCs or payment of the in-lieu fee (ILF). The database is also used to calculate and track discounts in the RiverSmart Rewards program.

Public users may use the database to:

- Submit compliance calculations and other information to support an application for DDOE approval of a Stormwater Management Plan, Erosion and Sediment Control plan, or Green Area Ratio plan
- Comply with an off-site retention obligation by applying to use SRCs or notifying DDOE of an in-lieu fee payment
- Apply to certify, transfer, or retire SRCs
- View the SRC registry
- Apply for a RiverSmart Rewards discount on the District's impervious surface-based fees

After completing applications, public users submit them electronically to DDOE. The database notifies DDOE of new applications. Staff review and make a decision to approve or disapprove each application and the database notifies public users of DDOE's decision.

After developing the database, DDOE held four meetings with a group of project engineers from the development community to test and revise the database. DDOE has also completed an internal testing period. DDOE is incorporating edits and working with a contractor to improve some functions of the database before an open release in FY 2015. More information about the Stormwater Database and trainings can be found at: http://ddoe.dc.gov/swdb.

FY 2015 Goals: DDOE will release the new BMP tracking database in FY 2015. Updates about the operation and implementation of the BMP tracking database will be included in future Annual Reports.

4.1.3 Off-Site Mitigation and/or Fee-in-Lieu

The 2013 Stormwater Rule provides regulated sites with flexible options for meeting regulatory requirements. Under the rule, each major regulated project faces a stormwater retention volume (SWRv) based on either the 0.8 or 1.2 inch storm. After they achieve half of their SWRv onsite, regulated sites may use Stormwater Retention Credits (SRCs) purchased from the private market or pay ILF to meet any remaining retention obligation. Program details are contained in Section 527 and Sections 530 through 534 of the 2013 Stormwater Rule and Chapters 6 and 7 of the 2013 Stormwater Management Guidebook. This meets the requirements of Section 4.1.3 of the MS4 Permit.

In FY 2014, the SRC trading program achieved several milestones. Beginning in January, major regulated projects were required to calculate and provide their SWRv on their stormwater management plans (SWMPs). As a result, DDOE is able to track potential SRCs and off-site retention volume, which could be met through SRCs or payment of in-lieu fee. Further, DDOE certified 51,249 SRCs, the first SRCs in the market, in April 2014 for the retention at four large

rain gardens in northwest DC. The owner sold 11,013 of those SRCs for $2.27 each to a buyer in September 2014, who used the SRCs to meet retention requirements for a charter school undergoing a renovation. The seller and buyer used DDOE's template contract to settle the terms and conditions of the trade and DDOE listed the final price of its SRCs in the SRC Registry. The Registry, as well as other analyses and information on the SRC trading program, are available on an updated SRC Website, http://ddoe.dc.gov/src.

FY 2015 Goals: DDOE expects SRC trades to increase throughout FY2015. In addition, DDOE plans to stimulate transactions through several projects. For example, a purchase guarantee program will provide some sellers with a guaranteed price for their SRCs in order to stimulate supply and then demand. DDOE also continues to provide trainings, assist participants with their SRC applications, and will publish reports on the status of the program and other issues in FY 2015.

4.1.4 Green Landscaping Incentives Program

The District is using a series of stormwater incentive programs to help single-family residents and commercial properties, multi-family residences, schools and churches plan and implement stormwater retrofit projects and increase planted areas. RiverSmart programs are fully funded from local sources, Enterprise Fund or Anacostia Clean Up and Protection Fund. The GAR and DDOE's RiverSmart programs fulfill the requirements of section 4.1.4. Additional information about DDOE's incentive programs can be found at: http://ddoe.dc.gov/riversmart

District green landscaping incentive programs are:

- Green Area Ratio
- RiverSmart Homes
- RiverSmart Schools
- RiverSmart Communities
- RiverSmart Rooftops
- RiverSmart Rebates
- Stormwater Retention Credit Trading
- RiverSmart Rewards

Green Area Ratio

The GAR, a zoning regulation that integrates sustainable landscape elements into parcel site design, became effective on October 1, 2013. Specific information about the GAR can be found in Section 4.1.2.

Specific information about GAR, including the GAR Guidebook, regulations, and score forms are available at http://green.dc.gov/GAR.

RiverSmart Homes

The District recognizes the importance of targeting homeowners for pollution reduction measures because residential property is the largest single land use type in the city and is the slowest of all construction areas to be redeveloped. Since 2008, DDOE has been implementing RiverSmart Homes aimed at single family homes. The program started with eight demonstration sites—one in each ward of the city. It then expanded to a pilot program in the Pope Branch watershed of the city. The RiverSmart Homes Program is now mature and has been operating citywide since summer of 2009. In FY 2014, the program focused outreach efforts in targeted watersheds to increase RiverSmart Homes participation in the neighborhoods adjacent to stream projects. To view information on the RiverSmart Homes Program: http://ddoe.dc.gov/riversmarthomes.

FY 2014 accomplishments include the following[2]:

- Installed 475 rain barrels[3]
- Planted 644 shade trees
- Installed 126 rain gardens[4]
- Implemented Bayscaping at 130 properties
- Installed pervious pavers at 27 properties
- Conducted 1,117 stormwater site audits

RiverSmart Schools

DDOE's RiverSmart Schools Program works with schools to install LID practices to control stormwater. These practices are specially designed to be functional as well as educational in order to fit with the school environment. Additionally, schools that take part in the RiverSmart Schools program receive teacher training on how to use the sites to teach to curriculum standards and how to properly maintain the sites. To view information on the RiverSmart Schools Program: http://green.dc.gov/service/riversmart-schools.

In FY 2014 DDOE completed the construction of five (5) RiverSmart Schools projects. Some highlights of these projects are:

Langdon Education Campus

- Located in the MS4 in the Anacostia River watershed
- Removed imperious channel and installed nine (9) infiltration swales at 132.05 cubic feet each with an underdrain, a 151.30 square foot linear bioretention, and a 2,850 square feet bioretention cell, that will capture and treat the 1.2-inch storm event

2 RiverSmart Homes will have improved tracking in FY 2015 and more precise metrics will be reported in future Annual Reports.
3 RiverSmart Homes rain barrels are assumed to treat 210 sf of rooftop area to the 1-inch level.
4 RiverSmart Homes rain gardens assumed to retain 1 inch of runoff from 450 sf of impervious surface.

- The total combined volume provided is 6,197.35 cubic feet capacity before entering municipal stormwater system
- Completed an outdoor classroom on the campus with seating for 20 students

Maury Elementary

- Located in the CSS in the Anacostia River watershed
- A low-impact development stormwater retrofit consisting of 3,983 square feet of permeable green space that includes a 1,737-square foot bioretention cell to treat runoff from the existing parking and playground area. The bioretention cell is sized to capture and treat the 1.2-inch storm event

St. Columba's Nursery School

- Located in the MS4 in the Potomac River watershed
- Installed several retrofit projects including a 500-gallon cistern capturing runoff from the school building rooftops.an infiltration system (approximately 700 square feet) to treat and discharge the runoff volume generated by the hillside, walkways, and rooftops, and a green roof (approximately 300 square feet) was constructed on top of the storage shed
- The total drainage area is 8,742 square feet with 918 cubic feet volume capacity on site for the drainage area

British School of Washington

- Located in the CSS in the Rock Creek watershed
- Installed a pollinator garden that consist of 174 native plants to help absorb stormwater and create habitat on the schoolyard
- Engaged 3 Watershed Stewards to assist with the conservation landscape project
- Involved 37 students from British School of Washington to participate in the Community Work Days to plant, mulch, and water the native plants that comprise their conservation landscape

Seaton Elementary

- Located in the CSS in the Anacostia River watershed
- Outdoor Laboratory with vegetation planted as food for wildlife with natural grasses and flowers and an edible gardening with raised beds
- Constructed an 8' x 10' shed with connection to a 75 gallons Rainbox

RiverSmart Communities

The RiverSmart Communities program offers technical and financial assistance to multifamily residential properties, houses of worship, commercial properties, embassies and universities to install practices such as rain gardens, Bayscaping, pervious pavement, and rain cisterns to control stormwater pollution. Properties city-wide can apply for a rebate for up to 60% of the project cost for stormwater retrofits. Properties in priority watersheds can apply for design/build assistance and will be required to pay a smaller copayment, approximately 20% of the project cost. FY 2014 accomplishments are summarized in Table 6. View information RiverSmart Communities at http://ddoe.dc.gov/service/riversmart-communities.

Table 6 RiverSmart Communities Projects in FY 2014

Property Name	Watershed	Sewershed	Type of Practice	Total Treatment Area (sq. ft.)	Rain Garden Area (sq. ft.)	Permeable Pavement Area (sq. feet)
Meadowbrook Phase III	Potomac	CSS	Rain Garden	1,823	275	0
Ridgecrest Apartments	Potomac	MS4	Rain Garden	4,078	320	0
Capitol Park IV	Potomac	CSS	Permeable Pavement	820	0	820
Total				**6,721**	**595**	**820**

RiverSmart Rooftops

The District offers rebates for new green roofs on existing buildings of any size and new construction projects that add a green roof that exceeds their requirements for a stormwater management permit. The 2014-2015 green roof rebate program will provide base funding of $10 per square foot, and up to $15 per square foot in targeted watersheds. Based on District stormwater management priorities, DDOE has selected eight (8) areas on which to focus. The targeted sub-watersheds are:

1. Bloomingdale drainage areas
2. Dumbarton Run
3. Hickey Run
4. Nash Run
5. Oxon Run
6. Pope Branch
7. Texas Avenue Tributary
8. Watts Branch

To view a map of the targeted sub-watersheds:
https://www.google.com/maps/d/viewer?msa=0&mid=z7aCcmZk_iH4.kwE_7ZsUWMRo

The 2014 Green Roof Program is administered by the Anacostia Watershed Society for DDOE with funds from the Anacostia River Clean Up and Protection Fund and the Stormwater Enterprise Fund. In FY 2014 60,222 square feet of green roofs were installed through the Green Roof Rebate Program, Table 15. To view information on DDOE's Green Roof Rebate Program go to http://www.anacostiaws.org/programs/stewardship/green-roofs.

Rain Barrel Rebate

Property owners who purchase and install approved rain barrels may apply for $1/gallon rebate. The barrel must hold at least 50 gallons to qualify. The rebate program works well for homeowners interested in alternative rain barrel options from the RiverSmart rain barrel offered

through RiverSmart Homes. Some homeowners also opt for the rain barrel rebates because they want more than two rain barrels (RiverSmart Homes limits homeowners to two per property), or because they are interested in installing rain barrels on their own. In FY 2014 the Rain Barrel Rebate Program installed 99 rain barrels with a total capacity of 6,917 gallons, Table 7.

Table 7 FY 2014 Rain Barrel Rebate Installations

Rain Barrel Model	Number of Barrels	Capacity per Barrel (gallons)	Total Capacity
Aquabarrel Abe	1	80	80
Earth Minded Rain Station	4	60	240
RiverSafe	1	132	132
Terra Cotta Rain Wizard	1	65	65
Savanna Rain Saver	1	55	55
Stoneware Urn	1	50	50
60 Gallon	2	60	120
Upcycle	2	50	100
Build a Barrel with Diverter	1	100	100
500 Gallon	3	500	1500
Rainwater Urn	2	50	100
Home Accents	1	50	50
Palm	1	50	50
DG 55	75	55	4125
Flat Back Whiskey Barrel	2	50	100
Rainwater HOG 51	1	50	50
Total	**99**	**1457**	**6917**

The Rain Barrel Rebate Program includes outreach to advertise the program through traditional channels and through innovative approaches (e.g., partnerships with local hardware stores). Homeowners are eligible to receive up to two rebates per property. The Rain Barrel Rebate Program is administered by the nonprofit organization, DC Greenworks, and paid for through the Enterprise Fund and the Anacostia River Clean Up and Protection Fund. To view information on the Rain Barrel Rebate Program: www.ddoe.dc.gov/service/riversmart-homes-rain-barrels.

Shade Tree Rebate

The Shade Tree Rebate Program provides rebates to individuals who purchase and plant a tree on residential or commercial private property. Small and medium canopy trees are eligible for rebates up to $50 per tree and select species noted for their large canopy and environmental benefits qualify for rebates up to $100 per tree. In FY 2014, 328 trees were planted through the Shade Tree Rebate Program. To view information on the Shade Tree Rebate go to http://ddoe.dc.gov/service/riversmart-rebates.

The Rain Garden, Pervious Paver, and Impervious Surface Removal Rebate Program

The Rain Garden, Pervious Paver, and Impervious Surface Removal Rebate Program is for single-family homeowners in the District. The rebate is based on how many square feet of impervious area a property owner is treating with the rain garden or pervious pavers/impervious surface removal. Impervious areas can either be rooftops or areas that are covered in concrete, asphalt, or other impervious surfaces. The rebate reimburses homeowners $1.25 per impervious square foot treated. The minimum square footage that a property owner must treat is 400 square feet, which would total a $500 rebate. The maximum rebate is $1,000 or treating 800 square feet or more of impervious surface. FY 2014 accomplishments are summarized in Table 8.

In FY2014 DDOE expanded the Rebate Program to offer special incentives to homeowners in the Bloomingdale Sewershed, one of the District's targeted watersheds. Available only to homeowners in fiscal 2014, the rebate program extended a $10/square foot rebate for removing impervious surfaces and replacing them with permeable pavement, or $5 per square foot for impervious surface removal. All rebate offers ended on September 30, 2014.

The program was available to single-family homes, condominiums, co-ops, apartments, locally-owned businesses, and houses of worship within the Bloomingdale Sewershed, and was funded by DC Water and managed by DDOE. The program's higher financial incentive and limited time offering lead to a significant increase in projects completed under the Rain Garden, Pervious Paver, and Impervious Surface Removal Rebate Program. The square footage of treatment area increased from 8,230.5 sq. ft. in FY 2013 to 36,618 sq. ft. in FY 2014.

The program complemented efforts of the Bloomingdale Sewershed Rain Barrel-Cistern Program, which offered a free rain barrel or cistern to help reduce stormwater runoff and reduce potential flooding in the area. The Rain Barrel-Cistern program ended in February 2014.

To view information on targeted incentives in the Bloomingdale Sewershed, visit: http://ddoe.dc.gov/bloomingdalerebates.

To view the Rain Garden, Pervious Paver, and Impervious Surface Removal Rebate application package, visit: http://ddoe.dc.gov/publication/rain-garden-pervious-paver-and-impervious-surface-removal-rebate-application

Table 8 FY 2014 Rain Garden, Pervious Paver, and Impervious Surface Removal Rebate Program Accomplishments

Project Number	Sewer System	Rain Garden Installations	Surface Removal Installations	Pervious Pavers Installations	Installation Date	Area Treated (sq./ft.)
22	MS4		x	x	10/2/2013	1000
19	CSS		x	x	10/9/2013	1282
23	CSS			x	10/3/2013	1235
21	CSS			x	10/3/2013	800
20	CSS		x	x	11/12/2013	900
5-R47	MS4			x	3/24/2014	952
4-R25	MS4	x			4/25/2014	600
5-R26	MS4		x		4/2/2014	495
5-R34	CSS	x			4/24/2014	700
5-R30	CSS	x			5/19/2014	800
5-R59	MS4	x			6/12/2014	670
5-R27	MS4			x	6/18/2014	405
4-R76	CSS			x	6/27/2014	960
3-R80	MS4	x			7/23/2014	465
6-R81	CSS			x	7/17/2014	1,020
5-R35	MS4	x			8/25/2014	460
6-R85	CSS			x	8/25/2014	920
4-R84	CSS			x	9/4/2014	1,290
5-R78	MS4		x		9/4/2014	1,500
1-R86	CSS			x	9/17/2014	880
5-R88	MS4	x			9/10/2014	636

Project Number	Sewer System	Rain Garden Installations	Surface Removal Installations	Pervious Pavers Installations	Installation Date	Area Treated (sq./ft.)
5-R66	MS4	x			9/25/2014	638
24	CSS		x	x	12/3/2013	1,350
	CSS		x	x	3/21/2014	814
1-B32	CSS		x		6/12/2014	412
5-B20	CSS		x	x	7/28/2014	431
1-B24	CSS		x	x	7/1/3014	551
5-B26	CSS			x	8/1/2014	492
5-B27	CSS			x	8/29/2014	640
1-B31	CSS		x	x	8/26/2014	340
1-B33	CSS			x	8/29/2014	4,606
1-B30	CSS			x	8/26/2014	508
5-B34	CSS			x	8/27/2014	530
5-B35	CSS			x	8/27/2014	651
5-B36	CSS			x	8/27/2014	290
5-B41	CSS			x	9/9/2014	558
5-B37	CSS			x	8/29/2014	598
5-B38	CSS			x	9/19/2014	1,038
5-B39	CSS			x	8/29/2014	500
1-B40	CSS			x	8/29/2014	342
1-B28	CSS		x		9/2/2014	143
5-B43	CSS			x	9/9/2014	437
5-B46	CSS			x	9/9/2014	381
5-B47	CSS			x	9/9/2014	345

Project Number	Sewer System	Rain Garden Installations	Surface Removal Installations	Pervious Pavers Installations	Installation Date	Area Treated (sq./ft.)
5-B45	CSS			x	9/8/2014	346
5-B42	CSS		x		7/29/2014	646
5-B44	CSS			x	9/24/2014	493
5-B48	CSS			x	9/12/2014	568
Totals	**11 MS4** **37 CSS**	**8**	**13**	**35**		**36,618** **sq. ft.**

Stormwater Retention Credit Trading

The Stormwater Retention Credit (SRC) Trading Program is an innovative market-based program for managing stormwater in the District of Columbia. The SRC Trading Program allows property owners to generate and sell SRCs by installing green infrastructure that has the capacity to retain stormwater and thereby reduce the runoff that harms District streams and rivers. An SRC is worth one gallon of retention for one year, and regulated development sites buy and use SRCs to meet their regulatory requirements for retaining stormwater runoff. Information on the FY 2014 implementation of the SRC Trading Program can be found in Section 4.1.3 of this report. To view information on the Stormwater Retention Credit Trading Program: http://ddoe.dc.gov/src.

RiverSmart Rewards

DDOE established RiverSmart Rewards (RSR), DDOE's Stormwater Fee Discount Program, on July 19, 2013 upon promulgation of regulations published in 60 DCR 10732, amending Title 21, Chapter 5 to include Sections 557 through 563, and 559.

RiverSmart Rewards offers a discount of up to 55% off the DDOE Stormwater Fee charged on a property's water and sewer utility bill. In order to be eligible for a discount, a property must install and maintain green infrastructure practices that function to retain stormwater runoff. Eligible green infrastructure practices include bioretention, rainwater harvesting, permeable pavement systems, green roofs, and newly planted or preserved trees. All stormwater management practices assigned a retention value in DDOE's 2013 Stormwater Management Guidebook qualify for a discount. Discounts are available for three-year periods and are renewable.

DDOE calculates discounts based on the volume of stormwater retained by eligible green infrastructure practices. The maximum discount of 55% is provided when a property manages

the 1.2" storm event, and the discount is scaled back proportionately for properties that manage less stormwater.

In FY14, DDOE launched a Simple Application available to properties with green infrastructure practices managing stormwater from less than 2,000 square feet of impervious area. Most RiverSmart Homes participants qualify to use the Simple Application. DDOE uses a web-based data management system to track discount applications, approvals, and disapprovals. DDOE also coordinates administration of RiverSmart Rewards with DC Water, which established a discount program on October 1, 2013 for its Clean Rivers Impervious Area Charge (IAC). When a property is approved for a RiverSmart Rewards discount, it is also automatically eligible for DC Water's Clean Rivers IAC Incentive Program. DDOE received 83 discount applications in FY 2014. To view information on RiverSmart Rewards go to http://ddoe.dc.gov/riversmartrewards.

FY 2015 Goals: The District will continue to implement green landscaping incentive programs. This will include all the listed RiverSmart Programs, GAR, SRC and RSR.

4.1.5 Retrofit Program for Existing Discharges

4.1.5.1 Retrofit Plan

DDOE submitted the District's draft Retrofit Plan on January 22nd, 2014. This plan establishes performance metrics that will be utilized to track progress in retrofitting existing impervious surfaces throughout the District, as required by Section 4.1.5.1 of the District's MS4 Permit. These metrics are consistent with the District's stormwater management regulations and guidance document that require development projects to retain stormwater runoff. In addition, these performance metrics present a methodology for crediting the area of retrofits for projects that achieve more or less than the 1.2" retention standard. To view the District's Draft Stormwater Retrofit Plan and calculator utilized to determine retrofit credit: http://ddoe.dc.gov/stormwaterretrofitplan.

4.1.5.2 Federal Facilities

The District does not have jurisdiction over federal lands to require the installation of structural retrofits to control stormwater pollutants that originate on federal lands. However, the District partners with many federal agencies to control stormwater runoff and to protect the Chesapeake Bay.

The EPA Chesapeake Bay Program is active in overseeing all other jurisdictions as they implement the Bay-wide TMDL. They also oversee the Watershed Implementation Plans (WIPs) being implemented by each state and the District of Columbia. The DC WIP outlines all the BMPs and actions that each federal agency committed to perform on their District properties. Many federal agencies have reported making substantial progress on these BMPs, with only a few agencies reporting they lack budget for the activities listed.

Additionally, the District worked with federal agencies, EPA Region III, and the Bay Program to develop and sign an MOU, which commits the signatories to work with DDOE on stormwater-related activities, particularly the items outlined in the WIP.

4.1.5.3 Volume and Pollutant Reductions

DDOE calculated the potential pollutant load and volume reductions achieved through the DC Retrofit Program. Table 9 details the runoff reductions from retrofit projects in the District.

In addition to stormwater runoff volume reductions, DDOE estimated potential pollutant load reductions resulting from these retrofit projects for bacteria (i.e., fecal coliform), nitrogen, phosphorus, suspended solids, copper, lead, zinc, cadmium, and trash, as shown in Table 10. Load reduction estimates for conventional pollutants are based on BMP removal efficiencies contained in the 2005 TMDL Wasteload Allocation (WLA) Implementation Plans for the Rock Creek and Anacostia Watersheds. Load reductions for trash are based on the trash loading coefficients developed for the Anacostia Trash TMDL. These methodologies will be revisited and updated as the District begins to develop its Consolidated TMDL Implementation Plan. For example, estimates for fecal coliform will be updated to estimate *E. coli.* BMP pollutant removal efficiencies will be updated as necessary for other pollutants of concern, as well.

Table 9 Stormwater Retained from Retrofit Projects

Watershed	Impervious Surface Retrofitted (square feet)	Runoff Retained (gallons)
Anacostia	335,672.45	13,676,879.69
Rock Creek	168,012.15	2,056,440.01
Potomac	129,567.40	1,353,380.43
City Wide	35,389.00	1,188,832.24
Total	**668,641**	**18,275,532.37**

Table 10 Pollutant Load Reduction from Retrofit Projects

Watershed	Fecal Coliform	TN	TP	TSS	Cu	Pb	Zn	Trash	Ca
Anacostia	2.12E+12	53.79	8.57	2171.18	1.92	8.75E-01	4.71E+00	1038878.96	9.58E-01
Rock Creek	1.73E+12	32.00	4.86	1242.84	1.03	4.59E-01	2.63E+00	0	5.03E-01
Potomac	3.26E+10	16.96	3.03	752.89	0.79	3.78E-01	1.75E+00	0	4.14E-01
City Wide	2.80E+11	6.97	1.05	268.44	0.22	9.68E-02	5.65E-01	0	1.06E-01
Total	**4.16E+12**	**109.72**	**17.51**	**4,435.35**	**3.96**	**1.81**	**9.65**	**1,038,878.96**	**1.98E+00**

4.1.5.4 Numeric Performance Requirement

In FY 2014, the District retrofitted 668,635 square feet of impervious surface, see Table 12. Since the start of the Permit Term in 2012 the District has retrofitted a total of 2,347,682 square feet of impervious surface. Data reported in Table 12 has been normalized to the 1.2" using the calculator included in the District's Stormwater Retrofit Plan. Table 12 does not include data from projects that are regulated by the District's Stormwater Management Regulations.

Tracking and reporting of retrofit projects under the Stormwater Management Regulations has been limited under the Stormwater Management Database. Once the new BMP Database is fully implemented and populated with historic data Table 12 will be updated.

DDOE is on track to meet the 18,000,000 square foot performance goal. To achieve 18,000,000 square feet of treatment, the District is implementing a wide range of stormwater management controls. Since many of these projects will be large, multi-year capital projects, the amount achieved each year will vary and cannot readily be broken down into an annual goal. The 2013 Rule on Stormwater Management and Soil Erosion and Sediment Control (2013 Stormwater Rule) will be a critical driver of retrofits in the District. The vast majority of development projects in the District involve the redevelopment of existing impervious surfaces. On average, regulated development projects disturb approximately 15 million square feet of land per year. Further, Major Substantial Improvement projects will result in a significant amount of additional stormwater retrofits. The 2013 Stormwater Rule took effect in July 2013 and the District expects to see the retrofit figures increase substantially in the near future. The Performance Standards went into effect in January 2014 for new projects going through the permitting process. The District expects retrofits to increase as projects under these new performance standards are constructed over the remainder of the Permit term. DDOE will continue to report on this Permit requirement in future Annual Reports.

The District covers 39,202 acres with a total of 16,997 acres of impervious cover, Tables 11. Table 11 fulfils the requirements of Section 6.2.1.n of the MS4 Permit. Section 6.2.1.0 requires the District to calculate the effective impervious surface reduced annually through projects that meet the performance standard. The District has created a new BMP tracking database and data is currently being migrated into it. Once the new BMP tracking database has been completely populated the District will report on the requirements of Section 6.2.1.0. Until that time the District will report on the percent of impervious surface reduced annually through the District Retrofit Program. The District continues to report on the number and square footage of practices installed, see Table 12.

Table 11 Total District Land Area by Watershed

Watershed	Land Area (square feet)	Impervious Surface (square feet)	Percent Impervious Surface	Percent of Impervious Surface Reduced Annually through the District Retrofit Program
Anacostia River	768,246,713	342,734,924	44.6	.098
Potomac River	518,360,312	237,976,429	45.9	.054
Rock Creek	421,040,752	159,678,779	37.9	.105
Total	**1,707,647,777**	**740,390,132**	**43.4**	**.257**

Table 12 Completed Retrofit Projects in FY 2014

Projects	Number of Practices	Total size	Impervious Surface Retrofitted (square feet)	Stormwater Runoff Retained (gallons)
Projects in the PROW	NA	234,912.00	234,912	3,421,432
Green Roofs[5]	18	148,908.00	147,233	2,789,374
RiverSmart Homes Rain Barrels[1]	475	99,750.00	98,628	1,934,591
RiverSmart Homes Rain Gardens[2]	126	56,700.00	56,062	1,099,657
RiverSmart Homes Bayscaping	130	58,500.00	57,842	842,454
RiverSmart Homes Permeable Pavers[3]	27	12,150.00	12,013	235,635
RiverSmart Schools Cisterns[4]	1	500 gallon	NA	NA
RiverSmart Schools Bioretention[6]	2	4,585.00	4,782	93,799
RiverSmart Schools Green Roof[5]	1	300.00	286	5,610
RiverSmart Communities Rain Gardens	2	595.00	568	11,141
RiverSmart Communities Permeable Pavers	1	820.00	783	15,359
RiverSmart Impervious Surface Removal Rebates	48	36,618.00	34,970	685,937
Rain Barrel Rebate	99	20,790.00	20,556	403,206
Total	**930**	**674,628.00**	**668,635**	**11,636,800**

[1]RiverSmart Homes rain barrels are assumed to treat 210 sf of rooftop area to the 1-inch level.
[2] RiverSmart Homes rain gardens assumed to retain 1 inch of runoff from 450 sf of impervious surface.
[3] RiverSmart Homes permeable pavers assumed to retain 1inch from retrofitted surface area.
[4] RiverSmart Schools cisterns are 500 gallons.
[5] Green roof calculations assume a 4-inch roof depth and 25 percent porosity for all roofs, for an assumed 1-inch retention capacity.
[6] RiverSmart Schools bioretention cells assumed to retain 1inch from impervious parking lots.

For FY 2014, the following project types were counted towards meeting our retrofit performance standard.

Impervious Surface Removal in the Public Right-of-Way

DDOT's Impervious Surface Removal Project has focused on increasing the green space within the PROW of DDOT roadways. This was accomplished through a combination of practices including tree box expansion, tree box creation, continuous strip creation, and large area greening. DDOT continued the Impervious Surface Removal Project in FY14 at I St NE from 12th St to 14th St, at 8th St, 9th St, & Q St NW, and at 7th St & H St NW. As part of DDOT's sidewalk paving program, impermeable pavement is being replaced with porous flexible rubber sidewalk in areas where tree roots have raised the pavement.

Green Median Renovation

Existing medians that are finished with a hardscape such as brick, concrete or, pavers were renovated by removing this impervious surface, and replacing with a turf or mulched surface and planting street trees. These changes to the streetscape resulted in reductions to the amount of stormwater entering the sewer system and ultimately the District's waterways. The increase in planting locations resulted in an expansion in the Urban Tree Canopy. View information about DDOT's Green Median and Impervious Surface Removal Projects: http://ddot.dc.gov/DC/DDOT/On+Your+Street/Urban+Forestry/ARRA+Projects+to+Enhance+Urban+Tree+Canopy+and+Increase+Green+Infrastructure.

Green Alleys

DDOT's Green Alley Projects are designed to reduce the quantity and improve the quality of stormwater within the District's PROW. Although alleys constitute a significant portion of impervious surface, most do not have stormwater controls, such as water quality catch basins or grate inlets. To mitigate this, Green Alley Projects use sustainable design and LID techniques that reduce the amount of stormwater and pollutants entering the sewer system by increasing water infiltration and treatment on site. The Chevy Chase Green Alley was completed in FY 2014 using pervious concrete in partial and full width sections. A portion of this alley is located in the RiverSmart Washington project area. A list of completed and upcoming Green Alley Projects is available at http://ddot.dc.gov/GreenAlleys.

Green Roofs

Details of the District's green roof installations are outlined in Section 4.1.7 of this report.

RiverSmart Programs

Details of the District's RiverSmart installations are outlined in Section 4.1.4 of this report.

RiverSmart Washington

The RiverSmart Washington project, a public-private sector partnership, is installing practices to reduce stormwater volume runoff in two neighborhoods. Construction started on the joint in

March 2014. The project is constructing bioretention and permeable pavement in streets and alleys of two neighborhoods in the Rock Creek Watershed. The MacFarland Petworth project area in the Combined Sewer System (CSS), is a row home neighborhood with small businesses and a school. The Lafayette Chevy Chase project area in the MS4 area contains medium density residential properties. The RiverSmart project is installing four green alleys, one full width permeable pavement roadway section, 16 permeable paving street parking lanes, 17 bioretention, and planting trees. Permeable pavement is being installed in several street parking lanes and one full section of a local residential roadway to demonstrate the feasibility and durability of permeable pavement use in the road. When RiverSmart Washington is finished in spring 2015, runoff from over six acres of ROW pavement will be retained. The total volume reduction will be monitored and measured in FY15 after construction is complete.

Retrofit Projects in the Public Right-of-Way

FY 2014, DDOT retrofitted 234,912 square feet of impervious surface in the PROW, Table 13. To date 779,142 square feet of the PROW have been retrofitted.

DDOT coordinated with other public and private groups to retrofit PROW areas for stormwater retention. In May 2014, the Golden Triangle Business Improvement District completed the 19th St NW bioretention areas at the intersection with L St NW. A bioretention on each of four corners collects street and sidewalk runoff and serves as a high profile demonstration project in the dense downtown neighborhood and high volume business district.

DC Water installed 14 bioretention areas along Irving St NW in the CSS area to retain street runoff and help mitigate flooding in the Bloomindale neighborhood.

DDOE managed the Broad Branch Stream Restoration project which included bioretention areas to retain runoff from alleys adjacent to the stream.

In FY14, DDOT completed several LID/GI retrofit design projects that will be constructed in FY15. These retrofit sites include East Beach Drive NW, Fitch Pl NE, Erie St SE, and Ft Dupont St SE using bioretention areas, bumpouts, and permeable pavements. The Q St Green Alley at 45th St will be constructed with bioretention planters and permeable pavers. The Normanstone Drive LID retrofit design is completed, but construction is on hold.

DDOT has been increasing use of stormwater treatment, retention, LID, and GI in major road construction projects. DDOT projects are being reviewed for GI retrofit opportunities and for compliance with new regulations. Several projects in design and construction in FY14 are subject to the pre-2013 stormwater regulations. In FY14, the 11th St Bridge project constructed two stormwater management ponds to meet the water quality treatment requirements. Of the three remaining bioretention areas in the 11th St Bridge project, two were replaced with Stormceptors due to contaminated soil and one will be constructed in FY15.

DDOT has several projects that completed design in FY14 and will start construction in FY15 which were not required to meet the new stormwater regulations. The Klingle Trail project includes a permeable pavement trail and several bioretention areas and swales to capture runoff before it flows into Klingle Run. Minnesota Ave NE will have multiple blocks with stormwater

planters in the streetscape to reduce and treat runoff in the Watts Branch watershed. The intersection redesign at 15th St, V St, & W St NW includes several bioretention planters and bumpouts to reduce runoff into the CSS. The Florida Ave NW project between U St and Sherman Ave includes several bioretention areas, larger tree soil volumes, and reduced impervious surface in this CSS neighborhood to mitigate flooding.

Several new design projects are required to meet the new stormwater regulations and are following the maximum extent practicable (MEP) process. The following projects started design in FY14 and will continue design in FY15: Oregon Ave NW, Virginia Avenue Tunnel street restoration, and Anacostia Streetcar Line Northern Terminus. The following projects developed concept plans in FY14 based on the MEP requirements and design build contracts will be awarded in FY15 to complete the plans: South Capitol St Bridge Phase 1 & 2 and the South Capitol St Trail. Overall, the DDOT Stormwater team assisted or reviewed 27 DDOT design and planning projects for stormwater retention opportunities or compliance with the new stormwater regulations.

Table 13 Completed Retrofit Projects in the PROW

Site Name	Sewershed	Watershed	Type (treatment or storage)	Impervious Area Treated (square feet)	Impervious Area Treated (acres)
I Street NE 1200 - 1300 Blocks	CSS	Anacostia	Paving Removal, tree box expansion, & street tree planting	2,751	0.06
8th, 9th and Q Street NW	CSS	Anacostia	Paving Removal, tree box expansion, & street tree planting	4,180	0.10
7th and H Street NW	CSS	Potomac	Paving Removal, tree box expansion, & street tree planting	249	0.01
Flexipave sidewalk Installations	Citywide	citywide	Permeable Paving	35,140	0.81
Bloomingdale Irving St GI 1	CSS	Anacostia	Bioretention	5,427	0.12
Bloomingdale Irving St GI 2	CSS	Anacostia	Bioretention	4,541	0.10
Bloomingdale Irving St GI 3	CSS	Anacostia	Bioretention	7,289	0.17

Site Name	Sewershed	Watershed	Type (treatment or storage)	Impervious Area Treated (square feet)	Impervious Area Treated (acres)
Bloomingdale Irving St GI 4	CSS	Anacostia	Bioretention	2,010	0.05
Bloomingdale Irving St GI 5	CSS	Anacostia	Bioretention	4,322	0.10
Bloomingdale Irving St GI 6	CSS	Anacostia	Bioretention	8,206	0.19
Bloomingdale Irving St GI 7	CSS	Anacostia	Bioretention	19,004	0.44
Bloomingdale Irving St GI 8	CSS	Anacostia	Bioretention	0	0.00
Bloomingdale Irving St GI 9	CSS	Anacostia	Bioretention	7,707	0.18
Bloomingdale Irving St GI 10	CSS	Anacostia	Bioretention	13,631	0.31
Bloomingdale Irving St GI 12	CSS	Anacostia	Bioretention	15,890	0.36
Bloomingdale Irving St GI 13	CSS	Anacostia	Bioretention	7,135	0.16
Bloomingdale Irving St GI 14	CSS	Anacostia	Bioretention	6,150	0.14
Bloomingdale Irving St GI 15	CSS	Anacostia	Bioretention	4,833	0.11
Broad Branch Daylight project stormwater facility # 1	MS4	Rock Creek	Bioretention	36,193	0.83
Broad Branch Daylight project stormwater facility # 2	MS4	Rock Creek	Bioretention	10,867	0.25
Green Alley Quesada, Rittenhouse	MS4	Rock Creek	Permeable Paving	19,178	0.44
19th St & L St NW - Golden Triangle BID	CSS	Potomac	bioretention (4 facilities)	20,000	.46
2033 G St NW - George Washington University	CSS	Potomac	tree space expansion	210	.0048
TOTAL				234,912	5

4.1.5.5 Substantial Improvement Projects

As part of the 2013 Stormwater Rule, finalized on July 19, 2013, the District created the regulatory mechanism that will implement a stormwater retention performance standard for substantial improvement projects. The stormwater retention performance standards will be triggered by two different categories of projects:

A) Sites that disturb 5,000 square feet (SF) or more of land will be required to retain the stormwater from a 1.2 inch storm, either on site or through a combination of on-site and off-site retention. The disturbance of 5,000 SF of land has been the trigger under the stormwater management regulations established in 1988. These projects are referred to as major land-disturbing activities.
B) Major substantial improvement projects, which are renovations of existing structures that have a combined building and associated land disturbance that is 5,000 SF or more and for which the project cost exceeds 50% of the pre-project value of the structure, will be required to retain the volume from a 0.8 inch storm. This is a new trigger.

More information about the 2013 Stormwater Rule can be found at http://ddoe.dc.gov/swregs.

4.1.5.6 District-Owned Properties

As required under Section 4.1.5.6 of the MS4 Permit DDOE continues to work with the DGS Office of Sustainability and Energy Management to identify retrofit project opportunities, as well as to incorporate LID into new construction. DGS staff participates in monthly MS4 TWG meetings, and the Director of DGS is a member of the SWAP.

FY 2015 Goals: DDOE will continue to fund and install LID throughout the District through various programs. Additionally, the District will track and report retrofit installations and progress towards meeting the District's performance goal of retrofitting 18,000,000 square feet of impervious surface. DDOT will monitor and measure the total volume reduction after RiverSmart Washington construction is complete. Construction will begin at East Beach Drive NW, Fitch Pl NE, Erie St SE, and Ft Dupont St SE using bioretention areas, bumpouts, and permeable pavements. The Q St Green Alley at 45th St will be constructed with bioretention planters and permeable pavers. The Normanstone Drive LID retrofit design is completed, but construction is on hold. In FY 2015, DDOT will design neighborhood wide GI retrofits in the Klingle watershed to complement the Klingle Trail project and in the LeDroit Park area to mitigate flooding. DDOT will expand the Green Alley program and design several sites city wide. Design will start on GI retrofits in the ROW in Alger Park NE, Oregon Ave NW watershed, and Dix St NE.

4.1.6 Tree Canopy

4.1.6.1 Tree Canopy Plan

In January 2013, DDOE and DDOT's Urban Forestry Administration (UFA) published the District's Draft Urban Tree Canopy Plan for public comment in the D.C. Register. In March 2013, DDOE and UFA had a conference call with EPA Region III where EPA provided initial feedback to the plan. During this conference call EPA Region III stated that they would also

provide written comments. The District agreed to respond to EPA and other stakeholder comments by incorporating appropriate changes to the Draft Urban Tree Canopy Plan and creating a response document to each comment received. DDOE has received comments from EPA. To view the Draft Urban Tree Canopy Plan: http://ddoe.dc.gov/treecanopyplan.

4.1.6.2 Tree Planting in the District

In an effort to improve air and water quality, reduce the urban heat island effect, and offset greenhouse gas emissions, the District has adopted a 40 percent tree canopy goal. Currently, UFA plants and maintains the District's street trees. DDOE, with help from nonprofit partners such as Casey Trees and Washington Parks and People, plants trees on private, federal, and other District lands. Additionally, DDOE offers a rebate to District homeowners who wish to plant a tree from the approved species list. To view information about UFA's Tree Planting Program seehttp://ddot.dc.gov/node/509082-ufa. To view information about DDOE's Shade Tree Rebate Program see http://green.dc.gov/service/riversmart-homes-shade-tree-planting.

As required by Section 4.1.6.3 of the MS4 Permit Table 14 documents tree planting efforts in FY 2014. Appendix B includes a map of FY 2014 citywide street tree planting.

Research estimates that street tree annual survival rates ranged from 94 to 97 percent. Based on this research the District is assuming a 5 percent mortality rate. Using this assumption, the District has achieved a net increase of 11,013 trees in FY 2014 with a net increase of 6,413 in the MS4.

Table 14 Trees Planted by Program for FY 2014

Program	Trees Planted Districtwide	Trees Planted in MS4 Area
RiverSmart Homes Tree Planting	634	NA
Casey Trees Tree Planting	1,539	1,326
UFA Districtwide Tree Planting	8,796	5,138
Tree Rebates	322	NA
Stream Restoration Tree Planting	273	273
Washington Parks and People Tree Planting	29	13
Total Trees Planted	**11,593**	**6,750**
Net Trees Planted[1]	**11,013**	**6,413**
Estimated Annual Stormwater Volume Reduction (gallons)[2,3,4]	11,804,835	7,235,325

1 5% tree mortality rate
2 1 inch of rainfall per acre is equal to 27,000 gallons of stormwater
3 Assumed 39.7 inches of average rain fall per year
4 CWP credits a 10% reduction in stormwater from tree cover

According to the 2013 Tree Report Card (the most recent report) by Casey Trees, the District tree canopy has currently been assessed at 36 percent. DDOE and UFA are currently building capacity to track tree mortality and replacement tree survival. This will help the District meet its tree canopy goals.

FY 2015 Goals: For FY 2015, DDOT has committed to plant 10,000 street trees across all eight Wards. Through its RiverSmart Homes and Tree Rebate programs, DDOE anticipates the planting of over 1,000 trees on private property in the District. Finally, DDOE will be undertaking two stream restoration projects which will also involve planting hundreds of trees.

Additionally, as part of Sustainable DC initiative the District complete tree-planting plans for schoolyards and public parks for these funds. The Sustainable DC Act of 2013 requires payment to immediately offset the destruction or removal of a tree. This change will allow the District Government to plant replacement trees on public space throughout the city to more rapidly replace lost trees and help achieve the citywide 40% tree canopy goal.

4.1.7 Green Roof Projects

4.1.7.1 Structural Assessment

In FY 2014 DGS completed a draft DC Smart Roof Cost-Benefit Report that estimates the costs and benefits of applying cool, green, or solar roofs on District owned buildings. The final report with be included in a future Annual Report.

4.1.7.2 Green Roof Installations

The District continues to aggressively retrofit existing rooftops and install new green roofs on District building. In FY 2014, the District installed:

- 148,908 square feet of green roofs Districtwide
- 18,089 square feet of green roofs were installed in the MS4 area
- 60,222 square feet of green roofs through the RiverSmart Rooftops Program
- 752,013 square feet of green roofs have been installed since the start of the Permit term
- 2,789,374 gallons of stormwater retained through green roof installations

4.1.7.3 Green Roof Tracking

DDOE continues to track green roof projects as required by Section 4.1.7.3 of the MS4 Permit. DDOE is regularly updating the database as additional green roofs are installed and verified through our inspection program. Table 15 has a detailed summary of District green roof installations in FY 2014.

Table 15 Summary of District Green Roof Installations Completed in FY 2014

Watershed	Sewershed	Project Name	Ownership	Size (square feet)	Green Roof Rebate Program
Potomac	CSS	Georgetown Post Office	Private	1,050	N
Anacostia	MS4	Howard University	Private	2,142	Y
Potomac	CSS	Potomac Plaza	Private	20,919	Y
Potomac	CSS	CSIS	Private	3,682	Y
Anacostia	CSS	American Psychological Association	Private	2,603	Y
5000 Overlook Ave SW		Fort Reno Reservoir	DC Water	42,390	N
Anacostia	CSS	Washington Gateway	Private	15,400	N
Anacostia	CSS	residential	Private	133	Y
Anacostia	CSS	Northwest One	Private	11,875	N
Anacostia	MS4	Friendship School	Municipal	7,478	Y
Anacostia	CSS	Carlos Rosario Intl. School	Private	3,500	N
Potomac	CSS	GWU - MISPH (950 NH Ave NW)	Private	5,860	Y
Anacostia	MS4	DCPCA		8,469	Y
Anacostia	CSS	United Methodist - General Board of Church and Society	private	6,800	Y
Anacostia	CSS	The Harper	Private	3,516	N
Rock Creek	CSS	Raymond Rec Center	Municipal	5,540	N
Anacostia	CSS	77 H	Private	5,415	N
Rock Creek	CSS	IMF Concordia	Private	2,136	Y
Total size (square feet)				**148,908**	
Total size in MS4 (square feet)				**18,089**	
Total installed through Green Roof Rebate Program (square feet)				60,222	
Total size normalized to 1.2" using the Draft Stormwater Retrofit Plan Calculator (square feet)				142,207	

FY 2015 Goals: DDOE will continue tracking, inspecting and funding green roof installations throughout the District of Columbia. DGS and DDOE will continue to report on the progress of the green roof structural assessment grant and meeting the green roof numeric requirement of the MS4 Permit.

4.2 Operation and Maintenance of Stormwater Capture Practices

4.2.1 District-Owned and Operated Practices

District included operation and maintenance requirements for retention practices and non-retention BMPs in the updated 2013 Stormwater Management Guidebook (2013 SWMG), which was finalized in July 2013. The 2013 SWMG is available at http://ddoe.dc.gov/swguidebook.

DDOE has held several sessions specifically for District staff. Agencies that have participated in these trainings include DDOE, DDOT, DGS, DCRA, DC Water, and DHCD. In FY 14, these trainings included:

- Two trainings on the MEP process for reconstruction of the PROW for roadway reconstruction projects
- Three sessions on general compliance with DDOE's stormwater regulations

DDOE also holds recurring meetings and training for DDOE staff, including plan reviewers and inspectors. This In FY 14, DDOE held 16 internal training sessions. DDOE plan reviewers meet regularly to discuss issues in the implementation of the regulations and receive training on topics including compliance calculations and unusual site conditions.

DDOE began development of a database to manage submission, review, and inspection of Stormwater Management Plans, Erosion and Sediment Control Plans, and Green Area Ratio Plans. The database will also incorporate all functions of the interim database that has been used for the SRC Trading and RiverSmart Rewards (RSR) programs. DDOE has previously submitted documentations regarding the functions and elements of the BMP database.

Members of the public will use the database to submit information to DDOE as part of the plan review and approval process. The database tracks each site's regulatory obligations and compliance, including off-site retention achieved with SRCs or payment of ILF. The database also calculates and tracks discounts in the RiverSmart Rewards program, inspection reports, as well as keeps an inventory of all practices on private property.

Public users may use the database to:

- Submit compliance calculations and other information to support an application for DDOE approval of a Stormwater Management Plan, Erosion and Sediment Control plan, or Green Area Ratio plan

- Comply with an off-site retention obligation by applying to use SRCs or notifying DDOE of an in-lieu fee payment

- Apply to certify, transfer, or retire SRCs
- View the Stormwater Retention Credit (SRC) registry
- Apply for a RiverSmart Rewards discount on the District's stormwater impervious fees

After completing applications, public users submit them electronically to DDOE. The database notifies DDOE of new applications. Staff review and make a decision to approve or disapprove each application and the database notifies public users of DDOE's decision.

After developing the database, DDOE held four meetings with a group of project engineers from the development community to test and revise the database. DDOE has also completed an internal testing period. DDOE is incorporating edits and working with a contractor to improve some functions of the database before an open release in FY 2015.

The District has expanding educational training for District agency employees, particularly with regard to Stormwater Pollution Prevention techniques and good housekeeping training.

FY 2015 Goals: DDOE has schedule additional training for District staff. These include training on BMP design, one-on-one "office hours" with DDOE staff for engineers who are developing Stormwater Management Plans, and training on the use of DDOE's Stormwater Management Database.

4.2.2 Non-District-owned and Operated Practices

As stated in Section 4.2.1, DDOE included operation and maintenance protocols in Chapter 5 of the 2013 SWMG, see http://ddoe.dc.gov/swguidebook.

Information about the electronic inventory of practices on private property can be found in Section 4.2.1. The new Stormwater Management Database is how the District will track non-district owned practices. All non-District properties are subject to inspection through DDOE's inspection and enforcement program. More information about DDOE's inspection and enforcement program can be found in Section 4.6.

FY 2015 Goals: DDOE will launch the updated BMP tracking database in early FY 2015.

4.2.3 Stormwater Management Guidebook and Training

On July 19, 2013 DDOE released the 2013 Stormwater Management Guidebook (2013 SWMG), which provides technical guidance on complying with the 2013 Stormwater Rule, as required by Section 4.2.3.1 of the MS4 Permit. The SWMG is available at ddoe.dc.gov/swregs. The webpage also contains a link to downloadable versions of several spreadsheets developed to assist with determining project compliance, and calculating SRCs that a project could earn. The available spreadsheets include the "General Retention Compliance Calculator" tool, a series of worksheets for the application and review of the proposed Maximum Extent Practicable (MEP) for the reconstruction of existing PROW, and an SRC Calculator to be used by SRC trading program participants.

As required by Section 4.2.3.2 of the Permit, DDOE holds training sessions for the public and District staff. DDOE also sends out updates to the stormwater stakeholder list of over 900 engineers, nonprofits, utilities, and government agencies. Information and schedules for upcoming Stormwater Guidebook training: http://green.dc.gov/node/619262

FY 2015 Goals: DDOE has committed to ensuring that interested stakeholders have the opportunity to participate in training sessions and will continue to add trainings based on stakeholder and public interest. A list of upcoming trainings can be found at http://green.dc.gov/node/619262.

4.3 Management of District Government Areas

4.3.1 Sanitary Sewage System Maintenance Overflow and Spill Prevention Response

As required by Section 4.3.1 of the MS4 Permit DC Water continues to implement an effective response protocol for overflow events. This protocol includes:

- Investigating complaints received within 24 hours of the incident report as outlined in the DC Water Emergency Command Center procedures and required by the DC Water All-Hazard Initial Response Actions Plan (2010).
- Responding within two hours to overflows for containment. Instructions on overflow response is located in the DC Water Sewer Emergency Containment Plan (2013) and DC Water All-Hazard Initial Response Actions Plan (2010).
- Notifying appropriate sewer and public health agencies within 24 hours when the sanitary sewer overflows to the MS4. Agencies are notified within 24 hours (per permit requirements) as identified in the DC Water Sewer Emergency Containment Plan (2013), DC Water Crisis Communication Plan, and the DC Water All-Hazard Initial Response Actions Plan (2010).
- Notifying the public in a timely and effective manner in the event of a discharge into the MS4 that may adversely affect public health. The procedures for notification are contained in the DC Water Crisis Communication Plan.

Due to confidentiality restrictions, the District cannot submit DC Water's All-Hazard Response Action Plan and Crisis Communication Plan at this time. However, these documents will be made available for review during the next EPA inspection and audit.

FY 2015 Goals: The District and DC Water will continue to coordinate to implement the provisions of Section 4.3.1 of the MS4 Permit. DC Water will continue to maintain a response and notification protocol.

4.3.2 Public Construction Activities Management

The District continues to comply with the construction and development requirements outlined in Section 4.3.2 of the MS4 Permit. Details of the construction management program are found in Section 2.6 of this report.

4.3.3 Vehicle Maintenance / Material Storage Facilities / Municipal Operations

Pollution Prevention

DDOE increased efforts to provide assistance to District agencies, including material storage facilities and equipment storage, in developing Stormwater Pollution Prevention Plans (SWPPPs) to better address spills and contingencies at their facilities. In 2012 DDOE created a staff position to focus on pollution prevention training and implementation. Since then, DDOE has held 17 training sessions for 101 staff at various levels that represented 6 agencies and 76 facilities. DDOE has also worked with sister agencies to develop, implement and update SWPPPs for appropriate facilities. Currently, two agencies have completed SWPPPs and a remaining four agencies will complete their plans in FY15. DDOE is also working with sister agencies to develop a self-inspection and reporting process to assure on-going compliance with pollution prevention practices. The District's Office of the City Administrator facilitated a meeting with agency directors on September 24, 2014 to assure agency commitments to finalize and implement SWPPPs.

DDOE has also improved the database that tracks the inspection of sister agencies to assure that facilities are inspected and maintained.

District Fleet

DPW elected to purchase alternative fuel vehicles (AFVs) to reduce particulate vehicle emissions that contribute to stormwater runoff, Table 17.

Table 16 District Alternative Fuel Vehicles Fleet

Vehicle	Number of DPW Maintained Vehicles	Other Agency Maintained Vehicles (MPD, DCPS, FEMS, WASA)	Totals
Biodiesel	895	836	1,731
E85	647	97	768
Natural Gas	154	45	202
Hybrid	97	3	100
Total	**1,820**	**981**	**2.801**

FY 2015 Goals: DDOE will establish a schedule to inspect municipal vehicle maintenance, material storage, and operations facilities. DDOE will work with District agencies to finalize or

update SWPPPs for DGS, DC Water, DCHA, DPW, and DDOT. DPW will continue to maintain and purchase additional AFVs as needed.

4.3.4 Landscape and Recreation Facilities Management, Pesticide, Herbicide, Fertilizer and Landscape Irrigation

On May 30, 2014, DDOE published a Notice of Proposed Rulemaking for the District of Columbia Pesticide Operation Regulations in the *D.C. Register*. This Draft rulemaking implements the provisions of the Pesticide Education and Control Amendment Act of 2012 and amends and reorganizes the District's existing pesticide regulations. The public notice is available at http://green.dc.gov/page/public-comments-district-columbia-pesticide-operation-regulations.

As required by Section 4.3.4.1 of the MS4 Permit, the District has an Integrated Pest Management (IPM) and Nutrient Management Program that is intended to inform the public on the proper use and disposal of pesticides and the use of safer alternatives. DDOE's RiverSmart Homes and RiverSmart Communities programs provide educational materials designed for homeowners and property managers. These programs encourage IPM at all project sites.

Additionally, the District has several laws and guidance documents pertaining to IPM:

- 20 DCMR Section 2215 of the District of Columbia Pesticide Operation Regulations requires District agencies to utilize an integrated pest management policy to reduce pesticide application on public rights-of-way, parks, District-occupied buildings, and other District property, as required by the District's MS4 Permit (Notice of Proposed Rulemaking, 61 D.C. Reg. 5432. (May 30, 2014))

- The Anacostia Waterfront Environmental Standards Amendment Act of 2012 (D.C. Official Code§ 2-1226.36(b)(4)) requires regulated projects in the Anacostia Watershed Development Zone (AWDZ) governed by this legislation to receive a DDOE-approved IPM Plan

- The Sustainable DC Act of 2012 (D.C. Official Code § 8-104.01 *et seq.*), which included The Anacostia River Clean Up and Protection Fertilizer Amendment Act of 2012

- The Pesticide Education and Control Amendment Act of 2012 (D.C. Official Code § 8-431 et seq), which became effective on October 23, 2012

- Appendix R of the 2013 Stormwater Management Guidebook provides the guidelines for implementing the IPM for regulated projects in the AWDZ. Appendix R is available at http://ddoe.dc.gov/sites/default/files/dc/sites/ddoe/publication/attachments/Appendix%20R%20%20Integrated%20Pest%20Management.pdf

Additionally, as required under Section 4.3.4.1 of the MS4 Permit, the District trains and certifies pesticide applicators, inspects sales and distribution establishments of pesticides, and monitors for the presence of pesticides in water bodies.

DDOE's Pesticide Management Program trains commercial applicators in the legal and safe appliance of pesticides and herbicides. Commercial applicators must receive a certification through the program to legally apply pesticides and herbicides in the District. DDOE is responsible for developing, updating, and administering examinations to qualified applicants for certification as pesticide applicators in The District.

DDOE is also responsible for regulating worker protection, ensuring compliance of both District and Federal laws, and inspections of workplaces, worksites, and retail establishments that sell, store, or use pesticides within the District. DDOE conducts inspections of retailers, wholesalers, and distributors of pesticide products not registered in the District or with the EPA, pesticides suspected of being shipped or distributed in violation of the District Pesticide Operations Act, pesticides displayed for sale in a manner to endanger human health and for pesticides that have been suspended or cancelled by the EPA.

The District waters are tested regularly for the presence of pesticides, herbicides, and fertilizers. Pesticides are monitored as part of DDOE's overall wet and dry weather stormwater sampling and analysis program. In previous years, pesticides have been detected in some of the samples collected from outfalls. When pesticides are found in monitoring samples, the Illicit Discharge Detection and Elimination (IDDE) Program is notified and an inspection is conducted.

As required by Section 4.3.4.2 of the MS4 Permit, District agency staff coordinate on the use of pesticide use. DGS maintains a plan to incorporate IPM on school properties. The Healthy Schools Act of 2010 requires the establishment of IPM in the DC Public Schools, under Title V, Sec. 501 (a)(1)(D). Implementation of this law requires coordination between DGS, DCPS, and pest control specialists.

As required by Section 4.3.4.3 of the MS4 Permit, the District regularly partners with outside organizations and jurisdictions to ensure pesticide and fertilizer use does not impact water quality. DDOE's RiverSmart Homes Program is a public-private partnership that aims to reduce stormwater runoff that harms the District's waterways and the Chesapeake Bay. RiverSmart Homes is a partnership between DDOE and non-profit groups, including Casey Trees, DC Greenworks, the Alliance for Chesapeake Bay, and District homeowners. RiverSmart programs provide financial incentives to help District property owners install green infrastructure, such as rain barrels, green roofs, rain gardens, permeable pavement, shade trees, and more. RiverSmart program encourages native planting and minimizing the use of herbicides, pesticides, and fertilizers that are typical in conventional landscaping. RiverSmart Homes has created a factsheet that describes the impact of fertilizer use on water quality and provides alternative options for home owners.

Additionally, through the Metropolitan Washington Council of Governments and the Chesapeake Bay Program's Urban Stormwater Workgroup, the District collaborates with other organizations in the region to discuss programs and measures to effectively limit the use pesticides and fertilizers.

As required by Section 4.3.4.4 of the MS4 Permit, the District provides incentives and education to curb the use of turf-grass fertilizer. The Sustainable DC Act of 2012, which included The Anacostia River Clean Up and Protection Fertilizer Amendment Act of 2012 (D.C. Official Code § 8-104.01 *et seq.*), established buffer zones around streams and rivers, as well as other limiting factors regarding where and when turf grass fertilizer can be applied. The legislation also requires retail establishments that sell fertilizer for turf to prominently display educational information. Additionally, the legislation requires the development of a public education program that shall include the dissemination of information regarding nutrient pollution, soil testing, proper interpretation of fertilizer label instructions, and the proper use and calibration of fertilizer application equipment, best management practices for fertilizer use in the urban landscape, the requirements of the legislation, and the effects of fertilizers on the Chesapeake Bay and its tributaries.

DDOE's RiverSmart Homes Program also educates residents about the benefits of native plants and Bayscaping and provides incentives for their installation. RiverSmart Homes improves District waterways by encouraging homeowners to install green infrastructure, which minimizes the use of herbicides, pesticides, and fertilizers that is typical in conventional landscaping. More information can be found at http://ddoe.dc.gov/sites/default/files/dc/sites/ddoe/publication/attachments/BayScaping%20JG.pdf

The District's existing geographic information system (GIS) layers contain data that can be used to identify and prioritize potential target areas for addressing pesticide and fertilizer use. These areas include District parks, institutional areas (such as college and university campuses), and transportation corridors (such as railroads). DDOE will develop an outreach and implementation strategy to address pesticide and fertilizer application in these areas and will provide details in its updated SWMP. This activity is progress towards meeting the requirements of Section 4.3.4.5 of the MS4 Permit.

The above detailed implementation activities summarize and explain how the District is meeting the requirements of Section 4.3.4 of the Permit.

FY 2015 Goals: DDOE will work with relevant sister agencies to include Integrated Pest Management as part of their overall SWPPPs.

4.3.5 Storm Drain System Operation and Management and Solids and Floatables Reduction

As required by Section 4.3.5 of the MS4 Permit, the District continues to conducts routine catch basin cleaning and repair activities and floatables removal.

Catch Basin Cleaning and Outfall Repair

There are approximately 25,000 catch basins located within the public right-of-way in the District. Approximately 19,674 catch basins are in the MS4 area, with the remainder in the CSC

area. DC Water conducts the operation and maintenance of pipes and conduits carrying stormwater flow and does not differentiate between the two systems for maintenance purposes and works to keep all catch basins clean.

FY 2014 catch basin cleaning and repair activities:

- DC Water cleaned 29,313 catch basins
- DC Water repaired 422 catch basins

The number of catch basins cleaned and repaired has remained relatively constant since FY 2004. Figure 1 shows the eleven-year trend for the cleaning and repair of the District catch basins.

Section 4.3.5 of the MS4 Permit requires the District to ensure that each catch basin in the MS4 area is cleaned at least once annually. Since DC Water manages and implements the catch basin maintenance program citywide, they do not track and distinguish between catch basins in the separate and combined sewer areas. In FY14, DC Water performed 29,313 individual catch basin clean-outs, and there are approximately 25,000 catch basins throughout the District. These numbers are more than adequate to ensure that each catch basin in the District was cleaned at least once. DC Water is developing and testing a mobile application to track catch basin cleaning in the field and improve the accuracy of these records. Information on the development of this mobile application will be included in future Annual Reports.

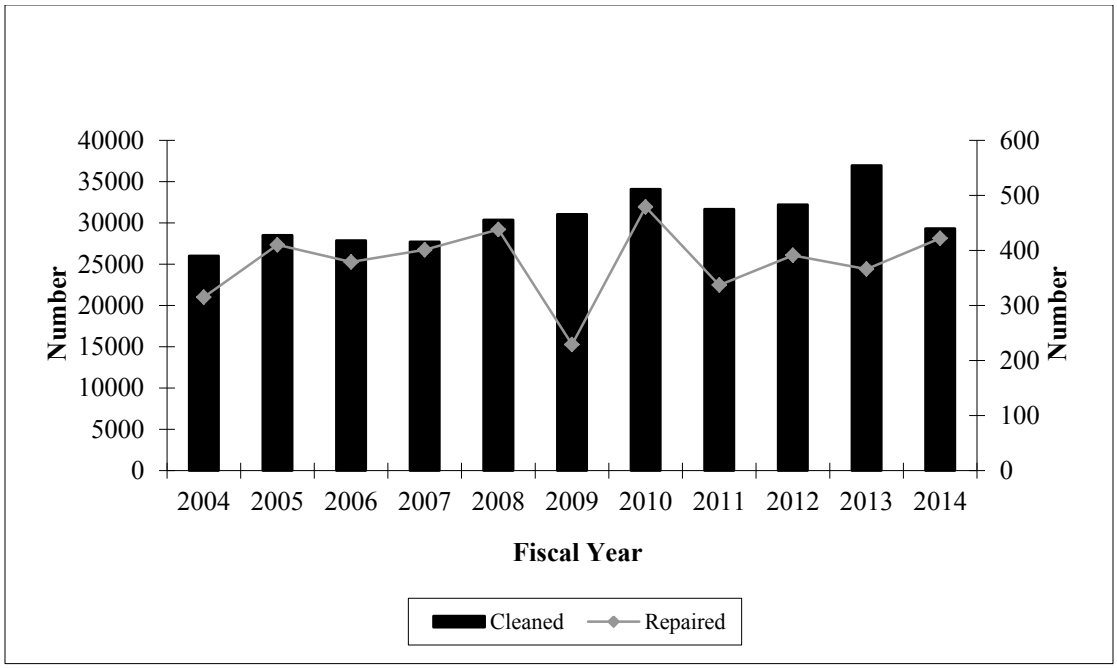


Figure 1 Number of Catch Basins Cleaned and Repaired

As required by Sections 4.3.5.1 and 4.3.5.3 of the MS4 Permit, in July 2013 DDOE and DC Water submitted an Optimal Plan for Catch Basin Cleaning, Inspection, and Repair Report and an Outfall Repair Schedule and Report to EPA Region III. These documents were posted to the DC Register for public comment and submitted to EPA for review and approval. Upon EPA approval of the deliverables, the District will begin implementing the recommendations of the plans.

- To view information about DC Water's catch basin repair and cleaning activities: http://www.dcwater.com/wastewater_collection/catch_basin.cfm.
- To View the Optimal Catch Basin Cleaning, Inspection, and Repair Report: http://ddoe.dc.gov/draftcatchbasinreport
- To View the Draft Outfall Repair Schedule and Report: http://ddoe.dc.gov/draftoutfallreport

Floatables Reduction

DC Water continues to conduct the floatables reduction program utilizing skimmer boats on the Potomac and Anacostia Rivers. Activities to remove floatable debris and trash from the rivers as well as accumulated trash on river banks continue five days a week using skimmer boats and support boats. In FY 2014, DC Water removed 500 tons of debris. Since 2003, DC Water's skimmer boats have removed a total of 6,696 tons of debris from the Anacostia River. Figure 2 shows the 12-year trend of floatables tonnage removed from the District's rivers.

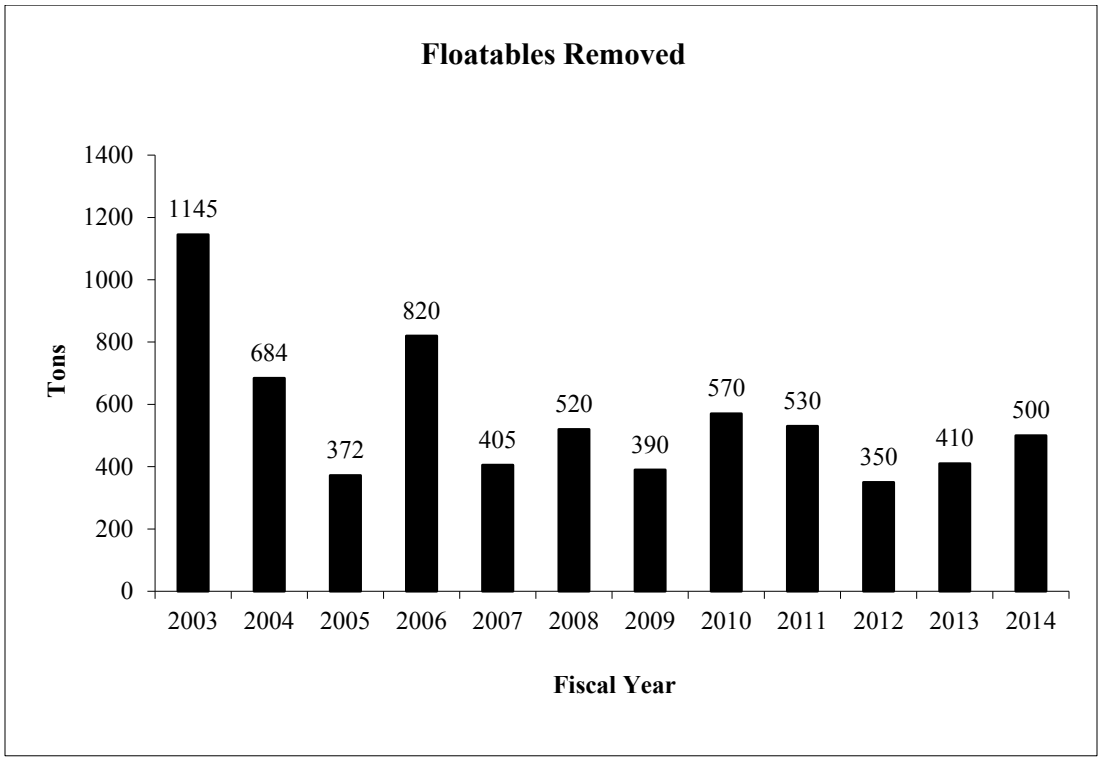


Figure 2 Trend in Floatables Removed

Trash TMDL Compliance

As required in Section 4.3.5.4 of the MS4 Permit, the District continues to comply with the Anacostia River Trash TMDL. Implementation activities can be found in section 2.10.1 of this report.

FY 2015 Goals: DC Water will continue to conduct the floatables reduction program on the Potomac and Anacostia River. Catch basin cleaning and outfall repair activities will also continue. . The District will fully implement the Catch Basin Optimization Plan upon the Plan's final approval by EPA.

4.3.6 Streets, Alleys, and Roadways

Street Sweeping
DPW is responsible for street sweeping activates in the District. DPW uses two basic methods to clean and sweep streets: mechanical street sweeping and litter vacuum personnel, complimented by truck crews that clean streets where the density of parked cars prohibits the effectiveness of mechanical cleaning. Table 17 illustrates the 14-year trend of street sweeping and litter receptacle activities.

In 2014 the District swept 1,526 acres of streets: 677 acres in the MS4 area and 663 in the CSS. A total of 1,609 tons of material were removed through daytime operations. Appendix C details the DPW street sweeping data for FY 2014. Street sweepers are deployed to residential, industrial, and environmental hotspot areas, as well as the Central Business district and arterial/highway routes at or above the frequencies indicated in Table 3 of the MS4 Permit. This report indicates that the District met the schedule specified in MS4 Permit Section 4.3.6.1, Table 3. To view information about DPW's Street Sweeping Program: http://dpw.dc.gov/page/street-and-alley-cleaning.

Table 17 DPW Street Sweeping and Debris Collection Activities

Fiscal Year	Streets Swept (miles)	Alley Segments Swept	Number of Litter Receptacles Cleaned	Litter and Debris Collected (tons)
2001	34,000	8,751	4,000	3,400
2002	74,490	16,400	4,000	8,920
2003	102,181	41,238	4,050	9,516
2004	103,163	13,354	4,050	9,346
2005	91,649	20,897	4,050	7,755
2006	72,468	3,781	4,200	6,632
2007	68,189	5,944	4,324	6,388
2008	64,955	4,181	4,445	7,411
2009	62,972	3,550	4,445	7,883
2010	87,837	2,397	4,445	7,834
2011	80,489	2,842	4,600	7,872
2012	82,240	3,647	4,600	6,851
2013	88,705	5,543	5,000	6,509
2014	69,076	5,694	5,000	7,225

Snow and Ice Removal

As required by Section 4.3.6.4 of the MS4 Permit, the District implements a snow removal and deicing program operating plan to ensure safe passage on its roadways using deicing materials that provide the minimum impact practicable to the storm water runoff from snow and ice that enters the MS4. In FY 2012, DPW assumed responsibility for the District's snow removal and deicing program, which had previously been coordinated through DDOT. In FY 2014, The District received 32 inches of snow and mobilized trucks 28 times based on weather predictions.

As required by Section 4.3.6.3, the District investigates and implements techniques to reduce the impacts from deicing salts and salt storage. The District continues to research and utilize the most efficient and environmentally friendly de-icing products. The main tool utilized by DPW for snow and ice control is sodium chloride (rock salt). DPW expanded the liquid pretreatment of bridges and roadways to include agricultural products, such as beet juice, which helps to melt snow and ice. This allows DPW to treat the roads and bridges before the precipitation and

provides a safer roadway surface. The goal of the beet juice pretreatment is to reduce salt usage and find alternatives for de-icing products or additives, to reduce corrosion on bridges and equipment, and protect the environment. DPW has expanded the use of Pet Safe Salt on all District bridge sidewalks. DPW has 12 liquid spray trucks, 300 pieces of snow removal equipment, and a computerized brine making machine that mixes the materials. The District has 60,000 gallons of storage capacity.

The District has studied the use of permeable surfaces that require less use of deicing materials. There are many studies that have examined the performance of pervious pavement compared with conventional pavement in cold climates. The general consensus is that pervious applications show less buildup of ice and snow because of their ability to infiltrate precipitation that falls on it. The District used this research in its decision to implement the use of permeable pavement in the RiverSmart Programs.

Section 4.1.5 of the Annual Report details the use of permeable materials in Green Alleys, RiverSmart Homes, RiverSmart Washington, and RiverSmart Communities. As previously stated, RiverSmart Washington is a multi-agency project to install LID neighborhood-wide on public and private lands to measure stormwater runoff volume reduction. The RiverSmart Washington projects and DDOT's Green Alleys program represent the first significant installations of porous and permeable materials in the public right-of-way.

DDOT is implementing post-construction monitoring to study the long-term effects of the RiverSmart Washington projects. Porous materials are one of the many types of BMPs installed as part of this project. Completion of these projects will begin to provide a suitable baseline to conduct the evaluation of the relationship between porous and permeable surfaces and use of deicing materials.

The District operates five salt storage facilities that contain 38,000 tons of rock salt. At all of the facilities, the runoff is controlled by a stormwater management facility to reduce the amount of pollutants. Four of the five facilities are located within the MS4 area.

The locations of the four facilities inside the MS4 area are (1) Potomac Avenue and R Street SW, (2) 3815 Fort Drive NW, (3) 401 Farragut Street NE, and (4) underneath the Key Bridge. At each facility, the salt is stored in covered domes, and stormwater is managed with BMPs and good housekeeping practices Facility staff clean salt spills and ensure salt is kept four feet from entrance doors.

As required by Section 4.3.6.4 of the MS4 Permit, the District continues to maintain a program that prevents excessive quantities of snow and ice from entering District water bodies. Yearly, the District conducts a Snow Plow Driver Training Program that stresses the importance of sensible salting and proper calibration of spreaders. This program consists of a classroom training that every District snow plow driver must attend. Additionally, DPW is updating the citywide Snow Removal Plan and expects it to be completed in the winter of 2014/2015. The current version of the District's Snow Removal Plan was provided in response to records request during EPA's May, 2013 inspection of the District's MS4 stormwater program.

If the District needs to haul snow due to major snow falls, DPW would utilize Lots 6, 7 and 8 of Robert F. Kennedy Memorial (RFK) Stadium, located in Ward 7. The District utilizes a strategy to minimize the impact of snow removal and stockpiling operations. This includes sweeping the storage area prior to the snow event, installing silt fence along the downside of the parking lots, and keeping catch basins clean and open.

FY 2015 Goals: DPW is continuing to expand the use of liquid applications, Snow Plow Driver Training Program, and use of Automated Vehicle Location (AVL) technology to better manage District resources. DPW continue to stress to all of the snow team about environmental concerns related to snow and ice removal and we continue to search for alternative products to reduce salt usage. Additionally, the District will continue to report on the implementation of permeable materials in future Annual Reports.

4.3.7 Infrastructure Maintenance / Pollution Source Control Maintenance

DDOE maintains a database of industrial, commercial, institutional, municipal, and federal facilities within the MS4 area. Included in this database are 20 municipal facilities identified as critical sources of storm water pollution. DDOE WQD conducts a minimum of two inspections of each municipal facility within the MS4 permit term to ensure compliance with maintenance standards, best management practices, the facility SWPPP and self-inspection and monitoring requirements, and proper record keeping. Within FY14 DDOE WQD conducted an inspection of 14 of the 20 municipal facilities identified and conducted several follow-up inspections to resolve deficiencies identified during the original inspections. At each site, DDOE inspects control strategies for protecting water quality, including good housekeeping practices, containment structures, pretreatment devices, sediment and erosion control devices, and other BMPs. Inspectors evaluate the effectiveness of the control strategies and document deficiencies for follow-up using standard forms based on facility type.

4.3.8 Public Industrial Activities Management / Municipal and Hazardous Facilities

No District owned facilities within the MS4 area have individual NPDES permits. In addition no District owned facilities currently have coverage under the NPDES Multi Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP). Currently, District Municipal facilities are covered and inspected under the District's MS4 Permit. District facilities that require MSGP coverage will pursue coverage after EPA issues a final updated MSGP.

EPA maintains sole enforcement authority over MSGP. DDOE received EPA grant funding in FY 2013 for staff and resources to conduct compliance evaluation inspections of MSGP facilities. With this funding, DDOE has begun implementing a program to inspect the MSGP facilities twice within the MSGP permit cycle. A complete list of MSGP facilities located within the District is found in Appendix D. A list of facilities with permit coverage in the District is available at http://www.epa.gov/reg3wapd/npdes/dcpermits.htm.

FY 2015 Goal: The District will obtain coverage under individual permits or MSGP for any industrial activity as appropriate and when a revised MSGP is available.

4.3.9 Emergency Procedures

The District did not conduct repairs of public service systems or infrastructure as part of any emergency circumstance that caused an upset of District Water Quality Standards. In FY 2014 there were no emergencies as defined by 40 C.F.R. 122.41(n). However, the District did respond to several IDDE emergencies as reported in Section 4.7.

FY 2015 Goals: The District will continue meet the requirements of Section 4.3.9 of the MS4 Permit.

4.3.10 Municipal Official Training

As required by Section 4.3.10 of the MS4 Permit the District continues to implement a training program for District staff who manage, investigate or work on stormwater practices regularly attend relevant trainings. Specifically, the District has taken significant steps to enhance its pollution prevention program since the current Permit was issued and has offered numerous targeted training sessions for municipal facility staff in categories 7–13, as identified in Permit Section 4.3.10. The District has also provided staff trainings in categories 1–9 and 14–16 with numerous training sessions during and after the development of the District's 2013 Stormwater Management Rule and Guidebook. Specific information about District trainings for the 2013 Stormwater Rule and Guidebook can be found in Section 2.1.3 of this report.

DDOE offers the general public many options for training on its stormwater regulations. Trainings are advertised to DDOE's stormwater stakeholder list of over 900 engineers, nonprofits, utilities, and government agencies. In FY 14, DDOE held 39 public training sessions on its stormwater regulations, the SRC program, and the GAR program. These trainings include:

- Eight training on general compliance with DDOE's stormwater regulations
- Three trainings sessions on detailed compliance with DDOE's stormwater regulations including site constraints and large storms
- Two trainings on the MEP process for reconstruction of the PROW for roadway reconstruction projects
- Three trainings on the MEP process for reconstruction of the PROW for parcel-based projects
- Twelve training sessions on the SRC program, RiverSmart Rewards program, and use of DDOE's online application system
- One training session on the RiverSmart Rewards program
- Ten trainings on the Green Area Ratio program

Public training sessions are also open to District staff. However, DDOE has also held several sessions specifically for other agencies. Agencies that have participated in these trainings include DDOT, DGS, DCRA, DC Water, and DHCD. In FY 14, these trainings included:

- Two trainings on the MEP process for reconstruction of the PROW for roadway reconstruction projects
- Three sessions on general compliance with DDOE's stormwater regulations

DDOE also holds recurring meetings and training for DDOE staff, including plan reviewers and inspectors. In FY 14, DDOE held 16 internal training sessions. DDOE plan reviewers meet regularly to discuss issues in the implementation of the regulations and receive training on topics including compliance calculations and unusual site conditions.

Additionally, DDOT performs outreach to technical peer groups at meetings and conferences, both locally and nationwide. As part of project development, DDOT meets with residents and neighborhood groups to inform them of project design and construction plans. In 2014, DDOT began regular project update meetings in each ward of the city. DDOT presented the goals of the Green Infrastructure program and plans for ward projects at these meetings. The full list of technical meetings and outreach presentations is below.

- RiverSmart Washington project update meetings
  - MacFarland/Petworth area at Petworth Library (March 18, 2014)
  - Lafayette/Chevy Chase area at Chevy Chase Library (March 20, 2014)
  - Lafayette/Chevy Chase area at Quesada St & 33rd St NW (September 3, 2014)
- LID Retrofits Project updates
  - Fitch Pl project to ANC-7C (October 10, 2103).
  - Ft Davis project to residents at Francis Gregory Public Library (November 19, 2013)
  - Erie St SE project to ANC-8B (February 18, 2014)
  - East Beach Drive LID project to North Portal Estates Community Meeting (May 28, 2014)
- "LID Projects" at DDOT Project Updates meetings
  - Ward 7 (March 7, 2014)
  - Ward 8 (March 26, 2014)
- Stormwater overview to 2nd grade class at Capital City Public Charter School. (November 19, 2014)

FY 2015 Goals: DDOE has already scheduled many more training opportunities in FY 15, and is adding new training topics. These include training on BMP design, one-on-one "office hours" with DDOE staff for engineers who are developing Stormwater Management Plans, and training on the use of DDOE's Stormwater Management Database, which will be launched in FY 15.

4.4 Management of Commercial and Institutional Areas

As required by Section 4.4 of the MS4 Permit the District's inspection and enforcement program utilizes established policies and procedures to effectively limit and reduce the discharge of pollutants in stormwater from all industrial, commercial, institutional, municipal, and federal facilities within the MS4 area. These facilities are inspected a minimum of twice each permit

term under DDOE's inspection and enforcement program and tracked via the MS4 Tracking Database. The inspections of all MS4 facilities are conducted by trained DDOE staff. Control measures identified at these facilities are documented by inspectors and include good housekeeping practices, containment structures, pre-treatment devices, sediment and erosion control devices, and other large best management practices. The condition and effectiveness of the control measures are also documented during these inspections. If an inspection of an MS4 facility identifies an ineffective control measure or an imminent threat to water quality, DDOE inspectors require immediate corrective action through varying approaches: compliance assistance, site directive, notice of violation, and possibly notice of infraction.

Additionally, the District's Stormwater Management Guidebook provides the procedures for managing stormwater. The Stormwater Management Guidebook can be found at **http://ddoe.dc.gov/swguidebook**.

4.4.1 Inventory of Critical Sources and Source Controls

DDOE continues to maintain a database of critical sources of stormwater pollution. DDOE Water Quality Division (WQD) maintains a database of industrial, commercial, institutional, municipal, and federal facilities within the MS4 area. Commercial and institutional facilities identified within this database include automotive repair facilities, automotive fueling stations, automotive wash facilities, dry cleaners, and other facilities deemed as sources of stormwater pollution. DDOE WQD identified 132 commercial and institutional critical sources stormwater pollution within the District's MS4 area during FY 2014. This includes 79 automotive repair and fueling facilities, 4 auto wash facilities, 21 dry cleaners, and 28 other facilities that have been deemed a critical source by the District.

4.4.2 Inspection of Critical Sources

DDOE maintains an inspection and enforcement program to address sources of stormwater pollution within the MS4 area of the District. During FY 2014 the DDOE MS4 Inspection and Enforcement Program inspected 100% of the 132 commercial and institutional facilities identified by the MS4 facilities database. These inspections are documented with facility specific inspections forms and recorded in the MS4 Inspection Tracking Database. DDOE took appropriate enforcement actions to ensure compliance with the District's MS4 Permit.

All facilities on the critical source inventory are inspected at a minimum of twice per Permit term. During the inspections, control strategies for protecting water quality, including good housekeeping practices, containment structures, pre-treatment devices, sediment and erosion control devices, and other best management practices are inspected and documented. The effectiveness of the control strategies is evaluated and deficiencies are documented for follow-up.

Further, in FY 2014 DDOE improved its established inspection policies and procedures by implementing a mobile application, which utilizes rugged computer tablets that are enabled with global positioning system (GPS) software. This new program has created an automated database of inspection data and enabled inspectors to track and query specific controls on site, and will

allow access to complete inspection records from the field. This state-of-the-art customized software application is now used to conduct MS4 facility inspections, storm sewer outfall inspections, and illicit discharge investigations. This increased field capability will help ensure complete, effective, and consistent inspections. After critical sources are inspected they are tracked to verify that inspections occurred via the MS4 Tracking Database, which was provided to EPA and can be found in the EPA's Inspection Report Appendix 6.

4.4.3 Compliance Assurance

DDOE inspects each facility identified on the critical source inventory at a minimum of twice each during the permit term and are tracked to verify that inspections are occurring. Inspectors document control measures identified at these facilities, including good housekeeping practices, containment structures, pretreatment devices, sediment and erosion control devices, and other large BMPs. Inspectors also document the condition and effectiveness of these control measures.

FY 2015 Goals: The District will continue to inspect, track, and report on critical sources as required by the MS4 Permit.

4.5 Management of Industrial Facilities and Spill Prevention

The District continues to implement a program to monitor and control pollutants from Industrial facilities within the MS4.

DDOE maintains a database of industrial, commercial, institutional, municipal, and federal facilities within the MS4 area, as required by Section 4.5.2 of the MS4 Permit. The industrial facilities identified by the database covered under NPDES individual and general permits are inspected as part of DDOE's NPDES Inspection and Enforcement Program. The database includes 27 facilities covered by the 2008 NPDES Multi-Sector General Permit, 5 Major Individual NPDES Permitted facilities, and 6 Minor Individual NPDES Permitted facilities.

As part of the Inspection and Enforcement program WQD conducted Compliance Evaluation Inspections (CEI) of all 11 Individual NPDES permitted facilities within the District. WQD also conducted a CEI of 6 of the NPDES Multi-Sector General Permit facilities. A CEI is conducted to verify permittee compliance with regulations, permit conditions, applicable permit self-monitoring requirements, effluent limits, compliance schedules, and the current SWPPP. Additionally, the program reviews facility DMR's for compliance with established effluent limits and the District Water Quality Standards.

Industrial facilities identified by the MS4 facilities database and not covered under NPDES are inspected as part of the MS4 Inspection and Enforcement program. These facilities include, but are not limited to industrial facilities subject to SARA, EPCRA Title III, and RCRA requirements. In the event either of the inspection and enforcement programs identifies a facility that requires coverage under a NPDES permit, recommendations regarding the facilities permit status are referred to USEPA Region III.

The US EPA issues the NPDES permits in the District. The list of can also be found at http://www.epa.gov/reg3wapd/npdes/dcpermits.htm.

In accordance with the Permit, the District tracks industrial facilities within the District that are subject to regulation under the CERCLA. CERCLA status is not permanent, as the sites are cleaned up, they are moved off the active list. The list includes private and Federal sites.

Table 18 List of DC Sites with an EPA CERCLIS ID

EPA CERCLISID	Site Name	Federal Facility
DCN000306845	AARON'S CLEANERS	N
DCN000306920	APPALACHIA RISING SITE	N
DCN000306864	BAPTIZED BELIEVERS CHURCH	N
DCN000306840	BELAIR CLEANERS	N
DCN000306846	CAPITAL CLEANERS	N
DCD024224545	CENTURY DRY CLEANERS	N
DCN000305704	DIAMOND ORDNANCE FUZE LAB	Y
DCN000306926	FLORIDA AVENUE DUMP	N
DC8210021004	FORT MCNAIR	Y
DCD981042179	FRENCH'S DRY CLEANERS	N
DCN000306664	GEORGIA AVENUE PCE SITE	N
DCN000306842	GOODY CLEANERS	N
DCR000501270	GSA-SAINT ELIZABETH'S WEST CAMPUS	Y
DCSFN0305462	KENILWORTH PARK LANDFILL SITE	N
DCN000306844	LEON'S NEW SYSTEM DRY CLEANERS	N
DCN000306843	LONG BROTHERS CLEANERS	N
DCN000306847	MAGIC CLEANERS	N
DCD982566127	NAYLOR VALET CLEANERS	N
DCD003254273	NPS - ANACOSTIA PARK SECTIONS E & F	Y
DCD983967951	PEPCO BENNING ROAD FACILITY	N
DCN000305662	POPLAR POINT NURSERY	Y
DC0001401637	SEAFARERS YACHT CLUB ER	N
DCN000306928	SMITHSONIAN INSTITUTE-NATURAL HISTORY BUILDING	Y
DC8470090004	SOUTHEAST FEDERAL CENTER (GSA)	Y
DC9751305997	ST ELIZABETH'S HOSPITAL	N

EPA CERCLISID	Site Name	Federal Facility
DCN000306841	THE LAUNDRY BASKET	N
DCN000306885	UNITY HEALTH CARE CLINIC - WATER CONTAMINATION SITE	N
DC5570024443	USAF BOLLING AIR FORCE BASE	Y
DC7120507432	USDA NATIONAL ARBORETUM	Y
DCN000305585	VERMICULITE VPC1	N
DC4210021156	WALTER REED ARMY MEDICAL CENTER	Y
DCD983971136	WASHINGTON D.C. CHEMICAL MUNITIONS SITE (SPRING VALLEY)	N
DCN000306000	WASHINGTON DC MERCURY INCIDENT	N
DCD077797793	WASHINGTON GAS LIGHT SITE	N
DC9170024310	WASHINGTON NAVY YARD	Y
DCD982567414	Z CLEANERS	N

Based on data extracted from the online EPA CERCLIS database on November 2014 (www.epa.gov.enviro).

DDOE continues to conduct inspections to determine compliance with hazardous waste regulations. DDOE conducted inspections at RCRA Large Quantity Generator (LQG), Small Quantity Generator (SQG), and Conditionally Exempt Small Quantity Generator (CESQG) facilities. HWD conducted 50 inspections in FY 2014.

As required by Section 4.5.3 of the MS4 Permit the District continues to provide on-site assistance and inspections focused on the development of pollution prevention plans and permit compliance.

The District has focused efforts on District Government staff training and awareness of pollution prevention requirements and has continued to improve interagency coordination. In 2012 DDOE created a position to focus on pollution prevention training and implementation. Since then, DDOE has held 17 training sessions for 101 staff at various levels that represented 6 agencies and 76 facilities, see the Pollution Prevention Training Log in Appendix F. DDOE has also worked with sister agencies to develop, implement and update SWPPPs for appropriate facilities. Currently, two agencies have completed SWPPPs and a remaining four agencies will complete their plans in FY15. DDOE is also working with sister agencies to develop a self-inspection and reporting process to assure on-going compliance with pollution prevention practices. The District's Office of the City Administrator facilitated a meeting with agency directors on September 24, 2014 to assure agency commitments to finalize and implement SWPPPs.

DDOE inspectors provide onsite compliance assistance to facility staff through the MS4 Inspection and Enforcement Program. Additionally, Appendix Q of the 2013 SWMG provides guidance on good housekeeping practices to prevent potential construction site pollutants from interacting with stormwater.

Appendix Q of the 2013 SWMG can be found at:
http://ddoe.dc.gov/sites/default/files/dc/sites/ddoe/publication/attachments/Appendix%20Q%20%20pollution%20Prevention%20Through%20Good%20Housekeeping.pdf

As required by Section 4.5.4 of the MS4 Permit the District continues to refine and implement procedures to investigate facilities suspected of contributing pollutants to the MS4. DDOE utilizes established policies and procedures to effectively limit and reduce the discharge of pollutants in stormwater from all commercial and industrial facilities within the MS4. These policies and procedures are outlined in the Illicit Discharge Detection and Elimination Program Inspection and Enforcement Strategy, Appendix E. DDOE enforcement procedures are addressed in *The Environmental Enforcement Guidelines*, see Appendix G. This document details the written enforcement strategy outlining how enforcement actions, such as violation notices, notices of infraction, and stop work orders, are issued and adjudicated. The strategies outlined in the manual provide the standard operating procedures for inspection and enforcement efforts within the District.

The program implementation activities in Sections 4.5 of the Annual Report address the District's requirements of section 4.5.6 of the MS4 Permit the Clean Water Act.

FY 2015 Goals: The District will continue to implement the provisions of Section 4.5 of the MS4 Permit. Additionally, In FY15 Stormwater Pollution Prevention Plans will be updated or completed for applicable facilities.

4.6 Management of Construction Activities

As required by Section 4.6.1 DDOE maintains a plan review and erosion control program for new construction, which coupled with a field inspection program, ensures compliance with the District erosion control regulations. DDOE reviews construction and grading plans for stormwater management, erosion and sediment control, and flood plain management considerations. As required by EPA, regulated projects in the District must have SWPPPs that "identify all potential sources of pollution which may reasonably be expected to affect the quality of stormwater discharges from the construction site."

In FY 2014, DDOE accomplished the following:

- Reviewed 2,153 stormwater management plans (SWM) and erosion and sediment control plans (ESC)
- Approved 1,705 SWM plans and ESC plans

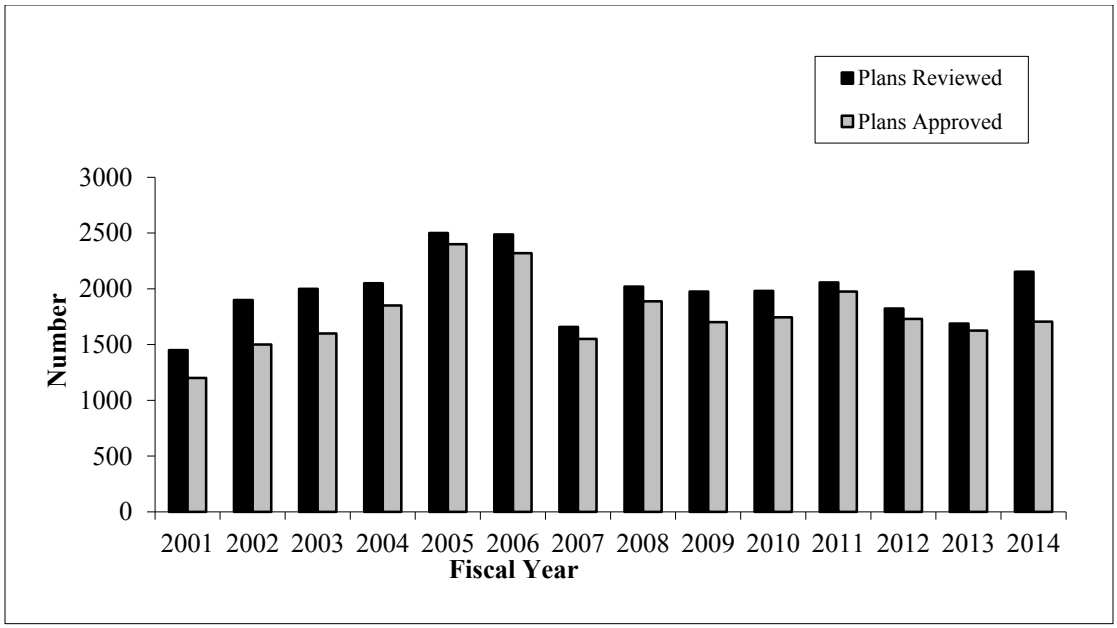


Figure 3 Total Number of Plans Reviewed and Approved Over Time

DDOE's construction site inspection program meets the required inspection frequency specified in Section 4.6.3 of the Permit. DDOE inspectors are authorized to conduct on-site inspections for all stormwater management facility construction in the District. The building permit holder is required to contact DDOE's Inspection and Enforcement Branch 24 hours before beginning construction of the stormwater management facility. The first step in all stormwater management facility construction inspections is a preconstruction meeting, where inspectors are required to review the SWMP with the owner/agent of the stormwater management facility. Inspections are performed at different stages of construction as outlined in the stormwater narrative of the approved SWMP and as specified in the specific Stormwater Management Facility Construction Report. A final inspection is performed upon completion of the stormwater management facility. The report indicates the due date of the As-Built plan of the completed stormwater management facility. A Final Approval Notice is issued to the owner/ agent after receipt and approval of the As-built.

The District's policies and procedures for erosion and sediment control inspections have been updated, see Appendix H. All District erosion and sediment control inspectors have been trained on the updated procedures, as well as receiving training on other current topics and best practices regarding soil erosion and sediment control.

In FY 2014, the District accomplished the following:

- Conducted 6,654 inspections at construction sites for enforcement of erosion and sediment control and stormwater management regulations
- Issued 135 enforcement actions, including stop work orders and civil infractions

DDOE conducts site inspections and calculates loading estimates from construction sites within the District. Figure 5 shows the 14-year trend of the construction inspection program. Figure 4 shows the 14-year trend of annual enforcement actions. Note that each time DDOE personnel

visit a construction site it is logged as an inspection. As a result individual construction projects are often inspected numerous times.

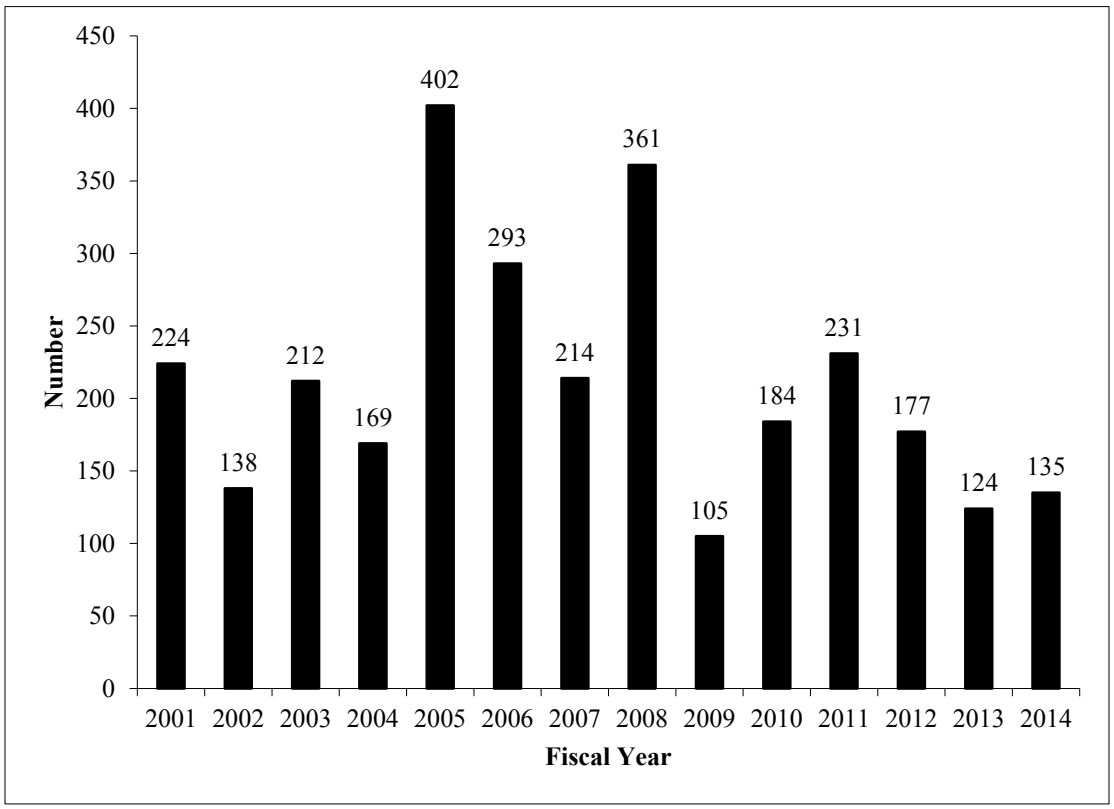


Figure 4 14-Year Trend in Enforcement Actions

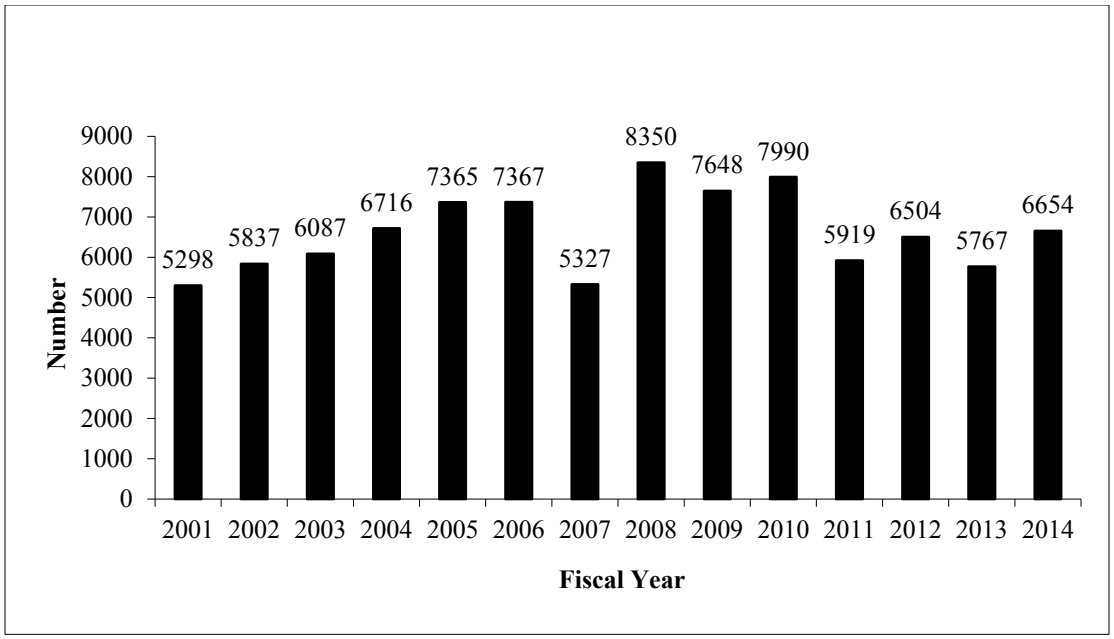


Figure 5 14-Year Trend in Annual Inspections

As required by Section 4.6.4 of the MS4 Permit the District is providing a listing of all violation and enforcement actions. A list of all Notice of Infractions (NOIs) is found in Appendix I. Additionally, the District is developing a new BMP tracking. This database will address the recordkeeping, paperwork, and data management requirement of the MS4 Permit. This database will track compliance with the District's updated stormwater management regulations, including the construction and ongoing maintenance of BMPs. A critical feature will be the ability for inspection personnel to access the new database in the field to review and update records during and immediately after an inspection. DDOE expects the database to be completed and functioning in 2015.

Educational training and compliance assistance for construction site operators is conducted during the site inspection process, as required by Section 4.6.5 of the MS4 Permit. This training includes distribution of the District's 2013 Stormwater Management Guidebooks and addresses particular needs and questions of the operators.

The accomplishments of the Inspection and Enforcement Program demonstrate the effectiveness of the Program and meet the requirements of Section 4.6.6 of the MS4 Permit. The District is performing multiple rounds of inspections, identifying violations were they are found, following up with sites as appropriate to ensure violations are addressed, and imposing penalties as appropriate. Since 1988, the District has required and enforced stringent erosion and sediment control measures for projects that disturb more than 50 square feet of earth, which significantly exceeds the Permit requirement to enforce controls on projects greater than 5,000 square feet. Regulation of construction sites prevents the acceleration of soil erosion and sedimentation, which reduces total suspended solids (TSS) and turbidity in District waters and reduces the amount of pollutants that adhere to the soil entering the waters. Dewatering practices at construction sites prevent additional pollutants, including toxics, from entering the District's

waters. SWPPPs and good housekeeping practices at construction sites further reduce the amount of pollutants that may be discharged to District waters. Additionally, the District has removed the "waivers and exemption" provision that previously existed in its regulations at 21 DCMR § 528.

FY 2015 Goals: The District will continue to review and approve SWM plans and to provide staff refresher training to continually improve efficiency for review and provision of technical assistance. The District will continue to provide educational materials to construction site operators and to enforce the inspection procedure guidelines. The new BMP tracking database will be functioning in FY 2015.

The District will continue inspections of commercial, residential, and road construction projects for the maintenance and implementation of erosion control devices and stormwater retention BMPs. DDOE will continue to track SWM facilities inspected and their BMPs its database system.

4.7 Management of Illicit Discharges and Improper Disposal

As required by Section 4.7.1 a-i of the MS4 Permit the District maintains an Illicit Discharge Detection and Elimination Program (IDDE) designed to detect and eliminate illicit discharges within the District. DDOE WQD, with the support of DC Water and DPW, investigates and conducts enforcement actions in accordance with the District's MS4 permit, the District's Water Pollution Control Act and the Districts Surface Water Quality Standards 21 DCMR § 1100 *et seq.*

The program also provides assistance to first responders, including DC FEMS, MPD, HSEMA, and the US Coast Guard in environmental emergencies. Reports or notifications from these agencies are routed to the DDOE Chief of Emergency Operations. Incidents potentially affecting the MS4 or District water quality are then referred to the WQD Inspection and Enforcement Branch for assistance. Those incidents referred to WQD through DDOE Emergency Operations are considered "emergency responses" and are designated and recorded as such.

In FY 2014, DDOE staff conducted:

- 46 illicit discharge investigations
  - 39 follow-up inspections at illicit discharge sites
- 9 Emergency Responses
  - 9 follow-up inspections at Emergency Response sites
- 147 targeted facility inspections
  - 12 follow-up inspections to ensure compliance169 outfall inspections

DDOE's enforcement procedures are addressed in *The Environmental Enforcement Guidelines*, see Appendix G. This document details how enforcement actions, such as notices of violation, notices of infraction, and stop work orders are issued and adjudicated. The strategies outlined in

the manual provide the standard operating procedures for inspection and enforcement efforts within the District.

Field screening procedures consist of dry and wet weather monitoring. Once general geographic priority areas have been determined, DDOE conducts dry weather surveys through visual observations of outfalls to identify non-stormwater flows. Because illicit discharges are often intermittent, DDOE inspectors check for discharges multiple times in a given location, particularly in priority locations. DDOE reviews the collected screening data to discern any spatial or temporal patterns that may assist the program in prioritizing Sewershed for additional regulatory, educational, or structural pollution controls. Illicit discharges are also identified through routine facility inspections.

The District provides personnel with training on spill prevention and response as part of the larger Pollution Prevention Program, as well as during compliance assistance provided by the IDDE inspection staff.

Outfall Inventory

DDOE continues to refine an inventory of outfalls within the District. DDOE is still cross referencing and reconciling the results of the Outfall Repair Schedule and anticipates slight adjustments to outfall numbers through continued inspections and desktop analyses. DDOE is encouraged that, despite methodology and terminology differences, two separate outfall inventory efforts have resulted in such similar numbers. Table 19 details the current inventory of outfalls by watershed in the District.

Table 19 MS4 Outfalls Identified by Watershed

Watershed	Number of Outfalls
Anacostia River	198
Potomac River	209
Rock Creek	176
Total	**583**

As required by Section 4.7.2 and 4.3.5 the District maintains a solids and floatables program. Information about the District's floatables program is found in Section 4.3.5 of this report.

As required by Section 4.7.3 the District continues to implement the prohibition against the disposal of used motor fluids, household hazardous waste, leaf and grass clippings, and animal waste into the storm sewer. Each of these programs are readily available and information can be found on the DPW and DDOE websites.

Motor Vehicle Fluids and Auto body Repair

In FY 2014, DDOE continued to offer the Compliance & Technical Assistance to managers, owners, and employees of gasoline stations, repair shops, fleet managers, and maintenance garages. This sector has significant direct impact on the quality of District waters.

To view information and presentation materials on the Environmental Compliance & Technical Assistance for Automotive and Fleet Managers Workshop: http://green.dc.gov/event/workshop-automotive-and-fleet-managers.

Visit DDOE's website for pollution prevention information for the auto body/ auto service industry: http://ddoe.dc.gov/service/environmental-issues-auto-repair-and-maintenance.

Illegal Dumping

DPW's Solid Waste Education and Enforcement Program (SWEEP) seeks to maintain clean private and public spaces by investigating illegal dumping complaints, overgrown lots, trash can litter and overflow, and other sanitation violations.

- To view information on DPW SWEEP program: http://dpw.dc.gov/service/solid-waste-education-and-enforcement-sweep

In FY 2014 DPW's SWEEP accomplished:

- 11,421 Responses to request for action from SWEEP
- 3,886 Number of requests for action for illegal dumping
- 79 Number of illegal dumping violations

Littering Enforcement

In December 2008, the Council of the District of Columbia passed the Anti-Littering Amendment Act of 2008. The legislation provided new tools to support the enforcement of littering. The Act also established a new violation for littering from a vehicle. It provides that "No person shall dispose or cause or allow the disposal of litter from a vehicle upon any public or private property. Litter shall include all rubbish, waste matter, refuse, garbage, trash, debris, dead animals, or other discarded materials of every kind and description." (DC Municipal Regulations § 18-2221.6). The penalty for the offense is a $100 fine.

MPD issued 69 tickets for littering from a vehicle and 76 littering NOVs.

Pet Waste

DDOE continues to implement its education and outreach program entitled "Scoop Your Pet's Poop." This program is designed to inform citizens of their legal obligation to manage their pet's waste and to explain the reasons why it is important to do so.

In FY 2014, DDOE printed 10,000 pet waste educational flyers and hands them out at outreach events with a focus on, BIDs, condominium rental offices, and Department of Health and Department of Parks and Recreation events and offices. DDOT and DDOE continue to install aluminum street-signs at targeted locations citywide. In FY 2014 DDOE received more than 500 requests for pet waste street signs. In FY 2014 DDOE and DDOT installed 400 street signs

throughout all 8 Wards. Requests for pet waste street signs can be made at http://green.dc.gov/page/pet-waste-sign-requests.

Household Hazardous Waste

DPW continues to provide household hazardous waste (HHW) collection and seasonal leaf collection. During FY 2014, DPW operated monthly HHW drop-off sites at the Ft. Totten Transfer Station. Residents are able to bring their HHW materials and unwanted electronics for proper disposal. Appendix J contains details of the Districts HHW collection in FY 2014. A copy of the 2014-2015 Leaf Collection Program brochure can be found http://dpw.dc.gov/node/461062

FY 2014 DPW HHW, leaf collection, and holiday collection accomplishments:

- 182 tons of unwanted electronics for processing.
- 62,175 total pounds of HHW were collected in FY 2014
- 28,620 gallons of Flammable Liquid (Paints, Roofing Tar, Driveway Sealers, etc.)
- 52,80 cars participated in the FY 2014 HHW drop-off
- 8,000 pounds of waste pesticides solids (Insecticides)
- 11,000 pounds of flammable aerosols
- 86.50 tons of holiday trees
- 6,054 tons of leaves (Figure 6)

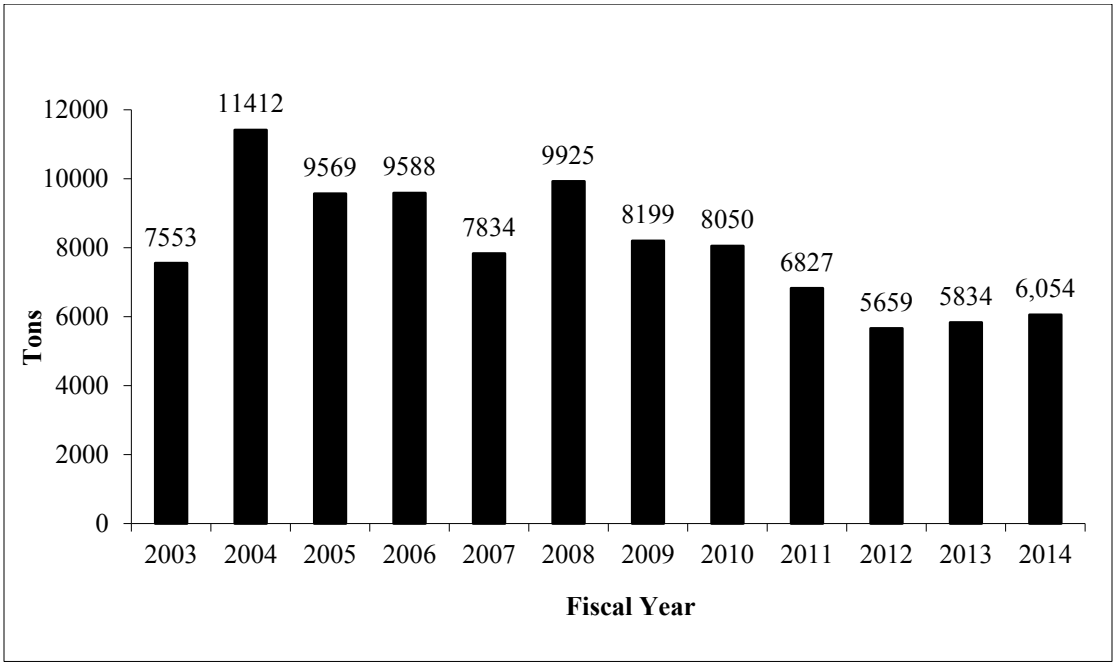


Figure 6 Leaf Collection Trend

Coal Tar Ban Enforcement

As required by Section 4.7.5 of the MS4 Permit the District continues to enforce its prohibition on the sale, use, and permitting of coal tar based pavement products.

In FY 2014 DDOE staff:

- Conducted 190 inspections
- Issued 3 NOVs, with one settlement agreement

When coal tar is confirmed on a site, DDOE requires that the coal tar pavement product is removed with a shot blast machine, which uses steel beebees, or "shot," to pulverize the sealant layer on the lot. The machines are equipped with a HEPA filter and vacuum to eliminate ambient dust release. Historically, there has been a discrepancy between the number of notices of violation (NOVs) issued and the number of remediated sites in a given fiscal year. This is due to the time that the legal process takes to progress from an NOV, to an NOI, to an Office of Administrative Hearings (OAH) order compelling remediation. This interval can cause remediation activities to occur in a subsequent fiscal year.

In FY 2014, DDOE required coal tar remediation at 3 sites (see Table 20). As of September 2014, DDOE has ordered the remediation of 13 sites contaminated with coal tar pavement sealant, totaling 436,271 square feet. All sites have been successfully remediated. The remediated sealant from these 13 sites contained the same amount of PAHs as approximately 600,000 gallons of undiluted used motor oil, the third most concentrated source of PAHs in the urban environment.

Table 20 FY 2014 Coal Tar Remediation

Site Number	Ward	Square Feet	Coal Tar Sealant Applied	Remediated
1	5	35,827	September 2013	April 2014
2	3	45,723	August 2010	June 2014
3	4	40,320	July 2010	July 2014

DDOE maintains a tip line for citizens to report properties they suspect are in violation of the District's ban on coal tar pavement products.

In FY 2014 DDOE performed several studies to increase the effectiveness of the Coal Tar Inspection and Enforcement Program, a Coal Tar Sealant Prevalence Study and an Aerial Imagery Analysis.

DDOE has nearly completed an internal study measuring the prevalence of sealed parking lots and driveways in the District. Effective January 1st, 2009, the District banned coal tar-based

pavement sealants, which contain exceptionally high concentrations of polycyclic aromatic hydrocarbons (PAHs). Understanding the prevalence of sealed parking lots and driveways will enable DDOE to better estimate the impact of the ban on PAH loading to the District's water bodies. DDOE expects the study to be completed in the first quarter of FY2015.

DDOE inspects all sealed parking lots that it identifies for compliance with the District's ban on coal tar pavement sealants, since it is impossible to differentiate between types of sealant visually. In 2014, for the first time, DDOE performed a computer analysis of recently-captured aerial imagery to remotely identify sealed parking lots for inspection. DDOE analyzed the imagery with a computer algorithm that uses complex GIS and remote sensing technology to identify dark-colored paved areas. The algorithm was first developed by a DDOE employee in FY2013. It greatly increases the efficiency of the District's enforcement efforts. The technology has already led to the discovery of two violations of the District's ban on coal tar pavement products.

Coal tar education and outreach efforts are reported in Section 4.9.4 of this report.

- To view information on the District's coal tar ban: http://ddoe.dc.gov/coaltarban

Anacostia Clean Up and Protection Act Enforcement

The District continued to implement the Bag Law, which requires all District businesses selling food or alcohol to charge $.05 for each disposable paper or plastic carryout bag. DDOE maintains a tip line for citizens to report a business they suspect to be in violation of the Bag Law. To view information about the Bag Law at http://green.dc.gov/bags

In FY 2014, DDOE staff:

- Performed 564 total inspections
- Issued 165 NOVs
- Issued 49 NOIs

Bag Law education and outreach efforts are reported in Section 4.9.4 of this report.

FY 2015 Goals: The District will continue to investigating illegal dumping complaints, overgrown lots, trash can litter, and other sanitation violations. The District will continue the program to detect illicit discharges, and to prevent improper disposal into the storm sewer system. DDOE personnel will continue to investigate potential illicit discharges in response to reports by citizens or government personnel.

DDOE will continue compliance education and enforcement efforts for the Bag Law Program. In FY15 DDOE launched a Environmental Tips Mobile Application (App). This App encourages the public to report bag law violations, including sharing photos and comments. DDOE staff will track these tips and investigate as appropriate.

DDOE will purchase and install additional pet waste street signs. DDOE will also print 10,000 additional pet waste flyers for city-wide dissemination.

DDOE will continue coal tar ban enforcement efforts and continue to draft regulations for the implementation of the ban on coal tar.

The District will strive to increase the number of citizens participating in the HHW and leaf collection programs through public education and the continuation of HHW collection at a transfer station on a monthly basis.

4.8 Flood Control Projects

The District of Columbia adopted the Flood Insurance Rate Maps (FIRM), issued by the Federal Emergency Management Agency (FEMA), on September 27, 2010. There have been no major changes in floodplains areas since the effective 2010 FIRM. After a major FIRM revision, for example for the area behind the Potomac Park Levee System after the completion and certification of the 17th Street levee construction, DDOE will update the impervious surface analysis of floodplains in the District, a requirement of Section 4.8.1 of the MS4 Permit.

Review in Compliance with the District's Flood Hazard Rules:

FY 2014 Flood Control Program accomplishments:

- 235 flood zone determinations were processed for various developers as part of the permitting process by DDOE review engineers co-located at the satellite office in the Department of Consumer and Regulatory Affairs (DCRA)

- 42 Environmental Impact Screening Forms were reviewed and 5 were approved for compliance with the District's Flood Hazard Rules (20 DCMR, Chapter 31), and the District's Environmental Policy Act (DC Law 8-36).

- 4,050 Erosion & Sediment Control (ESC), Stormwater Management (SWM) and Floodplain Management (FPM) Plans were reviewed and approved for compliance with the District's Flood Hazard Rules (20 DCMR, Chapter 31).

DC Flood Risk Management

DDOE, OP, the D.C. Homeland Security and Emergency Management Agency (HSEMA), the U.S. Army Corps of Engineers (USACE), the Federal Emergency Management Agency (FEMA), the National Park Service (NPS), the National Oceanic and Atmospheric Administration's National Weather Service (NWS), the U.S. Geological Survey (USGS), DC Water and the Washington Metropolitan Area Transit Authority (WMATA) have developed an interagency team at the District level to help coordinate, collaborate, and develop and implement solutions to the District's flood priority problems. The goal is to leverage information and resources, improve public risk communication, and create a mechanism to collaboratively solve flood risk issues.

Representatives from Federal and District agencies have met every two months since April 2012, to better prepare for floods along the Potomac River. Following Hurricane Sandy, these agencies created a Post-Hurricane Sandy lessons-learned document. Their efforts have made improvements in flood monitoring, flood forecasting, inundation mapping, and awareness. The DC Flood Risk Management Team (Team), DC Silver Jackets Team, is focusing on all types of potential flooding in the District. The Team is currently developing an MOU, with a formalized mission, objectives, organization, memberships, agency roles, and responsibilities.

The major goals of the team include:

- Update and revise the existing 2006 Flood Emergency Manual for Washington, DC and Vicinity
- Ensure that the construction, certification, and accreditation of the Potomac Park levee system are complete
- Obtain funding for completing the design and construction of the Potomac Park levee system improvement to the authorized 1:500 chance-per-year protection
- Increase flood risk awareness in the District
- Provide multi-agency expert advice to the District Emergency Operations Center (EOC) during a flood event
- Improve flood forecasting and communication of predicted flood depths throughout the District before a flood event
- Improve hurricane storm surge flood modeling, forecasting, and emergency response

The Silver Jacket Team is an innovative program that provides an opportunity to consistently bring together multiple state, federal, and sometimes tribal and local agencies to learn from one another and apply their knowledge to reduce risk. State agencies, including those of the State National Flood Insurance Program Coordinator and the State Hazard Mitigation Officer, come together with the federal family of agencies, including the USACE and the Federal Emergency Management Agency (FEMA), in a common forum to address the states' flood risk management priorities. There are currently 41 active state Silver Jackets teams including region III states: VA, MD, PA, DE, and WV.

- More information of the Silver Jackets Team: http://www.nfrmp.us/state/
- The District of Columbia Silver Jackets Team Web Page: http://www.nfrmp.us/state/factDC.cfm

A flood inundation map is under development. The tool will provide real-time and forecasted river levels at stream gages to help communities identify immediate flooding risks. This project will involve developing a flood hazard mitigation tool to inform the general public, land use planners, floodplain managers, and emergency managers of risks associated with riverine and tidal flooding along the Potomac River and tidal flooding along the Anacostia River. The tool will provide a stage inundation map library for the District, Northern Virginia, and adjacent communities based on the U.S. Geological Survey (USGS) stream gages and the National Weather Service (NWS) flood forecast points. These gages are located on the Potomac River at Wisconsin Avenue and on the Washington Channel at Southwest Waterfront.

Since the District experiences both riverine and tidal flooding, two sets of maps will be developed for the Potomac River for each gage and forecast point. This will be a "pilot project," because USGS and NWS do not currently have any flood inundation mapping projects for areas that experience both riverine and tidal flooding. The methodology developed from this project can then be applied to other locations around the nation.

Using both predicted tidal stage and river flow data, a flood model can digitally display inundation areas throughout most of the District on USGS and NWS map viewer websites (i.e., USGS Flood Inundation Mapper and NWS Advanced Hydrologic Prediction Service). Flood inundation maps at 1-foot intervals will be developed for the two gages. The Geographic Information System (GIS) datasets also will be supplied to local officials, flood risk planners, and emergency managers with GIS capability.

As part of this project, a flood loss analysis using FEMA's HAZUS software will be conducted and incorporated in the tool. HAZUS uses GIS technology to estimate the physical, economic, and social impacts of disasters. It is used for mitigation, preparedness, response, and recovery. HAZUS analyses are categorized according to the spatial resolution of the input data and the equations (loss functions) used in calculating loss and damage extents.

Upon deploying the tool, a broad outreach campaign will target both local authorities and the general public to inform them of the existence of the maps and where to obtain them.
The Washington DC Silver Jackets Team's (Team's) Flood Inundation Mapping Task Group members include the District of Columbia District Department of the Environment (DDOE), the U.S. Army Corps of Engineers (USACE), the U.S. Geological Survey (USGS), the National Weather Service (NWS), the Federal Emergency Management Agency (FEMA), the National Park Service (NPS), and the National Capital Planning Commission (NCPC). The Task Group members are actively involved in developing the project and contribute funding or "in-kind" resources. Other Team members will provide input to the project and will be kept apprised of the study progress. As part of the outreach component, the Team will coordinate with numerous other non-member agencies and organizations.

FY 2015 Goals: The flood control program will continue to review and track **c**ompliance with the District's Flood Hazard Rules. The program will also continue to develop the flood inundation map and outreach program.

4.9 Public Education and Participation

The District continues to implement an education and outreach program that is targeted and will reduce or eliminate behaviors that will cause adverse stormwater impacts.

4.9.1 Education and Outreach

The District conducts public education activities related to stormwater pollution. These activities targets:

- Teachers and students (RiverSmart Schools, DC Environmental Literacy Plan, District of Columbia Environmental Education Consortium, The Anacostia River Environmental Education Fair, Meaningful Watershed Education Experiences (MWEE), Environmental Ambassadors)
- Businesses (Bag Law, Coal Tar, Motor Oil, Pollution Prevention)
- District employees (2013 Stormwater Rule, Pollution Prevention, Stormwater Guidebook)
- Homeowners and property managers (RiverSmart Homes, RiverSmart Communities, RiverSmart Washington, IDDE)
- Developers and engineers (2013 Stormwater Rule, Stormwater Guidebook, SRC)
- General public (Storm drain markers, HHW, motor oil)

More information about each of these programs is presented in Section 4.9.4 of the Annual Report.

4.9.2 Measurement of Impacts

In October 2013, DDOE received the report of findings for a series of surveys that examined disposable bag usage and distribution after the District's five-cent fee on disposable bags took effect. DDOE commissioned the Alice Ferguson Foundation and OpinionWorks, LLC to complete the surveys, which sought input from both residents and businesses. The resident survey was completed in January 2013 and the business survey was completed from February-April 2013.

The resident survey found that 80% of residents report using fewer disposable bags than before the fee took effect. The average household reported using only four disposable bags per week in 2013, compared to 10 disposable bags per week before the fee took effect. Likewise, 67% of residents report seeing fewer plastic bags as litter, compared to before the fee took effect.

The business survey found that as many as four out of five businesses reported providing fewer plastic bags to customers. On average, businesses reported distributing 50% fewer plastic bags to customers, and 50% of the businesses surveyed stated that they have saved money as a result of the bag fee.

This study and anecdotal evidence from environmental groups hosting trash clean-up events shows that the Bag Law is working and keeping trash out of District water bodies.

Results of this study can be viewed at http://ddoe.dc.gov/sites/default/files/dc/sites/ddoe/publication/attachments/DDOE%202013%20Bag%20Law%20Survey%20Final%20Report%20%282%29.pdf.

4.9.3 Recordkeeping

As required by Section 4.9.3 of the MS4 Permit DDOE continues to track and record stormwater related public education and outreach activities through the WPD database. Items the WPD database tracks are:

- District youth receiving environmental education
- District teachers receiving environmental education training
- Agency staff receiving training
- Watershed meetings attended
- Environmental events attended

4.9.4 Public Involvement and Participation

As required by Section 4.9.4 of the MS4 Permit the District continues to provide the opportunity for direct public involvement through a variety of programs.

In FY 2014, WPD installed 109 storm drain markers with the help of private citizens, youth groups, individuals from various volunteer groups, and DCPS school groups throughout the District of Columbia.

The District hosts volunteer stream clean ups throughout the year. More information about volunteer stream cleanups can be found in Section 2.10 of this report.

The District has created a working group of stakeholders consisting of non-profit groups, and federal and District agencies to review progress throughout the development of the Consolidated TMDL Implementation Plan. This working group holds regular meetings provide information on the progress on the development of this plan.

Additional education and outreach prams include:

- DC Environmental Literacy Plan
- RiverSmart Schools
- District of Columbia Environmental Education Consortium
- The Anacostia River Environmental Education Fair
- Meaningful Watershed Education Experiences (MWEE)
- Environmental Ambassadors
- Trash and Litter Education
- Coal Tar Program
- Bag Law Outreach

- RiverSmart Washington
- IPM
- Clean Marina

DC Environmental Literacy Plan

On July, former Mayor Vincent Gray signed into law the Sustainable DC Omnibus Amendment Act of 2013. One of its seven subtitles is the "Environmental Literacy Plan Adoption" Act, which creates a new program and staff within the DC Office of the State Superintendent of Education (OSSE) to further develop and implement the Environmental Literacy Plan first developed under the Healthy Schools Act. The Environmental Literacy Plan will bring environmental education, including meaningful outdoor experiences, to District youth.

DDOE continues to collaborate with OSSE, DC Public Schools, the DC Environmental Education Consortium, and other community stakeholders to implement this plan.

This past summer, more than thirty District teachers from OSSE's Science Educator Leadership Cadre participated in an Environmental Literacy Summer Institute. Teachers learned about the Next Generation Science Standards (NGSS) and assessment strategies, and discussed how these new standards will change current teaching practices.

Guest lecturers provided presentations and academic field experiences that support the Environmental Literacy Framework, a new guidance document that provides a grade-by-grade outline of environmental contexts for learning and corresponding sustainability initiatives that are aligned with the NGSS. After three intensive weeks of instruction, the teachers were tasked with developing curriculum units that address the content and processes derived from the NGSS and that support the goals of Sustainable DC. These curriculum units will be field-tested during school year 2014-2015.

RiverSmart Schools

RiverSmart Schools works with DC Public Schools (DCPS), charter schools, and private schools to install LID practices to control stormwater. These practices are specially designed to be functional as well as educational in order to fit with the school environment. Additionally, schools that take part in the RiverSmart Schools program receive teacher training on how to use the sites to teach to curriculum standards and how to properly maintain the sites. See section 2.1.4 for additional details.

RiverSmart Schools is managed by DDOE's WPD. In FY 2014 RiverSmart Schools accomplished the following:

- Audited 15 District schoolyards for potential stormwater management projects.
- Provided 35 teachers with a four-day workshop on RiverSmart Schools site usage and programming.
- Conducted 22 classroom visits and provided 15 boat trips to support integration of watershed lessons for the RiverSmart Schools project at each participating school.
- Engaged students, teachers, and volunteers in Community Work Days to construct and maintain Schoolyard Conservation Sites. 150 youth from four schools participate in five community work days.

District of Columbia Environmental Education Consortium (DCEEC)

DDOE organizes a network of environmental educators throughout the city so that ideas and resources can be shared among them. The DC Environmental Education Consortium (DCEEC) provides opportunities for networking, event coordination, and program partnering among its members. The members provide environmental expertise, professional development opportunities, curricula and resources, and hands-on classroom and field studies to District schools.

In October 2014, DDOE and DCEEC hosted the 8th Annual D.C. Teacher's Night at the U.S. Botanical Gardens where 276 teachers pre-registered and 165 attended. At this even teachers learned about environmental programming from approximately 40 exhibitors representing local environmental and science education organizations. The teachers met with local environmental educators who connected them with environmental education opportunities both inside and outside the classroom. Participants also took part in hands-on experiments and left with lesson plans for their classrooms.

This year the District held its 3rd annual Growing Healthy Schools Week, which is the fusion of DC School Garden Week and DC Farm to School Week. Growing Healthy Schools Week highlights the interrelated goals of these two former weeks and reflects the components of the recent Healthy Schools Act, which encourages linkages between farm-to-school and school garden programs.

During the week, school staff worked with local non-profits, farms, and chefs to coordinate inspiring activities aimed at engaging the broader community, increasing environmental literacy, building program capacity, and connecting students to their food.

The Anacostia River Environmental Education Fair

This year marked the first Anacostia Environmental Youth Summit, which elevates the Anacostia River Environmental Fair into a city-wide showcase that spotlights youth voice, demonstrates environmental literacy, and encourages stewardship for the Anacostia, Potomac Rivers and the Chesapeake Bay. On May 16, 2014, 25 exhibitors and over 400 students were scheduled to participate in this event in Anacostia Park. Unfortunately, the event was cancelled due to inclement weather and was not able to be rescheduled.

Meaningful Watershed Educational Experiences (MWEEs)

DDOE funded non-profit partners to create meaningful watershed educational experiences for hundreds of District young people.

Outcomes include:

- AFF provided a trash-focused MWEE for 3rd through 5th graders at Kimball Elementary (20 students), Anne Beers Elementary (30 students), and Aiton Elementary (20 students). This included 70 MWEE hours. The grant program ended June 30, 2014.
- Live It Learn It implemented four trash-focused MWEE programs to seven (7) District of Columbia Public Schools. Approximately 115 students in 5th grade at Payne Elementary, Barnard Elementary, Randle Highlands Elementary, Smothers Elementary, CW Harris Elementary, Houston Elementary, and Neval Thomas Elementary participated in the trash-focused MWEE that include school trash collection and data, stream study, and pre-post lessons. The grant program sustain a two-year period for 16 classes and ends June 30, 2015.
- Alice Ferguson Foundation and partners Living Classrooms of the National Capital Region and NatureBridge began a pilot project to engage fifth grade students attending schools in Wards 7 and 8 in an Overnight Meaningful Watershed Educational Experience. Students spend three days and two nights in a natural setting learning about the environment. The partners reached 47% (696 out of 1467) students. DDOE plans to expand this program to all District wards in FY 15.

Environmental Ambassadors

DDOE funded non-profit partners to create a group of children and youth to serve as role models for third to eighth graders (target population). The Environmental Ambassadors functioned as "opinion leaders" – respected and admired by other members of the community. These opinion leaders espouse a certain lifestyle - such as respecting the environment by recycling, or properly disposing of trash – and their peers wish to emulate them. Outcomes include:

- Earth Conservation Corps worked with 48 students from Brent Elementary School. The students accepted the Trash Ambassadors challenge and created a short video.
- Living Classrooms of the National Capital Region worked with 25 students from Eastern Senior High School. These students learned about green careers and worked with 15 students from Eliot-Hine Middle School in Eastern High School's greenhouse and garden.
- Earth's Natural Force Connections recruited 14 students to become ENF Rangers. The ENF Rangers performed songs and dances with environmental messages. The rangers completed four assemblies at seven schools, with at least 100 students attending each assembly at their school.

RiverSmart Washington and Green Alleys

RiverSmart Washington is a multi-agency project to install LID neighborhood wide on public and private lands to measure volume reduction. There are two project areas in the Rock Creek Watershed: the MacFarland site, in the Petworth neighborhood and located in the combined sewer system, and the Lafayette site, in the Chevy Chase neighborhood and located in the MS4..

The District's Green Alley Projects are designed to reduce the quantity and improve the quality of stormwater within the city's right-of-way (ROW). Green alleys are one of the project types that are tracked to make progress toward the MS4 Permit's requirement to retrofit 1.5 million square feet of impervious surface in the transportation ROW. Although alleys constitute a significant portion of impervious surface, most do not have stormwater controls, such as water quality catch basins or grate inlets. To mitigate this, Green Alley Projects use sustainable design and LID techniques that reduce the amount of stormwater and pollutants entering the sewer system by increasing water infiltration and treatment on site. A list of completed and upcoming Green Alley Projects is available at http://ddot.dc.gov/GreenAlleys.

In FY 2014, DDOT conducted presentations to both residents and technical experts regarding RiverSmart Washington, Green Alleys, and Green Infrastructure Standards.

Presentations to Technical Experts

- "Stormwater Regulations & LID/GI Standards" to DDOT & American Council of Engineering Companies of Metropolitan Washington Quality Forum (October 8, 2013, 60 attendees)
- "Implement Permeable Pavements to Improve Infrastructure Sustainability – A Case Study in RiverSmart Washington" Poster presentation at Transportation Research Board National Meeting (January 13, 2014)
- "Stormwater Regulations & GI/LID Standards" to Construction Management Association of America, National Capital Chapter. (March 12, 2014, 100 attendees)
- "Creating a Green Streets Program in DC" to Chesapeake Water Environment Association, Stormwater Committee Seminar (June 4, 2014, 60 attendees)
- "Creating GI Standards for DC Streets" to FHWA/EPA nationwide webinar (June 19, 2014, 600 viewers)
- "DDOT Green Streets & GI Standards" at Metropolitan Washington Council of Governments "Green Streets Best Practices Workshop" (July 28, 2014)
- "DDOT Green Infrastructure Standards" at District of Columbia Regulatory Authority Green Building Symposium (September 26, 2014, 40 attendees)
- "DDOT Green Infrastructure Standards" to American Council of Engineering Companies of Metropolitan Washington (September 24, 2014, 40 attendees)
- "Green Infrastructure in DC" at WEFTEC (Water Environment Federation Technical Exhibition and Conference) Stormwater Congress in New Orleans (September 29, 2014)
- Tour of DDOT stormwater sites at Nannie Helen Burroughs Ave NE, Pennsylvania Ave SE, Green Alleys, 11th St Bridge, and The Yards streetscape for AASHTO Stormwater Practitioners meeting with representatives from about 30 DOT's nationwide (July 30, 2014, 50 attendees)
- Tour of RiverSmart Washington project site for EcoDistrict conference attendees (September 26, 2014, 50 attendees)

Presentations to the General Public

- RiverSmart Washington project update meetings
    - MacFarland/Petworth area at Petworth Library (March 18, 2014)
    - Lafayette/Chevy Chase area at Chevy Chase Library (March 20, 2014)
    - Lafayette/Chevy Chase area at Quesada St & 33rd St NW (September 3, 2014)
- LID Retrofits Project updates
    - Fitch Pl project to ANC-7C (October 10, 2103).
    - Ft Davis project to residents at Francis Gregory Public Library (November 19, 2013)
    - Erie St SE project to ANC-8B (February 18, 2014)
    - East Beach Drive LID project to North Portal Estates Community Meeting (May 28, 2014)
- "LID Projects" at DDOT Project Updates meetings
    - Ward 7 (March 7, 2014)
    - Ward 8 (March 26, 2014)
- Stormwater overview to 2nd grade class at Capital City Public Charter School. (November 19, 2014)

Coal Tar Ban

In FY 2014 The Coal Tar Program was able to contribute an article to the Property Management Association (PMA) newsletter. This article can be found at http://viewer.zmags.com/publication/3d9312e7#/3d9312e7/45

Bag Law

FY 2014 Bag Law Program accomplishments include:

- DDOE ran 22 full or half page ads regarding the accomplishments of the Bag Law in local newspapers (Washington Post Express, Washington Post El Tiempe Latino, Hill Rag, East of the River, MidCity DC)
- Bag Law inspectors tabled at local community events
- Distributed 2,150 reusable bag to District residents

Integrated Pest Management/Nutrient Management

DDOE continues to implement the Integrated Pest Management/Nutrient Management program. Educational materials, such as brochures and videos that provide suggestions on proper lawn fertilization, disposal of household waste, and application of pesticides and herbicides, were distributed to gardeners, homeowners and teachers. The materials were primarily distributed through the Environmental Resource Center at environmental events where the target audience is teachers and District residents.

Clean Marina

DDOE and NPS of the National Capital Region partner with marinas in the District to educate the public on environmentally responsible boating practices. The Clean Marina Program encourages marina, boatyard, and boat club operators, as well as the boating public, to reduce pollution through their daily operations and through encouraging boaters to do the same. In FY 2014, the Clean Marina program recertified two marinas and one Clean Marina Partner. One new partner joined in FY14. To view more information on DDOE's Clean Marina Program: http://ddoe.dc.gov/service/environmental-issues-marinas

Trash and Litter

A major component of DDOE's public education activities in FY 2014 related to anti-littering and trash prevention efforts. Trash education and outreach activities are detailed in section 4.9.4 of this report.

As required by Section 4.9.4.1 of the MS4 Permit the District will make the updating of the Stormwater Management Plan (SWMP) open to the public. The Draft SWMP is due for public comment on January 22, 2015.

As required by Section 4.9.4.2 of the MS4 Permit the District has established routine communication to groups. DDOE offers the public many options for training on its stormwater regulations. These trainings are advertised to DDOE's stormwater stakeholder list of over 900 engineers, nonprofits, utilities, and government agencies. In FY 14, DDOE held 39 public training sessions on its stormwater regulations, the SRC program, and the GAR program. Additionally, DDOE holds quarterly meetings with environmental non-profits regarding partnership opportunities and available grants. These meetings are held by the DDOE director and involve all DDOE programing.

As required by Section 4.9.4.3 of the MS4 Permit all MS4 Permit deliverables are made available for public comment.

- DDOE Annual Reports and Discharge Monitoring Reports are found at: http://ddoe.dc.gov/publication/ms4-discharge-monitoring-and-annual-reports
- The Draft Stormwater Retrofit Plan can be found at: http://ddoe.dc.gov/stormwaterretrofitplan
- The Draft Tree Canopy Plan can be found at: http://ddoe.dc.gov/sites/default/files/dc/sites/ddoe/page_content/attachments/Draft_Urban_Tree_Canopy_Plan_Final.pdf
- The Draft MS4 Catch Basin Maintenance Optimization Plan can be found at: http://ddoe.dc.gov/sites/default/files/dc/sites/ddoe/page_content/attachments/Draft_Urban_Tree_Canopy_Plan_Final.pdf
- The Draft MS4 Outfall Repair Schedule can be found at: http://ddoe.dc.gov/draftoutfallreport
- The 2013 Stormwater Guidebook and 2013 Stormwater Rule can be found at: http://ddoe.dc.gov/swregs

As required by Section 4.9.4.5 of the MS4 Permit these websites are regularly updated, at a minimum annually.

DDOE websites and social media sites:

- www.ddoe.dc.gov
- https://twitter.com/DDOE_DC
- https://www.facebook.com/DC.DDOE
- http://www.youtube.com/user/DDOEPublicInfo

FY 2015 Goals: The District periodically evaluates existing public education materials and revises or develops additional materials as necessary. DDOE will continue to update, add to, and refine the website and social media outreach to display all relevant information including reports, accomplishments, and outreach materials.

4.10 Total Maximum Daily Load Wasteload Allocation Planning and Implementation

4.10.1 Anacostia River Watershed Trash TMDL Implementation

The District is on track to meet the October 7, 2016, deadline for removing 103,188 pounds of trash annually from the Anacostia River. In FY 2014 the District removed 91,471 lbs. of trash from the Anacostia River.

To meet this requirement the District is using the following approaches to meet the Permit requirements:

- In-stream and end-of-pipe best management practices (e.g. trash traps)
- Stream clean-up activities
- Street sweeping environmental hotspots
- Education and outreach
- Regulatory approaches (e.g. Bag Fee)

Specifically, through stream clean-ups, street sweeping of environmental hotspots, in-stream and end of pipe BMPs, education and outreach, and enforcement of the Bag Law and littering laws.

Below is a description of the progress made to date with each of the following practice categories.

In-Stream and End-of-Pipe Best Management Practices

As stated in the draft Anacostia River trash TMDL implementation plan released in December 2013, the District will retrofit many "hotspot" Sewershed with end-of-pipe trash BMPs, or trash traps, by 2017. To date, the District has installed seven trash traps in the Anacostia River watershed, Figure 7 Four of those traps have been installed within hotspot Sewershed. Table 21 shows the average and annual maximum trash load that has been collected by each trap since its

installation. DDOE is currently exploring opportunities to install trash traps at other hotspot Sewershed outfalls in 2015.

Figure 7 Current location of trash traps in the Anacostia River watershed

The District met the FY14 goal of installing a trash trap at River Terrace Park, along the Anacostia River, Figure 8. This trap was installed at the end of an MS4 pipe, which empties into a restored wetland along the Anacostia River. The Sewershed for the outfall is approximately 800 acres in size, draining an area both east and west of Minnesota Ave SE.

Figure 8 Trash Trap Installed at River Terrace Park MS4 Outfall

Stream Clean-Up Activities

The District sponsors several clean-up events on an annual basis throughout the Anacostia watershed. Examples include, the Alice Ferguson Foundation's Potomac Trash clean-up and the Anacostia Watershed Society annual Anacostia River Earth Day clean-up. The total amount of trash collected at each cleanup event in the District can be found in Appendix K.

Street Sweeping Environmental Hotspots

DPW continued to implement the enhanced street sweeping program in 2014. DDOE funded DPW to develop an enhanced street sweeping program for the District. The purpose of this project was to make street sweeping more efficient by creating extra time per month to sweep streets identified as environmental hotspots by DDOE. More information about street sweeping can be found in Section 4.3.6.1.

Education and Outreach

The District met the 2014 goal to fully implement grants focused on changing littering behavior. In FY 2014 DDOE continued to fund the Alice Ferguson Foundation to develop and implement community outreach strategies that are geared towards reducing litter in the community. This campaigned involved partnering with local businesses to:

- display education and outreach materials
- conduct community trash clean-ups
- disseminate reusable bags to District residents
- work with community organizations on litter awareness and prevention.

To monitor for the effectiveness of the educational campaign AFF has conducted on-line behavioral surveys, trash counts, and visual behavioral studies in the targeted neighborhoods. on

the results of this monitoring will measure how the campaign has affected littering behavior. This data will be used to develop a load reduction efficiency for education and outreach to be counted towards the performance requirement of Section 4.10.1 of the MS4 Permit. The District is counting education and outreach towards compliance with Section 4.10.1 of the MS4 Permit since it meets the definition of Approach 5, Prevention through waste reduction practices, regulations and/or incentives.

Regulatory and Enforcement Approaches

The District continued to enforce the Bag Law, illegal dumping laws, and littering laws. Section 4.7 of this report provides details on the number of enforcement measures taken by the Bag Law Program in 2014. Section 4.7 also provides an update on litter enforcement activities undertaken by the DC MPD in 2014.

Summary of 2014 Trash Load Reductions

Table 21 below displays the current progress made by the District at reducing 103,188 lbs. of trash per year from reaching the Anacostia River.

Table 21 Annual Trash Load Reduction

Activity Category	Activity	Amount of Trash Removed (pounds)	Annual Load Reduction (pounds)	Calculation Methodology
Trash Traps	Marvin Gaye Park Bandalong	1,296	26	Annual average value taken from empirical data collected between Jan 2012 & November 2014. The average amount of trash collected during this time period is multiplied by 2% since that is the approximate proportion of the Watts Branch watershed which lies within District and drains to the trash trap.
	River Terrace Trash Trap	256	256	Current total collected in 2014. Data was only collected during part of 2014.
	Kenilworth Bandalong	2,323	2,323	Annual average taken from empirical data collected between March 2011 and November 2014. No reduction factors are being applied since the entire drainage area above this trap lies within the District.

Activity Category	Activity	Amount of Trash Removed (pounds)	Annual Load Reduction (pounds)	Calculation Methodology
	Nash Run Trash Trap	2,126	1,595	Annual average taken from empirical data collected between 2009 and 2014. The total amount collected is then multiplied by 75% since that is the approximate proportion of the Nash Run watershed that lies within the District and drains to the trash trap.
	Hickey Run BMP	10,000	2,000	Based on assumed efficiency of 100 percent design capture of device. A reduction factor of 20 percent was applied since glass and plastic bottles may not have been emptied of water.
	James Creek Bandalong	184	184	Annual average taken from empirical data collected between January 2012 and November 2014. No reduction factors have been applied since the entire drainage area for this practice lies within the District.
	Earth Conservation Corps Trash Booms	1,475	124	Amount collected from trap in 2014. Annual average not taken for 2013 and 2014 data since only four months of data was collected in 2013. Reduction factors are applied since a portion of the trash collected is coming from the mainstem of the river. A reduction factor of 16.5% is applied since this the proportion of the Anacostia watershed which lies within the District. A second reduction factor of 50.8 % is applied to account for the District's portion of the Anacostia served by the MS4.

Activity Category	Activity	Amount of Trash Removed (pounds)	Annual Load Reduction (pounds)	Calculation Methodology
Roadway and Block Cleanups	Adopt-A-Block Program	425	85	All cleanup events counted are found in the MS4 area of the Anacostia River. None are located along the river. An assumed weight of 25 lbs. per bag is applied to calculate the total weight of bags collected. The total weight of all trash collected is multiplied by 20% to account for not all plastic bottles and other containers being emptied of water.
Sweeping Environmental Hotspots	Sweeping Environmental Hotspots	144,768	72,384	The total area of roadways within the environmental hotspots (e.g. blocks found to contain high trash amounts)5 was calculated. That area was then multiplied by 50% because roughly half of the roadway (the middle of the road) is swept in these areas because they are unsigned. That area is then multiplied by the trash loading coefficient of 31.12 lbs./acre developed for the TMDL. That total mass in pounds is then multiplied by 16 since the DC Department of Public Works (DPW) is supposed to sweep environmental hotspots (i.e. blocks with high amounts of trash) twice per month, 8 months out of the year. That result is then multiplied by 50% because not all hotspots may always be swept.

5 - The environmental hotspots which are swept differ from the "hotspot" sewersheds mentioned earlier. The environmental hotspots swept represent a series of blocks found to contain very high amounts of trash.

Activity Category	Activity	Amount of Trash Removed (pounds)	Annual Load Reduction (pounds)	Calculation Methodology
Clean-Up Activities	Clean-Up Events	33,507	2,868	Based on empirical data collected during cleanup events within the District's portion of the Anacostia watershed. If a site is located along the mainstem of the river, a reduction factor of 16.5% is applied since this the proportion of the Anacostia watershed which lies within the District. A second reduction factor of 50.8 % is applied to account for the District's portion of the Anacostia served by the MS4. A third reduction factor of 20% is applied to account for the fact that not all plastic and glass bottles collected may have been emptied of water before bagged.
	Skimmer Boats	1,116,000	9,354	Based on the annual average of material collected by DC Water skimmer boats between 2003 and 2014. The average amount is first multiplied by 16.5 %, which represents the proportion of the watershed that lies within the District. A second reduction factor of 50.8 % was applied to account for the area of the District's portion of the watershed served by the MS4. A third reduction factor of 50 % was applied since not all material collected by the skimmer boats may have been trash. Finally, a fourth reduction factor of 20 percent was applied since not all plastic and glass bottles collected were emptied of water.
Education and Outreach	Watershed Wide Anacostia Campaign	NA	NA	Efficiency being assessed. DDOE is awaiting results from a grant funded project being undertaken by the Alice Ferguson Foundation. Results should be finalized some time in 2015.

Activity Category	Activity	Amount of Trash Removed (pounds)	Annual Load Reduction (pounds)	Calculation Methodology
Regulatory Approaches	Bag Law	1,072	272	DDOE currently estimates (based on data collected for the development of the Anacostia Watershed Trash Reduction Plan) that there are 82,431 bags in the river and tributaries. This amount is first multiplied by 50.8%, since this is the proportion of the Anacostia River served by the MS4. The amount is then reduced by 50% because according to a recent survey report, 50% of businesses in the District report a 50% reduction in bag purchases. Finally, the total number of bags is then multiplied by 0.013 lbs., which is the standard weight for a plastic bag.
Total (pounds)		**1,313,432**	**91,471**	

FY 2015 Goals: The District will continue to implement trash reducing BMPs and monitor for trash. DDOE is actively exploring other project opportunities focused on implementing trash BMPs. DDOE will report on all new activities in the next Annual Report.

4.10.2 Hickey Run TMDL Implementation

In FY14 DDOE created the Hickey Run Hero Program where homeowners in the Hickey Run Watershed were challenged to see which city block can manage the most stormwater. The goal of the competition is to help homeowners install green features on their properties. As of November 11th, DDOE has provided over 200 homeowners with site-specific stormwater plans and 62 homes have two or more features. The winning block will receive financial and technical assistance for a "green block makeover," which may include green infrastructure enhancements such as permeable pavement, trees and rain gardens. More information about the Hickey Run Here program can be found at http://ddoe.dc.gov/service/hickeyrun.

The Terre Kleen (TK45), installed in Hickey Run on October 26, 2011, is being monitored and maintained on a weekly basis. Additionally, every three months the BMP is cleaned of trash and sediment, and oil absorbent socks are replaced. The contract for monitoring and maintenance is through DGS and managed by DDOE. In 2012, the U.S. Geological Survey installed a stream gage just downstream of the BMP.

- To view gage data, including height, temperature, conductivity, and turbidity: http://waterdata.usgs.gov/dc/nwis/uv/?site_no=01651770&PARAmeter_cd=00065,00060,62620

FY 2015 Goals: A final contract will be awarded for construction of the Springhouse Run restoration project for Springhouse Run. Once the contract is awarded the project should be completed in last 2015.

Additionally, a new maintenance contract for the Terre Kleen BMP will be awarded in FY 2015. This contract will also require maintenance staff to quantify the amount and type of trash being removed..

4.10.3 Consolidated TMDL Implementation Plan

DDOE secured contractor support to assist in the development of the TMDL Implementation Plan and held a project kickoff meeting in July 2013. Since then, the project team has:

- Assembled a stakeholder committee to participate in and assist with the development of the plan, comprised of District and Federal agencies, the business community, and environmental organizations. The stakeholder committee has been convened for seven meetings to review and provide feedback on the project:
  - Meeting One – Project Introduction (8/26/2013)
  - Meeting Two – Methodology (12/5/2013)
  - Meeting Three – Methodology Feedback and Modeling (3/12/2014)
  - Meeting Four – Implementation Plan Modeling Tool (5/6/2014)
  - Meeting Five – Methodology and Modeling Tool Updates (6/26/2014)
  - Meeting Six- Revised Monitoring Program (8/7/2014)
  - Meeting Seven – Revised Monitoring, Gap Analysis (11/3/2014)

- Completed several project deliverables, including:
  - Quality Assurance Project Plan
  - Consolidated District TMDL Inventory and Literature Review
  - TMDL Implementation Plan Methodology
  - Revised Sewershed/Watershed delineations and BMP Implementation GIS layers
  - IP Modeling Tool
  - Draft Final Comprehensive Baseline Analysis

These deliverables are available on the Project website at: http://dcstormwaterplan.org/documents-and-deliverables/.

Progress on the Consolidated TMDL Implementation Plan will continue in FY 2015 as DDOE works to complete and submit the plan by the May 11, 2015 Permit deadline. DDOE anticipates that the IP, updated with stakeholder feedback, will outline FY 2015-2020 Goals in detail.

2015 Goals: Progress on the Consolidated TMDL Implementation Plan will continue in FY 2015 as DDOE works to complete and submit the plan by the May 11, 2015 Permit deadline.

5 MONITORING AND ASSESSMENT CONTROLS

5.1 Revised Monitoring Program Development Status

A key component of the Consolidated TMDL Implementation Plan is the revised monitoring program framework. The high-level objectives of the revised monitoring program include:

- Estimating wet weather pollutant loading for the parameters identified in the permit (e.g., E. coli, total nitrogen, total phosphorus, TSS, select metals, and trash)
- Evaluating health of receiving waters
- Identifying pollution sources
- Tracking performance toward compliance with TMDL Wasteload allocations

In FY 2014, the project team completed the following project deliverables:

- An analysis of monitoring needs and requirements
- A review of the existing monitoring programs
- A crosswalk comparison of monitoring needs and existing monitoring components

FY 2015 Goals: The project team is preparing the first draft of the revised monitoring framework for internal DDOE feedback, and anticipates releasing a version for stakeholder review and feedback in February 2015. DDOE expects to begin phasing in components of the final revised framework in FY 2016.

5.2 Interim Monitoring

In FY14 sampling is proceeding under the interim sampling provisions. The District is providing a summary of monitoring data, trends in pollutant loading, monitoring station locations, and storm information as required by Section 6.2.1.b. Additionally, as required by Section 5.7 of the MS4 Permit the District has submitted monitoring data via NetDMR and in the subsections below. Results of trash monitoring from FY 2013 are found in Section 4.10.1 of this report.

5.2.1 Wet Weather Discharge Monitoring

Water quality monitoring for chemical constituents took place at six monitoring stations, as required by Table 5 of Section 5.2.1 of the MS4 Permit, throughout the District during the 2014 sampling period, Table 22. Detailed map of each of the monitoring stations is found in Figure 9.

Table 22 Monitoring Stations and Dates

Watershed	Site	Location	Drainage Area (Acres)	Dates of Wet Weather Sampling	Dates of Dry Weather Sampling
Anacostia River	A1	Anacostia High School (Corner of 17th St and Minnesota Ave, SE)	252	01/10/14 04/07/14 06/04/14	04/03/14 7/22/14
	A2	Gallatin & 14th St NE (Across from the intersection of 14th St and Gallatin St, NE)	662	12/06/13 04/25/14 06/04/14	04/03/14 07/23/14
Potomac River	B1	Walter Reed (Fort Stevens Drive NW)	23	12/6/13 01/10/14 04/07/14	04/03/13 07/22/14
	B2	Soapstone Creek (Connecticut Avenue and Albemarle Street, NW)	320	12/06/13 01/10/14 04/25/14	04/03/14 07/22/14
Rock Creek	C1	Battery Kemble Creek (49th and Hawthorne Streets, NW)	11	12/6/14 01/10/14 04/07/14	04/03/14
	C2	Oxon Run (Mississippi Avenue and 15th Street, SE)	43	11/26/14 04/07/14 06/04/14	04/03/14 07/22/14

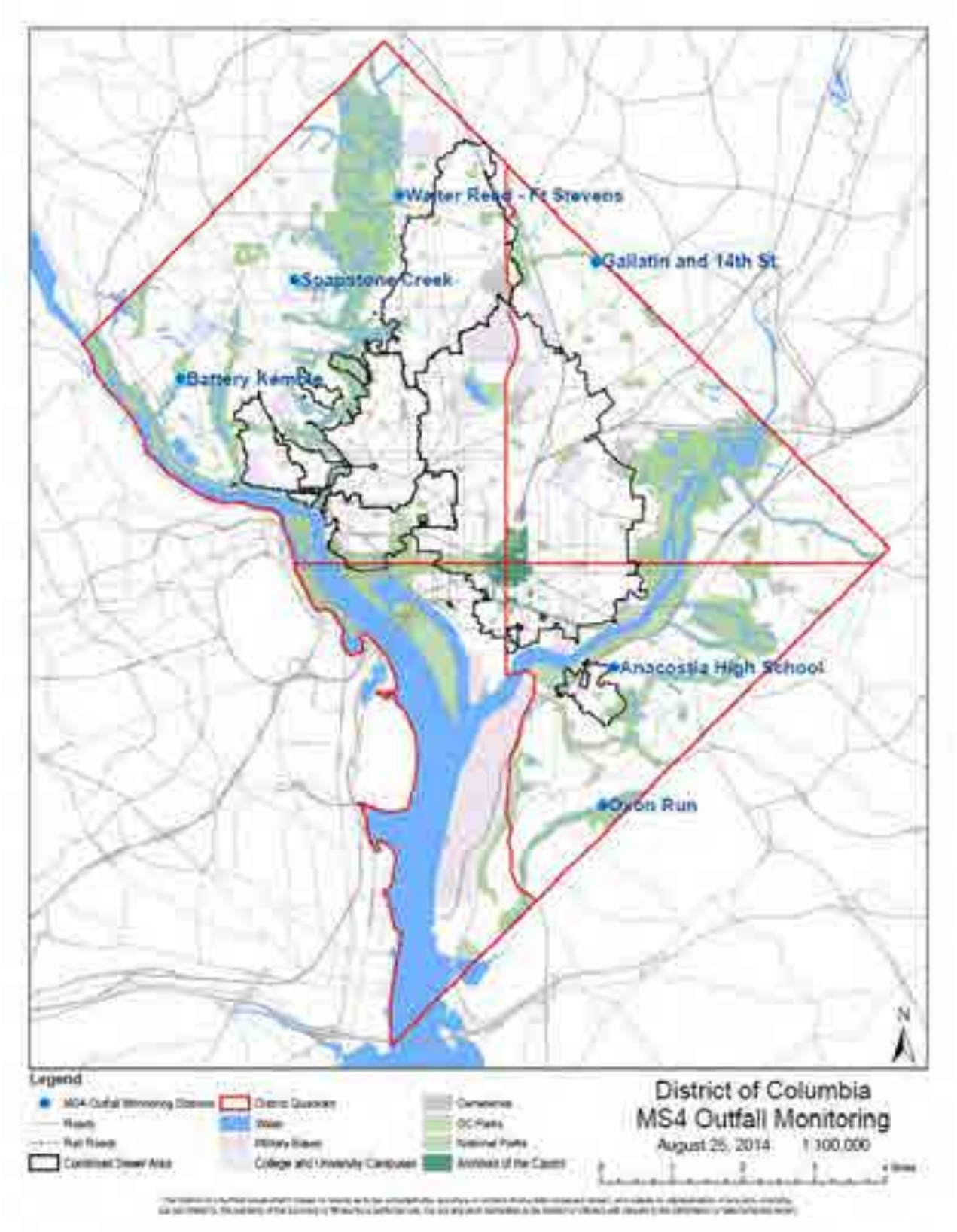


Figure 9 District MS4 Monitoring Stations

The District's annual Discharge Monitoring Report is included in the 2014 Annual Report and is found in Section 5.2 – 5.7 of this report. As required the Annual Report provides all monitoring data, and a brief synthesis of whether the data indicate that relevant waste load allocations and targets are being achieved.

Table 23 details the ambient water quality results for wet weather sampling.

Table 23Ambient Water Quality Data for Wet Weather Sampling

Site ID	Location	Date	Water Temp (°F)	pH	DO (mg/L)
A1	Anacostia High School	1-10-14	56.3	7.13	10.61
		4-7-14	50.2	7.1	9.9
		6-4-14	67.1	6.25	7.7
A2	Gallatin and 14th St. NE	12-6-13	54.32	7.26	10.14
		4-25-14	59.72	7.21	12.44
		6-4-14	69.98	7.5	7.6
B1	Walter Reed/Fort Stevens Dr.	12-6-13	53.6	7.1	10.20
		1-10-14	43.52	7.06	11.95
		4-7-14	50.0	7.99	10.19
B2	Soapstone Creek	12-6-13	57.0	7.53	10.73
		1-10-14	46.94	7.00	11.11
		4-25-14	60.98	7.6	10.4
C1	Battery Kemble	12-6-13	52.4	7.07	11.05
		1-10-14	46.4	7.08	12.1
		4-7-14	50.1	7.35	9.23
C2	Oxon Run	11-26-13	51.26	7.82	10.7
		4-7-14	49.9	7.11	9.92
		6-4-14	68.54	6.37	7.67

Table 24 details the wet weather sampling data for the required monitoring parameters. The geometric mean for each parameter was calculated to represent the event mean concentration (EMC). The wet weather summary data has also been submitted electronically to EPA via NetDMR.

Table 24 Summary of Wet Weather Monitoring

Parameters	Anacostia High School	Gallatin & 14th St., NE	Water Reed/ Fort Stevens	Soapstone Creek	Battery Kemble	Oxon Run
Cadmium (mg/L)	0.00025* (n=3)	0.0003 (n=3)	0.00050* (n=3)	0.00025* (n=3)	0.00025* (n=3)	0.00025* (n=3)
Copper (mg/L)	0.0140 (n=3)	0.0185 (n=3)	0.0203 (n=3)	0.0284 (n=3)	0.1197 (n=3)	0.0201 (n=3)
E. Coli (MPN/100mL)	1062 (n=3)	9042 (n=3)	29374 (n=3)	8595 (n=3)	13904 (n=3)	5763 (n=3)
Lead (mg/L)	0.0084 (n=3)	0.0062 (n=3)	0.0072 (n=3)	0.0081 (n=3)	0.0062 (n=3)	0.0032 (n=3)
Nitrogen, Total as N (mg/L)	3.55 (n=3)	2.87 (n=3)	3.42 (n=3)	2.51 (n=3)	2.47 (n=3)	3.48 (n=3)
Phosphorus, Total as P (mg/L)	0.16 (n=3)	0.23 (n=3)	0.24 (n=3)	0.28 (n=3)	0.27 (n=3)	0.17 (n=3)
Total Suspended Solids (mg/L)	36.43 (n=3)	20.97 (n=3)	30.57 (n=3)	53.80 (n=3)	23.89 (n=3)	12.97 (n=3)
Zinc (mg/L)	0.0579 (n=3)	0.0700 (n=3)	0.0806 (n=3)	0.1002 (n=3)	0.0329 (n=3)	0.0607 (n=3)

* If a sample result is below the reporting limit, one-half the reporting limit is used in the calculation of the geometric mean

5.2.1.1 Trash Monitoring

In 2014, DDOE awarded a grant to the Anacostia Watershed Society (AWS) to conduct stormwater monitoring for trash at six outfalls throughout the District. Several of the stormwater monitoring stations included in the MS4 permit possessed outfalls that were too large to allow for trash monitoring. Working with EPA Region III, DDOE and AWS were able to identify three of the stormwater monitoring stations included in the 2012 MS4 permit as being feasible for trash monitoring. Appendix L contains a land use map of each trash monitoring location. Table 25 provides details on each sampling site.

Trash monitoring stations included:

- **Walter Reed-Fort Stevens Drive** (16th Street and Fort Stevens Road, N.W. at an outfall)
- **Battery Kemble Creek** (49th and Hawthorne Streets, N.W. at an outfall)
- **Oxon Run** (Mississippi Avenue and 15th Street, S.E. into Oxon Run at an outfall)

An additional three locations located solely within the Anacostia River watershed were selected in collaboration with EPA Region III and DDOE. These three locations were previously monitored during the development of the Anacostia Trash TMDL. These stations will provide data on other types of land use not addressed in the three stations above required by the MS4 permit. These stations included:

- **McDonald's** (Minnesota Avenue NE and Nannie Helen Burroughs Ave NE at an outfall)
- **Benning Road** (Benning Road NE and Anacostia Avenue NE at an outfall)
- **New York Avenue** (New York Avenue NE and South Dakota Avenue NE interchange stormwater pond outfall)

Table 25 Trash Monitoring Station Information

Watershed	Site	Physiographic Province	Station	Land use	Acres
Rock Creek	WR	Piedmont	Walter Reed (Ft Stevens Rd & 16th St, NW)	Mixed density residential	23
Potomac	BK	Piedmont	Battery Kemble (Garfield St & 49th St, NW)	Low density residential	11
	OR	Coastal Plain	Oxon Run (Mississippi Ave & 15th St, SE)	Residential 46%, Public Land 45%, Commercial 5%, Utilities 4%	43
Anacostia	BR	Coastal Plain	Benning Road (Benning Rd & Anacostia Ave, NE)	Commercial	12
	McD	Coastal Plain	McDonald's (Minnesota Ave & Burroughs Ave, NE)	Residential 65%, Commercial 23%, Industrial 12%,	7.4
	NYA	Coastal Plain	New York Ave BMP (New York Ave & South Dakota Ave, NE)	Transportation right of way	1.5

Samples were obtained by placing custom made trash traps at the end of each storm sewer pipe and collecting solid material exiting from the outfall during a rain event. The traps fit over an outfall, with a box or sock of one-inch metal poultry netting that collected trash and natural debris emanating from the pipe. When an acceptable rain event was predicted, traps were deployed at one or more monitoring sites. After the rain ended, traps and any material contained within the trap were retrieved. Trap contents were transferred to labeled plastic trash bags for transport. The trap contents were taken to a residence at 3031 Oliver Street NW, Washington, DC, which is the same place samples were processed during the data collection for the TMDL. The bagged samples were set on a sloped concrete pad and small slits were cut in the bottom of the bags to allow water to drain away.

The samples were processed within 72 hours of collection, before appreciable degradation of any organic matter. The trap contents were hand-sorted to separate trash from natural debris. The natural fraction was weighed and properly discarded. The trash fraction was further sorted into its individual components and quantified using the categories used for the Anacostia River trash TMDL. The total trash fraction was then weighed and properly discarded.

Monitoring began at each site when permission to monitor was obtained from the property owner, such as the National Park Service (NPS) or the District Department of Transportation (DDOT). Monitoring was allowed to begin at three sites in September and at a fourth site in October. The National Capital Parks-East Office of NPS did not give permission to monitor the Oxon Run and Benning Road sites until November 2013. As a result of the delays in NPS permitting, and the snowy winter weather, monitoring did not begin at the Oxon Run and Benning Road sites until 2014. Additional information about samping delays can be found in Section 5.2.4.

Monitoring conducted for the development of the Anacostia trash TMDL in the coastal plain showed that at least 0.25 inches of rainfall is necessary to move trash through the District's MS4. Only samples from storms at least 0.25 inches in magnitude were monitored at stations found within the coastal plain. However, under the direction of DDOE, who gained approval from EPA, samples collected at Piedmont stations were only collected from storms at least 0.10 inches in magnitude. This was due to greater slopes found in the Piedmont province that could affect flow velocity and movement of trash through the MS4. Table 26 details the rain event characteristics of sampled storms.

Table 26 Rain Event Characteristics

Date	Precipitation (inches)[1]	Duration (hours)[1]	Peak Intensity[2]	Days from Previous Rain[1]	Sites Sampled
09/12/13	0.13[3]	1[3]	0.13[3]	10	WR
09/12/13	0.64[3]	6[3]	0.47[3]	10	BK
09/21/13	0.87	8	0.50	5	McD
10/07/13	1.13	5	0.75	16	NYA
11/16/13	0.42	7	0.13	9	WR, BK
11/26/13	2.20	30	0.33	8	McD, NYA
12/22/13	0.24	2.5	0.14	5	WR, BK
12/29/13	1.31	9	0.31	6	McD, NYA
02/03/14	1.48	13	0.22	5	OR
04/15/14	1.53	21	0.64	7	BR
04/25/14	0.39	3	0.28	3	OR
06/08/14	0.45	5	0.16	3	BR
08/11/14	1.63	20	0.65[4]	7	BR
08/20/14	0.26	1.5	0.34[4]	3	OR

1Precipitation amount, duration, and days from previous rain taken from National Weather Service Washington Reagan National Airport KDCA weather station

2Peak intensities from H Street Corridor-NoMa KDCWASHI27 Weather Underground station

3 Event data taken from Bethesda KMDBETHE6 Weather Underground station

4 Peak intensity from Aurora Hills KVAARLIN26 Weather Underground station

Table 27 details the results of total trash collected in pounds from each 2013 sampling event. The greatest total, and greatest average, amount of trash was captured at Benning Rd followed by the following sites in order: Oxon Run (Potomac), Walter Reed (Rock Creek), McDonald's (Anacostia), New York Avenue (Anacostia) and Battery Kemble.

Table 27 FY 2013 Trash Monitoring Results

Station	Date	Rain Amount (inches)	Trash Weight (pounds)
Walter Reed (Rock Creek)	09/12/2013	0.13*	3.313
	11/16/2013**	0.42	0.500
	12/22/2013**	0.24	2.813
Battery Kemble (Potomac)	09/12/2013	0.64*	0.125
	11/16/2013**	0.42	0.003
	12/22/2013**	0.24	0.006
Oxon Run (Potomac)	02/03/2014**	1.48	9.813
	04/25/2014**	0.39	4.438
	08/20/2014**	0.26	1.313
Benning Road (Anacostia)	04/15/2014**	1.53	45.125
	06/08/2014**	0.45	10.438
	08/11/2014**	1.63	3.813
McDonald's (Anacostia)	09/21/2013	0.87	0.875
	11/26/2013**	2.20	3.750
	12/29/2013**	1.31	0.250
New York Ave BMP (Anacostia)	10/07/2013**	1.13	3.063
	11/26/2013**	2.20	0.938
	12/29/2013**	1.31	0.500

Rain Amount taken from National Weather Service Washington Reagan National Airport KDCA weather station unless otherwise indicated

* Event data taken from Bethesda KMDBETHE6 Weather Underground station

** Due to weather, permitting, and access issues several samples were taken outside of FY2013. Additional details on sampling delays can be found in Section 5.2.4.

A total of 7,818 items of trash were collected during sampling. The number of items in major categories is shown in Figure 10. As in all previous studies, the food wrappers were the most abundant item encountered. Bottles and various beverage containers were not a dominant fraction by number of items, but they are highly visible and occupy a large volume of the trash

samples. Paper and plastic bags were a slightly smaller portion of the trash than in previous studies.

Expanded polystyrene foam was aggregated into one number that included fragments and pieces of cups and takeout containers, whole cups and plates, packing material, and miscellaneous foam pieces, but excludes whole Styrofoam clamshells, which were counted in the take-out category.

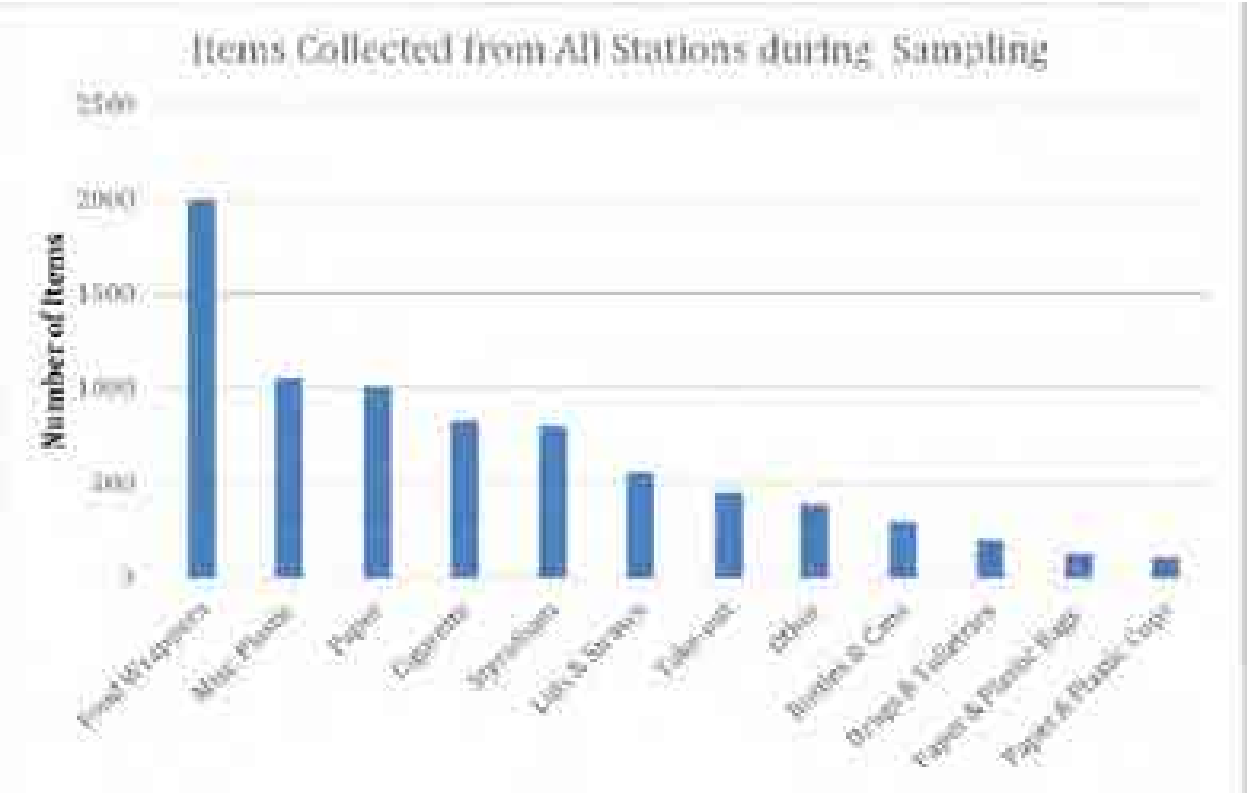


Figure 10 Items Collected During Trash Sampling

5.2.1.2 Estimates of Cumulative Pollutant Loading

The Simple Method is widely used to estimate stormwater runoff pollutant loads for urban areas. The Simple Method estimates pollutant loads for chemical constituents as a product of annual runoff volume and pollutant concentrations (Equation 1).

Equation 1 Simple Method

$$L = \sum_{i=1}^{\text{No. of landuse types}} \left(\frac{P}{12} \times CF \times Rv_i \times C_i \times A_i \times 2.72 \right)$$

Where:

L = Pollutant loading (lb./year for chemical constituents, MPN/yr. for bacteria)
P = Average annual rainfall (inches)
CF = Correction factor (0.9) to adjust for storms where no runoff occurs (dimensionless) (EPA 1992)
Rv_i = Runoff coefficient for the land use type (dimensionless)
C_i = Average event mean concentration (EMC) (mg/L for chemical constituents)
A_i = Land use area (acres)
2.72 = Unit conversion factor for chemical constituents in concentration units of mg/L; 12,334,885 for bacteria in units of MPN/100 mL.

The geometric mean of the measured event mean concentration (EMCs) were calculated for each monitoring station (Equation 2).

Equation 2 Event Mean Concentration

$$\text{Geomean of EMCs} = \left[\prod_{j=1}^{m} \text{EMC}_j \right]^{\frac{1}{m}}$$

Where:

EMC_j = Event Mean Concentration of storm

m = Number of storms at monitoring location

The total cumulative pollutant load for each of the three watersheds was calculated using the data from each monitoring site in a watershed. This calculation assumes that the two sampling stations are representative of the respective Potomac River, Anacostia River and Rock Creek watersheds. Given this assumption, a simple ratio is used to cover a cumulative load for each watershed (Equation 3). The annual pollutant loads for the selected pollutants is detailed in Table 28.

Equation 3 Cumulative Pollutant Load

$$L_A = \left(\frac{\sum L_i}{\sum A_i} \right) (A_t)$$

L_A = Estimated subwatershed cumulative pollutant load (lb./year)
A_t = Subwatershed total area (acres)
L_i = Pollutant loading for each monitoring site (lb./year)
A_i = Size of each monitoring site (acres)

Table 28 Annual Pollutant Loading

Station	TSS (lb./yr.)	TN (lb./yr.)	TP (lb./yr.)	Cd (lb./yr.)	Cu (lb./yr.)	Pb (lb./yr.)	Zn (lb./yr.)	E. Coli (MPN/100ml)
Anacostia High School	62,143	6,056	273	ND	23.88	14.33	100.64	8.2E+12
Gallatin & 14th St. NE	102,811	14,071	1,128	1.47	90.70	30.40	343.19	2.0E+14
Water Reed	4,588	633	32	0.07	1.62	0.00	6.64	2.2E+13
Soapstone Creek	38,025	569	498	0.55	39.09	0.00	88.84	3.8E+14
Battery Kemble Creek	19,325	1,998	218	ND	96.83	5.02	2.08	5.1E+13
Oxon Run	54,371	14,588	713	ND	84.26	13.41	254.46	1.1E+14
Load Estimates Anacostia Watershed (lbs./yr.)	1,434,725	175,056	12,182	12.79	996.61	389.01	3,860.38	1.8E+15
Load Estimates Potomac Watershed	6,728,927	1,514,447	85,012	0.00	16,534.45	1682.77	23,424.04	1.5E+16

Station	TSS (lb./yr.)	TN (lb./yr.)	TP (lb./yr.)	Cd (lb./yr.)	Cu (lb./yr.)	Pb (lb./yr.)	Zn (lb./yr.)	E. Coli (MPN/100ml)
(lbs./yr.)								
Load Estimates Rock Creek Watershed (lbs./yr.)	505,076	14,240	6,282	7.35	482.57	0.00	1,131.72	4.8E+15
Total Load Estimates (lbs./yr.)	8,668,729	1,703,743	103,475	20.14	18,013.63	2071.78	28,416.14	2.1E+16

5.2.1.3 Water Quality Trend Analysis

An examination of water quality trends was limited due to the differences between the 2013 and 2014 monitoring regime and the current interim monitoring requirements.

Tables 29,30, and 31 present the range in concentrations (minimum and maximum) for each watershed. Concentrations of cadmium, show a slight increase in the Anacostia River and Rock Creek watersheds. TSS concentrations also slightly differ in the Anacostia River. A slight increase in Zinc was observed in Rock Creek watershed. All other parameters were observed to be at concentrations below those of the preceding year.

Table 29 Summary of Selected Parameters in the Potomac River Watershed

Parameters	2013*		2014*	
	Concentration (mg/L)		Concentration (mg/L)	
	Low	High	Low	High
Cadmium, Total	ND	0.0036	ND	ND
Copper, Total	0.021	0.25	0.022	0.13
Lead, Total	0.0028	0.022	0.0026	0.019
Zinc, Total	0.016	0.32	0.016	0.079
Total suspended solids	9	120	8	62
Total Phosphorous	0.072	0.46	0.11	0.38
Total Nitrogen	1.9	5.7	2.1	3.4

* Samples were collected from two (2) stations for a total of six (6) sample events in 2013-2014

Table 30 Summary of Selected Parameters in the Anacostia River Watershed

Parameters	2013*		2014*	
	Concentration (mg/L)		Concentration (mg/L)	
	Low	High	Low	High
Cadmium, Total	ND	0.0037	ND	0.0052
Copper, Total	0.016	0.917	0.011	0.018
Lead, Tota[1]	0.0033	0.014	0.0021	0.015
Zinc, Total	0.0055	0.27	0.047	0.087
Total Suspended Solids	10	75	4	200
Total Phosphorous	0.23	0.45	0.03	0.48
Total Nitrogen	2.7	5.6	2.4	4.2

*Samples were collected from two (2) stations for a total of six (6) sample events in 2013-2014

Table 31 Summary of Selected Parameters in Rock Creek Watershed

Parameters	2013*		2014*	
	Concentration (mg/L)		Concentration (mg/L)	
	Low	High	Low	High
Cadmium, Total	ND	0.00077	ND	0.002
Copper, Total	0.012	0.12	0.016	0.04
Lead, Total	0.0036	0.026	0.0055	0.012
Zinc, Total	0.036	0.094	0.058	0.12
Total Suspended Solids	6.5	110	23	79
Total Phosphorous	0.17	0.63	0.17	0.44
Total Nitrogen	1.7	5.8	2.1	4.7

*Samples were collected from two (2) stations for a total of six (6) sample events in 2013-204

5.2.2 Storm Event Data

The National Oceanic and Atmospheric Administration (NOAA) rain gauge located at Reagan National airport is used to track rain conditions for the District and surrounding areas, Table 32. The Annual precipitation within the District of Columbia for the 2014 monitoring period was 49.48 inches. A number of the rainfall events were in the form of short duration thunderstorms followed by a lengthy dry period which did not meet the sampling requirements in the MS4 Permit. Table 33 details the measurements of storms sampled in the FY 2014 monitoring period. This information includes, as required by the MS4 Permit, the date, duration, and size of storm events, and time to previous sampled storm. The required flow measurements can be found in table 38 in Section 5.5 of this report.

Table 32 Precipitation Record for the District of Columbia

Year	Month	Actual (inches)*	Number of Days in Month with Storms >0.10 inches	Monthly Average (inches)
2013	October	6.25	5	3.40
	November	2.92	5	3.17
	December	5.53	8	3.05
2014	January	2.58	7	2.81
	February	4.02	5	2.62
	March	4.26	8	3.48
	April	6.47	6	3.06
	May	4.96	9	3.99
	June	3.31	7	3.78
	July	4.68	7	3.73
	August	3.39	7	2.93
	September	1.11	3	3.72

* Rain gauge Reading at Ronald Reagan National Airport.

Table 33 Characteristics of Sampled Storms

Date	Precipitation (inches)	Duration (hours)	Time to Previous Measurable Rainfall (approx. days)	Sites Sampled
11-26-13	1.46	8	7	C2
12-6-13	0.63	17	8	A2, B1, B2, C1
1-10-14	1.44	36	4	A1, B1, B2, C1
4-7-14	0.38	10	7.5	A1, B1, C1, C2
4-25-14	0.39	3	10	A2, B2
6-4-14	0.42	5	7	A1, A2, C2

5.2.3 Sample type, Collection, and Analysis

The District conducted the water quality sampling and analysis in accordance with the requirements specified in the MS4 Permit, SWMP, and EPA regulations. Table 34 details the water quality sampling and laboratory requirements.

Table 34 Sample Analysis Requirements

Bottle Type	Sample Type	Parameter	Method	Units	Monitoring Detection Limit
1000 mL Plastic, Sterile	Grab	E. coli	SM9221F	MPN/ 100 mL	200
500 mL Plastic H_2SO_4	Composite	Total Nitrogen	Calculation	mg/L	1.0
500 mL Plastic H_2SO_4	Composite	Phosphorus, Total	SM4500-P B, E	mg/L	0.010
1-L Plastic Unpreserved	Composite	Total Suspended Solids	SM2540D	mg/L	1.0

Bottle Type	Sample Type	Parameter	Method	Units	Monitoring Detection Limit
1000 mL Plastic HNO_3	Composite	Cadmium, Total	EPA 200.8	mg/L	0.00050
1000 mL Plastic HNO_3	Composite	Copper, Total	EPA 200.8	mg/L	0.0010
1000 mL Plastic HNO_3	Composite	Lead, Total	EPA 200.8	mg/L	0.0010
1000 mL Plastic HNO_3	Composite	Zinc, Total	EPA 200.8	mg/L	0.0050

5.2.4 Sampling Waiver

For FY 2014 the District was able to collect all required monitoring samples for the chemical constituents listed in Table 4 of the MS4 Permit. However, FY 2014 trash monitoring has been delayed.

DDOE expects 2014 trash monitoring report to be completed early in 2015 and will submit an addendum to the 2014 Annual Report featuring all data collecting during that sampling period, as required by Section 6.2.3 of the MS4 Permit. Several factors, such as site access, permiting, and severe weather delayed collection of trash samples for 2013 and 2014.

5.3 Dry Weather Monitoring

5.3.1 Dry Weather Screening Program

The District continues with the dry weather screening program as described in the SWMP. Dry weather sampling will commence on scheduled days following periods of dry weather (seventy-two (72) hours of no precipitation).

Sampling location and dates are found in Table 22. Table 35 detail the ambient water quality results for dry weather sampling.

Table 35 Ambient Water Quality Data for Dry Weather Sampling

Site ID	Location	Date	Water Temp (°F)	pH	DO (mg/L)
A1	Anacostia High School	4-3-14	54.3	7.62	9.55
		7-22-14	72.86	7.9	8.9
A2	Gallatin and 14th St. NE	4-3-14	54.7	7.19	9.23
		7-23-14	73.4	7.61	10.21
B1	Walter Reed/Fort Stevens Dr.	4-3-14	54.06	7.08	10.63
		7-22-14	70.3	6.77	9.35
B2	Soapstone Creek	4-3-14	54.48	7.05	9.91
		7-22-14	66.56	7.09	10.98
C1	Battery Kemble	4-3-14	52.52	7.14	9.75
		NDF	--	--	--
C2	Oxon Run	4-3-14	56.6	7.1	8.36
		7-22-14	70.88	7.1	9.0

NDF – No Dry Weather Flow

The water quality monitoring data for dry weather sampling is found in Table 36. The geometric mean for each parameter was calculated to represent the event mean concentration (EMC). The wet weather summary data has also been submitted electronically to EPA via NetDMR. The analysis for dry weather monitoring included additional parameters of concern. The full analysis for dry weather monitoring is included in Appendix M.

Table 36 Summary of Dry Weather Monitoring

Parameters	Anacostia High School	Gallatin & 14th St., NE	Water Reed/Fort Stevens	Soapstone Creek**	Battery Kemble	Oxon Run
Cadmium (mg/L)	0.0004* (n=2)	0.0003* (n=2)	0.0004* (n=2)	0.0004* (n=2)	0.0003* (n=2)	0.00025* (n=2)
Copper (mg/L)	0.0124 (n=2)	0.0068 (n=2)	0.0024* (n=2)	0.0158* (n=2)	0.0032 (n=2)	0.0023 (n=2)
E. Coli (MPN/100 mL)	1600 (n=2)	271 (n=2)	57 (n=2)	1600* (n=2)	130 (n=2)	521* (n=2)
Lead (mg/L)	0.0119 (n=2)	0.0009* (n=2)	0.0007* (n=2)	0.0028* (n=2)	0.0005 (n=2)	0.0010 (n=2)
Nitrogen, Total as N (mg/L)	3.13 (n=2)	4.90 (n=2)	3.60 (n=2)	3.78* (n=2)	2.80 (n=2)	3.87 (n=2)
Phosphorus, Total (as P) (mg/L)	0.23 (n=2)	0.27 (n=2)	0.01* (n=2)	0.13* (n=2)	0.01* (n=2)	0.01* (n=2)
Total Suspended Solids (mg/L)	30.74 (n=2)	3.34 (n=2)	0.17* (n=2)	5.37* (n=2)	2.40 (n=2)	10.00 (n=2)
Zinc (mg/L)	0.0759 (n=2)	0.0215 (n=2)	0.0182 (n=2)	0.0277* (n=2)	0.0063 (n=2)	0.0123 (n=2)

If a sample result is below the reporting limit, one-half the reporting limit is used in the calculation of the geometric mean

5.3.2 Screening Procedures

Details on screening procedures can be found in Section 4.7.

5.3.3 Follow-up on Dry Weather Screening Results

The District continues to implement an IDDE program for locating and ensuring elimination of all suspected sources of illicit connection and improper disposal identified during dry weather

screening. The District's IDDE program description and implantation activities can be found in Section 4.7 of this report.

5.4 Area and Source Identification Program

The District is highly urbanized, with little available land for further development. The MS4 drainage area contains approximately 26,500 acres, which is two-thirds of the District. The Combined Sewer System (CSS) drainage area encompasses approximately 12,640 acres, which is one-third of the District. All new development and redevelopment of existing areas is subject to the District's stormwater management regulations with a review by DDOE. The land use and impervious area must be indicated on all stormwater management plans submitted to DDOE for review and inspection. No single development plan reviewed to date has sufficient land area to make a significant impact to the MS4 system. The cumulative impacts of the proposed and new developments have not resulted in a significant change for the existing land use activities in the portion of the District served by the MS4. Table 37 provides the existing land use by planning area in the District (MS4 and CSS).

Table 37 Acres of Existing Land and Water Use by Planning Area

	Planning Area											
Land Use Type	Capitol Hill	Central Washington	Far northeast & southeast	Far southeast & southwest	Lower Anacostia waterfront/near southwest	Mid city	Near northwest	Rock creek east	Rock creek west	Upper northeast	Citywide	Percent (%)
Public Rights-of-Way	759	899	1,338	906	477	628	716	1,311	1,760	1,223	10,018	25
Single Family Detached Homes	6	0	775	164	7	15	84	919	2,324	641	4,936	13
Single Family Attached Homes/ Row Homes	520	10	641	328	30	497	340	606	290	611	3,874	10
Low-Rise Apts.	43	10	436	555	106	136	110	85	185	189	1,856	5
High-Rise Apts.	4	26	20	44	26	59	65	25	109	25	402	1
Commercial	97	448	129	63	122	144	220	106	170	296	1,795	5
Industrial	5	16	12	5	42	21	6	16	0	295	418	1
Local Public Facilities	72	47	154	441	47	54	75	131	67	102	1,110	3
Federal Facilities (excl. parks)	47	481	4	1,067	409	1	1	412	283	76	2,781	7
Institutional	42	67	71	117	22	142	249	163	659	730	2,262	6

	Planning Area											
Land Use Type	Capitol Hill	Central Washington	Far northeast & southeast	Far southeast & southwest	Lower Anacostia waterfront/near southwest	Mid city	Near northwest	Rock creek east	Rock creek west	Upper northeast	Citywide	Percent (%)
Permanent Open Space	296	678	1,321	729	533	141	354	878	2,011	1,038	7,980	20
Rail, Utilities Communication,	1	36	223	74	11	97	6	83	4	321	857	2
Vacant	66	58	179	188	51	36	33	22	111	99	843	2
Total Land	**1,958**	**2,776**	**5,305**	**4,687**	**1,884**	**1,971**	**2,259**	**4,757**	**7,982**	**5,645**	**39,225**	**100**
Water	117	509	135	1,791	1,295	46	239	19	313	89	4,554	
Total Land and Water	**2,075**	**3,284**	**5,440**	**6,474**	**3,179**	**2,017**	**2,498**	**4,776**	**8,288**	**5,735**	**43,766**	

5.5 Flow Measurements

Table 38 details flow measurements and flow conditions during FY 2014 MS4 sampling.

Table 38 Stormwater Sampling Flow Measurements and Conditions

Date	Site Number	Event Type	Location Name	Watershed	Flow Conditions	Flow Rate at Outfall(GPM)
1/10/2014	A1	Wet	Anacostia High	Anacostia	Good	~898
1/10/2014	B1	Wet	Walter Reed/Fort Stevens	Rock Creek	Good	~37
1/10/2014	B2	Wet	Soapstone Creek	Rock Creek	Good	~1,145
1/10/2014	C1	Wet	Battery Kemble Creek	Potomac	Good	~24.9
4/3/2014	A1	Dry	Anacostia High	Anacostia	Good	~448.8

Date	Site Number	Event Type	Location Name	Watershed	Flow Conditions	Flow Rate at Outfall(GPM)
4/3/2014	A2	Dry	Gallatin	Anacostia	Good	~982
4/3/2014	B1	Dry	Walter Reed/Fort Stevens	Rock Creek	Good	~12.47
4/3/2014	B2	Dry	Soapstone Creek	Rock Creek	Good	~233.8
4/3/2014	C1	Dry	Battery Kemble Creek	Potomac	Good	~6.23
4/3/2014	C2	Dry	Oxon Run	Potomac	Good	~149.6
4/7/2014	A1	Wet	Anacostia High	Anacostia	Good	~897
4/7/2014	B1	Wet	Walter Reed/Fort Stevens	Rock Creek	Good	~62.3
4/7/2014	C1	Wet	Battery Kemble Creek	Potomac	Good	~62.3
4/7/2014	C2	Wet	Oxon Run	Potomac	Good	~523.6
4/25/2014	A2	Wet	Gallatin	Anacostia	Good	~374
4/25/2014	B2	Wet	Soapstone Creek	Rock Creek	Good	~299.2
6/04/2014	A1	Wet	Anacostia High	Anacostia	Good	~561.0
6/04/2014	A2	Wet	Gallatin	Anacostia	Good	~1,496.1
6/4/2014	C2	Wet	Oxon Run	Potomac	Good	~224.4
7/22/2014	A1	Dry	Anacostia High	Anacostia	Good	~280
7/22/2014	B1	Dry	Walter Reed/	Rock Creek	Good	~1.26

Date	Site Number	Event Type	Location Name	Watershed	Flow Conditions	Flow Rate at Outfall(GPM)
			Fort Stevens			
7/22/2014	B2	Dry	Soapstone	Rock Creek	Good	~187
7/22/2014	C2	Dry	Oxon Run	Potomac	Good	~112
7/23/2014	A2	Dry	Gallatin	Anacostia	Good	~336
7/23/2014	C1	Dry	Battery Kemble	Potomac	No Dry Flow	No Dry Flow
12/6/2014	A2	Wet	Gallatin	Anacostia	Good	~6,284
12/6/2014	B1	Wet	Walter Reed/ Fort Stevens	Rock Creek	Good	~474
12/6/2014	B2	Wet	Soapstone Creek	Rock Creek	Good	~936.93
12/6/2014	C1	Wet	Battery Kemble Creek	Potomac	Good	~23.28

5.6 Monitoring and Analysis Procedures

The District monitoring is conducted using the procedures approved in 40 C.F.R Part 136, http://www.epa.gov/region9/qa/pdfs/40cfr136_03.pdf.

Detection limits for the District's water quality monitoring can be found in table 31.

5.7 Reporting of Monitoring Results

The MS4 Permit Section 5.7 and 6.2.1.b requires all monitoring results and trends to be reported in the Annual Report. Section 5 of this report is the District's Annual Discharge Monitoring Report and fulfils the Requirements of Section 5.7 and 6.2.1.b of the MS4 Permit.

All monitoring results are submitted in Net DMR as required by the MS4 Permit and one copy of the Annual Report and DMR is sent to EPA Region III and National Marine Fisheries Service North East Region.

5.8 Additional Monitoring

The District did not monitor any pollutant more frequently than required by the MS4 Permit.

5.9 Retention of Monitoring Information

The District continues to retain all monitoring records in electronic and hard copy files as required by the MS4 Permit.

5.10 Record Content

DDOE maintains a record of rainfall event, sampling, and analysis data.
This data includes:

- Description of Sampling
  - Sampling protocols
  - Location/Collection time
  - Sample collection procedures
  - Field notes
  - Sampling personnel
- Storm Event Data
  - Date and duration of storm events sampled
  - Rainfall measurements
  - Duration between storm event sampled and the end of the previous measurable storm event
  - Estimate of the total volume of the discharge sampled
- Storm Water Analysis Data
  - Field test results
  - Laboratory results

6 REPORTING REQUIREMENTS

The District continues to comply with the reporting requirements and deliverable dates of the MS4 Permit.

6.1 Discharge Monitoring Report

The DMR is found in Section 5 of this report.

6.2 Annual Report

The District continues to submit the Annual Report to EPA Region III. The 2014 Annual Report can be found of the DDOE website at http://ddoe.dc.gov/publication/ms4-discharge-monitoring-and-annual-reports. The 2014 Annual Report follows the format of the MS4 Permit and addresses each Permit requirement. The required elements of Section 6.2.1 a-p are addressed throughout the 2014 Annual Report. The activities described as “FY15 Goals” in each section of

the Annual Report fulfill the Section 6.2.1.1 requirement to provide a summary of commitments for the next year.

7 MODELING

A TMDL Implementation Plan modeling tool integrated with DDOE's new BMP tracking database is an essential component of the Consolidated TMDL Implementation Plan. Since 2001, TMDLs in the District have been developed using a variety of land-based loading and hydrodynamic models, at differing spatial scales, using best available model inputs at the time a particular TMDL was developed. These models and model inputs have been documented, compiled, and inventoried so that they can be reconciled with the model that will be used for the Consolidated TMDL Implementation Plan. Also, DDOE has continued to update and refine the GIS data layers for MS4 outfalls and the delineation of their Sewershed. These layers inform and contribute to the ongoing development of a new GIS layer for the contributing area of each TMDL water body.

In early FY 2014, the TMDL IP project team finalized the TMDL Implementation Plan Methodology document, which identified modeling requirements, the model framework, and described the methods used to calculate runoff volume, loads, and load reductions anticipated by the implementation of stormwater and pollution reduction strategies. The project team then developed and used the modeling tool to conduct a baseline analysis that is documented in the Draft Final Comprehensive Baseline Analysis. Finally, the TMDL IP project team is in the process of finalizing, development scenarios and DDOE is committed to include modeling results for planned implementation in the final Consolidated TMDL Implementation Plan.

DDOE's IP Modeling Tool tracks and accounts for pollutant load generation and load reduction for all of the pollutants of interest that have MS4 WLAs. It consists of three parts:

- *Runoff Module:* calculates the runoff volume for a typical year of rainfall using a Modified Version of the Simple Method (CWP and CSN, 2008).
- *Pollutant Load Module:* calculates the pollutant loads using event mean concentrations (EMCs), stream bank erosion calculations, and/or trash load rates in conjunction with runoff volume from the runoff module described above.
- *BMP Module:* consists of the current BMP inventory and the assumed BMP pollutant load reduction efficiencies in order to calculate load and runoff reductions provided by the BMPs.

As part of the Consolidated TMDL Implementation Planning process, the District has used the modules above to estimate runoff, pollutant loads, and reductions associated with the BMPs that have been implemented to date. Pollutant load reductions for each TMDL, water body, and pollutant are presented in the Baseline Attachment Tables 1-24 in the Draft Final Comprehensive Baseline Analysis Report. The District will continue to assess the performance of BMPs (including stormwater retention practices) by updating and running the BMP module with controls put on the ground in the appropriate reporting period. In addition to tracking load reductions by TMDL, water body, and pollutant, DDOE is considering the addition of a

summary of the modeled pollutant reductions throughout the MS4 area by major drainage basin in future annual reports.

The implementation activities of this section fulfil the reporting requirements of Section 6.2.1.g and Section 7 of the MS4 Annual Report.

The TMDL IP Methodology can be found at http://dcstormwaterplan.org/wp-content/uploads/Final-Methodology-Document.pdf.

The Draft Final Comprehensive Baseline Analysis Report can be found at http://dcstormwaterplan.org/wp-content/uploads/AppB_SewershedDelineations_DraftFinalCBA_0924_2014.pdf.

8 APPENDICES

A Memorandum of Understanding

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE DISTRICT OF COLUMBIA
THE CHIEF FINANCIAL OFFICER OF THE DISTRICT OF COLUMBIA
THE DEPARTMENT OF HEALTH
THE DEPARTMENT OF PUBLIC WORKS
AND
THE DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
REGARDING STORMWATER PERMIT COMPLIANCE ADMINISTRATION

THIS MEMORANDUM OF UNDERSTANDING ("MOU") is entered into this 14th day of December, 2000 by and between the City Administrator of the District of Columbia, the Department of Health ("DOH"), the Department of Public Works ("DPW"), the District of Columbia Water and Sewer Authority ("WASA"), (collectively, "parties") and the Chief Financial Officer of the District of Columbia ("DCCFO"), who joins this agreement for limited purposes set forth in paragraph 9.

WHEREAS, on or about April 19, 2000 the United States Environmental Protection Agency ("EPA") issued discharge permit number DC0000221 to the District of Columbia as Permittee ("MS4 permit"); and

WHEREAS, the MS4 permit authorizes certain discharges and requires other activities related to the operation of District of Columbia Municipal Separate Storm Water Sewer System; and

WHEREAS, the MS4 permit contains a compliance schedule which requires the District of Columbia to compile and submit information on pollution sources, significant changes in the identification and mapping of storm sewer system outfalls, and changes affecting the separate storm sewer system due to land use activities, population estimates, runoff characteristics, structural controls and other matters; and

WHEREAS, the compliance schedule requires, among other items, a written annual review to be submitted to EPA as well as implementation of outfall monitoring activities on or before April 19, 2001. A written annual report and implementation plan must be submitted to EPA by April 19, 2002; and

WHEREAS, the Mayor, as the Chief Executive Officer of the District of Columbia, directs the actions of the Department of Health and the Department of Public Works through the heads of those Departments; and

WHEREAS, the City Administrator is the chief executive officer of the Mayor and has been delegated the authority to sign this agreement on the Mayor's behalf;

WHEREAS, the Department of Health is a subordinate agency of the government of the District of Columbia charged with multiple responsibilities, including the enforcement of regulations designed to protect water quality and monitoring of environmental compliance in the District of Columbia; and

WHEREAS, the Department of Public Works is a subordinate agency of the government of the District of Columbia charged with primary responsibility to maintain public roads and streets in the District of Columbia and routinely engages in activities necessary to implementation of MS4 requirements related to the public space; and

WHEREAS, the District of Columbia Water and Sewer Authority is an independent agency of the government of the District of Columbia, has the ability to contract and provides wastewater treatment services for both sanitary and combined sanitary and storm water flows delivered to the Blue Plains Advanced Wastewater Treatment Plant; and

WHEREAS, on or about September 13, 2000, Council Bill 13-813 was introduced before the Council of the District of Columbia. This Bill, known as the "Storm Water Permit Compliance Amendment Act of 2000" ("the Storm Water Bill" or "the Bill"), is intended to amend the enabling legislation of the Water and Sewer Authority to grant express authority to WASA to engage in certain MS4 permit compliance activities including creation of a storm water administration within WASA and authority to coordinate actions between and among other District agencies; and

WHEREAS, the Bill would establish a Permit Compliance Enterprise Fund, require the collection by WASA of fees set by the Council for storm water management activities, and require certification by WASA's General Manager or his or her designee of the sufficiency of MS4 permit compliance budget requests made by District agencies; and

WHEREAS, the bill is expected to receive favorable consideration from the Council, the Mayor, and the Financial Responsibility and Management Assistance Authority. Following completion of the 30 legislative day period of congressional review, the Bill is likely to become law shortly before certain MS4 compliance activities must be completed; and

WHEREAS, in order to provide the best opportunity for complete compliance with MS4 permit conditions, the parties have determined that this Memorandum of Understanding will govern the coordination of MS4 permit compliance actions of the parties during that period of time which shall commence on the effective date of this MOU and terminate upon the expiration of the permit; and

WHEREAS, at the request of the Mayor, representatives of these parties and others have met on a weekly basis over the past several months to negotiate a MS4 Permit compliance protocol acceptable to all parties; and

WHEREAS, the parties have developed a compliance matrix which sets forth the respective MS4 permit compliance responsibilities of the Department of Health, the Department of Public Works, and WASA; and

WHEREAS, the parties have agreed that each will be that each will be responsible for and shall complete all duties set forth in the attached Compliance Matrix (Schedule A; incorporated by this reference), and

WHEREAS, DOH AND DPW will provide technical assistance to WASA and all parties will dedicate operational resources, including personnel and equipment to the respective tasks assumed by each in the Compliance Matrix; and

WHEREAS, WASA will coordinate MS4 permit compliance activities of District agencies under the terms of this MOU and the requirements of the Storm Water Bill, once effective subject to the expenditure cap set forth herein; and

WHEREAS, the parties acknowledge that it may be necessary for some or all parties to take action to amend, reprogram or supplement their respective Fiscal Year 2001 and proposed 2002 budgets in order to lawfully undertake activities required by the MS4 permit and wish to set forth how these actions will be taken; and

WHEREAS, a separate Memorandum of Understanding between WASA and the Chief Financial Officer of the District ("Pilot MOU") governs WASA's obligation to make a Payment in Lieu of Taxes to the District ("Pilot"); and

WHEREAS, the DCCFO joins this memorandum only for the purposes of effecting an amendment to the Pilot MOU to require an adjustment to the Pilot MOU when circumstances described in paragraph 9 occur.

NOW THEREFORE, in consideration of the promises mutually exchanged, the receipt and sufficiency of which are acknowledged by all, the parties agree as follows:

1. Definitions.

Coordination Tasks means (a) the monitoring and coordinating the activities of all District agencies, including the activities of WASA, which are required to maintain compliance with the MS4 permit and (b) WASA's billing and collection of the Storm Water Compliance Fee, if established.

Storm Water Administrator means the person designated by the WASA General Manager to take primary responsibility for undertaking Coordination Tasks, who shall be the same person designated to head the Storm Water Administration if established in accordance with section 206A(a) of the WASA Act as amended by the Storm Water Bill.

2. Availability of Appropriations. Compliance with any provision of this MOU that would require the expenditure of funds is conditioned upon the availability of an appropriation and of funds equal to that appropriation.

3. Term. This agreement shall be effective as of the date written above and shall terminate upon the expiration of the MS4 permit unless extended by agreement of all signatories, or sooner terminated pursuant to the provisions of paragraph 12.

4. Agreement to undertake compliance activities. Each party shall employ its best efforts to fully, faithfully and timely discharge all responsibilities assumed by itself as a shared or joint or sole obligation in the Compliance Matrix (Schedule A). The parties acknowledge that the Compliance Matrix lists all of the parties' responsibilities under the MS4 permit.

5. Storm Water Administrator to Administer Compliance Activities. The Storm Water Administrator shall, during the term of this agreement, monitor the performance of tasks required to be performed in order for the parties to remain in permit compliance. The Storm Water Administrator shall issue notices of deficiencies where a party fails to meet joint or separate obligations expressed in the Compliance Matrix. The Storm Water Administrator shall also coordinate the performance of all permit requirements and shall employ best efforts to submit all deliverables required under the MS4 permit and shall establish binding timetables for submissions by other parties.

6. Agreement to Cooperate – Planning. DOH, DPW and any other District agency identified by the Storm Water Administrator shall timely comply with all requests made by the Storm Water Administrator related to MS4 permit compliance, including the scheduling of work, planning and development of capital improvements, and submittal of information, plans, proposed budgets or supplemental budgets related to storm water activities.

7. Storm Water Permit Compliance Enterprise Fund. In the event that the Storm Water Permit Compliance Enterprise Fund ("the Fund") is established pursuant to the Storm Water Permit Compliance Amendment Act of 2000, WASA shall administer the Fund as follows:

a.) WASA shall first apply monies in the Fund to the Authority's costs of performing Coordination Tasks up to the expenditure cap provided for in paragraph 8.

b.) After applying the revenues as described in subparagraph (a), WASA shall next apply income in the Fund to satisfy WASA's and any other District agency's costs of complying with the MS4 permit, including all administrative, operating and capital costs and to create adequate reserves, provided, however that no funds shall be disbursed for costs associated with MS4 permit compliance or other storm water activities carried out prior to April 19, 2000, except to the extent those costs increased in order to comply with the terms of the MS4 permit.

8. Expenditures Cap for Coordination Tasks

a.) During Fiscal Year 2001 WASA is not obligated to expend money to perform Coordination Tasks if the expenditure, taken together with any prior expenditures made that fiscal year, would exceed either (1) WASA's budgetary authority to perform the tasks; (2) the total amount of funds made available to WASA through DOH and DPW transfers or the PILOT credit made in accordance with paragraph 9(a) or (3) $1 million.

b) During Fiscal Year 2002 or thereafter, WASA is not obligated to expend money to perform Coordination Tasks if the expenditure, when taken together with any prior expenditures made that same fiscal year, would exceed either (1) WASA's budgetary authority to perform the tasks; (2) the projected revenues for the Fund plus funds made available to WASA through DOH and DCRA transfers or the PILOT credit made in accordance with paragraph 9(b), or (3) $1 million.

9. Funding of Coordination Tasks

a) During fiscal year 2001, DOH and DPW shall be exclusively responsible for the funding of WASA's performance of Coordination Tasks. In the event that the combined amounts transferred to WASA as of the effective date of this MOU are less than the amount authorized in WASA's FY 2001 budget for Coordination Tasks, the Administrator may request DOH and DPW to transfer such amounts as are necessary to make up the difference. Should DOH and DPW fail to transfer the amounts as requested within 60 days after a written request is sent, the DCCFO shall adjust the annual Pilot to credit WASA for all amounts actually expended in excess of the total funds transferred.

b) During Fiscal Year 2002 or thereafter, WASA's performance of Coordination Tasks shall be funded exclusively by the fund in accordance with paragraph 7(a). In the event that the Storm Water Administrator determines that the projected fiscal year revenues from the storm water fee will be less than the amount included in WASA's approved budget for Coordination Tasks, the Administrator may request DOH and DPW to transfer such amounts as are necessary to make up the difference. Should DOH and DPW fail to transfer the

amounts as requested within 60 days after a written request is sent, the DCCFO shall adjust the annual Pilot to credit WASA for all amounts actually expended in excess of fund revenues (including transferred amounts) for that fiscal year.

10. Agency Compliance Plan – Fiscal Years 2002 through 2005. On or before November 15th of each year, DOH and DPW shall submit to the Storm Water Administrator, and WASA shall submit to DOH and DPW, a written MS4 Permit Compliance Plan for the ensuing fiscal year. This plan shall set forth for the ensuing fiscal year:

a) All funds in the proposed budget for the ensuing fiscal year ("Agency's Proposed Budget") dedicated for MS4 permit compliance activities assumed by the Agency in the Compliance Matrix (Schedule A).

b) A statement whether the Agency's Proposed Budget contains sufficient funds expressly dedicated to all MS4 permit compliance activities.

c) In the event that an agency determines sufficient dedicated funds will not be available under either its current budget or in the Agency's Proposed Budget, the agency shall estimate the amount of funds required and shall advise the Storm Water Administrator what budget actions and options are available (including, for the current budget, reprogramming funds) to secure adequate funding.

d) *The Storm Water Administrator* shall review each party's plan and determine whether the agency Proposed Budget adequately funds MS4 permit compliance activities. The Storm Water Administrator shall inform the party, the Mayor and the Council of any deficiency found and shall indicate all revisions, procedures and actions necessary to correct the deficiency.

11. Allocation of liability. The Parties agree to the following principles with respect to their liability in the event that EPA alleges noncompliance with respect to any MS4 permit term:

a) Where the allegation concerns a task that is identified as the sole responsibility of a party, that party shall defend any administrative action resulting therefrom, and, shall be exclusively liable for the payment of any fines, the costs of defense and the fulfillment of any compliance tasks agreed to or ordered in connection therewith.

b) Where the allegation concerns a task that is identified as the responsibility of "each", and EPA, in its complaint, in response to an inquiry, or in a decision and order identifies the party responsible, the identified party shall defend any administrative action resulting therefrom,

and shall be liable for the payment of any fine, the costs of defense and the fulfillment of any compliance tasks agreed to or ordered in connection therewith. Nothing herein precludes a named party from asserting, as a defense, that another party is responsible for the violation, in which case that party may enter the proceeding, and shall be liable for such fines and tasks imposed by EPA as a result of acts or omissions for which the party is found responsible. If the EPA does not indicate the party responsible, the parties shall proceed in accordance with subparagraph (c).

c) Where the allegation concerns a task that is identified, the responsibility of "all" parties, the parties shall attempt to allocate liability. If no agreement is reached the issue shall be submitted to a third party agreed to by the parties, whose determination with respect to the issue of liability shall be final and binding.

12. Termination This MOU will terminate prior to the expiration of the term:

a) 90 days after a party provides written notice to the Storm Water Administrator based upon the failure of another party:

i) To fulfill any of its permit responsibilities as determined pursuant to this MOU;

ii) To pay any liability or perform any compliance task arising from such liability as determined pursuant to principles expressed in paragraph 11; or

iii) To propose a budget, supplemental, or to take any other budget related action requested of the party by the Storm Water Administrator;

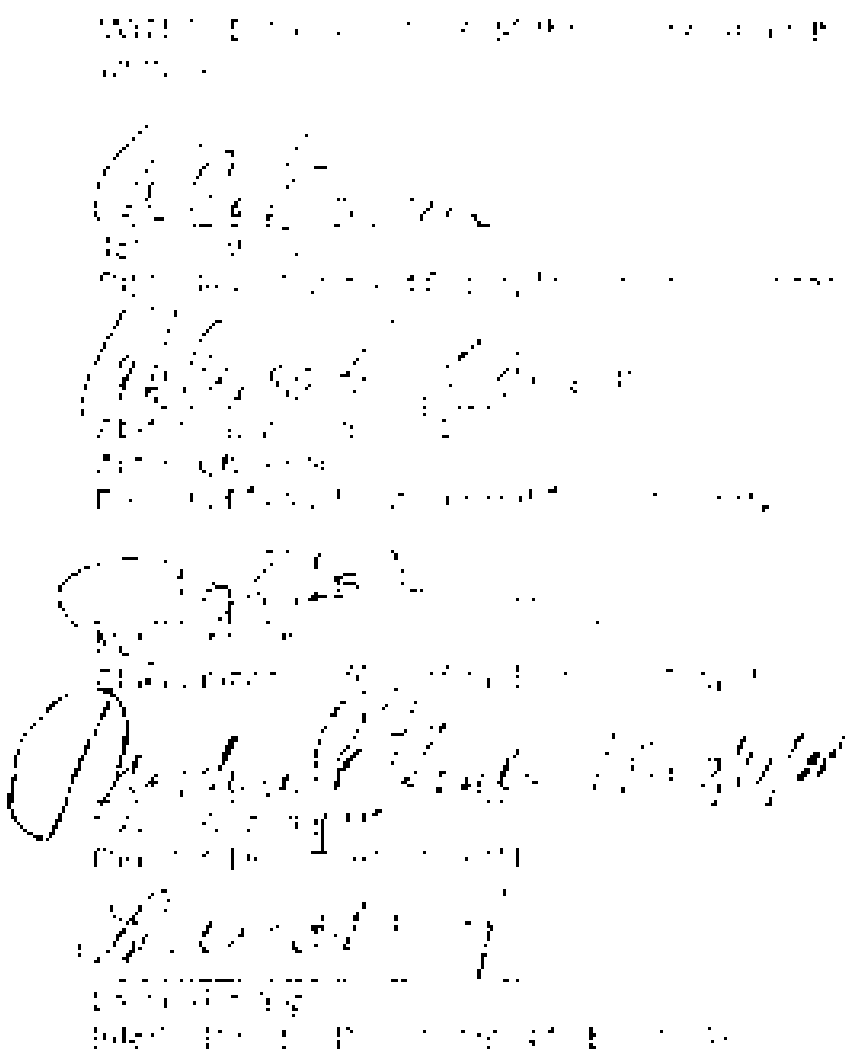
b) If the Storm Water Permit Compliance Amendment Act of 2000 does not become law by September 30, 2001; or

c) If the Storm Water Permit Compliance Amendment Act of 2000 becomes law in a form that, in the judgment of any party that is substantially and materially different from the form appended hereto as Schedule B.

13. Storm Water Task Force. The parties shall meet at least once monthly as a Storm Water Task Force. The taskforce shall be chaired by the Storm Water Administrator. Each party will designate one permanent member of the Task Force. The parties shall attempt to reach consensus with respect to all decisions regarding their responsibilities under the MS4 permit and this MOU. If no consensus is reached the Storm Water Administrator shall govern. One week before each regularly scheduled meeting each party will provide, to the

Storm Water Administrator a summary of all MS4 permit activities performed during the previous month and a plan for tasks to be accomplished during the forthcoming month. At the meeting, the Storm Water Administrator will note any deficiencies in each party's plan, and the party will take all necessary actions to remedy the deficiency. The Storm Water Administrator may call meetings at any time, either on his or her own initiative or at the request of a party.

14. Counterparts. This Memorandum of Understanding may be executed in separate counterparts, each of which when so executed and delivered shall be an original, but all of which together shall constitute but one and the same instrument.



[illegible]

TASK #	TASK	RESPONSIBILITY	DUE DATE	PERCENT COMPLETE
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

TASK #	TASK	RESPONS. AGENCY	DUE DATE	PERMIT SECT.
	Storm Water Management Plan for Construction Sites			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible] discharge [illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible] Low Impact Development [illegible]	[illegible]	[illegible]	[illegible]

TASK #	TASK	RESPONS. AGENCY	DUE DATE	PERMIT SECT.
	[illegible]			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

TASK #	TASK	RESPONS. AGENCY	DUE DATE	PERMIT SECT.
	[illegible] municipal [illegible] and other municipal [illegible] facilities			[illegible]
[illegible]	[illegible] - [illegible] - Identify areas with poor water quality [illegible]	[illegible]	[illegible]	[illegible]
[illegible]	Report on annual plan how activities meet Clean Water Act requirements and results of activities such as [illegible] monitoring, [illegible]	DPW	Apr [illegible]	Part [illegible]

[illegible]

TASK #	TASK	[illegible]	DUE DATE	PERMIT REQ.
	Monitor and Control Pollutants from [illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

TASK #	TASK	[illegible]	[illegible]	[illegible]
	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

TASK #	TASK	[illegible]	[illegible]	[illegible]
	Develop snow management plan and investigate [illegible] alternatives			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	Report on progress to reduce pollution from [illegible] and [illegible]	[illegible]	[illegible]	[illegible]
[illegible]	Avoid dumping snow in areas adjacent to waterways and [illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE DISTRICT DEPARTMENT OF THE ENVIRONMENT
THE DISTRICT DEPARTMENT OF PUBLIC WORKS
THE DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
AND
DEPARTMENT OF TRANSPORTATION
REGARDING MS4 STORMWATER PERMIT FISCAL ADMINISTRATION

THIS MEMORANDUM OF UNDERSTANDING (MOU) is entered into this 1st day of August 2007, by and between the District Department of the Environment (DDOE) and the District Department of Transportation (DDOT), the D.C. Water and Sewer Authority (WASA), and the Department of Public Works (DPW) to administer finances and reimbursements from the Storm Water Permit Compliance Enterprise Fund for activities conducted to reduce pollutants in the District of Columbia, under the municipal separate storm sewer system (MS4) National Pollution Discharge Elimination System (NPDES) Permit (MS4 Permit).

WHEREAS, storm water discharges from the municipal separate storm sewer system (MS4) are authorized by the National Pollution Discharge Elimination System (NPDES) Permit Number: DC0000221 issued to the District of Columbia as Permittee.

WHEREAS, on August 19, 2004, the Environmental Protection Agency (EPA) re-issued the District's MS4 Permit Number: DC0000221 to authorize storm water discharges to the District of Columbia as Permittee, for a five-year term;

WHEREAS, the MS4 Permit contains a compliance schedule which requires the District of Columbia to compile and submit information on pollution sources, significant changes in the identification of storm sewer system outfalls, and changes affecting the separate storm sewer system due to land use activities, population estimates, runoff characteristics, structural controls, reporting requirements and other matters as outlined in the MS4 Permit Implementation Plan, in order to reduce storm water pollution;

WHEREAS, the MS4 Permit outlines additional activities to be undertaken by the District,

WHEREAS, the above named agencies have been assigned activities in the MS4 Implementation Plan;

WHEREAS, the MS4 Task Force has been established with representatives from DDOE, DCOP, DPW, WASA to manage the activities required in the MS4 Permit, pursuant to the "Storm Water Permit Compliance Amendment Act of 2000", D.C. Official Code § 34-2202.06a;

WHEREAS, the Director of DDOE, or his designee, was made the Storm Water Administrator with primary responsibility for leading the Storm Water Administration, pursuant to the Establishment of the District Department of the Environment Act of 2005, D.C. Official Code § 8 1511.03(b)(2);

WHEREAS, the storm water management activities in the Implementation Plan are supported by fees collected by WASA in a Storm Water Compliance Enterprise Fund and provided to DDOE for the Storm Water Administrator to certify the sufficiency of the MS4 Permit budget requests;

WHEREAS, the parties acknowledge that it may be necessary for some or all parties to take action to amend, program, reprogram or supplement their respective budgets in order to lawfully undertake activities required by the MS4 permit and wish to set forth how these actions will be taken, and

WHEREAS, in the event that not all the projects can be funded, priority will be given to the projects that provide the most benefit in reducing storm water pollution.

NOW THEREFORE, in consideration of the promises mutually exchanged, the receipt and sufficiency of which are acknowledged by all, the parties agree to administer the Storm Water Permit Compliance Enterprise Fund (Storm Water Fund) as follows:

I. SCOPE OF SERVICES

1. Each agency, including DDOE, shall submit a proposed budget for the following fiscal year to the Storm Water Administrator by October 1 of each calendar year. Accordingly, as of this signing, each agency agrees to submit their proposed 2009 Fiscal Year Budget Request to the Storm Water Administrator by October 1, 2007. The Storm Water Administrator will use this information to program budget authority from the Storm Water Fund. Acceptance of this summary by the Storm Water Administrator does not constitute approval of the expenditure, but rather general agreement that activities of this type may be reimbursable from the Enterprise Fund.

2. Each agency, including DDOE, shall submit a detailed Storm Water Fund budget request to the Storm Water Administrator no later than six-months prior to the beginning of the fiscal year covered by that request. The Storm Water Administrator will review and approve budget requests prior to allocating funds in DDOE's annual budget for the expected reimbursement. For each activity included in the budget request the agency will detail:

   (a) A description of the activity to be funded;

   (b) MS4 Implementation Plan reference for the activity;

   (c) MS4 Permit section reference for the activity;

   (d) Explanation that this activity is above and beyond storm water activities carried out by the agency prior to April 19, 2000;

   (e) Cost-benefit discussion including which pollutants are targeted for reduction by this project/activity, estimated reduction per year to be achieved, and estimated cost/pound of pollutant removed over the life of the project/activity; and

   (f) A statement of whether the agency's proposed budget contains sufficient funds expressly dedicated to all MS4 Permit compliance activities.

3. The Storm Water Administrator may request additional information from the agency to justify the project/activity. Approval of the detailed budget request by the Storm Water Administrator is pre-approval for reimbursement for expenditures conducted by the agency for the approved project or activity.

4. The Storm Water Administrator shall review and approve all programmatic changes or modifications that might affect the estimated quantity of pollutants removed or the cost benefit analysis of the project or activity.

5. In the event of a budget shortfall, the Storm Water Administrator shall allocate remaining funds giving priority to the projects that he or she determines would provide the most benefit in reducing storm water pollution. In the event that the Storm Water Administrator determines that the projected fiscal years revenues from the Storm Water Fund will be less than the anticipated costs of the Storm Water Administration, the Storm Water Administrator may request that DDOT, WASA, DDOT, and DPW make up the difference.

6. For FY 2007, the Storm Water Administrator shall administer the Storm Water Permit Compliance Enterprise Fund as follows:

Department of Public Works	$ 1,270,000
District Department of Transportation	$ 1,537,000
DC Water & Sewer Authority	$ 292,999
District Department of the Environment	$ 1,950,000

7. Each agency shall request reimbursement quarterly from the Storm Water Administrator for expenditures related only to complying with the MS4 permit. Reimbursement requests shall include:

   (a) Description of the activity performed;

   (b) Certification that all expenditures submitted for reimbursement are for direct MS4 permit compliance activities above and beyond storm water activities carried out by the agency prior to April 19, 2000;

   (c) Citation of the MS4 Permit section(s) reference for the activity;

   (d) Description of which pollutants were targeted for reduction by the project/activity; and

   (e) Copies of invoices and other applicable documentation demonstrating MS4 relevant work. Documentation to include invoices outlining storm water-related tasks completed, including description of task, hours incurred including date and time.

8. The Storm Water Administrator may request additional supporting documentation, as required, to evaluate the reimbursement request or to detail how the reimbursement request will address the overall agency implementation Plan.

9. Reimbursements are subject to total approved budget limits as well as cash on revenues available in fund.

10. Requests approved by the DDOE will be submitted within five business days of approval by the Storm Water Administrator.

II. RESOLUTION OF DISPUTES

The Chief Financial Officer or the City Administrator shall resolve all disputes arising under this MOU.

III. EFFECTIVE DATE AND SPECIAL PROVISIONS FOR TERMINATION OF MOU:

1. This MOU shall be effective as of August 1, 2007 through August 19, 2009, unless terminated in writing by the Parties prior to the expiration.

2. This MOU may be extended by agreement of all signatories.

3. DDOE may terminate this MOU on the following grounds:

   (a) Lack of local funding.

   (b) Changes in applicable law;

   (c) Changes in District or federal policy affecting these services,

   (d) Changes in the structure or nature of the MS4 Permit, and

   (e) Elimination of DDOE as the Storm Water Administrator or Storm Water Administration

IV. COUNTERPARTS

This MOU may be executed in separate counterparts, each of which when so executed and delivered shall be an original, but all of which together shall constitute but one and the same instrument.

IN WITNESS WHEREOF, the parties hereto have signed this MOU as of the day and year written above.

George S. Hawkins, Acting Director, DDOE — Date: 7/31/07

Emeka C. Moneme, Director, DDOT — Date

William Otis Howland, Jr., Director, DPW — Date: 8-27-2007

Jerry N. Johnson, General Manager, DCWASA — Date

UPDATED MATRIX OF RESPONSIBILITIES (JANUARY 2008)

	Letter Agreement refers to the Letter agreement dated November 27, 2007 distributed to all MS4 task force agencies.
	*The 2000 MOU assigned responsibilities to DPW, WASA and DOH. In October 2002, the newly formed DDOT took on some of the responsibilities formerly assigned to DPW. In 2006, DDOE was formed and Water Quality Division and Watershed Protection Division took over the responsibilities formerly assigned to DOH.
	SWMD=storm water management division; WQD = water quality division; WPD= watershed protection division within DDOE

TASK #	TASK DESCRIPTION (note that Task N also contains administrative requirements)	PERMIT SECTION	RESPONSIBLE AGENCY	DEADLINES/NOTES
	General			
New	Legal and administrative issues		General Counsel DDOE	
New	Update 2000 MOU to formally define roles and responsibilities of District Agencies*	Letter Agreement	ALL	Due 8/19/08
New	Implement recommendations for funding mechanisms and fee structure	Letter Agreement	WASA/SWMD	Completed
A-1	Compile and analyze information on pollution sources since Nov 1998: MS4 outfalls (identification and mapping), impact to MS4 due to land use, population, structural controls, landfills, publicly owned lands, and industries. Submit information when requested and during reporting period	Part II	WASA/SWMD/WQD	Mapping was completed
A-2	Outfall Discharge Monitoring Report (DMR)	Part III - A	SWMD/WQD	WQD submits monitoring information to SWMD to prepare report and reviews reports prior to submittal to EPA
A-3	Prepare annual report.	Part III - A	SWMD	
A-4	Prepare annual implementation plan.	Part III - A	SWMD	
A-5	Prepare Upgraded Storm Water Management Plan	Part III - A	SWMD/ALL	Due 2/15/09
A-6	Implement Upgraded Storm Water Management Plan	Part III - A	ALL	Througout the life of the Permit
	Administrative Requirements			

UPDATED MATRIX OF RESPONSIBILITIES (JANUARY 2008)

TASK #	TASK DESCRIPTION (note that Task N also contains administrative requirements)	PERMIT SECTION	RESPONSIBLE AGENCY	DEADLINES/NOTES
N-1	Conduct annual review of program effectiveness.	Part III - C	SWMD/ALL	
	- Compare performance with goals			
	- Review implementation and compliance,			
	- Review monitoring data,			
	- Assess effectiveness of controls,			
	- Describe cost needs budget,			
	- Determine required program improvements			
	- Describe inspections, public education activities			
	violations and enforcement actions, model results			
	- Water quality improvements, modeling results			
N-2	Develop a schedule to achieve full permit compliance within 5 years of permit effective date.	Part III - C	SWMD/ALL	
N-3	Prepare fiscal needs assessment each year.	Part III - C	SWMD/ALL	
N-4	Operate and maintain structural and non-structural hydraulic controls.	Part III - C	WASA	
N-5	Prepare annual report:	Part III - C	SWMD/ALL	
	- Cost/benefit and affordability analysis			
	- Methodology to assess program effectiveness,			
	- Annual budget and expenditures,			
	- Evaluate commitments from past year,			
	- Make commitments for next year,			
	- Summary of monitoring data,			
	- Summary of annual review.			
N-6	Prepare and submit Annual Implementation Plan:	Part III - E	SWMD/ALL	
	- Planned activities			
	- Budget			

UPDATED MATRIX OF RESPONSIBILITIES (JANUARY 2008)

TASK #	TASK DESCRIPTION (note that Task N also contains administrative requirements)	PERMIT SECTION	RESPONSIBLE AGENCY	DEADLINES/NOTES
	- Fiscal analysis			
	Cost/benefit and affordability analysis			
N-7	Revise/Update Storm Water Management Plan	Part III - E	SWMD/ALL	
N-8	Ensure adequate legal authority exists.	Part III - E	SWMD/ALL	
	Application Requirements		SWMD	
	Assessment of Controls		WASA/ALL	
	Structural controls		WASA	
	Areas of new or significant development		DDOT/WASA	
	Roadways		DDOT	
	Flood control projects		WPD	
	Pesticide, Herbicide, and Fertilizer application		WPD/OPM	
	Illicit discharges and improper disposal		DPW/WASA	
	Industrial and high risk runoff		ALL	
	Priority Industrial Facilities		WQD	
	Municipal Waste Sites		DPW	
	Spills		ALL	
	Infiltration of seepage		WQD	
	Construction site runoff		WPD	
	Public Education		ALL	
	Monitoring Program		WQD	Maintain a monitoring program to comply with MS4 Permit requirements
	SWMP Component 1: Storm Water Management Plan for Commercial, Residential, and Government Areas			
C-1	Continue with current practices of road, street and highway maintenance as described in the SWMP and evaluate LID practices for inclusion with either new or retrofitted District and/or federal highway construction projects.	Part III-B-1	DDOT	
C-2	Management Plan for Commercial, Residential and government properties shall consider functional landscapes and Low Impact Development (LID) projects	Part III -B-1	WPD/OPM	
New	Install environmental catch basins or equivalent BMP in new road construction projects.	Letter Agreement	DDOT/WASA	Submit implementation schedule by 2/2009 to be included in the SWMP

UPDATED MATRIX OF RESPONSIBILITIES (JANUARY 2008)

TASK #	TASK DESCRIPTION (note that Task N also contains administrative requirements)	PERMIT SECTION	RESPONSIBLE AGENCY	DEADLINES/NOTES
New	Devise a LID plan and schedule for conversion of paved areas into green space such as "pocket parks" or "green streets" and include rain barrels and downspout disconnections	Letter Agreement	DDOT/WPD	Due 12/31/2014
New	Complete a master LID implementation list	Letter Agreement	DDOT/WPD	Revision of Appendix C in Anacostia TMDL. Due: 8/19/2008. On going
New	Construct 17 LID projects in the ROW by August 19, 2009	Letter Agreement	DDOT	Due 8/19/09
New	To the extent possible, comply with all LID options in the AWI Transportation Architecture Design Standards for all DDOT transportation infrastructure projects	Letter Agreement	DDOT	
New	No later than 18 months from the date of this package, DDOE shall work with the Mayor's office to determine the best way to develop legislation to establish tax credits or other incentives programs for installation of green roofs on non-governmental buildings. An update will be submitted by August 19, 2010.	Letter Agreement	DDOE	8/19/2010
New	Complete a structural assessment on all District properties maintained by Office of Property Management (OPM) to determine current roof conditions and the feasibility for green roof installation.	Letter Agreement	OPM	4/30/2009
New	For the next four years, every new building constructed by OPM will include green roofs where feasible as determined by OPM and all major renovations/rehabilitation projects of District-owned properties within OPM's inventory will include green roofs where feasible as determined by OPM.	Letter Agreement	OPM	Start after structural assessement is completed.
New	Submit an implementation schedule including square footage, for the green roofs to be installed in selected District properties, based upon the results of the structural assessment, in the 2009 Implementation Plan.	Letter Agreement	OPM	OPM to submit implementation schedule by July 15, 2008

UPDATED MATRIX OF RESPONSIBILITIES (JANUARY 2008)

TASK #	TASK DESCRIPTION (note that Task N also contains administrative requirements)	PERMIT SECTION	RESPONSIBLE AGENCY	DEADLINES/NOTES
New	Continue to review new and retrofit construction (federal, residential, commercial, and District-controlled properties) for green roof installation throughout the District, making available $500,000 in incentives for these roofs beginning October 1, 2008.	Letter Agreement	WPD	500,000 available through RFA to non-profit. Grant will include assessment of effectiveness
New	After one year, assess the effectiveness of the green roof incentives program and modify as needed, including dedicating up to $1,000,000 per year if deemed effective in order to make progress toward the Mayor's goal of achieving 20% green roof coverage in the District in 20 years. The Plan and schedule shall provide for steady progress toward the goal throughout the period and be incorporated into the next MS4 permit revision.	Letter Agreement	WPD	
New	Annually document and report the square footage of green roof coverage for all buildings in the District.	Letter Agreement	OPM/WPD	OPM to submit square footage for green roofs installed in DC properties and WPD to submit square footage of green roofs installed in private property
New	Complete "LID Stormwater Control Structures Maintenance Manual" by 4/30/09	Letter Agreement	WPD	
New	Draft strategy for the District to achieve optimal tree canopy, with input from the Casey Trees foundation, Friends of the Earth (FOE), and other stakeholders. The strategy will utilize GIS technology to determine and to prioritize planting locations.	Letter Agreement	WPD/DDOT	
New	Provide final detailed plan for achieving the optimal District tree canopy goal in the 2009 Implementation Plan, dated August 19, 2009.	Letter Agreement	WPD	

UPDATED MATRIX OF RESPONSIBILITIES (JANUARY 2008)

TASK #	TASK DESCRIPTION (note that Task N also contains administrative requirements)	PERMIT SECTION	RESPONSIBLE AGENCY	DEADLINES/NOTES
New	The District shall make best efforts to achieve optimal tree canopy by planting at least 4,150 trees per year with a goal of planting and maintaining at least 13,500 additional trees by 2014. Trees shall be planted in the manner recommended by *The Green Build-out Model: Quantifying the Stormwater Management Benefits of Trees and Green Roofs in Washington, DC* (Casey Trees May 15, 2007) and/or other pertinent studies to achieve optimal survival tree rate determined in the strategy. The District shall annually document the survival rate of total trees planted along with an annual estimate of storm capture rates to determine the volume of storm water that is being removed from the MS4 system in a typical year of rainfall as a result of the maturing tree canopy over the life of the permit.	Letter Agreement	DDOT	DDOT to submit survvial rate of total trees planted along with an annual estimate of storm water capture
New	No later than August 19, 2008, develop and implement a schedule to achieve an optimal tree canopy goal. The District shall make best efforts to implement said schedule no later than December 31, 2014, and will employ a stakeholder process that includes at a minimum Friends of the Earth and Casey Trees. The plan and schedule will be incorporated into the next revision of the MS4 permit.	Letter Agreement	DDOT/WPD	
New	Continue current tree planting at the rate of at least 4,150 annually	Letter Agreement	DDOT	
C-2	coordinate solid waste services, inc. leaf collection,	Part III-B-1	DPW	
C-2	coordinated street sweeping and catch basin cleaning	Part III-B-1	DPW/WASA	
New	Complete the street sweeping study and begin implementing the long-term enhanced street sweeping and fine particle removal schedule and program by December 31, 2007. Provide notice and opportunity for comment on plan by Friends of the Earth (FOE).	Letter Agreement	DPW	

UPDATED MATRIX OF RESPONSIBILITIES (JANUARY 2008)

TASK #	TASK DESCRIPTION (note that Task N also contains administrative requirements)	PERMIT SECTION	RESPONSIBLE AGENCY	DEADLINES/NOTES
New	Submit the details of the implementation of the enhanced program for street sweeping and fine particle removal in the upgraded Storm Water Management Plan of February 19, 2009.	Letter Agreement	DPW	
New	Continue with implementation of current large and enhanced fine particle removal program for street sweeping based on recently completed study recommendations and document annual pollutant removal rates in pounds from the analysis of different materials collected that have been captured to show the amount of pollution from the street sweeping operation that is being diverted from entering the MS4 system.	Letter Agreement	DPW	
New	The plan and schedule for the street sweeping program will be incorporated into the next MS4 permit revision and shall represent the District's best efforts at achieving a program designed to achieve optimum removal of fine particulate matter and other pollutants from the MS4 waste stream.	Letter Agreement	DPW	
C-2	preventative maintenance inspections of storm water facilities,	Part III-B-1	DDOE/WPD	
	rain leader disconnection program,	Part III-B-1	DDOE/WPD	
New	Install 50 rain gardens, 125 rain barrels, and perform 200 downspout disconnections by 12/31/2009	Letter Agreement	DDOE/WPD	
	public education on pet waste, fertilizer, etc.	Part III-B-1	DDOE/WPD	
	modeling storm water impacts	Part III-B-1	SWMD	
New	Develop a statistical model for estimating pollutant reductions in Microsoft Excel or other database program that will be a combination of Portland's non-structural BMP spreadsheet model and the Watershed Treatment Model (WTM) developed by EPA. A draft of the model will be included in the 2008 MS4 Annual Report and final version will be included in the upgraded Stormwater Management Plan.	Letter Agreement	SWMD	
	develop performance measures	Part III-B-1	SWMD	
	strengthen erosion control program for new construction	Part III-B-1	DDOE/WPD	

UPDATED MATRIX OF RESPONSIBILITIES (JANUARY 2008)

TASK #	TASK DESCRIPTION (note that Task N also contains administrative requirements)	PERMIT SECTION	RESPONSIBLE AGENCY	DEADLINES/NOTES
C-3	Control storm water pollution from Federal and District government properties.	Part III -B-1	WQD	
New	Develop a pollution prevention program that will include training to District government workers who are in charge of maintenance facilities and who handle hazardous materials, by September 30, 2008.	Letter Agreement	SWMD	
C-4	Pursue partnerships with federal departments and agencies (e.g., National Park Service, Department of Agriculture, Department of Defense, and General Services Administration) responsible for facilities in the District designed to highlight the District's commitment to "lead by example" in managing storm water runoff.	Part III -B-1	WPD	
C-5	Maintain the authority to control all types of discharges into the waters of the District	Part III - B-1	DDOE	
	SWMP Component 2: Management Plan for Industrial Facilities			
D-1	Update and maintain industrial facilities database	Part III -B- 2	WQD	
D-2	Perform/provide on-site assistance/inspections	Part III -B- 2	WQD	
D-3	Perform outreach focused on stormwater Pollution Prevention plan development and NPDES compliance (use wet weather screening to target)	Part III -B-2	WQD	
D-4	Refine and implement procedures to govern investigations of facilities.	Part III -B- 2	WQD	
D-5	Monitor and control pollutants in storm water discharged to the D.C. MS4 from:Private Solid Waste Transfer Stations private soild waste trasnfer stations and Hazardous waste treatment, disposal, and/or recovery plants	Part III -B- 2	WQD	
	Industrial Facilities subject to SARA or EPCRA Title III	Part III -B- 2	WQD	
	Industrial Facilities with NPDES Permits	Part III -B- 2	WQD	
	Industrial facilities with a discharge to the MS4	Part III -B- 2	WQD	

TASK #	TASK DESCRIPTION (note that Task N also contains administrative requirements)	PERMIT SECTION	RESPONSIBLE AGENCY	DEADLINES/NOTES
D-6	Include collection of data on industrial discharges in wet weather screening program.	Part III -B- 2	WQD/WASA	
D-7	Implement a program to prevent, contain and respond to spills.	Part III -B- 2	WQD	
D-8	Continue to prohibit illicit discharges, control spills and prohibit dumping.	Part III -B- 2	WQD/WASA/DPW	
D-9	Report Progress in developing and carrying out industrial related programs	Part III -B- 2	WQD	
	SWMP Component 3: Management Plan for Construction Sites			
New	Promulgate new stormwater regulations that will require LID construction as a first option, and will incorporate enhanced stormwater management requirements for the District where feasible as proposed in the Anacostia Waterfront Corporation (AWC) standards, by June 30, 2008.	Letter Agreement	DDOE	6/30/2008
New	Promulgate new regulations that will require construction site managers to have erosion control training by June 30, 2008.	Letter Agreement	DDOE	6/30/2008
E-1	Continue implementation of the Program that addresses the discharge of pollutants from construction sites.	Part III -B- 3	WPD	
E-2	Evaluate and report if the existing practice meets the requirements given in 40 CFR 122.26(d)(2)(iv)(A) and (D).	Part III -B- 3	WPD	
New	Continue review and approval process of sediment and erosion control plan and SW management. Once promulgated, the District will require compliance with AWC standards where feasible	Part III -B- 3	WPD	
E-4	Submit inspection and enforcement procedures to EPA for review and approval.	Part III -B- 3	WPD	
E-5	Continue with regular construction site inspections	Part III -B- 3	WPD	
E-6	Follow existing enforcement procedures and practices for violations of local erosion and sediment control ordinances	Part III -B- 3	WPD	
E-7	Provide public education and guidance materials to construction site operators.	Part III -B- 3	WPD	

TASK #	TASK DESCRIPTION (note that Task N also contains administrative requirements)	PERMIT SECTION	RESPONSIBLE AGENCY	DEADLINES/NOTES
E-8	Report on implementation of construction site management programs including how implementation of these procedures, particularly with regard to District "waivers and exemptions", will meet the requirements of the Clean Water Act.	Part III -B- 3	WPD	
E-9	Operate and maintain streets to reduce pollution, maintain erosion controls.	Part III -B- 3	DDOT	
E-10	Minimize soil disturbing activities during road construction, re-vegetate.	Part III -B- 3	DDOT	
E-11	Address spill prevention, material management practices, and good housekeeping measures at all equipment and maintenance shops that support maintenance activities.	Part III -B- 3	DPW/DDOT/WASA	
	SWMP Component 4: Flood Control Projects			
F-1	Assess storm water impacts of all flood management projects	Part III -B- 4	WPD	
F-2	Evaluate the feasibility of retrofitting pollution controls on existing flood controls.	Part III -B- 4	WPD	
F-3	Report on the above assessment, mapping program, and feasibility studies	Part III -B- 4	WPD	
F-4	Submit flood control measures necessary to meet the requirements of the Clean Water Act	Part III -B- 4	WPD	
F-5	Review all development proposed in flood plains to ensure that the impacts on the water quality of receiving water bodies has been properly addressed	Part III -B- 4	WPD	
F-6	Information regarding impervious surface area located in the flood plains shall be used (in conjunction with other environmental indicators) as a planning tool	Part III -B- 4	WPD	
F-7	Collect data on the percentage of impervious surface area located in flood plain boundaries for all proposed development	Part III -B- 4	WPD	The percentage of impervious area in the flood plains was calculated last year. The percentage needs to be updated using new FEMA layers when available.
F-8	Collect similar data for existing development in flood plain areas, in accordance with the mapping program and other activities designed to improve water quality	Part III -B- 4	WPD	

TASK #	TASK DESCRIPTION (note that Task N also contains administrative requirements)	PERMIT SECTION	RESPONSIBLE AGENCY	DEADLINES/NOTES
F-9	Reports on these activities, including an explanation of how the implementation of these procedures will meet the requirements of the Clean Water Act	Part III -B- 4	WPD	
	SWMP Component 5: Control Pollutants from Municipal Landfills and Other Municipal Waste Facilities			
G-1	[illegible] monitor to reduce pollutants in storm water discharges from facilities that handle municipal waste, including sewage sludge	Part III -B- 5	DPW/WASA	Storm water management plan to be developed for these facilities
G-2	Report results of this activity	Part III -B- 5	DPW/WASA	
G-3	Reduce pollutants in the storm water discharges from District-operated or owned solid waste transfer stations, maintenance and storage yards for waste transportation fleets and equipment, publicly owned treatment works, and sludge application and/or disposal sites which are not covered by an NPDES permit	Part III -B- 5	DPW/DDOT	
G-4	Report the results of this effort and provide an explanation as to how the implementation of these procedures will meet the requirements of the Clean Water Act for the above facilities	Part III -B- 5	DPW/DDOT	

UPDATED MATRIX OF RESPONSIBILITIES (JANUARY 2008)

TASK #	TASK DESCRIPTION (note that Task N also contains administrative requirements)	PERMIT SECTION	RESPONSIBLE AGENCY	DEADLINES/NOTES
	SWMP Component 6: Control Pollutants from Hazardous Waste Sites			
H-1	Monitor and control pollutants from: hazardous waste recovery, treatment, storage, and disposal facilities; facilities subject to Section 313 of the Emergency Planning and Right-to-Know Act; and any other industrial facility that either the permittee or the Regional Administrator determines is contributing a substantial pollutant loading to the MS4. This work shall be reported in each Annual Report/Implementation Plan	Part III -B- 6	DDOE	
H-2	Complete an identification of industrial and high risk runoff facilities	Part III -B- 6	DDOE	
H-3	Develop procedures to map and record details of the facilities	Part III -B- 6	DDOE	
H-4	Implement procedures to govern the investigation of the identified facilities suspected of contributing pollutants to the MS4, including a review, if applicable, of monitoring data collected by the facility pursuant to its NPDES permit.	Part III -B- 6	DDOE	
H-5	Submit procedures governing the investigation of identified facilities and the method,schedule,and progress in implementing those procedures	Part III -B- 6	DDOE	
	SWMP Component 7: Monitor and Control Pesticide, Herbicide and Fertilizer Application			
I-1	Continue to control the application of pesticides, fertilizers, and the use of other toxic substances according to the SWMP and regulations.	Part III - B-7	WPD	
I-2	Reduce the discharge of pollutants related to the storage and application of pesticides, herbicides, and fertilizers applied by employees or contractors, to public right of ways, parks, and other District property.	Part III - B-7	WPD/OPM/DDOT	DDOT to make sure contractors use friendly products in the ROW.

UPDATED MATRIX OF RESPONSIBILITIES (JANUARY 2008)

TASK #	TASK DESCRIPTION (note that Task N also contains administrative requirements)	PERMIT SECTION	RESPONSIBLE AGENCY	DEADLINES/NOTES
I-3	Implement programs to encourage the reduction of the discharge of pollutants related to the application and distribution of pesticides,herbicides,and fertilizers.	Part III - B-7	WPD	
I-4	Report on the implementation of the above application procedures,a history of the improvements in the control of these materials,and an explanation on how these procedures will meet the requirements of the Clean Water Act	Part III - B-7	WPD	
I-5	Complete screening characterization to determine the sources of pesticides,herbicides,and fertilizers that contaminate the storm water runoff as part of the outfall monitoring plan	Part III - B-7	WQD	
I-6	Develop a priority system for control of these pollutants.	Part III - B-7	WQD	
I-7	Develop, implement, and report procedures for reducing these pollutants.		WQD	
	SWMP Component 8 and 9: Deicing and Snow Removal Activities			
J-1	Continue to evaluate the use, application and removal of chemical deicers, salt, sand, and/or sand/deicer mixtures in an effort to minimize the impact of these materials on water quality.	Part III -B- 8	DDOT	
J-2	Investigate and implement techniques available for reducing pollution from deicing salts in snowmelt runoff and runoff from salt storage facilities.	Part III -B- 8	DDOT	
J-3	Make this evaluation part of an overall investigation of ways to meet the requirements of the Clean Water Act. Report and provide an explanation as to how the implementation of procedures resulting from this investigative effort will meet the requirements of the Clean Water Act.	Part III -B- 8	DDOT	
J-4	Implement a program and operating plan to ensure excessive quantities of snow and ice control materials do not enter the District's waterbodies.	Part III -B- 9	DDOT	
J-5	Report progress in implementing the program and plan.	Part III -B- 9	DDOT	

TASK #	TASK DESCRIPTION (note that Task N also contains administrative requirements)	PERMIT SECTION	RESPONSIBLE AGENCY	DEADLINES/NOTES
J-6	Avoid snow dumping in areas adjacent to water bodies, wetlands, and areas near public or private drinking water wells which would ultimately reenter the MS4 system except during a declared Snow Emergency.	Part III -B- 9	DDOT	
	SWMP Component 10. Management Plan to Detect and Remove Illicit Discharges			
New	Provide an implementation plan and strategy to reduce pet waste from entering storm drains. Strategy may include the creation of dog parks, and providing pet waste bags/receptacles at dog parks, hiring a contractor to deal with pet waste, and conducting a public education campaign in the District, in the upgraded Storm Water Management Plan.	Letter Agreement	WPD	
K-1	Implement an ongoing program to detect illicit discharges and prevent improper disposal into the storm sewer system.	Part III -B-10	WQD	
New	Continue with current and new trash removal programs to document that trash removal efforts from all sources are increased from the previous year, with annual incremental increases over the life of the permit and that such trash is diverted from the waste stream that contributes to the MS4 system.	Letter Agreement	DPW	
New	Require water quality catch basins for trash/sediment removal devices for new roadway reconstruction projects.	Letter Agreement	DDOT/WASA	
New	By the end of FY 2009, complete a trash survey and trash removal strategy / trash reduction plan for the Anacostia River and include in the 2010 Implementation Plan	Letter Agreement	WPD/WQD	
New	Determine the type of trash control devices that would be the most effective in retaining large debris and sediments in the hot spot areas identified by the trash survey to be included in the 2010 Implementation Plan	Letter Agreement	WASA/DPW	

UPDATED MATRIX OF RESPONSIBILITIES (JANUARY 2008)

TASK #	TASK DESCRIPTION (note that Task N also contains administrative requirements)	PERMIT SECTION	RESPONSIBLE AGENCY	DEADLINES/NOTES
New	Identify a suitable location for one end-of-pipe litter trap in the 2009 Implementation Plan, to be installed by a contractor in the following year. If effective, describe efforts to increase installations of end-of-pipe litter traps in the 2010 Implementation Plan.	Letter Agreement	WASA/WPD	
New	Retrofit 50 catch basins to address trash control, in conjunction with enhancements to the District's street sweeping efforts, by February 19, 2009.	Letter Agreement	WPD/DPW	Install bar screens. Pilot project along Nannie Helen Avenue
New	Develop a total maximum daily load (TMDL) implementation plan for the Anacostia River towards the goal of a "Trash-Free Potomac River" to be provided by October 31, 2010.	Letter Agreement	WQD	
New	Continue current trash removal program and document trash removal efforts including household hazardous waste, leaves, and litter cans from all sources showing that at least 50% is currently being removed from the trash stream that contributes to the MS4 system.	Letter Agreement	DPW	
New	Commit $1 million annually for retrofitting existing catch basins with vortex separator systems or other effective structural BMPs that the District determines to be the best practicable technology available to maximize storm water pollution reduction, beginning October 1, 2009. Retrofitting will be part of subwatershed implementation plans.	Letter Agreement	SWMD/WASA	
K-2	Report the accomplishments of this program.	Part III -B-10	WQD/WASA	
K-3	Implement a program to prevent illicit discharges, as defined at 40 CFR 122.26(b)(2). and those discharges listed at 40 CFR 122.26(d)(2)(iv)(B)(1) are identified by the permittee as sources of pollutants.	Part III -B-10	DDOE/WASA	
New	Continue to enhance the District's illicit discharge program by targeting potential discharge sources (e.g. Laundromats, dry cleaners, auto repair shops).	Letter Agreement	WQD	

UPDATED MATRIX OF RESPONSIBILITIES (JANUARY 2008)

TASK #	TASK DESCRIPTION (note that Task N also contains administrative requirements)	PERMIT SECTION	RESPONSIBLE AGENCY	DEADLINES/NOTES
New	Complet a strategy for proactive inspection and enforcement of illicit discharges of pollutants to storm sewers and drains - targeting each item listed in the chart on Pg. 5 of the District's Sept. 24, 2007 proposal	Letter Agreement	WQD	Due January 31, 2008.
New	Annually target 20 percent of the MS4 area to achieve 100 percent coverage in the permitting cycle.	Letter Agreement	WQD	
K-4	Further reduce the discharge of floatables (e.g. litter and other human-generated solid refuse). The floatables program shall include source controls and, where necessary, structural controls.	Part III -B-10	DPW/WASA	
K-5	Continue to implement the prohibition against the discharge or disposal of used motor vehicle fluids, household hazardous wastes, grass clippings, leaf litter, and animal waste into separate storm sewers.	Part III -B-10	DPW	
K-6	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. Such programs shall be readily available to all private residents and shall be publicized and promoted on a regular basis, pursuant to the Public Education Plan in this permit at Part III.B.12.	Part III -B-10	DPW/WASA	

UPDATED MATRIX OF RESPONSIBILITIES (JANUARY 2008)

TASK #	TASK DESCRIPTION (note that Task N also contains administrative requirements)	PERMIT SECTION	RESPONSIBLE AGENCY	DEADLINES/NOTES
K-7	Detection and elimination of illicit discharges shall include, but not be limited to: - Implementation of an illicit connection detection and enforcement program to perform dry weather flow inspections in target areas; · Visual inspections of targeted areas; and · Issuance of fines, tracking and reporting illicit discharges, and reporting progress on stopping targeted illicit discharges, and in appropriate cases, chemical testing immediately after discovery of an illicit discharge.	Part III -B-10	WQD	
K-8	Implement an enforcement plan for illicit discharges	Part III -B-10	WQD	
K-9	Provide justification for the control plan in terms of meeting the requirements of the Clean Water Act.	Part III -B-10	WQD	
K-10	Carry out all necessary inspection, surveillance, and monitoring procedures to remedy and prevent illicit discharges.	Part III -B-10	WQD	
K-11	The District shall carry out the necessary monitoring activities with the goal of meeting the requirements of the Clean Water Act.	Part III -B-10	WQD	
K-12	Submit an inspection plan (include a schedule and allocation of resources), inspection criteria, and documentation regarding protocols and parameters of field screening.	Part III -B-10	WQD	
K-13	Implement procedures to prevent, contain, and respond to spills that may discharge into the MS4.	Part III -B-10	WQD	
K-14	Provide for the training of appropriate personnel in spill prevention and response procedures	Part III -B-10	WQD	
K-15	Report the implementation of this program	Part III -B-10	WQD	
New	Submit the number of catch basins and structural components of the MS4 conveyance system to be retrofitted as part of the Watts Branch restoration project in the upgraded Storm Water Management Plan.	Letter Agreement	WASA	

UPDATED MATRIX OF RESPONSIBILITIES (JANUARY 2008)

TASK #	TASK DESCRIPTION (note that Task N also contains administrative requirements)	PERMIT SECTION	RESPONSIBLE AGENCY	DEADLINES/NOTES
New	Begin the Watts Branch project which will include stream restoration, catch basin retrofits, and storm drain stenciling in the Watts Branch watershed. Storm drain stenciling will begin by April 30, 2008. Report progress in the 2008 Annual Report.	Letter Agreement	WASA/WPD	
	11. Enforcement Plan			
L-1	Implement an enforcement plan for carrying out the objectives of the SWMP	Part III -B-11	ALL	
L-2	Use a listing of all violations and enforcement actions to assess the effectiveness of the Enforcement Program	Part III -B-11	ALL	
L-3	Enforcement shall be maintained at its current level.	Part III -B-11	ALL	
	12. Public Education Program			
New	Enhance program to prevent illicit discharges by increasing publicity of the need to prevent illicit discharges. Enhancements to be identified in the upgraded Storm Water Management Plan.	Letter Agreement	ALL	
New	Install 1,000 storm drain markers per year starting in April 2008.	Letter Agreement	WPD	
New	Distribute “scoop your pet’s poop” educational materials to all veterinarian clinics and pet shops in the District by March 2008.	Letter Agreement	WPD	
M-1	Implement a public education program that address all topics required by 40 CFR 122.26.	Part III -B-12	ALL	
M-2	An educational and outreach program to control household hazardous waste (required under Part III.B.10).	Part III -B-12	DPW	
M-3	Implement programs and materials to inform and educate the public on proper management and disposal of used oil, other automotive fluids, and household chemicals.	Part III -B-12	DPW	
M-4	Promote the proper use of pesticides, herbicides, and fertilizers through the development and dissemination of either new or existing educational materials (as required under Part III.A.7).	Part III -B-12	WPD	

UPDATED MATRIX OF RESPONSIBILITIES (JANUARY 2008)

TASK #	TASK DESCRIPTION (note that Task N also contains administrative requirements)	PERMIT SECTION	RESPONSIBLE AGENCY	DEADLINES/NOTES
M-5	Implement an industrial facility outreach program to monitor and control pollutants from industrial facilities (required under Part III.A.2). Program should focus on informing industries about storm water permitting and pollution prevention plans and the requirement that they develop structural and non-structural control systems, pursuant to 40 CFR 122.26(d)(2)(iv)(C) and (iv)(A)(5).	Part III -B-12	WQD	
M-6	Continue providing construction site operators with technical guidance documents as outreach and educational materials.	Part III -B-12	WPD	
M-7	Develop public educational materials in cooperation and coordination with other agencies and organizations in the District with similar responsibilities and goals.	Part III -B-12	ALL	
M-8	Provided progress reports on public education including an explanation as to how this effort will reduce pollution loadings to meet the requirements of the Clean Water Act.	Part III -B-12	ALL	
M-9	Maintain a file of public education materials at the DC Public Library.	Part III -B-12	SWMD	The District is proposing to make all MS4 public documents available from its website
	Part IV. Monitoring and Reporting Requirements			
O-13	Locate sources and eliminate illicit connections.	Part IV - B-3	WQD/WASA	
	Part VI. Hickey Run TMDL			
P-5	Use best efforts to negotiate an agreement with all parties to construct a multi purpose BMP and have it operational and ready for monitoring its effectiveness during the permitting cycle.	Part VI	WASA/SWMD/DDOT	A new stategy is being proposed instead of the End of pipe control proposed in the 2002 SWMP
	Waivers and Exemptions	Part IX.1		
	Compliance Monitoring of Effluent Limits for Waste Load Allocations			

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE DISTRICT DEPARTMENT OF THE ENVIRONMENT
AND
THE DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY:
MS4 PERMIT ACTIVITIES

Table of Contents

I. INTRODUCTION AND PURPOSE

This Memorandum of Understanding ("MOU") is entered into between the District Department of the Environment ("DDOE") and the District of Columbia Water and Sewer Authority ("DC Water") collectively referred to herein as the "Parties," for the period of Fiscal Years 2014 and 2015.

The purpose of this MOU is for DDOE to secure the services of DC Water to help implement discrete provisions of the District of Columbia's ("District's") U.S. Environmental Protection Agency National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System Permit ("MS4 Permit") related to the maintenance of water quality catch basins and the repair of outfalls. Another purpose is to fund such work with assistance from the MS4 Enterprise Fund.

II. PROGRAM GOALS AND OBJECTIVES

The goal of this MOU is to improve water quality in the Anacostia and Potomac Rivers for the benefit of District residents, visitors, wildlife, and the environment.

The objectives of this MOU are to reduce stormwater pollutants entering the local waters (i.e., rivers, streams, and estuaries) of the District of Columbia as required under the current applicable MS4 Permit. The MS4 Permit obligates the District to: clean and maintain catch basins; develop an optimal catch basin inspection, cleaning, and repair plan; and develop an MS4 outfall inspection and repair schedule to meet local water quality goals for surface water.

Under the MS4 Permit's Settlement Agreement, dated January 31, 2013, DC Water will undertake specific tasks towards compliance with the requirements of the MS4 Permit.

III. SCOPE OF SERVICES/RESPONSIBILITIES OF THE PARTIES

A. DC Water shall:

1. Provide water quality catch basin maintenance services and reports in accordance with DDOE Standard Operating Procedures for Water Quality Catch Basins Maintenance Service ("DDOE's SOP") (Attachment B):

   a. Inspect and clean each DDOE-identified water quality catch basin within the MS4 area at least once during each fiscal year;

   b. DC Water or its contractor may use any equipment to inspect and clean the water quality catch basins; and

   c. Within one (1) month of the end of each fiscal year, provide a report of the cleaning and inspection dates for each catch basin.

including the percentage of the basin that was filled with debris at the start and finish of each inspection;

2. Purchase and operate one (1) new truck for maintenance of water quality catch basins as follows:

   a. This truck shall include an industrial, air-conveying vacuum system with a high-pressure water pump-hose reel that is capable of removing grit, grease, sludge, and other debris, meeting specifications for the DC Water-through-NJPA, procured in 2013-2014 at one Vac-Con vehicle in NJPA Awarded Contract 040117010-AMD, line item 2, PO131396, from Atlantic Machinery, Inc., for DC Water's Department of Sewer Services, or equivalent, as approved by DDOE; and

   b. This new water quality catch basin maintenance truck shall be used for the purpose of maintaining water quality catch basins in the District of Columbia.

3. Finalize DC Water's "MS4 Report on Optimal Plan for Catch Basin Cleaning, Inspection, and Repair" (June 2013), in response to EPA Region III's comments and any DDOE comments;

4. Finalize DC Water's "MS4 Outfall Repair Schedule and Report" (June 2013), in response to EPA Region III's comments and any DDOE comments;

5. Develop and implement the asset management and tracking system detailed in Recommendation 2, Section 5 of DC Water's "MS4 Report on Optimal Plan for Catch Basin Cleaning, Inspection, and Repair" (June 2013);

6. Participate in and support the District's MS4 Technical Working Group activities, presently chaired by DDOE;

7. With respect to work identified in Attachment C:

   a. Commence activities on outfall repairs and stream restorations.

   b. Submit a funding proposal for DDOE to pay DC Water for the costs related to each stream restoration project that is not due to outfall structural failure ("Non-failure Funding Proposal"). Each Non-failure Funding Proposal must clearly define the cause of the stream channel issue and show that the damage was not caused by structural failure of the outfall, and

c. If DDOE approves the Non-failure Funding Proposal, submit the designs and specifications at the 30%, 65%, and 95% phases of the design process for DDOE's review and approval.

B. DDOE shall:

1. By August 1 of each year, provide an updated list of newly installed water quality catch basins located in the MS4 area and a Geographic Information System layer of water quality catch basins for which DDOE has X and Y coordinates;

2. Provide funding for activities listed in the Cost of Services table, found in Attachment A;

3. Be available for the technical matters required by this MOU;

4. Timely review proposals, plans, designs, reports, and other transmittals requiring a response; and

5. Approve or deny each Non-failure Funding Proposal.

IV. DURATION OF MOU

A. The period of this MOU shall be from October 1, 2013, through September 30, 2015, unless terminated in writing by a Party prior to the expiration.

B. The duration may be extended only in writing.

C. The extension of this MOU shall be subject to the availability of funds at the time.

D. The Parties contemplate extending this MOU.

V. AUTHORITY FOR MOU

A. D.C. Official Code § 1-301.01(k) (District agencies) authorizes the Parties to enter into this MOU for orders placed with other departments, at actual cost.

B. DC Water is authorized to enter into this MOU pursuant to D.C. Official Code §34-2202.03(10), which authorizes DC Water to enter into contracts with the District.

C. DDOE is further authorized to enter into this MOU pursuant to the following:

1. The Water Pollution Control Act of 1984, effective March 16, 1985 (D.C. Law 5-188, as amended), D.C. Official Code §8-103.01 *et seq.*, including §8-103.13 (Mayor regulates construction bearing upon water quality);

2. The District Department of the Environment Establishment Act of 2005, effective February 15, 2006 (D.C. Law 16-51, §§101 *et seq.* as amended), including D.C. Official Code §8-151.03 (establishment of DDOE and consolidation of environmental functions); § 8-151.03(b)(2) (stormwater administration, including the monitoring and coordinating the activities of all District agencies that are required to maintain compliance with the storm water permit, receiving and expending funds from the Storm Water Permit Compliance Enterprise Fund); §8-151.07 (Director guides and enforces environmental services and federal actions, promulgates and enforces rules and programs, and liaises with other agencies);

3. The Comprehensive Stormwater Management Enhancement Amendment Act of 2008, effective March 25, 2009 (D.C. Law 17-371, §2(b), as amended), including D.C. Official Code §8-152.01 (monitor, coordinate, and secure information from District agencies required to comply with the MS4 Permit and administer the stormwater program within DDOE); §8-152.03 (stormwater fee discount program); §8-152.04 (establish an enterprise grant fund program); and

4. Mayor's Order 2009-61, dated June 14, 2006 (delegation and transfer of authority to DDOE Director).

VI. FUNDING PROVISIONS

A. Cost of services, if any:

1. Unless DDOE specifically authorizes a change in funding in writing, total cost for services under this MOU for all activity items listed in Attachment A shall not exceed the following:

   a. Three hundred and ten thousand two hundred and sixty dollars ($310,260) for Fiscal Year 2014; and

   b. Eight hundred and thirty-three thousand dollars ($833,000) for Fiscal Year 2015, subject to availability of funds.

2. Funding for the activities listed in Attachment A shall not exceed the actual costs of the goods and services. Overhead costs for DC Water staff are not funded.

3. Funding for each activity shall not exceed the cost specified in Attachment A, unless DDOE specifically authorizes a change in writing; and

4. Notwithstanding any other provision of this MOU, DDOE may not, and will not, guarantee payment of funds for which it has not received budget authority for a fiscal year.

B. Payment:

1. DDOE shall pay DC Water for services detailed in this MOU by check or electronic funds transfer based on an itemized invoice, within 45 days of receipt of each invoice;

2. DC Water shall submit a monthly budget and status update, including a management report that compares budget to actual funds spent and includes the following:

a. Descriptions of the activity that was performed;

b. List of materials and their costs; and

c. DC Water staff and consultant services costs; and

3. Payment to DC Water shall not exceed the total amount of this MOU.

C. Anti-deficiency considerations.

The Parties acknowledge and agree that DDOE's and DC Water's obligations to fulfill financial obligations of any kind pursuant to any and all provisions of this MOU, or any subsequent agreement entered into by the parties pursuant to this MOU, are and shall remain subject to the provisions of the following: (1) the federal Anti-Deficiency Act, 31 U.S.C. §§ 1341, 1342, 1349, 1351, (2) the District of Columbia Anti-Deficiency Act, D.C. Official Code §§ 47-355.01-355.08; (3) D.C. Official Code § 47-105; and (4) D.C. Official Code § 1-204.46, as the foregoing statutes may be amended from time to time, regardless of whether a particular obligation has been expressly so conditioned.

VII. DISPUTE RESOLUTION

The Parties shall resolve disagreements and or disputes arising from services between agencies under this MOU with the following procedures.

A. DC Water and DDOE will make every effort to resolve any disputes concerning this MOU at the staff level:

B. In the event that the Parties' staff are unable to resolve a dispute, the matter will be elevated to the Director of DDOE and the General Manager of DC Water, as appropriate, for resolution within thirty (30) days; and

C. If the DDOE Director and DC Water General Manager are unable to resolve the dispute, the aggrieved party may invoke the Termination procedures, unless the Director and General Manager agree on an alternate dispute resolution procedure.

VIII. COMPLIANCE AND MONITORING

Since this MOU's funds include District of Columbia funds, DC Water will be subject to scheduled and unscheduled monitoring reviews by the District to ensure compliance with all applicable requirements. If funding is federal, in whole or in part, DC Water will be subject to monitoring reviews of the District and the federal government.

IX. RECORDS AND REPORTS

Since this MOU's funding includes District of Columbia funds, DC Water and each of its contractors/grantees paid under this MOU shall maintain records and receipts for the expenditure of all funds provided for a period of no less than three (3) years from the date of expiration or termination of each activity. DC Water shall arrange with its contractors to make these documents immediately available for inspection by request of representatives of DDOE or the District. If funding is federal, in whole or in part, documents must be made similarly available to representatives of the District or the federal government.

X. CONFIDENTIAL INFORMATION

The Parties to this MOU will use, restrict, safeguard, and dispose of all information related to services provided pursuant to this MOU in accordance with all relevant federal and District of Columbia statutes, regulations, and policies.

XI. SPECIAL PROVISIONS FOR TERMINATION OF THE MOU

Any Party may terminate this MOU in whole or in part by giving twenty-eight (28) days advance written notice to the other Party on one of the following grounds.

A. Lack of funding;

B. Changes in applicable law;

C. Changes in the structure or nature of the program;

D. Elimination of the program or service;

E. Failure of either Party to follow Federal or District laws, rules, or regulations; or

F. Failure of either Party to follow the terms of this MOU.

However, DC Water shall be reimbursed for costs incurred (or irreversibly committed to) performing the above approved services as of the day following the date on which DC Water received written notice of termination. DC Water shall not be obligated to perform any services for which it is to be reimbursed under this MOU following receipt of any notice of termination from DDOE. The writing may be by email or fax.

XII. NOTICE

The following individuals are the official contacts for each Party under the MOU:

FOR DDOE:
Mr. Jeffrey Seltzer, P.E.
Associate Director, Stormwater Management Division
District Department of the Environment
1200 First Street, NE, 5th Floor
Washington, DC 20002
Phone: 202-535-1609
Fax: 202-535-1363
Email: jeffrey.seltzer@dc.gov

FOR DC WATER:
Dr. Mohsin Siddique
Supervisor, Environmental Planning
District of Columbia Water and Sewer Authority
5000 Overlook Avenue, SW
Washington, DC 20032
Phone: 202-787-2634
Fax: 202-787-2459
Email: mohsin.siddique@dcwater.com

XIII. MODIFICATIONS

The terms and conditions of this MOU may be modified only upon prior written agreement by the Parties.

XIV. MISCELLANEOUS – FOLLOW THE LAW

The Parties shall comply with all applicable laws, rules, and regulations whether now in force or hereafter enacted or promulgated.

XV. SIGNATURES

IN WITNESS WHEREOF, the Parties hereto have executed this MOU as follows:

DISTRICT DEPARTMENT OF THE ENVIRONMENT

for Keith A. Anderson
Director

9/8/14
Date

Amy E. McDonnell
General Counsel, for legal sufficiency

9/8/14
Date

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

George S. Hawkins
General Manager

9/10/14
Date

Randy E. Hayman
General Counsel, for legal sufficiency

9/8/14
Date

ATTACHMENT A

DDOE Funding for Activities

This MOU addresses the following activities. By signing this MOU, DDOE and DC Water have agreed to the cost of items listed below.

COST OF SERVICES

	Activities	Type of Service	FY 2014 Amount (Dollars)	FY 2015 Amount (Dollars)*
1	Water quality catch basin cleaning and maintenance	Provide water quality catch basin maintenance services and reports per Attachment B. Cost per water quality catch basin is $230. Item III.A.1	$106,260	$0
2	Purchase appropriate receptacles suitable for water quality catch basin maintenance	Secure one (1) truck for maintenance of water quality catch basins. Item III.A.2	$0	$400,000
3	Revise optimal catch basin inspection, cleaning, and repair plan	Revise, as needed, the "Optimal Plan for Catch Basin Cleaning, Inspection and Repair." Item III.A.3	$15,000	$25,000
4	Revise stormwater outfall inspection plan and repair schedule	Revise, as needed, the "Outfall Report Schedule and Report." Item III.A.5	$20,000	$35,000
5	Asset management and tracking system	Develop and implement a tracking system as recommended in the "Optimal Plan for Catch Basin Cleaning, Inspection, and Repair." Item III.A.6	$50,000	$0
6	DC Water MS4 Technical Workgroup Staff Activities	Participate in and support the District's MS4 Technical Working Group activities. Item III.A.7	$8,000	$8,000
7	Stream Restoration Design	Submit proposals to EPA/CBT for stream restoration funding and develop alternatives evaluations and designs per Attachment C. Item III.A.8	$110,000	$165,000
		Total Funding for Activities in FY 2014	$310,260	
		Total Funding for Activities in FY 2015		$933,000

* FY 2015 Funding amounts are subject to availability of funds.

FY14-FY15 MS4 M0S1 between DDOE and DC Water

ATTACHMENT B

DDOE Standard Operating Procedure for Water Quality Catch Basin Maintenance Service

BEFORE SERVICE

1. Once a water quality catch basin (WQCB) has been scheduled for service, the District Department of the Environment (DDOE)'s Inspection and Enforcement Branch (IEB) is to be notified. Notification must be made at least seventy-two (72) hours before service to a WQCB is to begin.

   Contacts are: (202) 535-2977 or nels.scheduling@dc.gov.

AT THE SERVICE SITE

1. When you arrive, record the date of inspection and the percentage of the basin that was filled with debris round up: 100%; 75%; 50%; 25%; or 0 %.

2. All chambers of the WQCB are to be vacuumed with a vacuum truck or similar type of equipment. All standing water, grit, and debris are to be evacuated. All large debris (e.g., construction materials, plastic bottles, sediment, branches, leaves, and those too large to vacuum) are to be bagged and disposed of or recycled at an approved disposal facility.

3. If at the beginning of the maintenance service, the WQCB grit, storage, or weir chambers are dry (i.e., no standing water) upon inspection and the joints and corners require resealing, then conduct resealing with caulk, hydraulic cement, or similar approved material that will create a water-tight seal within these chambers.

4. In order to remove accumulated sediment, clear water may be decanted to the clear well of the WQCB using a submersible pump after all oil and grease has been removed from the surface of the grit chamber.

5. After evacuation of the bulk of the trash and debris from the WQCB, the vacuum truck should then be positioned at the storage chamber or clear well outlet chamber of the WQCB. Then, the other chambers should be power washed, and the remaining debris and sediment and wash water should be recovered by vacuuming.

6. All wash water should then be recovered by the vacuum truck at the clear well

chamber. Then the WQCB should be inspected at this time for cracks or physical damage that may require repair.

7. If cracks or physical damage are apparent, then the joints and corners require resealing with caulk, hydraulic cement, or similar approved material that will create a water-tight seal within these chambers.

8. After power washing and vacuuming the wash water, the WQCB should be recharged with clean water to the elevation of the overflow weirs in the grit, storage, and weir chambers.

9. A standard DC Water or other service sticker should then be placed on the WQCB indicating the date of service.

10. When you leave, record the percentage of the basin that was filled with debris (round up): 100%, 75%; 50%; 25%; or 0 %.

AFTER SERVICE

1. Wastewater and waste materials should be properly disposed of and records made of the disposal.

2. Disposal records for waste material are to be submitted within thirty (30) days of service to DDOE's IGH.

Revised 9/11/2014

ATTACHMENT C

DC Water's Outfall Repair and Stream Restoration Estimated Schedule and Costs

		Stream Restoration Estimated Costs and Schedule			
Outfall #	Location	FY14 Alternative Evaluation	FY15 Alternative Evaluation	FY15 Design	Stream Repair Construction Cost
F-083	Foundry Branch	$30,000	$0	$10,000	$190,000
F-113	Soapstone	$10,000	$0	$5,000	$50,000
F-140	Soapstone	$40,000	$0	$20,000	$200,000
F-853	Foundry Branch	$20,000	$0	$10,000	$100,000
F-855	Glover Park	$20,000	$0	$10,000	$ 90,000
F-079	Fenwick	N/A	$60,000	$0	$300,000
F-080	Fenwick	N/A	$10,000	$0	$50,000
F-353	Portal	N/A	$110,000	$0	$550,000
F-403	Sunderland	N/A	$20,000	$0	$100,000
F-805	Fenwick	N/A	$10,000	$0	$50,000
F-102	Fenwick	N/A	N/A	N/A	$0
F-109	Fenwick	N/A	N/A	N/A	$0
	TOTALS	$110,000	$110,000	$55,000	$1,190,000
	FY14 STREAM TOTALS	$110,000			
	FY15 STREAM TOTALS		$165,000		

GOVERNMENT OF THE DISTRICT OF COLUMBIA
District Department of the Environment

Office of the Director

September 22, 2014

Mr. Matthew Brown
Acting Director
The District Department of Transportation
55 M St SE, Suite 400
Washington, DC 20003

Subject: Amendment to FY12 MS4 Enterprise Fund MOU with DDOE

Dear Mr. Brown:

Attached you will find a copy of an amendment extending your FY12 MS4 Enterprise Fund MOU with the District Department of the Environment. This MOU will fund the installation of low impact development projects throughout the District which are vital to restoring the District's water bodies.

Please sign the attached amendment and return to DDOE at your convenience. If you have any questions concerning the MOU please contact Mr. Jeffrey Seltzer, Associate Director of DDOE's Stormwater Management Division, at (202)535-1603. Once again DDOE appreciates the constructive collaboration with DDOT on important environmental initiatives. We look forward to continuing that relationship in the future.

Sincerely,

Keith A. Anderson
Director

AMENDMENT # 1
MEMORANDUM OF UNDERSTANDING
BETWEEN
THE DISTRICT DEPARTMENT OF THE ENVIRONMENT
AND
THE DISTRICT DEPARTMENT OF TRANSPORTATION
for FISCAL YEAR 2012 MS4 ENTERPRISE FUNDS

INTRODUCTION

This Amendment #1 amends the Memorandum of Understanding between the District Department of the Environment and the District Department of Transportation for Fiscal Year 2012 MS4 Enterprise Funds, of July 10, 2012 ("MOU"). The Parties are the District Department of the Environment ("DDOE") and the District Department of Transportation ("DDOT").

The purpose of this amendment is to extend the MOU through fiscal year 2015 (ending September 30, 2015).

AMENDMENT

Section V.A. is deleted in its entirety and replaced with the following text:

> The period of this MOU shall be from October 1, 2011, through September 30, 2015, unless terminated in writing by the Parties prior to the expiration.

ADDITIONAL PROVISIONS

The Parties make no other changes to the MOU.

SIGNATURES

The following parties agree:

DISTRICT DEPARTMENT OF THE ENVIRONMENT

Keith A. Anderson, Director — Date 09/22/14

Amy E. McDonnell, General Counsel — Date 9/18/14
for legal sufficiency

DISTRICT DEPARTMENT OF TRANSPORTATION

Matthew Brown, Acting Director — Date

GOVERNMENT OF THE DISTRICT OF COLUMBIA

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE DEPARTMENT OF GENERAL SERVICES (DGS) AND
THE DISTRICT DEPARTMENT OF THE ENVIRONMENT (DDOE)

I. INTRODUCTION

This Memorandum of Understanding ("MOU") is entered into between the District of Columbia Department of General Services, the seller agency ("DGS") and the District of Columbia District Department of the Environment, the buyer agency ("DDOE"), collectively referred to herein as the "PARTIES." This introduction section appears for the parties' convenience, and statements in it shall not be read to modify the express provisions below.

DGS has requested the assistance of DDOE in funding two Low Impact Development projects on DGS property. These projects are a stormwater harvest and reuse system and a large-scale bioretention and tree-planting project.

As a condition of DDOE funding, the ability of both of these projects to generate Stormwater Retention Credits (SRCs) will be limited as specified in Attachment A.

To implement this MOU, DDOE and DGS will coordinate financial transfers, project management, tracking progress, media exposure and resources.

II. PROGRAM GOALS AND OBJECTIVES

This section appears for the convenience of the parties. Other than using the terms in this section to resolve ambiguities, statements in it shall not be read to modify the express provisions below.

DGS will be responsible for installing a stormwater harvest and reuse system at Brookland Middle School. The system will capture stormwater from the middle school's roof, and filter and reuse the water for grey water flushing on-site.

DGS will also be responsible for installing bioretention cells and tree box planters along O St NW. These bioretention cells must capture and retain runoff from at least a 1.2 inch storm which falls on the project's drainage area. All plantings will be native species.

DDOE will purchase DGS's services described in the Scope of Services Responsibilities of the Parties section.

III. SCOPE OF SERVICES/RESPONSIBILITIES OF THE PARTIES

A. DGS SHALL:

1. Install a stormwater harvest and reuse system at Brookland Middle School. The system will be designed to capture and filter at least 23,000 gallons of stormwater runoff from a 17,449 square feet roof for use in grey water flushing.

2. Install no fewer than 32 bioretention cells and three tree boxes along O St NW, adjacent to the Paul Laurence Dunbar High School. The bioretention cells shall be designed and constructed to retain 1.2 inches of runoff from a 1.2 acre drainage area.

3. Manage construction and maintenance as stated in the DDOE approved stormwater management plan (DDOE Plan number 36881 for the Brookland Middle School rainwater harvest and reuse system.

4. Manage construction and maintenance as stated in the DDOE approved stormwater management plan (DDOE Plan number 32871 for the O St NW bioretention and street tree planting project.

5. Notify DDOE at least one month in advance if maintenance of either project is ever transferred to another entity.

6. Obtain all required permits.

7. Schedule a pre-construction meeting for both projects with the DDOE Watershed Protection Division Inspection and Enforcement Branch.

8. On a frequency that DDOE shall state in writing, monitor construction and installation milestones, and provide updates to DDOE.

9. Seek DDOE's advance approval of modifications that might affect the estimated quantity of pollutants removed or the cost-benefit of the project or activity, and

when in doubt, ask DDOE. For example, if any bioretention cell being constructed as part of the O St NW project needs to be reduced in size or eliminated because of an unforeseen utility conflict, DDOE must be consulted before a design change is made.

10. Submit to DDOE the final as-built architectural and engineering plans for both projects, in hard copy or electronic form, as DDOE specifies.

11. Be bound by the terms of Attachment A addressing SRC certification.

12. Be bound by the terms of Attachment B, which details funding provisions required for funding coming from a Chesapeake Bay Trust grant.

B. DDOE SHALL

1. Timely seek clarification of design, specification and construction decisions for both projects.

2. Review and approve/deny modifications that might affect the estimated quantity of pollutants removed or the cost-benefit of the project or activity.

3. Respond within five (5) business days to DGS for a request to modify designs or proposed change orders.

4. Advise DGS as to which document submissions can be made exclusively electronically, if any.

5. Timely transfer the funds, as provided below.

6. Track the limited ability of these projects to generate SRC's, in conformance with Attachment A.

IV. DURATION OF MOU

The period of this MOU shall be from the date of signing until the end of fiscal year 2015, unless terminated in writing by either Party prior to the expiration.

V. AUTHORITY FOR MOU

D.C. Official Code § 1-301.02(a).

VI. FUNDING PROVISIONS

A. COST OF SERVICES

1. Total cost under this MOU shall not exceed one million nine hundred eight thousand four hundred and ninety two dollars and zero cents $1,735,754.00

2. The cost for each project shall not exceed what is detailed in the following table:

Project	Total Cost	Total to be funded from MS4 Enterprise Capital	Total to be funded from Chesapeake Bay Trust grant funds
Brookland Middle School stormwater harvest and reuse system	$ 598,300.00	$ 598,300.00	$ 0.00
0 St NW Bioretention and Tree Planting Project	$1,137,454.00	$ 1,042,454.00	$ 95,000.00
Total	$ 1,735,754.00	$ 1,640,754.00	$95,000.00

3. DDOE shall pay no more than the actual costs of materials, supplies, or equipment furnished, and work and services performed, by vendors and contractors, as determined by DGS through its contracting process.

B. PAYMENT

1. DDOE shall pay for goods and services detailed in this MOU through an Intra-District Advance to DGS for the amount stated in subpart A of this section

2. If DDOE receives Bay Bay payments under its stormwater management regulations, DDOE intends to use some or all of these payments to reimburse the MS4 Enterprise Fund for construction of the Brookland Middle School stormwater harvest and reuse system

3. DDOE shall make the transfer after:

   a. The Parties sign the MOU, and

   b. Within 10 business days after the District Office of the Chief Financial Officer ("OCFO") approves the transfer.

4. DGS shall provide financial reports every three (3) months for each District financial quarter following commencement of this MOU, no later than 14 days after the end of each quarter. The reports shall detail the amounts charged to the project's budget for the preceding quarter, with each reconciliation to include:

   a. Description of the activities performed; and

   b. Identification of materials and their costs

5. DGS shall provide a financial report of the expenditures associated with project expenses by the completion date of the project. A report for expenditures made with Chesapeake Bay Trust funds should be provided to DDOE in accordance with the provisions outlined in Attachment B.

6. Payment shall not exceed the total amount of this MOU.

7. If funds remain upon the termination of this MOU, those funds shall be returned to DDOE.

8. DGS must return funds at termination of the MOU by the later of:

   a. The date when all fiscal reconciliation of funds has been completed; or

   b. At the conclusion of four (4) months from the date of notice of the termination.

C. ANTI-DEFICIENCY CONSIDERATIONS

The Parties acknowledge and agree that their respective obligations to fulfill financial obligations of any kind pursuant to any and all provisions of this MOU, or any subsequent agreement entered into by the parties pursuant to this MOU, are and shall remain subject to the provisions of: (1) the federal Anti-Deficiency Act, 31 U.S.C. §§1341, 1342, 1349, 1351; (2) the District of Columbia Anti-Deficiency Act, D.C. Official Code §§ 47-355.01-355.08 (2014), (3) D.C. Official Code § 47-105 (2014), and (4) D.C. Official Code § 1-204.46 (2014), as the foregoing statutes may be amended from time to time, regardless of whether a particular obligation has been expressly so conditioned.

VII. COMPLIANCE AND MONITORING

As this MOU is funded by District of Columbia funds, DGS will be subject to scheduled and unscheduled monitoring reviews to ensure compliance with all applicable requirements

VIII. RECORDS AND REPORTS

DGS shall maintain records and receipts for the expenditure of all funds provided for a period of no less than three (3) years from the date of expiration or termination of the MOU and, upon request, make these documents available for inspection by duly authorized representatives of DDOE, and other officials as DDOE may specify.

IX. CONFIDENTIAL INFORMATION

The Parties to this MOU will use, restrict, safeguard, and dispose of all information related to services provided pursuant to this MOU in accordance with all relevant federal and local statutes, regulations, and policies. DGS shall "own" the information, but DDOE shall have a non-exclusive right to use the information.

X. TERMINATION

Either Party may terminate this MOU in whole or in part by giving thirty (30) calendar days advance written notice to the other Party. Written notice includes email with confirmation that the message was received and read

XI. NOTICE

The following individuals are the contact points for each party:

DDOE: District Department of the Environment
Jeffrey Seltzer, P.E.
Associate Director, Stormwater Management Division
1200 First Street NE, 5th Floor
Washington, DC 20002
Email: Jeffrey.seltzer@dc.gov
Desk: 202-535-1603

SELLER: District Department of General Services
Mark Chambers
Sustainability Manager
District Department of General Services
2000 14th Street NW, 8th Floor
Washington, DC 20009

Email: mark.chambers@dc.gov
Desk: 202-230-5084

XII. MODIFICATIONS

The terms and conditions of this MOU may be modified only upon prior written agreement by the PARTIES.

XIII. PROCUREMENT PRACTICES ACT

If a District of Columbia agency or instrumentality plans to employ the goods or services of an agent or third party (e.g., contractor, consultant) to provide any of the goods or services specified under this MOU, then the agency or instrumentality shall abide by the provisions of the District of Columbia Procurement Practices Reform Act of 2010 (D.C. Official Code § 2-351.01 *et seq.*) to procure the goods or services of the agent or third party.

This space left intentionally blank

XIV. COMPLIANCE WITH THE LAW

The Parties shall comply with all applicable laws, rules and regulations whether now in force or hereafter enacted or promulgated

XV. DISPUTE RESOLUTION

The PARTIES' directors, or their designees, shall resolve disputes under this MOU.

In the event that the Parties are unable to resolve a dispute, either party may refer the matter to the Office of the City Administrator ("OCA"). The decision of OCA shall be final.

IN WITNESS WHEREOF, the PARTIES AGREE to this MOU by their authorized signatories.

Date: 5/12/14

Brian J. Hanlon

Director, District Department of General Services

Date 05/08/14

Keith A. Anderson

Director, District Department of the Environment

Approved for legal sufficiency.

Date 5/8/14

Amy E. McDonnell, General Counsel

Attachment A - Limitation on SRC Generation by DDOE-Funded Stormwater Retention BMPs

Background

DDOE offers numerous programs that fund, either wholly or in part, the creation of stormwater retention capacity, either through installation of Best Management Practices (BMPs) (e.g., green roofs, bioretention, permeable pavement, and stormwater harvest-reuse systems) or conversion of land cover (e.g. converting impervious surface to compacted or natural cover).

These DDOE stormwater funds are limited to those projects installing retention capacity voluntarily and not for sites regulated under the 2013 Rule on Stormwater Management and Soil Erosion and Sediment Control (2013 SW Rule, available at ddoe.dc.gov/swregs), unless those regulated sites are exceeding their regulatory obligations. This reserves that DDOE's stormwater funds provide benefits to District waterbodies in excess of what regulated sites are required to achieve.

Similarly, for projects that DDOE supports with stormwater funds after the finalization of the 2013 SW Rule, DDOE has committed to limiting the generation of Stormwater Retention Credits (SRCs), since those SRCs can be sold to a regulated site to achieve its regulatory obligations. If DDOE-funded retention capacity does not generate SRCs, then that retention capacity provides a benefit for District waterbodies that is in excess of the benefit being achieved by regulated sites. Limiting SRCs for DDOE-funded projects also helps reduce the competitive disadvantage for SRC-generating projects that are not subsidized by DDOE.

By limiting SRC generation by a DDOE-funded BMP for a period of time, DDOE can recoup the stormwater retention value of its funding, without permanently removing the incentive for maintenance. For example, assume that DDOE provides $1,000 to support the installation of a BMP with 100 gallons of SRC-eligible retention capacity and that the SRC market price is $1.00. If SRC generation were not restricted, the BMP could generate 100 SRCs annually, worth $100, and it could generate 1,000 SRCs over 10 years, worth $1,000. If DDOE prohibited the BMP from generating SRCs for that 10-year period, then DDOE would have recouped the stormwater retention value of its $1,000 investment.

A permanent prohibition on the generation of SRCs by DDOE-funded retention capacity that would otherwise be SRC eligible would have the unintended consequence of removing the incentive for maintenance that comes from the recurring opportunity to certify SRCs every three years. This would be undesirable, since maintenance is critical for retention capacity to perform as designed and to continue providing benefits to District waterbodies. Consequently, DDOE has decided to limit SRC generation to 50% of the SRC-eligible retention capacity for DDOE-funded retention capacity until DDOE has recouped the stormwater retention value of its investment.

Limitation

SRC-eligible retention capacity funded with DDOE stormwater funds is limited to earning SRCs for fifty percent (50%) of the SRC-eligible retention capacity until DDOE recoups the full

stormwater retention value of its funding, based on the annual average SRC market price. For example, 1,000 gallons of DDOE-funded SRC-eligible retention capacity applying for three years' worth of SRC's (the maximum period for which SRC's can be certified) would be able to receive 1,500 SRC's. For each year of that period, DDOE would recoup a stormwater retention value equal to 50% times the annual average SRC market price, expressed as: 50% * 1,000 * annual average SRC market price.

Notes:

- This limitation only applies to projects that DDOE funds with stormwater funding after July 19, 2013. Projects that DDOE funded prior to July 19, 2013 will not be subject to this limitation.
- DDOE stormwater funds include stormwater impervious fee revenue, bay bill fee revenue, and federal funding for stormwater management.
- DDOE will calculate the annual average SRC market price and apply it each year as described above to determine the stormwater retention value that has been recouped by DDOE.
- After DDOE has recouped the stormwater retention value of its funding for a project, this limitation no longer applies to the project.
- If DDOE recoups the stormwater retention value of its funding for a project partway through a year, DDOE may pro-rate SRC's for the project, assuming the project applies for SRC's and remains eligible.
- This limitation will be included as part of the terms under which DDOE provides stormwater funding, and will transfer to subsequent owners of the property.
- This limitation is intended for BMPs that would otherwise satisfy SRC eligibility requirements, including having a Stormwater Management Plan (SWMP) approved by DDOE. If a DDOE-funded BMP that is initially not SRC eligible subsequently becomes SRC eligible, this limitation would be applied at that point. For example, if a RiverSmart Homes project without a SWMP subsequently has a formal, SWMP approved and meets the other eligibility requirements, DDOE would calculate the stormwater retention value of the project back to the date of installation.

--End--

Attachment B - Funding Restrictions Associated with Chesapeake Bay Trust Grant

DGS shall adhere to the following provisions in spending the Chesapeake Bay Trust funds for the O St NW bioretention project:

1. DGS shall only spend the funds in accordance with the final budget approved by the Chesapeake Bay Trust.

2. DGS shall account separately for funds provided by the Chesapeake Bay Trust.

3. For all public communications and promotions associated with the projects, including but not limited to press releases, print publications, signage, and online messaging, DGS shall acknowledge the Chesapeake Bay Trust and include the Trust's logo license plate. Logo files should be downloaded from www.cbtrust.org/logos.

4. DGS must inform DDOE and the Chesapeake Bay Trust of any significant changes to project scope in advance of the change. When in doubt, DGS should consider a change to be a significant change. Significant changes include but are not limited to:

   a. Change in key personnel, including the project manager at your agency or for the contractor;

   b. Change in budget that results in a greater than 10% shift in funds across budget categories;

   c. Change in budget that results in addition of a new line item; and

   d. Change in a project deliverable.

-- End --

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE DISTRICT DEPARTMENT OF THE ENVIRONMENT
AND
THE DEPARTMENT OF PUBLIC WORKS
REGARDING MS4 STORMWATER PERMIT FISCAL ADMINISTRATION
AMENDMENT # 1

The MOU between DPW and DDOE, dated July 24, 2013, is amended to specify the amount of funds to be transferred to DPW from the FY 2014 MS4 enterprise fund, and to identify the activities to be conducted for FY 2014 by DPW to comply with the MS4 Permit and the duration of the MOU.

SECTION III.B.2: Delete Section B.2 on page 4 and replace it with the following text:

a. For FY 14 DDOE has received the following DPW budget for MS4 funds necessary for complying with DPW's obligations under the MS4 Permit.

b. For FY 14DDOE approves the total cost for DPW services under the MOU to not exceed the amount stated in the table below, based on the actual cost spent by DPW.

c. DDOE will approve reimbursement only for the activities listed below. The total amount shall be used to conduct the following activities in the priority indicated:

Activity	Amount	Priority
Hazardous waste collection from permanent DPW drop-off facility (Fort Totten)	$ 325,000	1
Public Education (leaf collection brochures and new sweeper route advertising)	$ 30,000	2
Operation and maintenance of MS4 regenerative air sweepers	$ 200,000	3
Total Amount	$ 555,000	

SECTION IV: Delete the Section and replace it with the following text:

This MOU shall be effective until September 30, 2014.

All other provisions of the MOU shall remain the same.

DISTRICT DEPARTMENT OF THE ENVIRONMENT

Keith A. Anderson, Director — Date 07/15/14

Amy E. McDonnell, General Counsel — Date 7-15-14
For legal sufficiency

DISTRICT DEPARTMENT OF PUBLIC WORKS

William O. Howland, Jr., Director — Date 7-30-2014

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE DISTRICT DEPARTMENT OF THE ENVIRONMENT (DDOE)
AND
THE DEPARTMENT OF PUBLIC WORKS (DPW)
REGARDING MS4 STORMWATER PERMIT FISCAL ADMINISTRATION
(NOT FOR ENHANCED STREET SWEEPING)

I. INTRODUCTION

This Memorandum of Understanding ("MOU") is entered into between the District of Columbia Department of the Environment, the buyer agency ("DDOE") and the Department of Public Works, the seller agency ("DPW"), collectively referred to herein as the "Parties." The purpose of this MOU is to administer finances and reimbursements from the Storm Water Permit Compliance Enterprise Fund ("Storm Water Fund") for activities conducted to reduce pollutants to the District of Columbia, under the municipal separate storm sewer system (MS4) National Pollution Discharge Elimination System (NPDES) Permit (MS4 Permit).

DDOE has requested the services of DPW to conduct activities to reduce pollutants to the District of Columbia, under the MS4 Permit.

This MOU specifies the amount of funds to be transferred to DPW from the FY 2013 Storm Water Fund, and identifies the activities to be conducted by DPW to comply with the MS4 Permit and states the duration of the MOU. This MOU does NOT address implementation of an enhanced street sweeping program; that is the subject of a separate MOU.

II. PROGRAM GOALS AND OBJECTIVES

WHEREAS, storm water discharges from the MS4 are authorized by the NPDES Permit issued to the District of Columbia as Permittee, No. DC0000221 (Nov. 9, 2012)(Final Signed Limited Modification, available at http://www.epa.gov/reg3wapd/npdes/dcpermits.htm);

WHEREAS, on November 9, 2012, the Environmental Protection Agency ("EPA") re-issued the District's MS4 Permit Number DC0000221, to authorize storm water discharges, to the District of Columbia as Permittee;

WHEREAS, the NPDES permit commits the District to undertake measures to improve the quality of stormwater discharges authorized;

WHEREAS, each of the Parties have been assigned activities in the MS4 Permit Implementation Plan;

WHEREAS, the MS4 Task Force has been established with representatives from DDOE, DPW,

the District Department of Transportation ("DDOT"), the District of Columbia Water and Sewer Authority ("DC Water", formerly "WASA"), Department of General Services ("DGS"), Department of Parks and Recreation ("DPR"), and the Office of Planning ("OP"), to manage activities required in the MS4 Permit, pursuant to the Comprehensive Stormwater Management Enhancement Amendment Act of 2008, D.C. Official Code § 8-152.01 *et seq.*;

WHEREAS, the Director of DDOE, or his designee, was made the Storm Water Administrator, with primary responsibility for heading the Storm Water Administration, pursuant to the District Department of the Environment Establishment Act of 2005, D.C. Official Code § 8-151.03(b)(2);

WHEREAS, the storm water management activities in the Implementation Plan are supported by fees collected by DC Water and deposited in the Storm Water Fund, and the Storm Water Administrator is authorized to certify the sufficiency of the Storm Water Fund to meet MS4 Permit budget requests;

WHEREAS, the Parties acknowledge that it may be necessary for some or all parties in the MS4 Task Force to take action to amend, program, reprogram or supplement their respective budgets in order to lawfully undertake activities required by the MS4 permit, and wish to set forth how these actions will be taken; and

WHEREAS, in the event that not all the projects can be funded, priority will be given to the projects that provide the most benefit in reducing storm water pollution and can be implemented most expeditiously, as determined by DDOE and DPW;

NOW THEREFORE, in consideration of the promises mutually exchanged, the receipt and sufficiency of which are acknowledged by each of the Parties, both agree to administer Storm Water Fund monies as follows:

III. SCOPE OF SERVICES

Pursuant to the applicable authorities and in the furtherance of the shared goals of the Parties to carry out the purposes of this MOU expeditiously and economically, the Parties do hereby agree

A. RESPONSIBILITIES OF DPW

1. DPW shall submit a proposed budget to DDOE for the immediate fiscal year by October 1, the first day of the fiscal year in question.

2. For each activity included in DPW's budget request the agency will detail:

   ii. A description of the activity to be funded;

b. MS4 Implementation Plan reference for the activity;

c. MS4 Permit section reference for the activity;

d. Explanation that this activity is above and beyond storm water activities carried out by the agency prior to April 19, 2000;

e. Cost-benefit discussion, including:

i. which pollutants are targeted for reduction by this project/activity, estimated reduction per year to be achieved;

ii. estimated cost/pound of pollutant removed over the life of the project/activity; and

iii. A statement whether DPW's proposed budget contains sufficient funds to successfully carry out the indicated activities.

3. For FY 2013, DPW has submitted its budget, below, for MS4 funds necessary to comply with DPW's obligations under the MS4 Permit for FY 2013.

4. DPW shall carry out the budgeted and funded activities.

B. RESPONSIBILITIES OF DDOE

1. DDOE will use DPW's budget submittal to program budget authority from the Storm Water Fund.

a. DDOE may request additional information from DPW to justify the project/activity.

b. DDOE shall review and approve all programmatic changes or codifications that might affect the estimated quantity of pollutants removed or the cost-benefit analysis of the project or activity.

c. In the event of a budget shortfall, DDOE shall allocate remaining funds giving priority to the projects that the agency determines would provide the most benefit in reducing storm water pollution.

d. In the event that DDOE determines that the fiscal year's revenues from the Storm Water Fund will be less than the anticipated costs of the Storm Water Administration, DDOE may request that DPW and other District agencies make up the difference.

e. DDOE shall authorize the transfer of funds from DDOE to DPW for the expenditures conducted by DPW for the activities listed in this Part, subject to total approved budget limits, as well as cash or revenues available in the Storm Water Fund.

f. DDOE may request supporting documentation to evaluate the status of the activities or to detail how the activities will address the overall MS4 Permit Implementation Plan.

g. DDOE may pre-approve projects, and their expenditures, in advance of approving a detailed budget.

2. For FY 2013, DDOE has approved the following funding to DPW, as follows:

a. DDOE has received the following DPW budget for MS4 funds necessary for complying with DPW's obligations under the MS4 Permit for FY 2013.

b. DDOE approves the total cost for DPW services under this MOU to not exceed the amount stated in the table below, based on the actual cost spent by DPW.

c. DDOE will approve reimbursement only for the activities listed below. The total amount shall be used to conduct the following activities in the priority indicated:

Activity	Amount	Priority
Hazardous waste collection from permanent DPW drop-off facility (Fort Totten)	260,000	1
Public Education (leaf collection brochures)	30,000	2
Operation and maintenance of MS4 regenerative air sweepers	200,000	3
Total Amount	490,000	

IV. DURATION OF MOU

The period of this MOU shall be from October 1, 2012, through September 30, 2013, unless terminated in writing by the Parties prior to the expiration.

V. AUTHORITY FOR MOU

The Parties are authorized to enter into this MOU pursuant to D.C. Official Code §1-301.01(k).

VI. FUNDING PROVISIONS

A. COST OF SERVICES

1. Total cost for services under this MOU shall not exceed the amount stated in Part III.B.

2. The estimated cost of this MOU is based on the proposed Scope of Services, as outlined above.

3. In the event of termination of the MOU, DPW shall return all unspent funds, with a reconciliation, to DDOE no later than November 30 of the following fiscal year.

B. PAYMENT

1. Payment shall be made through an Intra-District advance by DDOE to DPW based on the total amount of this MOU.

2. DPW shall submit reconciliations by November 30 of the following fiscal year which shall explain the amounts charged for the period. The invoices shall include copies of: (1) list of materials and their costs; (2) Labor costs, including hourly rates for each class of workers; and (3) contractor overheads.

3. Advances to DPW for the services to be performed/goods to be provided shall not exceed the amount of this MOU.

4. DPW will receive the advance through the Intra-District process only for actual costs incurred for those goods or services actually provided pursuant to the terms of this MOU. Any unobligated funds, at the end of the fiscal year, will be returned to DDOE's Storm Water Fund.

VII. DISPUTES

The Parties' Directors or their designees shall resolve all adjustments and disputes arising from services performed under this MOU. In the event that the Parties are unable to resolve a financial issue, the matter shall be referred to the D.C. Office of the Chief Financial Officer.

VIII. ANTI-DEFICIENCY CONSIDERATIONS

The Parties acknowledge and agree that their respective obligations to fulfill financial obligations of any kind pursuant to any and all provisions of this MOU, or any subsequent agreement entered into by the parties pursuant to this MOU, are and shall remain subject to the provisions of (i) the federal Anti-Deficiency Act, 31 U.S.C. §§1341, 1342, 1349, 1351, (ii) the District of Columbia Anti-Deficiency Act, D.C. Official Code §§ 47-355.01-355.08 (2001), (iii) D.C. Official Code § 47-105 (2001), and (iv) D.C. Official Code § 1-204.46 (2006 Supp.), as the foregoing statutes may be amended from time to time, regardless of whether a particular obligation has been expressly so conditioned.

IX. COMPLIANCE AND MONITORING

As this MOU is funded by District of Columbia funds, DPW will be subject to scheduled and unscheduled monitoring reviews to ensure compliance with all applicable requirements.

X. RECORDS AND REPORTS

DPW shall maintain records and receipts for the expenditure of all funds provided for a period of no less than three years from the date of expiration or termination of the MOU and, upon the District of Columbia's request, make these documents available for inspection by duly authorized representatives of DDOE and other officials as may be specified by the District of Columbia at its sole discretion.

XI. CONFIDENTIAL INFORMATION

The Parties to this MOU will use, restrict, safeguard and dispose of all information related to services provided by this MOU, in accordance with all relevant federal and local statutes, regulations, and policies. Information received by either Party in the performance of responsibilities associated with the performance of this MOU shall remain the property of the buyer agency.

XII. TERMINATION

Either Party may terminate this MOU in whole or in part by giving 30 calendar days advance written notice to the other Party.

XIV. NOTICE

The following individuals are the contact points for each Party under this MOU:

Hallie Clemm
Department of Public Works
2000 14th Street, NW, 6th Floor
Washington, DC 20009
Phone 202- 645-5141
hallie.clemm@dc.gov

Jeffrey Seltzer, P.E.
Stormwater Administrator
District Department of Environment
1200 First Street, NE
Washington, DC 20002
Phone 202-535-1603
jeffrey.seltzer@dc.gov

XV. MODIFICATIONS

The terms and conditions of this MOU may be modified only upon prior written agreement of the Parties.

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XIII. COMPLIANCE WITH LAWS

The Parties shall comply with all applicable laws, rules and regulations whether now in force or hereafter enacted or promulgated.

IN WITNESS WHEREOF, the Parties hereto have executed this MOU as follows:

DISTRICT DEPARTMENT OF THE ENVIRONMENT

Keith A. Anderson, Director

Date: 07/02/13

Kimberly Katzenberger, Esq.
General Counsel

Date 7-3-13

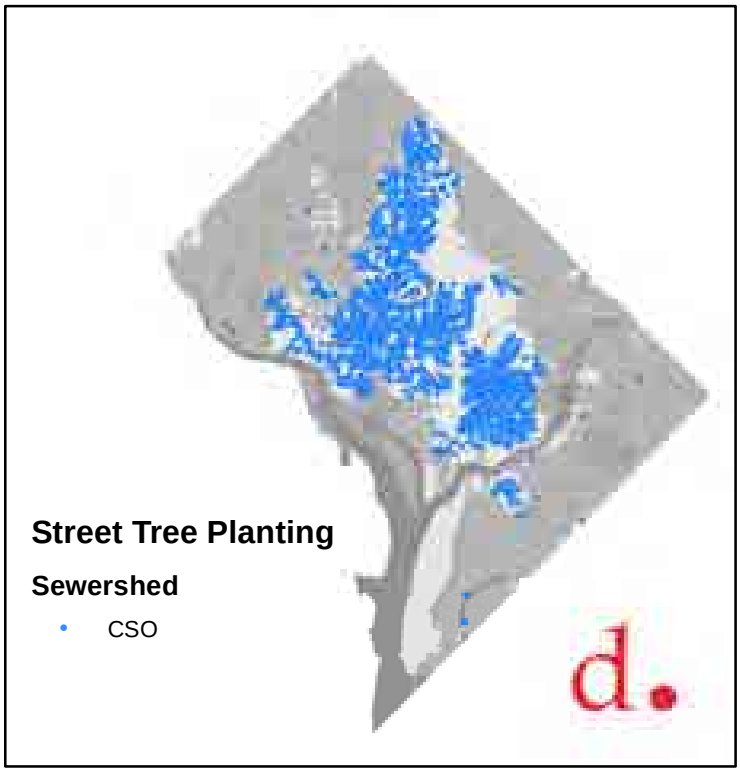
DEPARTMENT OF PUBLIC WORKS

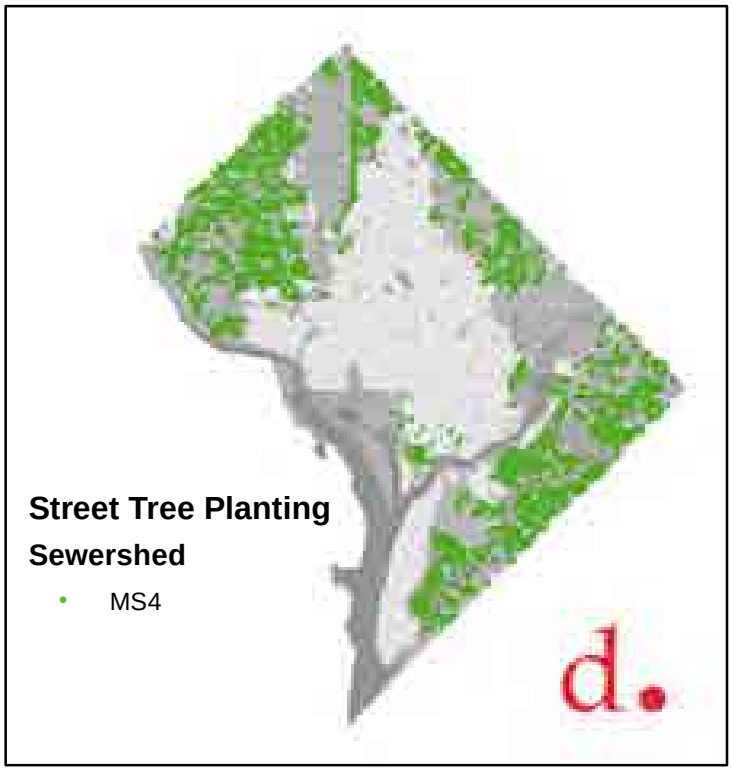
William O. Howland Jr., Director

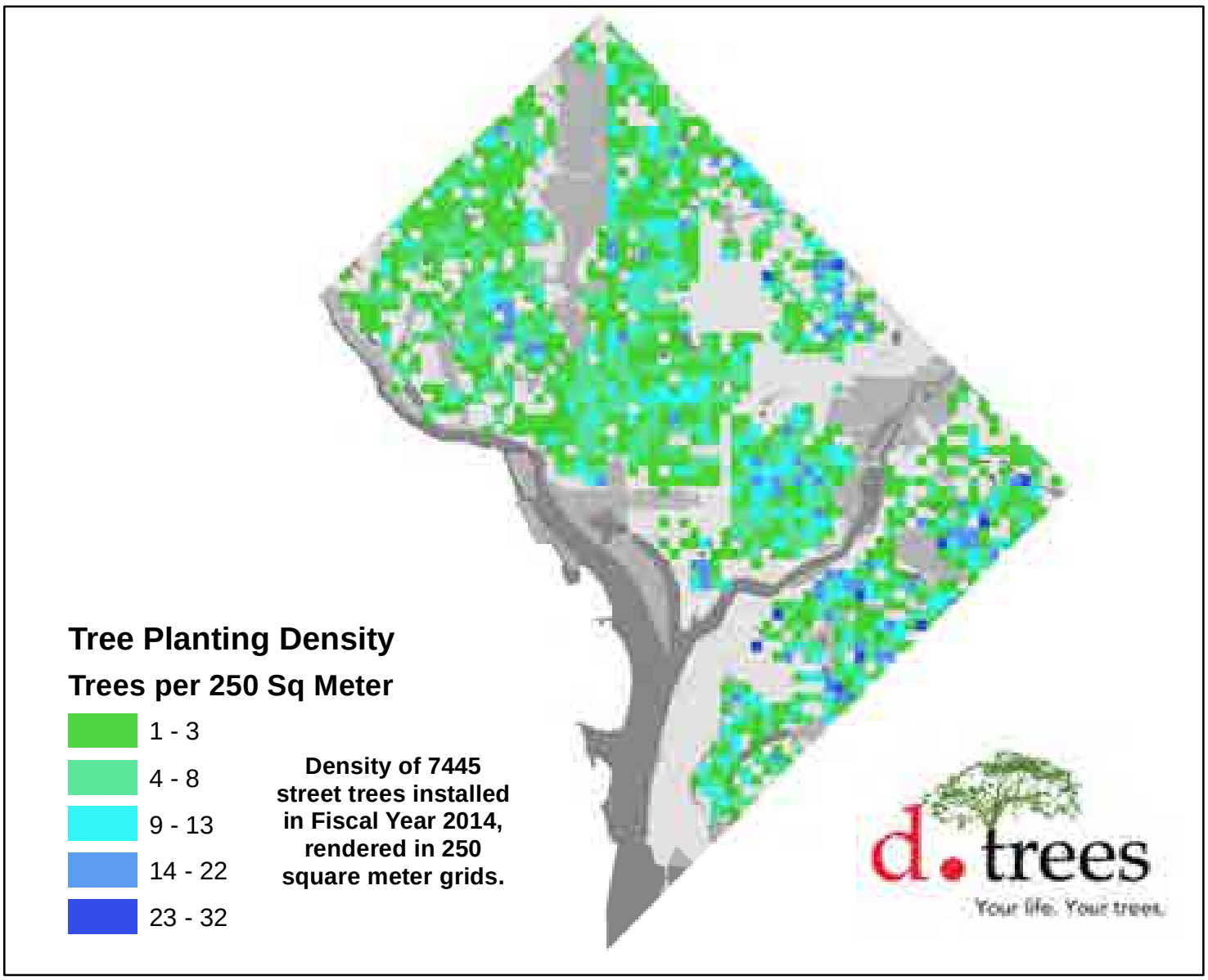
Date: 7-24-2013

B Map of Tree Planting

Fiscal Year 2014 Citywide Street Tree Planting







Map data and design: DDOT Urban Forestry Administration/Earl E November 2014. For general informational purposes only.

C DPW Street Sweeping Data

Daytime and Nighttime Mechanical Sweeping Miles and Tonnage
for YTD 2014

Day of Week	Mon	Tue	Wed	Thu	Fri	Total
	Total Daytime Miles Swept					
Scheduled	3,658	4,136	4,542	4,762	-	17,098
Unscheduled	122	228	45	50	1,788	2,233
Total	3,780	4,364	4,587	4,812	1,788	19,331
	Average Daytime Miles Swept per Route					
Scheduled	9.8	9.9	9.1	9.3	-	9.5
Unscheduled	9.4	8.1	9.0	12.5	11.4	10.8
	Total Daytime Sweeping Tons Collected					
Scheduled	296	329	343	351	8	1,326
Unscheduled	37	49	23	22	151	283
Total	333	379	366	372	159	1,609

Nighttime Sweeping		
Type	**Miles Swept**	**Tons Collected**
Downtown	7,153	744
Highway	4,758	22
Total	11,911	766

	Daytime Sweeping				Nighttime Sweeping		
Month	**Scheduled Miles Swept**	**Unscheduled Miles Swept**	**Scheduled Tons Collected**	**Unscheduled Tons Collected**	**Downtown Miles Swept**	**Highway Miles Swept**	**Downtown & Highway Tons Collected**
Jan-14	-	-	-	-	60	125	26
Feb-14	-	-	-	-	-	260	-
Mar-14	799	174	147	31	92	134	-
Apr-14	2,850	162	360	47	931	385	173
May-14	2,964	274	220	54	686	49	61
Jun-14	2,645	223	168	37	552	834	136
Jul-14	2,947	450	193	49	1,431	810	110
Aug-14	2,509	463	150	46	1,842	1,092	128
Sep-14	2,384	487	88	18	1,559	1,069	103
Total	17,098	2,233	1,326	283	7,153	4,758	766

Data Source - Trakster Software System

Prepared by Public Works Solutions

1/21/2015

D District Facilities with a Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP)

Tracking Number	Date of Coverage	Application Type	Name	Status
DCR05A760	April 09, 2009	Industrial	District Yacht Club	Active
DCR05AA04	November 25, 2012	Industrial	Total Civil Construction Engineering	Active
DCR05A757	February 04, 2009	Industrial	NSA Washington	Active
DCR05AA24	June 09, 2013	Industrial	Southwest Airlines Co. at DCA	Active
DCR05AA20	April 19, 2013	Industrial	Virginia Concrete - SWDC Plant	Active
DCR05AA18	February 19, 2013	Industrial	WMATA - Shepard Parkway Bus Division	Active
DCR05AA17	February 17, 2013	Industrial	CMK DEV, LLC - 5333 Connecticut Ave	Active
DCR05AA15	January 09, 2013	Industrial	Monumental Concrete Joint Venture -DC Village	Active
DCR05AA06	October 21, 2012	Industrial	john driggs co.	Active
DCR05AA05	October 24, 2012	Industrial	Superior Concrete Materials Inc	Active
DCR05A762	February 22, 2009	Industrial	Delta Air Lines, Inc.	Active
DCR05A763	February 25, 2009	Industrial	Signature Flight Support at DCA	Active
DCR05A764	February 26, 2009	Industrial	United Airlines Inc. at DCA	Active
DCR05A765	February 27, 2009	Industrial	Midwest Airways at DCA	Active
DCR05A766	February 27, 2009	Industrial	US Airways @DCA	Active
DCR05A768	February 28, 2009	Industrial	National Railroad Passenger Corporation	Active
DCR05A769	February 28, 2009	Industrial	International Limosine Service INC	Active
DCR05A772	March 12, 2009	Industrial	American Eagle Airlines at DCA	Active
DCR05A773	March 14, 2009	Industrial	Sibley Memorial Hospital	Active
DCR05A785	May 07, 2009	Industrial	American Airlines at DCA	Active
DCR05A787	May 13, 2009	Industrial	MR BP Office #1 LLC - Half St Office	Active
DCR05A789	June 19, 2009	Industrial	IBM Corporation	Active
DCR05A741	December 25, 2008	Industrial	USPS Friendship Station	Active
DCR05A744	March 08, 2009	Industrial	The Washington Marina Company	Active
DCR05A816	November 28, 2009	Industrial	DOD- Bolling Airforce Base	Active
DCR05A856	October 01, 2010	Industrial	Half Street SE, LLC	Active

Tracking Number	Date of Coverage	Application Type	Name	Status
DCR05A857	September 26, 2010	Industrial	NPS East Potomac Park Mainenance Facility	Active
DCR05A873	December 02, 2010	Industrial	JetBlue Airways at DCA	Active
DCR05A745	January 22, 2009	Industrial	Aircraft Service International Incorporated at DCA	Active
DCR05A875	December 14, 2010	Industrial	Rock Creek Park, NPS Maintenance Yard	Active
DCR05A747	May 01, 2009	Industrial	Metropolitan Washington Airports Authority at DC	Active
DCR05A748	January 18, 2009	Industrial	Federal Express Corporation	Active
DCR05A885	December 02, 2010	Industrial	WMATA Western Bus Division	Active
DCR05A886	December 02, 2010	Industrial	WMATA Bladensburg Facility	Active
DCR05A910	March 19, 2011	Industrial	GSA Potomac River Gen Station	Active
DCR05A924	June 25, 2011	Industrial	MRP Realty - Washington Harbour	Active
DCR05A940	August 18, 2011	Industrial	FLEETPRO at DCA	Active
DCR05A950	November 26, 2011	Industrial	Worldwide Flight Services at DCA	Active
DCR05A957	December 11, 2011	Industrial	USDA/ARS US National Arboretum	Active
DCR05A751	January 28, 2009	Industrial	Allied Aviation Fueling Company of National Airport	Active
DCR05A989	April 22, 2012	Industrial	CSX Transportation Inc. Benning Yard	Active
DCR05AA30	October 27, 2013	Industrial	CSX Transportation, Inc. Benning Yard	Active
DCNOEAA33	December 17, 2013	No Exposure	First Transit, Inc.	Active
DCNOEAA25	April 09, 2013	No Exposure	Bombardier Services Corp	Active
DCNOEA971	November 29, 2011	No Exposure	Seafarers Yacht Club	Active
DCNOEA881	October 26, 2010	No Exposure	GSA Central Heating and Refrigeration Plant	Active
DCNOEA880	October 26, 2010	No Exposure	GSA West Heating Plant	Active
DCNOEA874	October 07, 2010	No Exposure	Waste Management of Maryland, Inc North East Transfer	Active

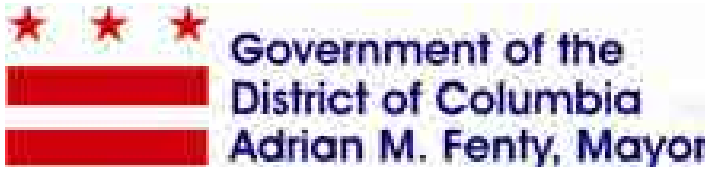
Tracking Number	Date of Coverage	Application Type	Name	Status
DCNOEA812	September 21, 2009	No Exposure	Eastern Power Boat Club, Inc.	Active
DCNOEA809	September 02, 2009	No Exposure	DEPARTMENT OF THE TREASURY	Active
DCNOEAA42	October 20, 2014	No Exposure	NRG POTOMAC RIVER LLC	Active
DCRNEA054	March 13, 2004	No Exposure	DEPARTMENT OF THE TREASURY Bureau of Engraving and Printing	Active
DCNOE0002	May 23, 2005	No Exposure	BAE System Information	Active

E Illicit Discharge Detection and Elimination Program Inspection and Enforcement Strategy

Government of the District of Columbia
Washington, D.C.

Municipal Separate Storm Sewer System
NPDES Permit No. DC0000221

Illicit Discharge Detection and Elimination Program
A Strategy for Proactive Inspection and Enforcement



Submitted By

Stormwater Management Administration
District Department of the Environment

January 2008

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1. INTRODUCTION

The District of Columbia (DC) Municipal Separate Storm Sewer System (MS4) Permit requires implementation of controls to reduce pollutant loads from the DC storm sewers. To meet the requirements of the Permit, the District of Columbia upgraded its Storm Water Management Plan (SWMP) in 2002. The DC SWMP includes a management plan to detect and remove illicit discharges. During the implementation of the plan in the last five years, significant accomplishments have been made and some valuable insights have been gained.

This document serves as a general overview of the District of Columbia's illicit discharge prevention activities and presents the strategy for the implementation of a systematic proactive approach to an effective Illicit Discharge Detection and Elimination (IDDE) program. Ongoing efforts and methodologies are reviewed in order to gain an insight into the current practices and developing an effective strategy.

2. PROGRAM OBJECTIVE

The Code of Federal Regulations, 40 CFR &122.26(b)(2) defines an Illicit Discharge as

> "any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges from fire fighting activities."

General objectives of the IDDE Program include:

- Meet the IDDE requirements of the NPDES Permit No**.** DC0000221, including quick and effective responses to illicit discharges to the District's MS4.
- Promote proper and consistent illicit discharge detection and elimination methodologies.
- Facilitate the proper management and disposal of floatables, household toxics, pet waste and leaf litter.
- Educate residents, businesses, employees and property owners on the importance of preventing, detecting, and eliminating illicit discharges through adherence to the District's IDDE Program.
- Reduce or eliminate careless or illegal discharges to the MS4 system that can result in pollutants reaching local water bodies or areas of natural importance via stormwater.
- Reduce or eliminate pollutant discharges that can affect safety and health, water quality, wildlife, and eventually damage the quality of life in the District.

In summary, the objective of District of Columbia MS4 Illicit Discharge Detection and Elimination Program is to detect and eliminate unauthorized discharges that will

contribute to the degradation of the waters of the District of Columbia and meet the IDDE requirements of the NPDES Permit No. DC0000221.

3. OVERVIEW OF THE DISTRICT OF COLUMBIA IDDE PROGRAM

The DC MS4 permit specifically authorizes discharges, when properly managed, from the following sources: clear water flows, roof drainage, water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated infiltration and pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation waters, springs, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, street wash water, fire fighting activities and similar activities.

The DC SWMP outlines the implementation of the DC IDDE program. One unique aspect of the program is that it not only addresses illicit discharges, as required by NPDES, but also includes the control of floatables (solids) which are introduced into storm sewers as a result of littering and/or direct dumping. The control of floatables was necessitated by the chronic discharge of trash and debris that has been observed at some outfalls. The IDDE program also addresses improper disposal of household toxics, grass clippings, leaf litter and improper disposal of animal waste. Table 1 shows a number of the District's agencies that are responsible for implementing the elements of the program.

Table 1: Agencies Responsible for Implementing the DC IDDE Program

Responsible Agency	**Compliance Activity**
DDOE	Source identification Wet/dry weather monitoring program Wet weather screening program Illicit discharge detection Inspection/enforcement
DCWASA	Floatables reduction program Illicit discharge detection
DPW	Household hazardous waste collection Seasonal leaf and holiday tree collection program Trash/floatable reduction program
All Agencies	Public outreach and education

Most of the illicit discharge investigations were and continue to be prompted by residents' reports of unusual discharges from storm sewer outfalls. According to the latest surveys, there are a total of over 400 outfalls identified in the system. A number of the outfalls carry stream flows that have been piped in the early development of the city.

While about one third of the outfalls discharge directly into the major water bodies, the Potomac and the Anacostia rivers, the majority of the outfalls discharge to Rock Creek and other second order tributaries. The close proximity of secondary streams to residential and recreational areas has gained the streams, and by extension the outfalls, a large contingency of stewardship. Residents and visitors make calls reporting unusual discharges. The most common types of resident complaints received by DDOE include the presence of an unusual color or cloudiness, strong pungent or musty odor, floating debris, surface scum or foam, oil sheen, algae, dead vegetation or stains on a channel bottom or sides.

3.1 Enforcement Authority to Prevent Illicit Discharges

This program component refers to the legal and administrative authority established to regulate, respond and enforce illicit discharges in the District. Regulatory mechanisms prohibiting illicit discharges have been established by DDOE and other District agencies involved in MS4 regulation. The District already has legislation that prohibits the discharge or disposal of used motor vehicle fluids, household hazardous wastes, grass clippings, leaf litter, and animal waste into separate storm sewers. The Water Pollution Control Act of 1984 (D.C. Official Code 8-103.07 (e)) provides that no person shall discharge a pollutant to the waters of the District. The Water Pollution Control Act defines "pollutant" as any substance which may alter or interfere with the restoration or maintenance of the chemical, physical, radiological, and biological integrity of the waters of the District; or any dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemicals, chemical wastes, hazardous wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, oil, gasoline and related petroleum products, and industrial, municipal, and agricultural wastes.

DDOE enforcement procedures are now addressed in *The Environmental Enforcement Process in the District of Columbia*. This document details the written enforcement strategy outlining how enforcement actions, such as violation notices, notices of infraction, and cease and desist orders, are issued and adjudicated. The strategies outlined in the manual provide the standard operating procedures for inspection and enforcement efforts within the District.

3.2 Mapping the Sewer System

The first and foremost requirement for an effective IDDE program is to develop maps to identify sewersheds, outfalls, and the conveyance network of the system. Existing maps of the separate storm sewer conveyance system have been digitized and combined with data regarding sewersheds and outfall locations, creating a database of the MS4 infrastructure**.** Final verification of the District outfalls has also been completed. The database contains information including outfall size, type and condition. There are approximately 800 outfalls in the District, of which 410 are located in the MS4 area. The

remaining outfalls are located outside of the MS4. Figure 1 shows the outfall locations and the sewer infrastructure.

Maps are used to identify potential hot spots and prioritize sewersheds based on the number and types of industrial facilities, the number of past illicit discharges and the water quality condition of the receiving water. The maps are also used to trace the source of an illicit discharge and evaluate and assess our IDDE program.

Industrial facilities are a priority source of pollutants and DDOE has developed a database of high priority facilities, including auto repair shops, car washes, dry cleaners, and laundromats. A database of the facilities with individual NPDES permits is also maintained. Various analyses are conducted by overlaying GIS layers of industrial facilities and illicit discharge incident locations. This allows for the identification of potential links to sources of an illicit discharge. The storm sewer maps are also used to trace possible sources of the dry weather flows to a general area. Combined with the storm sewer map, facility maps provide a more complete representation of conditions in the field, and allow the District to direct program resources more effectively. As the IDDE program progresses, the District plans to enhance its GIS and database capabilities to conduct more complex analyses for implementing the program.

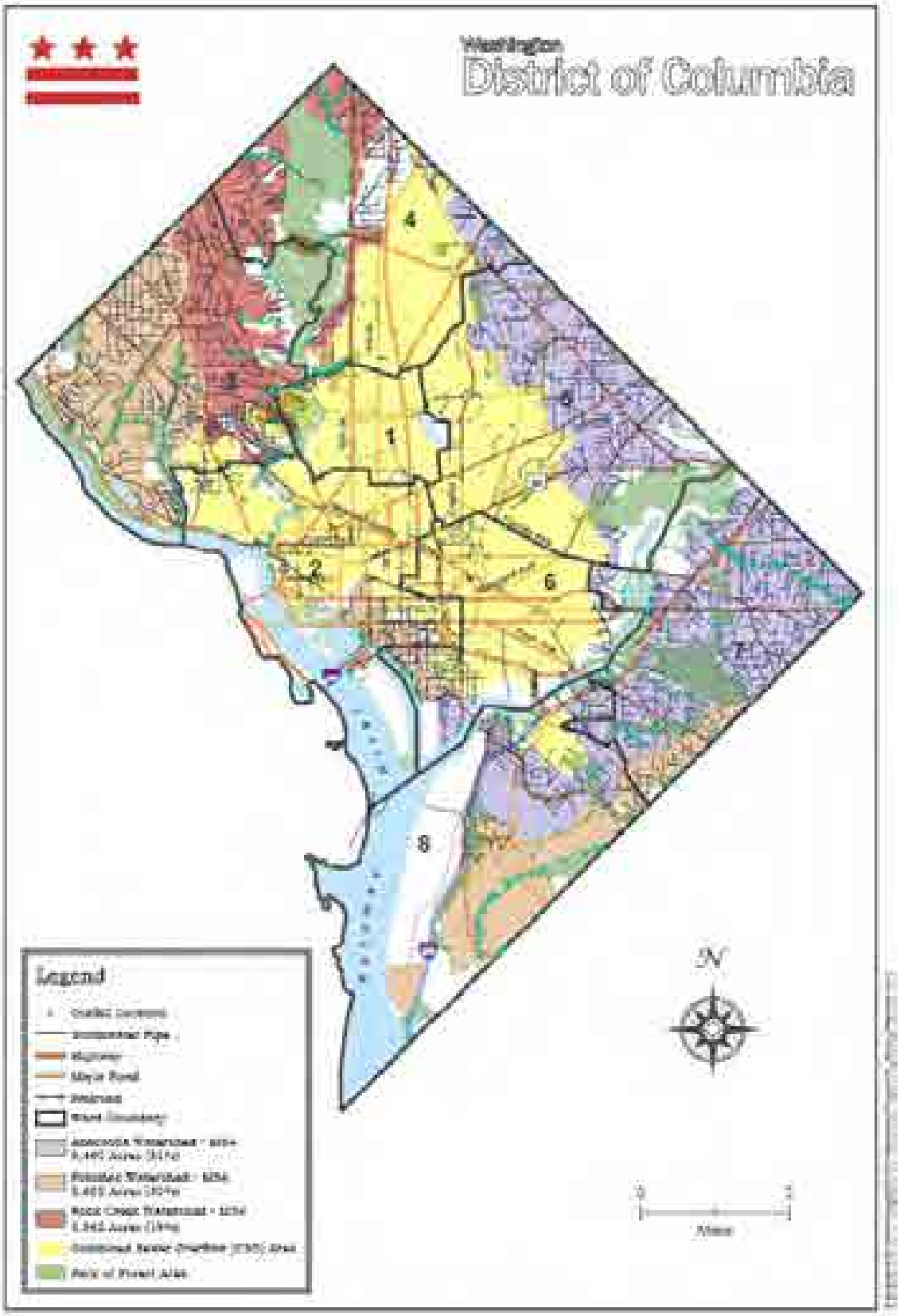


Figure 1. Infrastructure and Outfall Locations

3.3 Field Screening Procedure

Once general geographic priority areas have been determined, dry-weather surveys of outfalls are undertaken to look for non-storm water flows. DDOE makes visual observations of outfalls during dry weather. Because illicit discharges are often intermittent, DDOE inspectors ideally check for discharges multiple times in a given location, particularly in a priority location.

DDOE also conducts wet weather screening which mainly consists of sampling representative outfalls during storm events. Data collected during wet weather samplings are reviewed in order to identify areas that may be contributing excessive levels of pollutants to the MS4 and for possible illicit discharges. The representative outfalls selected for the wet weather monitoring and screening are listed in the NPDES Permit No. 0000221, and include outfalls for the Anacostia, Rock Creek, and Potomac River subwatersheds. The results of the wet weather screening are analyzed to identify which outfalls and sewersheds show signs of contamination. DDOE reviews the collected screening data to discern any spatial or temporal patterns that may assist the program in prioritizing sewersheds for additional regulatory, educational or structural pollution controls. Illicit discharges are also identified through routine facility inspections.

3.4 Procedures to Investigate and Remove Illicit Discharges

Illicit discharges are identified through regular dry and wet weather screening programs, routine facility inspections, and reports of unusual discharges or illegal dumping by the public. Once an incident is identified, a desktop analysis of the facility database and the storm water network system is conducted to obtain a general understanding of the area, then potential sources are identified and the best course of action is determined. A field crew then inspects the site and conducts a detailed investigation to pin point the cause of the discharge. Several techniques, many of which are already employed by the District, may be used to identify the source of illicit discharge. The techniques include dye testing, video inspection, interview of facility owners/operators , review of facility documents, visual inspection of stains, inspections of manholes leading to the storm sewer, tracking illegal dumping, flow monitoring, and water quality testing.

Once the source is identified, the offending discharger is notified and directed to correct the problem. Depending on the nature of the discharge, notification combined with education is enough to resolve the problem before taking legal action. Often, home or business owners are not aware of the existence of illegal connections between their buildings and the storm sewer systems. In these cases, DDOE inspectors provide the responsible party with information about the connection, its environmental consequences, the applicable regulations, and how to remedy the problem. These actions may be enough to secure voluntary compliance.

However, if these measures are not effective, the inspectors issue formal site directives, notices of violation, and notices of infraction. Noncompliance of notices of violation

results in a notice of infraction and fines. DDOE follows these summarized steps for enforcement:

- DDOE inspectors send the property owner a Notice of Violation (NOV), which may require the violator to take steps such as eliminating an illicit connection or discharge.
- If the person receiving the NOV does not comply in a timely manner, DDOE inspectors will then issue them a notice of infraction (NOI) that carries a fine.
- The person receiving the NOI may admit and pay the fine, admit with explanation and request a reduction of the fine, or deny the infraction(s) and adjudicate the NOI. The violator is required to pay the fine levied in the NOI and abate the illicit discharge unless an Administrative Law Judge rules that the person is not responsible for the illicit discharge.
- If the violator fails to correct the violation; DDOE may take appropriate measures necessary to abate the violation. The agency then may require reimbursement from the violator for the cost of the abatement, including administrative costs.
- DDOE also has the ability to seek an injunction against the violator **"**restraining the person from activities which would create further violations or compelling the person to perform abatement or remediation of the violation.**"**

As a final step, all actions taken under the investigation are documented. This illustrates that progress is being made to eliminate illicit connections and discharges. Documented actions are reported in annual reports and include information such as: the number of outfalls screened, complaints received and corrected, the number of illicit discharges eliminated, and the number of dye tests conducted.

3.5 Procedures to Limit Infiltration of Sewage into the Storm Sewer System

Illicit discharges of sewage into the storm sewer system typically occur due to a cross connection between the sanitary sewer system and the storm sewer system. Sewage can also enter the storm sewer system due to a failure of the sanitary/storm system and sanitary overflows. Cross-connections could also occur due to damaged or deteriorating storm/sanitary sewer pipes or due to faulty connections during repair or construction. Dry-weather field screening and outfall monitoring helps identify portions of the system that are experiencing discharges of sanitary sewage. In some cases, facility inspections, including review of facility piping diagrams, and dye testing also reveals sanitary cross-connections. Many of the same investigative and removal techniques used to identify other illicit discharge sources described earlier are also used in evaluation of cross connections. DDOE inspectors work closely with DCWASA to determine such connections and eliminate the source(s).

3.6 Procedure to Prevent, Contain, and Respond to Spills

The District developed and is implementing the procedures specified in the Water Pollution Control Contingency Plan (WPCCP) for spills and chemical releases. The

WPCCP provides guidance on timely and effective response to hazardous substance releases that threaten to impact the natural resources of the District. The plan also addresses the pollution and resource assessment, mitigation, cleanup, and follow-up actions resulting from non-permitted discharges. The District continues to operate under the plan developed in 1999.

The Permit discusses implementing procedures to prevent, contain, and respond to spills that may discharge into the MS4, including the training of personnel in spill prevention and response procedures. The contingency plan outlines procedures for notifying the incident commander and the trustees of the natural resources in the event of a spill and procedures for oil and hazardous substances emergency response. DDOE continues to perform compliance and enforcement activities in accordance with EPA regulations under the CWA and District regulations under the District of Columbia Water Pollution Control Act that address illegal discharge of potentially hazardous materials.

The District plans to provide pollution prevention outreach to managers of facilities, and in-house spill training to the District agencies. DPW, DDOT, and WASA have incorporated spill response activities and best housekeeping practices into employee training at equipment storage and maintenance facilities. DDOE plans to revise the current contingency plan in the future.

3.7 Improper Disposal of Floatables and Other Household Waste

Floatables Reduction Program

The DPW Solid Waste Education and Enforcement Program (SWEEP) seeks to maintain clean private and public spaces by investigating illegal dumping complaints, overgrown lots, poor trash containerization and other sanitation violations. Generally, SWEEP staff attempt to work with out-of-compliance property owners to bring the property into compliance with the District code. If SWEEP staff cannot obtain voluntary compliance from a delinquent property owner, the Department may clean their property and charge the property owner twice the cost of the cleanup effort. This cost is added to the property owner's next property tax bill. DDOE also visually inspects MS4 outfalls and the waters to which they discharge in efforts to detect and eliminate illicit discharges in selected sewersheds. WASA personnel also perform visual inspections while maintaining catch basins and the MS4 infrastructure.

The District also operates a river pollution control program that seeks to reduce the floating debris found in the District's rivers. The District continues to conduct the Floatables Reduction Program for the Potomac and Anacostia Rivers. The WASA Floatables Debris Removal Program was initiated in August 1992 to remove floating debris from the Anacostia and Potomac Rivers on a routine basis.

Waste Collection Program

The Permit prohibits the discharge of used motor vehicle fluids, household hazardous wastes, grass clipping, leaf litter, and animal waste into separate storm sewers. The District provides household hazardous waste collection biannually and seasonal leaf collection each fall. The existing program for the collection of motor vehicle fluids and household hazardous waste has been expanded to include paint, batteries, pesticides, solvents, motor oil, furniture polish, nail polish and remover, and other possibly toxic items. Bagged grass clippings and leaves are also collected throughout the year with regular garbage collection. Leaf litter is collected during November, December, and January by DPW utilizing vacuum trucks.

In addition, DDOE has developed an education and outreach program entitled "Scoop Your Pet's Poop" to educate District residents on the proper use and disposal of pet waste. This program is designed to inform citizens of their legal obligation to manage their pet's waste and to explain the reasons why doing so is important. Currently there are laws in the District requiring pet owners to remove animal waste. A brochure outlining the requirements of the law are available to registered pet owners to inform them that runoff from animal waste is a source of nutrient pollution in the waters of the District.

3.8 Facilitate Reporting of Illicit Discharges

As part of the education and outreach efforts outlined in the following section, the District provides a mechanism for receiving reports of illicit discharge from the general public. Currently, citizens are able to report illicit discharges by calling the Mayor's Command Center which will direct them to the appropriate staff within DDOE. The reports are documented with relevant information including time, place, nature of the discharge and any contact information volunteered by the caller. Additionally, citizens report illicit discharges directly to DDOE.

3.9 Public Education

Outreach to public employees, businesses, property owners, and the general community regarding ways to detect and eliminate illicit discharges is an integral part of the IDDE program.

The storm water pollution control public education program entails a mixture of programs including:

- Public web site development.
- Education related to household hazardous waste collection and disposal.
- Pesticide, fertilizer and pet waste education program.
- Industrial facility education program.

- Construction site operators' education program.
- Agency cooperation program.
- District-wide science fairs and outreach events, i.e., presenting storm water education materials or activities at such public events.
- Library submittals.

The Stormwater Management Administration at DDOE maintains a public web site which seeks to discuss all pertinent aspects of the MS4 program. The "MS4 Permit" section gives information about the current regulations governing MS4s. The "What Can I Do" section gives information on what residents can do to help local water quality and the "Contact Information" section lists various contacts for additional information and resources for the MS4 related issues.

4. PROACTIVE IDDE IMPLEMENTATION STRATEGY

The District, in the past, has used two different approaches to illicit discharge investigation: the first approach was to conduct a complete investigation of all potential sources in a particular sewershed, and the second approach was to target one or multiple high priority industries/activities that possessed the most frequent violations. The first approach presented a challenge due to limited staffing resources. It was lengthy and did not result is rapid improvement, whereas the second approach was found to be much more manageable and provided quick resolution of the cases investigated. Although relative benefits in using one approach over the other for any particular sewershed can be justified, a balance between the two approaches is necessary in achieving overall maximum benefit.

The objective of the proactive strategy of the District's inspection and enforcement of illicit discharges is to target high risk facilities that include auto repair shops, car wash facilities, dry cleaners and laundromats to reduce toxics and other harmful substances from entering the storm sewer system and ultimately to the District's waters. The strategies of the District's IDDE program targeting a range of sources are presented in Table 2.

Table 2. Strategy of the District's IDDE Program

Targeted Pollution Sources	Strategies
Sanitary Wastewater	- Conduct dry weather inspections of 20 percent of the outfalls per year with all the outfalls inspected over a five year period. - Conduct repeat inspections of outfalls in sewersheds prioritized based on density of high risk facilities, report of illicit discharges, water quality assessment of streams, and field visits. - In addition to using water quality field test kits, expand the scope of investigation through

	laboratory analysis of suspected discharges as appropriate. - Coordinate with other DC agencies in order to prioritize problem areas.
Auto Repair, Car Wash, Dry Cleaners, Laundromats	- Inspect 20 percent of the facilities per year with all the facilities inspected over a five year period. - Conduct repeat inspections of facilities located in high priority sewersheds as necessary. - In addition to using water quality field test kits, expand the scope of investigation through laboratory analysis of suspected discharges as appropriate. - Implement aggressive educational programs for owners and operators. - Develop model spill prevention plans for the facilities. - Develop best management practices guidance documents for facilities. - Make educational materials available on the internet. - Implement aggressive enforcement for repeat offenders. - Enhance current data reporting and tracking databases and establish links to the DDOE enforcement tracking system which is under development for enforcement cases.
Spills	- Continue to use current spill response procedures and identify gaps and areas of possible enhancement. - Update the current WPCCP if funding is available.
Household Hazardous Waste, Grass Clippings and Leaf Litter	- Develop additional education materials on best management practices. - Make educational materials available on the internet. - Implement aggressive stromdrain stenciling program in targeted sewersheds.
Discharge of Floatables	- Enhance current DPW illegal dumping programs. - Work with members of the Metropolitan Police Department to enhance illegal dumping enforcement. - Work with DPW to install cameras in order to record illegal dumping activities and assist with enforcement actions.

	- Implement recommended strategies in the Trash Reduction Plan for the Anacostia watershed once it is developed. The plan is slated to be developed by 2010. - Implement aggressive stromdrain stenciling program in targeted sewersheds. - Publish educational materials on the internet. - Make DC dumping and enforcement laws available on the DDOE stormwater administration's website or other websites where they are more visible. - Continue the WASA floatable collection program to collect floatables from the river.
Animal Waste	- Continue with the current education program. - Work with the DC Department of Parks and Recreation in the establishment of dog parks.

5. EVALUATION OF THE IDDE PROGRAM

Annually, the District intends to evaluate the successes of the illicit discharge detection and elimination program implementation. The following benchmarks will be used to measure the effectiveness of the IDDE program:

- The number of facilities inspected
- The number of outfalls inspected
- The number of illicit discharges investigated
- The number of eliminated/closed investigations related to illicit discharges
- The number of complaints received from neighborhoods with history of illicit discharges compared to previous years.
- The number of enforcement actions taken
- The number of educational materials (e.g., brochures) developed and distributed
- The number of dog parks established
- The amount of pollution entering tributaries (e.g., reduced concentrations of pollutants) compared to previous years.

F Pollution Prevention Training Log

Date	Agency	Event	Training conducted by:	Description
FY 2013				
9/11/2013	DC Water	Staff training Main and O, and Northeast Boundary Swirl facilities	Michael DeVito	The training included an introductory meeting with staff to discuss the goals of the SWPPP and pollution prevention efforts. We conducted a site walk through training that revealed minor house keeping concerns but an overall well maintained facility. The vehicle repair garage on site was particularly clean and well maintained with labeled containers and secondary containment.
9/27/2013	DDOT	Staff training at 1403 W St. NE	Michael DeVito	The training included an introductory meeting with staff to discuss the goals of the SWPPP and pollution prevention efforts. I discussed with them my position, the role of compliance assistance and next step. We had a productive question and answer period that covered spill clean up procedure, spill reporting and general good housekeeping practices. The rest of the training consisted of a site walk through and hands on training. The site walk through included observing and discussing areas of improvement, highlighting areas of existing good practices, fielding questions, and discussing next steps.

Date	Agency	Event	Training conducted by:	Description
FY 2014				
12/5/2013	DDOT	Staff training at 1735 15th St. NE	Michael DeVito	Training started with introductory discussion of overall MS4 permit, P2 goals, role of DDOE in compliance assistance and role of EPA. I handed out copies of the 2013 DDOE pollution prevention guidance to Julie, and the facility manager Melony Pree. I gave everyone in attendance a copy of the new good housekeeping checklist and solicited feedback on the document. Feedback was generally positive. The second half of the training was a facility walk through, including recommendations for improvements.
12/12/2013	DDOT	1338 G street SE	Michael DeVito	Training started with introductory discussion of overall MS4 permit, P2 goals, role of DDOE in compliance assistance and role of EPA. I handed out copies of the 2013 DDOE pollution prevention guidance. I gave everyone in attendance a copy of the new good housekeeping checklist and solicited feedback on the document. The staff said that the feedback would be useful. The staff was engaged and had a lot of questions. One particular area that we covered was cleaning up and safely disposing of the silica and other debris that is the result of street sign installation. The second half of the training was a facility walk through, including recommendations for improvements.

Date	Agency	Event	Training conducted by:	Description
12/19/2013	DCHA	1133 North Capitol St NE	Michael DeVito	This was an introductory training/meeting to go over pollution prevention, the MS4 permit and the broader goals of protecting District waterways. DCHA had not previously been informed of the requirements of the MS4 permit, so this introduction started very generally with the Clean Water Act, discharges to waterways, combined sewer versus MS4 and the role of District agencies in carrying out the
12/30/2013	DPW	1725 15th St NE	Michael DeVito	This training was specifically for the newly formed four person pollution prevention team. The team will spearhead efforts to update the SWPPP and implement training routines. Training started with my usual introductory discussion of overall MS4 permit, P2 goals, role of DDOE in compliance assistance and role of EPA. The team had a significant number of questions relating to what DPW needs to do to meet compliance. We set out plans for the team to determine the best approach to training the rest of the relevant staff. I handed out copies of the 2014 DDOE pollution prevention guidance. I gave out copies of the updated document templates. The second half of the training was a facility walk through, including recommendations for improvements.

Date	Agency	Event	Training conducted by:	Description
1/10/2014	DC Water	301 Bryant St., pumping station	Michael DeVito	Training started with introductory discussion of overall MS4 permit, P2 goals, role of DDOE in compliance assistance and role of EPA. I handed out copies of the 2013 DDOE pollution prevention guidance. I gave everyone in attendance a copy of the new good housekeeping checklist and solicited feedback on the document. The staff said that the feedback would be useful. The second half of the training was a facility walk through, including recommendations for improvements.
3/20/2014	DCHA	Facility review	Michael DeVito	This was a facility review in preparation for developing the DCHA SWPPP. We went to the vehicle storage yard and a few maintenance facilities. We discussed pollution prevention in general. I pointed out areas that would need to be improved and we discussed the connection between the workspace, drains on site and the health of the rivers.

Date	Agency	Event	Training conducted by:	Description
3/26/2014	DDOT	Annex #9 Bryant St.	Michael DeVito	This facility is where DDOT conducts asphalt and concrete testing to ensure quality control. The set up and location of the site is odd because the buildings are located within the grounds of the DC Water Bryant St facility. This is a holdover from when the site was mixed use. Over time, DC Water has taken over most of the facility, except for two buildings and four trailers. The buildings house testing equipment and store core samples and bags and buckets full of materials waiting to be tested. There are long term plans to move the testing facilities to a more permanent location, but so far all attempts have fallen through. There is currently no definite plan in place to move the testing to another facility.
3/18/2014	DC Water	80 M. Street	Michael DeVito	The Large Group Staff Meeting is the monthly management meeting for DC Water. I gave my pollution prevention PowerPoint presentation to assembled managers and supervisors, including the agency assistant general manager Charles Kiely. I discussed the MS4 permit and pollution prevention efforts in general as well as good housekeeping recommendations for DC Water specifically.

Date	Agency	Event	Training conducted by:	Description
5/14/2014	DPW	1725 15th St NE Fleet Management	Michael DeVito	This was a central training for facility staff and supervisors. Rather than conduct individual training at each of the facilities, the DPW SWPPP team requested that I conduct a training for managers and supervisors who can then disseminate the information. I started with a PowerPoint presentation covering the importance of the MS4 permit, the requirements, potential fines, and general good housekeeping. After that, we watched the "Rain Check" employee training video. Next, we went through the "Rain Check" training quiz. Rather than having everyone take the quiz individually we worked through the questions and answers as a group, including discussing the why certain answers were correct or incorrect maintenance strategies. Lastly we had a round table discussion of the specific issues facing DPW, went over questions and answers and recommendations moving forward.
6/4/2014	OSSE	1345 New York Avenue NE bus Terminal	Michael DeVito	This was a training session for the terminal manager. The plan is for the terminal manager to disseminate the information to the terminal staff. I started with the SWPPP PowerPoint covering the importance of the MS4 permit, the requirements, potential fines, and general good housekeeping. Following the PowerPoint I answered several facility specific questions and we had a helpful discussion of their challenges and where P2 efforts stand.

Date	Agency	Event	Training conducted by:	Description
6/5/2014	OSSE	4 DC Village Lane Terminal	Michael DeVito	This was a training session for the terminal manager and assistant terminal manager. The plan is for the terminal manager to disseminate the information to the terminal staff. I started with the SWPPP PowerPoint covering the importance of the MS4 permit, the requirements, potential fines, and general good housekeeping. Following the PowerPoint I answered several facility specific questions and we had a helpful discussion of their challenges and where P2 efforts stand.
6/18/2014	OSSE	2000 Adams Place NE Terminal	Michael DeVito	This was a training session for the terminal manager and assistant terminal manager. The plan is for the terminal manager to disseminate the information to the terminal staff. I started with the SWPPP PowerPoint covering the importance of the MS4 permit, broad Clean Water Act compliance and the goals of cleaning the District waterways. I covered the combined and separate sewer systems and the links between the work place and the health of the rivers. We discussed procedures and protocols for staff to prevent releases of pollutants. We looked at document templates for checklists and good housekeeping. Afterwards we did a facility walk through, covering good housekeeping for vehicle storage and fueling, trash clean up, etc.

Date	Agency	Event	Training conducted by:	Description
6/19/2014	OSSE	5th St NE Terminal	Michael DeVito	This was a training session for the terminal manager and assistant terminal manager. The plan is for the terminal manager to disseminate the information to the terminal staff. I started with the SWPPP PowerPoint covering the importance of the MS4 permit, broad Clean Water Act compliance and the goals of cleaning the District waterways. I covered the combined and separate sewer systems and the links between the work place and the health of the rivers. We discussed procedures and protocols for staff to prevent releases of pollutants. We looked at document templates for checklists and good housekeeping. Afterwards we did a facility walk through, covering good housekeeping for vehicle storage and fueling, trash clean up, etc.

Date	Agency	Event	Training conducted by:	Description
8/20/2014	OSSE	4 DC Village Lane Terminal	Michael DeVito	This was a training session for the supervisory staff at each of the terminals that are below the level of the terminal managers. These are the supervisors that report to the terminal managers. This effort was a continuation of the OSSE strategy to conduct top down training of staff in a trickle down approach to pollution prevention knowledge. I delivered my standard P2 training. We then watched some chapters of the Rain Check employee training video, followed by the corresponding quiz. We then proceeded to walk through the terminal facility and review pollution prevention practices. We looked at the fueling are and discussed better fueling techniques to prevent spills or drips of fuel. We looked at catch basins and discussed

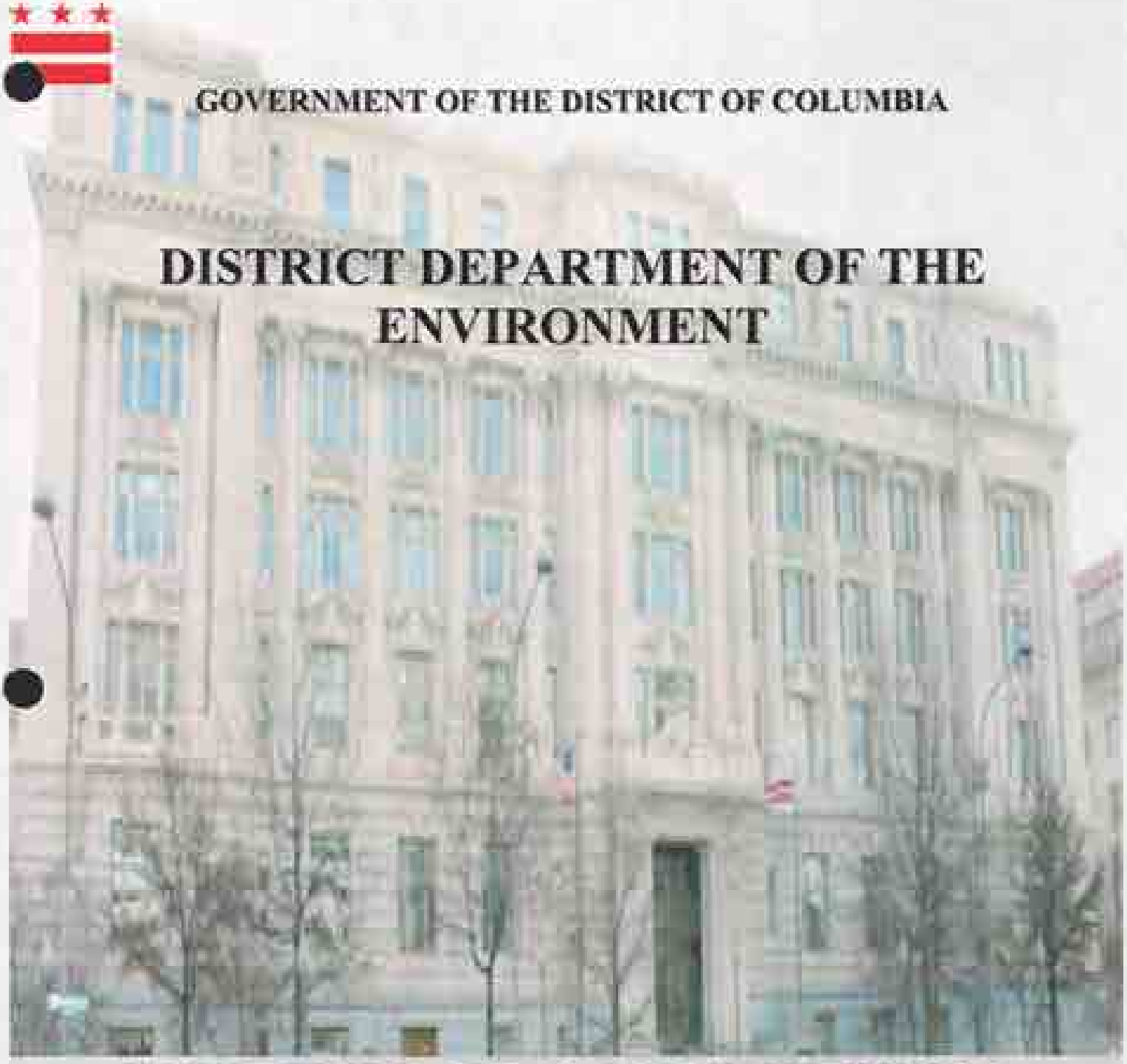
Date	Agency	Event	Training conducted by:	Description
9/26/2014	DGS	2200 Adams Place NE	Michael DeVito	This training included a mixture of staff but was primarily for area managers and those in a supervisory role. I started with the P2 PowerPoint presentation, starting with an overview of the MS4 permit and narrowing down to good housekeeping and BMP maintenance. After that I showed the chapters of the Rain Check video on good housekeeping, spill prevention, SPCC, vehicle fueling and materials management. The training session finished with a site walk through, specifically focusing on the fueling area outside of the building that DGS shares with DCPS. The fuel pumps on this site are actually under the purview of DPW, but the area is useful for training purposes. We looked at a spill of fuel at the pumps where someone had applied absorbent material, demonstrating good housekeeping was taking place there. I opened the spill kit located next to the pumps and demonstrated how to use the materials inside and went over the importance of staff awareness and timely response to spills.

Date	Agency	Event	Training conducted by:	Description
FY 2015				
10/9/2014	Autobody shop	DDOE office	Michael DeVito for P2, other DDOE staff for related topics	This was a broad training, primarily for auto body shop owners and fleet maintenance for a few of the local universities. We had a few folks from WMATA and DPW present as well. I presented on general pollution prevention, but other presenters also covered air pollution, inspections and other requirements. The participants were very engaged and there was a robust dialogue and questions asked throughout the presentation.

G DDOE Environmental Enforcement Guidelines

GOVERNMENT OF THE DISTRICT OF COLUMBIA

DISTRICT DEPARTMENT OF THE ENVIRONMENT



ENVIRONMENTAL ENFORCEMENT GUIDELINES

Prepared By
THE OFFICE OF ENFORCEMENT AND ENVIRONMENTAL JUSTICE

KENDOLYN HODGES-SIMONS
DIRECTOR

SEPTEMBER 10, 2009

ACKNOWLEDGEMENT

Special thanks to the following people who participated in the District Department of the Environment Enforcement Guidelines Working Group for their assistance in the development of this document:

Cecily Beall	Air Quality Division
Mary Begin	Toxic Substances Division
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James Sweeney	Toxic Substances Division
Deborah Thomas	Office of Environmental Protection

DDOE
DISTRICT DEPARTMENT OF THE ENVIRONMENT

MESSAGE FROM THE DIRECTOR

DDOE Team,

All of us play an important role in protecting the natural environment of the District of Columbia. Our air, water and wildlife are in excellent hands, thanks to the commitment and talent of the District Department of the Environment's professional staff.

When it comes to enforcement, the District has some of the nation's strongest environmental laws and regulations. The document you are about to read will help you ensure compliance with them. From a simple warning letter to a settlement of hundreds of thousands of dollars, all of the tools in our enforcement tool belt are explained in the following pages.

I want to thank the Office of Enforcement and Environmental Justice for assembling this manual, and all of you for your hard work every day to make the District a better place.

Sincerely,

George S. Hawkins, Esq.
Director

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DISTRICT DEPARTMENT OF THE ENVIRONMENT
ENVIRONMENTAL ENFORCEMENT GUIDELINES

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DISTRICT DEPARTMENT OF THE ENVIRONMENT
ENVIRONMENTAL ENFORCEMENT GUIDELINES

I. POLICY OVERVIEW AND GENERAL CONSIDERATIONS

A. Introduction

This document discusses regulatory enforcement by the District Department of the Environment (DDOE) or (the Department) and provides guidelines for DDOE staff to use in monitoring compliance, taking enforcement actions to address violations and assisting violators in returning to compliance. The policies and procedures stated herein do not carry the force of law and are intended solely to provide guidance. If a conflict were to arise between these guidelines and District of Columbia statutes and regulations, the statutes or regulations would control.

In some instances, program-specific Standard Operating Procedures (SOPs) may identify additional priorities and procedures not included in these guidelines. The programs must consult their SOPs to address timely and appropriate enforcement responses to violations that are designated as high priority violations (HPVs) or significant non-compliance (SNC). These SOPs may also identify special tracking systems for documenting suspected violations, including a time schedule for resolving such cases. Any conflicts between these general guidelines and the program-specific procedures should be brought to the attention of the Director of the Office of Enforcement and Environmental Justice (OEEJ), who will work with enforcement staff, their managers, and the Office of the General Counsel (OGC) to provide resolution.

B. DDOE's Mission and Vision

1. Mission

DDOE's mission is to protect and restore the environment; conserve natural resources; provide energy-related policy, planning, and direct services; and improve the quality of life in the District of Columbia.

2. Vision

As the nation's capital city, the District will become the model of environmental protection and sustainable environmental practices. DDOE will partner with other District agencies, the federal government, business groups, non-profit organizations and residents to help instill environmental awareness through innovation and best practices.

C. DDOE Enforcement Policy

DDOE was established to, among other things, improve the quality of District urban life and to streamline the enforcement and administration of District and federal environmental laws and regulations. Through its many enabling authorities and promulgated regulations, DDOE has developed and implemented processes that direct its limited resources to best advantage in order to provide assistance to the regulated community and achieve necessary compliance assurance. While enforcement is an important and valuable tool for assuring compliance with environmental laws and regulations, enforcement actions are not considered to be goals in and of themselves.

DDOE is committed to providing consistent, timely and appropriate enforcement actions that protect the public health and the environment while creating a credible deterrent to potential future violations. It is DDOE's practice to consider all enforcement options, select the most appropriate and effective option commensurate with the nature of the violation and assess fair and equitable penalties based on specific factors identified in the Department's penalty policies.

In implementing its regulatory enforcement responsibilities, DDOE seeks to:

- Ensure that facilities are complying with environmental requirements,
- Stop repeat violations and correct ongoing violations,
- Deter future violations,
- Remove the economic benefit of noncompliance,
- Remediate the environmental impact of past violations, and
- Take timely, appropriate, fair, consistent, and effective enforcement actions when necessary.

The District's Civil Infraction Schedule of Fines categorizes, or classifies, a substantial number of environmental regulations DDOE is authorized to enforce. Classifications are made according to the nature and severity of the violations and their potential to impact human and environmental health. Under the Schedule of Fines, Class 1 and Class 2 violations are considered the most egregious and serious violations. Class 3 violations contain mixed minor/serious violations and Classes 4 and 5 are generally minor violations. The Schedule of Fines is found in 16 District of Columbia Municipal Regulations (DCMR) Chapters 32 – 38 and is discussed in greater detail in other sections of this document.

The classifications in the Schedule of Fines provided a useful benchmark for these guidelines and were used to help establish appropriate enforcement responses and protocols for the Department. Proper execution of these guidelines will help DDOE to carry out its mission and achieve its vision for the city.

D. Enforcement Roles within DDOE

The following are the key DDOE offices and programs with enforcement responsibilities:

1. DDOE's Environmental Offices

The Offices of Environmental Protection, Natural Resources and Energy are the three primary offices within DDOE with environmental enforcement responsibility. Inspectors in these Offices are assigned to divisions and serve as the primary contacts for the regulated community and the public. These inspectors are the Department's first responders to instances of environmental noncompliance.

The divisions are further organized into branches and programs that address specific environmental areas. The Office of the Director and the managers of these divisions, in conjunction with the Director of the Office of Enforcement and Environmental Justice and the Office of the General Counsel, determine DDOE's enforcement priorities. DDOE divisions and branches with environmental mandates are as follows:

Environmental Protection Administration

Air Quality Division
- Permitting and Enforcement Branch
- Monitoring and Assessment Branch

Toxic Substances Division
- Land Remediation and Development Branch
- Hazardous Materials Branch

Lead and Healthy Housing Division
- Compliance and Enforcement Branch
- Childhood Lead Poisoning Prevention Branch

Natural Resources Administration

Water Quality Division
- Planning and Enforcement Branch
- Monitoring and Assessment Branch

Watershed Protection Division
- Inspection and Enforcement Branch
- Planning and Restoration Branch
- Technical Services Branch

Fisheries & Wildlife Division
- Fisheries Management Branch
- Wildlife Management Branch

Stormwater Management Division

Energy Division
- Conservation Division
- Energy Assistance Division

An agency reorganization is currently pending.

2. The Office of Enforcement and Environmental Justice

OEEJ supports DDOE's environmental programs and coordinates enforcement-related activities. OEEJ provides guidance to the divisions regarding enforcement matters by developing appropriate enforcement authorizations, policies and procedures. OEEJ assists the program offices by providing case-by-case strategies on key enforcement matters and by facilitating training of staff on enforcement and case management matters.

3. The Office of the General Counsel

OGC attorneys provide legal advice to DDOE's enforcement programs, including legal sufficiency reviews of documents such as correspondence, contracts, settlement agreements, rules, and legislation. OGC also provides litigation support and representation for administrative cases initiated by inspectors, cases referred to the Environmental Protection Agency ("EPA") and cases referred to the Office of the Attorney General for civil or criminal judicial prosecution.

E. Other Entities That Support DDOE Enforcement

1. The District of Columbia Office of Administrative Hearings

The District of Columbia Office of Administrative Hearings (OAH) is a central administrative body that processes Notices of Infraction (NOIs) issued under the civil infractions process and conducts formal adjudicatory hearings pursuant to the District's Administrative Procedures Act for several District of Columbia agencies, including DDOE.

2. The District of Columbia Metropolitan Police Department

The District of Columbia Metropolitan Police Department (MPD) is vested with authority to investigate and prosecute environmental crimes and is available to assist DDOE with such cases. The designation of an environmental violation as "criminal" may be based upon factors such as the knowledge, intent, or willfulness of the actor.

3. The District of Columbia Office of the Attorney General

Attorneys from the District's Office of the Attorney General (OAG) are assigned to DDOE's OGC. When matters require civil or criminal litigation in courts, rather than through an administrative process, OAG's litigation section will try the case with active support from DDOE's OGC and technical support from DDOE staff.

4. The District of Columbia Department of Consumer and Regulatory Affairs

The District of Columbia Department of Consumer and Regulatory Affairs (DCRA) issues professional and technical licenses and permits, conducts inspections, enforces building, housing, and safety codes, regulates land use and development, and provides consumer education and advocacy services. DCRA is vested with authority to implement and enforce several laws and regulations that impact DDOE activities mainly through licensure, permitting, and land use development. The two agencies proactively coordinate certain permitting functions and also reactively assist each other when investigating violations.

5. The U. S. Environmental Protection Agency

The U. S. Environmental Protection Agency (EPA) is the federal agency with primary environmental enforcement authority, except regarding matters such as hazardous wastes, underground storage tanks, and air quality where EPA has authorized the District to administer and enforce its own laws in lieu of the federal programs. In such instances, EPA may still conduct activities in the District, including initiating enforcement, and will notify District officials of its activities. EPA may also file its own federal actions even when the District has initiated an enforcement action when EPA feels the District's penalty is too low[1] or the District's enforcement has been inadequate such as when a facility/source has been on EPA's "Watch List" for an extended period without a District resolution. The District may also refer environmental violations to EPA for enforcement according to proper referral protocol.

[1] This is commonly referred to as "overfiling".

II. THE ENFORCEMENT PROCESS

A. Inspections and Compliance Audits

DDOE's first steps in enforcement may include a number of activities such as conducting a records review, audit or site inspection resulting from a scheduled or unscheduled compliance audit; or responding to a citizen complaint or an emergency. Such activities help to determine whether a facility is in compliance with all applicable permits, regulations and statutes.

As part of the inspection or compliance audit, an inspector may conduct a visual observation of a site or a facility's operations, review records, interview plant personnel, take samples, or any combination thereof. The results of any inspection activity and/or record review constitute the agency's findings.

Details such as who, what, when, where, why, and how help to provide an adequate picture of the inspection findings and should be addressed in the inspection report. The inspection report may also contain recommendations of additional review activity. Typical enforcement responses may include taking or requiring collection of additional samples or requesting the provision of additional documents, such as information regarding the ownership of the facility or financial assurance.

The inspector should consult the relevant statutes and regulations, program SOPs, and OEEJ SOPs before conducting the inspection and preparing the inspection report. An inspection report should be prepared as soon as possible after the inspection is completed or within 30 days, unless the relevant SOPs provide a different timeframe.

B. Elements of an Inspection Report

General guidelines for conducting inspections and preparing inspection reports will be provided in SOPs developed by OEEJ. Each program's SOP will identify the inspection procedures and protocols specific to the types of inspections it conducts. Program SOPs shall also specify the policies for supervisory review of inspection reports. It is important to prepare an inspection report thoroughly, accurately, and according to approved protocols, because inspection reports may be used as evidence in an enforcement action.

The following elements are generally included in an inspection report:

1. General Information

The general information establishes necessary site information, the responsible parties, witnesses, and points of contact for future inspections and related matters. General information to be included, should, at a minimum include the following:

- Date and time the inspection was conducted
- Location of the inspection
- Individual or business name, address, telephone and other contact information
- Name, title, address, telephone and other contact information for an appropriate contact person
- Names, titles, and contact information for all DDOE personnel, other government representatives, and facility or site personnel directly involved in the inspection

2. Purpose of the Inspection

An inspection report should clearly state the reason or reasons for the inspection. This allows the reviewer to understand the purpose and scope of the inspection, and to determine whether proper procedures were followed. DDOE may conduct inspections for some of the following reasons:

- Routine Compliance
- Follow-up/Re-inspection
- Complaint Investigation
- Emergency Response
- Oversight of regulated activity (e.g., installation, removal or closure of underground storage tanks)

3. Information About the Regulated Entity's Operations and Activities

An inspection report should discuss the nature of the business or activity being inspected and contain a site-specific discussion of the operations. This will help provide a better understanding of any potential regulatory requirements. Names and titles of the sources providing the information about the activities or operations should be identified.

4. Inspection Procedures Followed

An inspection report should identify the procedures the inspector used to conduct the inspection. These procedures should be in accordance with governing laws and regulations and approved SOPs.

5. Inspection Checklists

Approved inspection checklists may be used to facilitate conducting inspections where common elements of operations or documents must be reviewed to address statutory or regulatory requirements. Checklists may be appended to an inspection report; however, they are not substitutes for an inspection report.

6. Collection of Evidence

It is imperative that the inspector gathers sufficient evidence during the inspection that will be useful for building a case if it is later determined that further enforcement action is warranted. An inspector should use professional judgment regarding the amount and type of evidence needed. Useful evidence generally includes the following:

- **Photographs**
  Photos should be taken as necessary to establish evidence of violations. Photos should include an object to show scale and should include the date and time the photo was taken using a time stamp, if available. The name of the photographer and identification of any persons in the photo should be provided. A precise description of the location where the photograph was taken (e.g., "8 foot deep pit in northwest corner of parking lot") should also be provided. The inspector should maintain a log of all photographs taken during his or her inspection and include the log in the inspection report.

- **Samples**
  An inspector should be aware of the relevant statutes, regulations and program SOPs when taking samples. All laboratory reports and supporting documentation, including chain of custody related to samples, must be included in the inspection report. If these details are not available at the time the report is issued, a notation of this should be included in the report.

- **Documents**
  Documents or copies of documents that support the alleged violations, such as permits and licenses obtained during the inspection, should be included or referenced in the inspection report.

- **Relevant Statements**
  Any statements made during the course of the inspection that provide evidence for a violation or potential violation or describe an operational process in a unique manner should be documented. The source of the statement must be reported.

The inspection report should discuss the evidence collected during the inspection. When possible the evidence, such as photographs and laboratory results, should be appended to the inspection report. As stated, checklists used during an inspection may also be included as a part of an inspection report, but such tools are not to be considered as inspection reports in and of themselves.

7. Other Legal Considerations

An inspection report should contain sufficient documentation to establish that the inspector has appropriately addressed any legal issues that might otherwise invalidate the inspection report or compromise any subsequent enforcement action. The legal considerations are varied and should be discussed in detail with program attorneys; however, the inspectors should be mindful of one important consideration – that of consent to conduct the inspection to obtain necessary evidence.

Normally the authority to conduct the inspection is not an issue as the inspection authority is granted in governing laws and regulations and tied to the issuance of licenses and permits. In addition, owners, operators, or other persons normally grant consent to inspect at the site. In circumstances where some consent issues may be raised (such as when the owner or operator is absent from the premises), the inspector should clearly document that consent has been obtained from a person with authority to grant consent to conduct the inspection or to collect necessary evidence. Where inspectors are unable to obtain consent, they should consult with OEEJ and/or OGC regarding the possibility of obtaining access through alternative means (e.g., an administrative warrant). Inspections tied to suspected criminal activity may pose consent issues and should be authorized by a valid search warrant. In such circumstances, appropriate protective measures (such as being accompanied by MPD) should be followed.

8. Concerns and Recommendations

An inspection report should contain only objective statements regarding observed facts and concerns raised by those observations. It should not contain statements regarding conclusions or discussions about potential or specific violations. Inspectors who believe non-compliance issues are present or who have concerns that may warrant further review or enforcement action, may needed additional documentation depending upon whether the inspection report findings suggest potential minor violations, potential minor/serious mixed violations or potential serious violations. Enforcement recommendations should not be made in the inspection report.

C. Post-Inspection Communications and Evaluations

Generally, once an inspector has completed his or her inspection report and concluded that a facility is in compliance with applicable laws and regulations, no further enforcement action is required. The inspector should clearly note in the inspection report when no concerns are observed and no recommendations made as a result of the inspection. The inspector may also prepare a written communication to an owner or operator that summarizes the inspection findings. Program SOPs should provide guidance on the appropriateness of sending other documentation such as sample results along with inspection results. Information related to the inspection should be entered into DDOE's tracking system and any other required national databases. Once cost-recovery tracking procedures are developed, information should be included in the tracking database to allow a determination of DDOE time and resources expended to address matters at a particular site or facility.

If, however, facts are observed or evidence is obtained which suggest non-compliance issues the inspector should prepare the appropriate post-evaluation analyses and/or take the appropriate enforcement action. Selecting the appropriate enforcement action will depend upon the nature and severity of the alleged violations and specific facts about the alleged violator.

Inspection reports should be reviewed by supervisors in accordance with program SOPs or for periodic quality consistency purposes. At a minimum, DDOE supervisors should review (and document the review of) inspection reports at high-profile sites, e.g., RCRA large-quantity generators, major air sources, facilities of interest to more than one program, repeat violators, or facilities that are the subject of an enforcement initiative (such as RCRA generators who are required to obtain District permits, or old Underground Storage Tank cases).

In some instances, an appropriate post-inspection evaluation will include a written Enforcement Analysis. The details of such analysis are discussed in greater detail below.

D. The Enforcement Analysis

A post-inspection Enforcement Analysis is a written document prepared by an inspector of record (or other personnel as appropriate) that addresses potential enforcement against an alleged violator based upon facts observed, documents received, and other evidence associated with an inspection or compliance audit.

An Enforcement Analysis represents an enforcement work product that is provided for inspector-supervisor and attorney-client deliberations and is prepared in anticipation of possible litigation. Therefore it should be marked "**Enforcement Confidential**". The Enforcement Analysis should, at a minimum, contain the following information:

1. Violation documentation - Each alleged violation that is identified must be adequately supported with the facts necessary to establish the elements of each violation. It is not enough to simply state that the law was violated. The details should be clear enough so that a third party can understand the nexus between the concerns raised and the violations alleged.

2. Evidence discussion- Evidence must be obtained to support all elements of the alleged violations and recorded in the report in conjunction with each violation. In many cases the inspector's properly documented observation of a violation provides sufficient evidence of a violation. In other situations additional evidence may be needed for enforcement follow-up.

3. The alleged violator's relevant compliance history including whether the alleged violator is a first-time or repeat offender, and

4. Recommendation(s) for enforcement action (including corrective actions and fines and penalties, if warranted).

Unless otherwise stated[2], an Enforcement Analysis should be prepared whenever:

1. Findings suggest that a Class 1 or Class 2 violation has been committed,
2. Findings suggest that a serious violation (as defined in section III of these Guidelines) has been committed,
3. Findings suggest that minor violations with fines exceeding $10,000 have been committed,
4. Findings suggest non-compliance issues by the District or federal governments, or
5. OGC, OEEJ, or other appropriate supervisory personnel request the analysis to address a specific concern.

An Enforcement Analysis should be in writing and prepared within at least 30 days of the inspection, unless the violation poses an immediate threat to public health and the environment, in which case the inspector should not wait 30 days. Supervisors should make a decision on the appropriate enforcement action within 30 days of receipt of the Enforcement Analysis. The decision must be in writing and forwarded to OGC for further action. Enforcement action should generally be initiated within 90 days of the inspection.

OEEJ may exempt the requirement to prepare an Enforcement Analysis for certain types of violations for which the evidentiary requirement is relatively simple and proof of the violation can be addressed adequately by basic information in the inspection report.[3] OEEJ will provide a list of such violations to the programs.

The inspector who prepared the Enforcement Analysis is responsible for ensuring that once an enforcement decision is made, the enforcement action is reflected in the enforcement tracking system and that all relevant documents and notations are included in the case file.

E. Enforcement Against the District and Federal Governments

Sovereign immunity and other similar issues may exist when the District seeks to take enforcement action against other District government agencies or offices or the federal government. Issues of non-compliance with sister agencies should be addressed in accordance with the DC Changes strategy developed by DDOE in April, 2008. In addition, no enforcement action should be taken against the District or federal government without the review and concurrence of OGC and OEEJ and the approval of the Director.

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[2] An Enforcement Analysis does not have to be prepared if circumstances require that action must be taken quickly. In this case, however, a written document must be prepared to explain the justification for the quick action.

[3] An example might be an exemption of the requirement to prepare Enforcement Analyses for Class 1 or 2 violations that involve failure to obtain required permits. In these instances the evidentiary requirements are fairly simple; the activity is or is not covered and a permit exists or does not exist. In such cases a well-written inspection report will provide sufficient evidentiary information to support a penalty enforcement action.

III. DETERMINING WHETHER VIOLATIONS ARE MINOR OR SERIOUS

A. Minor Violations

For purposes of this guidance, minor violations are defined as violations that have minimal potential to negatively affect human or environmental health and have not caused actual damage.[4] These may include:

- Minor excursions from numerical standards which may be prescribed in program SOPs.
- Minor reporting and record keeping violations.
- First offenses that have minimal potential to negatively impact human or environmental health.
- Violations that have minimal potential to pose a threat to human or environmental health and can be corrected quickly.

Minor violations may be designated as serious violations if they are part of a recurring pattern or if they remain uncorrected. Determining whether minor violations will be treated as minor violations or elevated to the status of serious violations is left to the judgment of the inspector or supervisor in consultation with the OGC, as necessary. Factors for consideration include: past compliance history, willfulness of the violation, the degree of harm or potential harm, the ability of the violator to make timely corrections, and any other appropriate factors.

B. Serious Violations

Serious violations are defined as violations that have significant potential to harm human or environmental health or are otherwise flagrant and egregious. In addition, any fraudulent activity, such as intentional falsification of self-monitoring reports, or recalcitrant behavior are serious violations and may potentially be criminal (see Section V of these Guidelines). Other examples of serious violations are:

- Major excursions from numerical standards prescribed in program SOPs
- Major reporting and record keeping violations
- Offenses that pose a threat to public health or the environment
- Offenses that are part of a pattern of chronic, non-compliant behavior
- Offenses that require a significant amount of time, resources, or capital to correct

In addition, several federal regulations have specific definitions and criteria to distinguish between degrees of "seriousness." For instance, EPA's Enforcement Response Policies define

[4] Actual damage that is *de minimus* may, in some cases, still be considered minor.

"high priority violation" (HPV) and "significant non-compliance" (SNC) See the program-specific SOPs or protocols for guidance on how to address these violations.

IV. DETERMINING THE APPROPRIATE ENFORCEMENT RESPONSE TO VIOLATIONS

DDOE's enforcement response to violations will depend upon a variety of factors and circumstances. Some of these criteria include: whether certain actions are prescribed by federal delegation or enforcement agreements or District laws or regulations, the severity of the violation, the degree of harm or potential harm to public health or the environment, the willingness of the facility to correct the violation, the past compliance history of the facility and the willfulness of the act. If a penalty is warranted other factors, such as those discussed in Section V, DDOE Penalty Policy, may be considered as part of the decision-making process. DDOE also has the option of choosing the most appropriate forum in which to pursue its enforcement action. Accordingly, DDOE can use either administrative or judicial actions to achieve compliance.

A. Administrative Actions

1. Warning Letters (Site Directives and Notices of Violation)

DDOE has available a number of non-penalty administrative enforcement tools that can be used as a preliminary approach to addressing minor issues of noncompliance. Depending on the program SOP, either a site directive[3] or a notice of violation (NOV) may be used when an inspector observes facts that suggest that a noncompliance situation may exist. While NOVs can be issued for any degree of violation (minor or serious) and may be used in conjunction with other enforcement tools, NOVs are normally used in the following circumstances:

- The suspected deficiencies can usually be corrected within 30 days or less,
- The facility is an infrequent violator,
- The violation is minor and does not pose a threat to human or environmental health, or
- The facility is cooperative.

The warning letter should generally include the following:

- A statement of facts (not opinions, conclusions or conjectures),
- Citations to applicable laws or regulations,
- A specific request for corrective action including a compliance plan and schedule, if necessary,
- A date certain for performance,

[3] These directives are alternatively called "corrective action notices" by some of the programs.

- A warning that failure to resolve the suspected problem may result in further enforcement activity, and
- Contact information for the appropriate DDOE representative.

All contacts and requests to the respondent must be documented in the case file. The inspector should continue to monitor the matter through appropriate document review or follow-up inspections until he or she has sufficient information to verify that the requested correction has occurred. The inspector may provide compliance assistance consistent with program SOPs to facilitate correction of violations.

The corrective action outcome should be memorialized in an inspection report form or other document in accordance with program SOPs. All follow-up activities should be documented in the case file and entered into the enforcement database tracking system. If the noted deficiencies are corrected within the specified time, generally no penalties are assessed and no further enforcement action is required.[8] No consent orders or agreements are required for NOVs and site directives and management may be only minimally involved above the inspector level.

If a respondent is unable to meet a compliance deadline, it may request a reasonable extension of the deadline provided that:

- It has exhibited good faith and diligence in its compliance efforts,
- The delay is caused by circumstances beyond its control, and
- The request is made prior to the due date for completion of the corrective action.

Any request for an extension of a corrective action deadline shall be in writing and shall specify the reason for the extension. Failure to meet a deadline without just cause or failure to notify DDOE of the inability to perform should result in an escalation of the type of enforcement pursued by the Department. A first extension to a corrective action deadline should not be granted without supervisory approval. A second extension should only be granted for compelling circumstances and with supervisory approval. Requests for extensions beyond a second extension may only be granted with the approval of OEEI.

B. Compliance Orders and Consent Agreements

1. What They Are and When to Use Them

When serious violations occur or when the violations are persistent and ongoing, DDOE can work cooperatively with the alleged violator to develop and execute a compliance order. These orders are useful when the parties want to achieve compliance but avoid litigation. Compliance Orders are usually initiated through issuance of a DDOE Notice of Non-Compliance (NONC) and include:

[8] However, complete and timely corrective action does not preclude an enforcement action levying a monetary penalty.

- Factual background information,
- The specific regulations which have been violated,
- An explanation of the nature of the violation,
- DDOE's statutory authority for enforcement, and
- A Proposed Consent Agreement containing corrective action and/or penalties.

Final Consent Agreements resulting from the NONCs are developed cooperatively between DDOE and the violator and are entered into by mutual agreement. They must include documented compliance plans and enforceable schedules, penalty provisions, and provisions mandating that failure to meet the terms of the agreement without just cause will result in further enforcement action.

For clarification, these Consent Agreements are not the same as court-approved consent decrees. Notices of Non-Compliance with attached Consent Agreements are administrative orders issued by DDOE whereas consent decrees are issued by OAH or by a court. The use of the NONC process is our primary vehicle for handling environmental deficiencies involving federal facilities and other District agencies.

Serious consideration should be given to use of a NONC, as opposed to initiation of an action before OAH, because the agreements are not published and respondents generally do not admit guilt or liability in Compliance Orders. This means that some NONC violations cannot be counted for purposes of escalating the penalty for subsequent violations or otherwise used as precedent.[7]

2. Approval of Compliance Orders and Consent Decrees

In addition to OGC and OEEI approval, all compliance orders and consent decrees assessing fines or penalties must receive the following minimal level of management approval[8]:

$1 - $24,999	Branch Chief
$25,000 - $49,999	Associate Director
$50,000 - $99,999	Deputy Director
$100,000 or above	DDOE Director

C. Emergency Orders

DDOE programs are authorized to issue stop work and cease and desist orders, or similar "Emergency Orders" when special circumstances exist that require immediate action to abate imminent and substantial injury or damage. Such Emergency Orders are the administrative

[7] DDOE is exploring a systematic public notice of these agreements, such as a public notice in the D.C. Register, once they are concluded.

[8] Issues of settlement authority will be further delineated in delegations currently being drafted by OEEI in consultation with DDOE'S OGC.

equivalent of temporary injunctions and are considered serious enforcement actions. An Emergency Order is effective upon service and is issued without the consent of the facility to which it is directed. Often the facility is given little or no prior notice or opportunity to comment on the directives of the order. Each program's laws address the issuance of these Emergency Orders, including appeal and hearing rights of the recipients. Procedures for addressing emergency orders should be clearly addressed in program SOPs.

D. Notices of Infraction (Civil Infractions Ticket)

1. General Usage

The District's Civil Infractions Act of 1985, as amended, and the DDOE Establishment Act of 2006 authorize DDOE to issue Notices of Infractions or Civil Infractions Tickets to address violations of the District's environmental laws and regulations.

Issuing a Notice of Infraction (NOI) under the civil infractions regulations, (16 DCMR Chapters 32-38), is a common enforcement tool that is useful for penalizing violators and deterring future violations. Although NOIs can be used in many situations and for large fine amounts, DDOE's policy is to issue NOIs primarily for minor violations that total $10,000 or less.[9]

The civil infractions program authorizes inspectors to write NOIs for specific violations of District environmental regulations that are listed or scheduled on the Civil Infractions Schedule of Fines. Effective October 1, 2008, OEEJ will process all of DDOE's NOIs. Matters for which respondents have requested a hearing or submitted an admit with explanation (a request for mail adjudication) will be forwarded to OAH for adjudication. Unanswered NOIs will also be forwarded to OAH for default adjudication. All settlements of NOIs must be approved by OEEJ.

The following guidelines should be followed when using the civil infractions process:

- NOIs may only be issued for violations listed on the Schedule of Fines covering DDOE's violations (16 DCMR Chapter 36).
- NOIs may only be issued on forms approved by OEEJ
- No NOIs may be issued for fines exceeding $10,000[10] without prior supervisory, OGC, or OEEJ approval.

2. Class 1 and 2 Violations

Violations that are classified as Class 1 or Class 2 violations on the Civil Infractions Schedule of Fines or are otherwise egregious and serious normally warrant enforcement

[9] The decision to issue an NOI for amount larger than $10,000 or for serious violations should be supported by an Enforcement Analysis.

[10] This $10,000 amount does not include any penalties that may later be assessed for respondent's failure to reply to the NOI.

actions that involve more than just a warning (NOV) or site directive. If the findings of an inspection report suggest Class 1 or 2 violations, or otherwise serious violations, the inspector should prepare the Enforcement Analysis, unless the violation has been exempted from the analysis, and make appropriate enforcement recommendations. A consultation with the inspector, his or her supervisors, OGC and OEEI based on the Enforcement Analysis memorandum, will determine whether the NOI or another enforcement tool is most appropriate to address the matter.

3. Class 3 Violations

Class 3 of the Civil Infractions Schedule of Fines addresses violations that are of a mixed minor/serious nature. Although defined as serious in the schedule of fines, many of these violations would meet the definition of "minor violations" under this guidance. If the findings of an inspection report suggest non-compliance issues and potential Class 3 violations, the inspector should proceed directly with the issuance of a NOI for these alleged violations. The inspector will not need to prepare an Enforcement Analysis before issuing the Class 3 NOI.

If the inspector does not write the NOI, he or she must recommend another penalty-based enforcement action which must be supported by an Enforcement Analysis. The inspector may, at his or her discretion and in accordance with approved program SOPs, issue a NOV (warning letter), corrective action notice or directive in these cases.

If the inspector does not prepare an Enforcement Analysis for the matter, he or she should ensure that sufficient facts and evidence are documented to support the issuance of the NOV, directive or corrective action and/or the prosecution of the NOI, if applicable.

4. Class 4 and 5 Violations

If the findings of an inspection report suggest non-compliance issues and potential Class 4 or 5 violations, or otherwise minor violations, unless otherwise stated in the program SOPs, the inspector may issue a NOV, or corrective action or directive to address the non-compliance. In the alternative the inspector may issue an NOI. The NOI may be accompanied with a corrective action or directive. However, an NOV and NOI should not be issued together as one is a warning, and thus a reprieve, and the other is a penalty action. The Enforcement Analysis will not be required for enforcement actions taken to address Class 4 and 5 violations. The issuing inspector, however, should ensure that sufficient facts and evidence are documented to support the issuance of the NOV, directive or corrective action and/or the prosecution of the NOI.

5. Chart of Actions

To recap, the NOI process and Enforcement Analyses should be used in the following manner:

Class 1 or 2 or otherwise serious violations	Prepare an Enforcement Analysis unless the violation is exempted from the analysis requirement	If the violation is exempted from the analysis requirement, issue a NOI (not to exceed $10,000 without further approval) If the violation is not exempted prepare the analysis and consult with OGC or OEEJ
Class 3 violations	Preparation of the Enforcement Analysis is discretionary	Issue a NOV or Issue a NOI (not to exceed $10,000 without further approval)
Class 4 or 5 or otherwise minor violations	Preparation of the Enforcement Analysis is discretionary	Issue a NOV or Issue a NOI (not to exceed $10,000 without further approval)

6. Other Administrative Actions or Hearings

Administrative actions, including hearings can be used whenever authorized in statutes. DDOE can also elect to request a hearing before OAH when a case has not been resolved by consent. Administrative hearings will be appropriate for the following situations:

- Where required by statute, including a respondent's request for a hearing after the receipt of a NOI, an appeal of the issuance of an Emergency Order, or a challenge to a directive[1].
- When DDOE seeks to revoke a permit or similar grant of right, or
- When the parties mutually agree that a hearing is appropriate.

E. Judicial Actions

1. Civil

[1] Some environmental statutes provide that challenges to directives may be appealed to the Department, in lieu of OAH. The inspector should consult with OGC and/or OEEJ to determine whether this route is authorized by statute or regulations.

After consideration of all relevant factors, DDOE may determine that court action is the most appropriate enforcement response. Court remedies include temporary and permanent injunctions, civil penalties, cost-recovery, and natural resource damages. Civil judicial actions are recommended when:

- A consent order or administrative order has been violated and/or has not yielded compliance
- A serious threat to human health and the environment has resulted and/or is present
- Violation are ongoing
- The party has a history of noncompliance
- DDOE has expended funds and wants to recover them
- The case is part of an enforcement initiative
- The case is one of first impression (the issue has never been brought before OAH, and/or has never been decided by a court)
- The case is multi-media (i.e., of interest to more than one program office)

Judicial actions may be selected by collaboration of OGC, program management, and OEEJ. The actions must be prepared by OGC and approved by the Director before they are sent to a litigating division of the Office of the Attorney General for further action.

2. Criminal Actions

Similarly, after consideration of all relevant factors, DDOE may determine that criminal enforcement is the most appropriate enforcement response. As a general matter, referral for criminal prosecution should be considered in cases in which:

- Sufficient evidence has been collected that make it likely that the occurrence of violations can be proved in court beyond a reasonable doubt
- The violations caused, or could have caused, significant harm to public health, safety, or welfare, or the environment
- The violations were the result of willfulness and/or indifference by the alleged violator

Because of the challenges of criminal prosecution, and the severe consequences of criminal convictions (harsh punishment and the stigma of a conviction), criminal cases are most appropriately pursued by OAG, EPA's Criminal Investigations Division (EPA/CID), or the U.S. Department of Justice. DDOE support for such cases is coordinated by OEEJ in consultation with OGC and program staff. The consequences of criminal convictions make criminal enforcement the most severe environmental enforcement option and, therefore, should represent the exception rather than the rule.

It should be noted that a criminal referral does not preclude DDOE from exercising its other administrative enforcement options. All Departmental compliance and enforcement activities may continue after the criminal matter is referred. Civil actions should proceed

unless written notification to contrary is provided by the Attorney General's Office and/or OEEJ. Efforts should be made to minimize interference and overlap.

F. Referrals to EPA for Enforcement

While DDOE uses all available means to address violations of the laws and regulations it is mandated to enforce, circumstances occasionally require that the agency decline further action and refer the case to EPA. Such referrals are made on a case-by-case basis, using the following criteria:

- All reasonable administrative options have been attempted and were unsuccessful
- DDOE has insufficient resources to pursue the matter adequately because of its nature and/or complexity
- The matter has interstate interests or is one of a national priority
- Federal remedies are more appropriate to address the matter
- The responsible party is out-of-state
- The matter involves multimedia interests

EPA and the District will occasionally take joint actions against a violator. OEEJ should be consulted and concur with a recommendation to refer a matter to EPA for enforcement before the referral is made.

V. DDOE PENALTY GUIDELINES

DDOE is committed to a consistent, timely and appropriate enforcement program, which is protective of public health and the environment while creating a strong, credible deterrent against future violations. DDOE seeks to assess fair and equitable penalties in keeping with factors specified in governing statutes and/or applicable case law, and commensurate with the nature of the violations. Thus, when calculating the penalty, DDOE considers the degree of violation, impact on the health and the environment due to the violation, and other relevant factors. Consideration is also given to the status of the facility's compliance history and other factors that DDOE program deems reasonable.

A. Considerations in Assessing Penalties

The penalty calculation and potential adjustment factors used in assessing penalties include:

1. Harm to human or environmental health, including the degree of injury to, or impairment of, the air, waters, or natural resources of the District
2. The extent to which the location of the violation, including the areas of human population, creates the potential for harm to sensitive ecosystems or vulnerable populations
3. The willfulness of the violation
4. Compliance history of the violator (regarding the same or similar type of violation)
5. Length of time of the violation
6. Violator's cooperation in mitigating the violation and/or impact thereof
7. The financial impact of a penalty on the violator
8. Removal of economic benefit of noncompliance, thereby placing the respondent in the same position it would have been if compliance had been achieved on time

DDOE programs consider each of these specific factors on a case-by-case basis. While all of these factors are considered, it is not necessary for all of them to be present before the statutory maximum penalty amount may be assessed. A single factor may warrant the imposition of the maximum penalty. Furthermore, all factors, even if applicable in a given case, are not necessarily weighed equally in determining a reasonable penalty. Individual programmatic SOPs may contain specific administrative penalty policies for calculating the gravity and economic benefit components of penalties assessed.

B. Statutory Civil and Criminal Penalties

The District's environmental laws generally authorize DDOE to levy civil as well as criminal fines and penalties for environmental violations. The civil fines and penalties are identified in

specific statutes. The criminal penalties are also identified in the specific environmental statutes and generally combine a penalty amount with a term of imprisonment upon conviction.

C. Civil Infractions Fines and Penalties

As previously stated, DDOE environmental programs are authorized to use civil infractions fines as an alternative to the statutory civil or criminal penalties. DDOE's civil infraction fines are "scheduled" or listed in 16 DCMR Chapter 36, which establishes the fines and penalties selected by the Mayor for violations of District's environmental laws and regulations.

The monetary fine for a first offense ranges from $50 to $2,000 depending upon the class of the violation. Violations that are considered egregious or imminently dangerous to health and welfare are scheduled as Class 1 violations ($2,000 for the first offense). Violations that are considered a nuisance but not a threat to human or environmental health are Class 5 and the fine amount is $50. Even though civil infraction fines may be relatively small compared to fines and penalties that can be imposed under environmental statutes, and frequently do not recover the economic benefit of a violation, they are a useful tool in achieving compliance.

Another important consideration in the imposition of fines under the civil infractions process is that the fine amount doubles for subsequent violations of the same regulation (second, third and fourth offenses) committed within a three-year period. Any subsequent violations of the same regulation, after the fourth offense within the three-year period, are fined at the same level as the fourth offense.

Penalties are assessed in the civil infractions process only after the respondent, without good cause, fails to timely respond to the notices of infraction issued.

VI. SETTLING ENFORCEMENT ACTIONS

A. Settlement Guidance

The following settlement guidance is proposed to govern the settlement of cases involving fines and penalties and to ensure that settlement amounts are appropriate. When a proceeding is before a court or administrative body, the judge will typically review a settlement before entering it as a final order to determine whether the settlement is fair, equitable, and in the public interest. This guidance is developed to ensure that violators are treated fairly, transparently, and predictably in the Department's settlement decisions.

B. Settlement Considerations

Decisions to settle cases should be made through a collaboration of the inspector of record, his or her managers, OEEI, OGC, and in some instances, OAG. The Department Director should also be consulted for high profile or controversial matters. As a general rule, there should be no fine reductions or settlements without simultaneously obtaining compliance unless compliance is impossible, i.e., property has already been converted or sold. Factors to be considered in the evaluation of a settlement include:

1. Avoidance/Minimization of Litigation

This factor considers the efficiency and financial benefits of settlements. Although crafting and executing an appropriate settlement involves some work on the part of the parties, successful and timely settlement generally minimizes the time the parties spend addressing the matter, and the time, energy, and costs of litigation.

2. Compliance History

This factor considers a responsible party's previous history of compliance with environmental laws and regulations. A responsible party with good compliance history is a better candidate for settlement than a responsible party with a poor compliance history.

3. Compliance Efforts

This factor considers a responsible party's efforts to correct the violation and/or efforts to reduce the likelihood that the violation will occur again. Corrective efforts may include not only stopping the violation, but also taking measures such as installing technology (such as electronic monitoring systems) to prevent subsequent violations, and increasing staff training. The compliance and prevention efforts must be both appropriate and timely to impact a settlement decision.

4. Mitigating Circumstances

This factor considers circumstances generally beyond a responsible party's control that may have affected the ability to achieve compliance. Examples of mitigating circumstances may include, among other things, illness, insolvency, emergency during the infraction time, governmental intervention or acts of God. All claims of mitigating circumstances must be substantiated. A reduction in fines or penalties will not be considered for lack of knowledge of the regulations; DDOE will not accept ignorance of the law as a mitigating circumstance. A claim of lack of knowledge because someone within the respondent's organization did not provide information to responsible individuals also will not be accepted as a mitigating circumstance because responsible parties must maintain proper oversight of their operations that have the potential to negatively impact human or environmental health.

In each case the settlement considerations will be weighed against evidence of actual harm to humans, animals, or the environment as the result of violations. When there is evidence of actual harm some or all of the settlement considerations may not be applied.

C. Supplemental Environmental Projects

DDOE may use Supplemental Environmental Projects (SEPs) to satisfy a portion of fines or penalties assessed against an alleged violator. A SEP is part of the settlement of an enforcement action where the violator voluntarily agrees to undertake an environmentally beneficial project in exchange for a reduction in fines or penalties.

The SEP program is based on a long standing program developed by EPA in its enforcement programs. The use of SEPs may be appropriate in the settlement of an enforcement action for three reasons. First, SEPs are intended to achieve improvements in environmental conditions that could not otherwise be accomplished through the imposition of traditional fines and penalties. Second, the use of SEPs adds value to enforcement settlements because SEP resources inure directly to specific environmental projects. Lastly, SEPs require violators to go beyond actual technical compliance with recognized legal standards and thereby create a greater level of environmental stewardship. SEPs afford the alleged violator an opportunity to provide a benefit that is focused on improving the environment of the affected community as a whole.

In enforcement settlements in which the respondent commits to conduct a SEP, the final settlement amount (cash penalty + SEP value) must equal or exceed the value that the traditional penalty settlement would have been without the SEP. In many instances the method for determining the actual cost of implementing a SEP and the formula for determining the amount that the SEP mitigates the penalty amount may be established by the SEP Policy. EPA's SEP policy requires that a violator must pay at least 20% in fines and can mitigate up to 80% of the penalty. In general, federal and non-profit organizations can mitigate penalties 1:1, but private entities must mitigate penalties at the higher rate of 2:1, unless circumstances are present that would justify a different ratio.[12]

[12] For example, the ratio may be reduced for the implementation of an energy conservation SEP that might result in an additional economic benefit to the respondent such as reduced energy bills.

To be approved as a SEP, DDOE requires that the project meet the criteria set out below:

1. The Project Must Primarily Benefit Public Health or the Environment

A SEP must improve, protect, or reduce risks to public health, or the environment. While in some cases a SEP may provide the alleged violator with certain benefits, there must be no doubt that the project primarily benefits public health and/or the environment. To qualify as a benefit to public health/environment, a SEP must fit into at least one of the following categories:

- **Public Health** - include projects that address the health concerns of residents in a community and may include examining residents in a community or their health data to determine a pattern of health problem due to the violations.
- **Pollution Prevention** - involves changes in activities or operations so that a company no longer generates some form of pollution. For example, a company may make its operation more efficient so that it reduces or eliminates its hazardous waste stream.
- **Pollution Reduction** - reduces the amount and/or danger presented by some form of pollution, often by providing better treatment and disposal of the pollutant.
- **Environmental Restoration and Protection** - improves the condition of the land, air or water in the area damaged by the violation.
- **Emergency Planning and Preparedness** - includes projects that provide assistance to a District emergency response or planning entity to enable these types of organizations to fulfill their obligations under the federal Emergency Planning and Community Right-to-Know Act. Such assistance may include the purchase of computers and/or software, communication systems, chemical emission detection and inactivation equipment, HAZMAT equipment, or training. Cash donations to District emergency response organizations are not acceptable SEPs.
- **Assessments and Audits** - allow a violator to agree to examine its operations to determine if it is causing any other pollution problems or can run its operations better to avoid violations in the future. These audits go well beyond standard business practice.
- **Environmental Compliance Promotion** - allows an alleged violator to provide training or technical support to other members of the regulated community to achieve, or go beyond, compliance with applicable environmental requirements. For example, the violator may train other companies on how to comply with the law.
- **Other Types of Projects** - include proposed SEPs that have environmental merit but do not fit within the categories listed above. These types of projects must be fully consistent with all other provisions of the SEP Policy and be approved by the respective DDOE program.

2. The Project Must Meet All Other Legal Requirements

Since SEPs are part of an enforcement action, they must meet certain legal requirements, such as:

- There should be no direct relationship between the SEP and the underlying violation. Environmental improvements directly tied to the underlying violation are traditionally viewed as a correction action per se. Merely correcting a violation does not constitute a SEP. The SEP must represent improvements that go beyond compliance.

- A SEP must be voluntary, i.e., the project must not be one which the violator is legally obligated to perform under another law, regulation, administrative order or settlement document. SEPs may include activities which the violator will become legally obligated to undertake two or more years in the future, as long as the regulation or statute does not provide a benefit to the violator for early compliance.

- A SEP cannot have been committed to or started before DDOE identifies the violation(s) (e.g., issued a NOV, NONC, or complaint). This is because the primary purpose of this policy is to obtain environmental or public health benefits that may not have occurred "but for" the SEP.

- All SEPs must be defined in sufficient detail to meet the requirement of enforceability. There must be objective quantifiable deliverables, deadlines, and consequences. If a SEP is not completed satisfactorily, pursuant to the terms of the settlement, a stipulated penalty may be imposed for this failure. The determination of whether the SEP has been satisfactorily completed and whether the violator made a good faith, timely effort to implement the SEP is reserved to the sole discretion of DDOE program.

- A SEP's performance or its funding cannot be managed or controlled by a District agency. However, DDOE may perform oversight to ensure that a project is implemented pursuant to the provisions of the settlement. The District may have legal recourse if the SEP is not adequately performed.

Since SEPS will be part of the settlement process, the proposed SEP will normally be presented to program attorneys in OGC as part of settlement negotiations. Prior to their acceptance, however, the SEPs must be presented to the appropriate program personnel for technical analysis. The technical analysis and program approval of the SEP must be in writing. Final proposals of SEPS must be approved by the Division manager, the Administration Deputy, OEEJ, and OGC.

VII. CASE CLOSURE AND RECORD RETENTION

A. Case Closure

When no further action is required and satisfactory compliance has been achieved, a case is ready to be closed. In closing a case, program management determines, along with compliance and legal staff, if necessary, whether all terms of site directives, consent orders, compliance agreements, and other requirements have been met. This includes, among other things, confirming that permits have been obtained, closure plans have been implemented, civil charges have been paid, and that any other requirement imposed as part of the enforcement action have been completed. Case closure should be accompanied in all instances by a closeout memorandum to file and, in some instances, by closeout correspondence to the respondent.

1. Case Closure Memorandum

Within 30 days of the date that satisfactory compliance has been achieved, the inspector of record or other designated staff member should prepare a case closure memorandum for the file. This memorandum should contain sufficient information to provide an outside reader with information about the relevant matters in the case. The closure memorandum should, at a minimum, include the following information:

- The inspectors name, badge number, and telephone number,
- Case start and end dates,
- The name and address of the responsible party,
- The location of the site inspected,
- The violations addressed,
- Any corrective action performed,
- Dates and nature of enforcement actions taken,
- Dates of administrative or judicial actions taken, and
- Justification for the case closure.

2. Case Closure Form

For enforcement matters concluded by a final administrative order (such as an OAH final Order and Notice of Payment Order), the closure requirements above may be abbreviated and may be entered on a case closure form approved by OEEI. The case closure form must include the following:

- Inspector's name, badge number and telephone number,
- The respondent's name,

- The location of the violation,
- The docket or other identifying case number,
- A brief summary of the nature of the case (i.e., Violation of 20 DCMR 900.1- engine idling),
- The date the final order was issued[1],
- The date the case closure order was issued, and
- The judgment summary including any fines or penalties assessed.

The case closure form should also be completed within 30 days of date that satisfactory compliance (and complete payment) has been achieved.

Any relevant final administrative order and case closure order should be attached to the closure memorandum or form or easily identified in the case file. The enforcement staff and appropriate management should sign the case closure memorandum or form. Once the case closure memorandum and/or form is finalized, it should be placed prominently in the file identifying the case as closed.

3. Case Closure Correspondence

Unless a third party such as OAH or a judicial court provides a closure document (such as final notice of payment), the program should notify the respondent by letter that the case is closed for the reasons specified in the case closure memorandum. This letter serves as sufficient notice to a responsible party that the enforcement action has been terminated.

B. Record Retention

Unless otherwise noted, all documents relevant to an enforcement action such as inspection reports and notes, photographs and other evidence, correspondence and official documents (including directives and NOVs) should be maintained in the case file until the conclusion of the final appeal of the enforcement action. Specific retention periods may be prescribed by relevant statutes, grant requirements, District government record retention policies, or DDOE record retention policies.

[1] OAH Final Orders generally do not close cases especially when liability is found and fines remain unpaid. OAH often issues Notices of Payment orders to close cases once the payments are made. OAH will, however, occasionally issue a Final Order which also contains information about payments received. If the Final Order states that the judgment is paid in full then the case is closed.

GLOSSARY/ACRONYMS

DCMR - *The District of Columbia Municipal Regulations*

DDOE - *District Department of the Environment*

EPA- *Environmental Protection Agency*

OAG - *Office of the Attorney General*

OAH - *Office of Administrative Hearings*

OGC- *Office of the General Counsel*

NOI- *Notice of Infraction*

NONC- *Notice of Non-Compliance*

NOV- *Notice of Violation*

OEEJ - *Office of Enforcement and Environmental Justice*

SOP - *Standard Operating Procedures*

H Standard Operating Procedures for Erosion and Sediment Control Inspections

Watershed Protection Division	DOCUMENT NUMBER SOP # WPD-305
TYPE Inspection and Enforcement Branch	REVISION 0
TITLE Stormwater Management Facility Construction Inspections	EFFECTIVE DATE MAY 30 2014

PURPOSE

This procedure provides instructions for conducting inspections in the District of Columbia for compliance with stormwater management facility construction regulations.

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REVISION SUMMARY

Revision 0 is new procedure

APPROVED BY

Branch Chief _____ Date 4/12/14

Associate Director _____ Date 4/30/14

Director _____ Date 05/30/14

The Inspection and Enforcement Branch (IEB) of the District Department of the Environment (DDOE) Watershed Protection Division (WPDD) is authorized to inspect land-disturbing activities in the District of Columbia for compliance with stormwater management (SWM) regulations set forth in Title 21 DCMR Chapter 5 as amended. As part of the requirements of the District of Columbia building permit process, IEB inspectors conduct on-site inspections of SWM facility construction and installation at different stages of construction, as specified in the SWM plan. These procedures set forth the steps for conducting SWM facility construction inspections and for preparing the Final Approval Notice for the facility construction.

1.0 Pre-construction Meeting Requirements

1.1 After obtaining a building permit from the DCC Department of Consumer and Regulatory Affairs (DCRA), an owner/agent must contact the Inspection and Enforcement Branch (IEB) of the Watershed Protection Division (WPD) at 202-535-2977 to schedule a pre-construction meeting at least 72 hours before beginning construction of the SWM facility.

1.2 The Program Specialist enters the information regarding the pre-construction meeting and inspection request into the IEB data system. In the absence of the program specialist, the Branch Chief or the Branch Chief's designee may be contacted for processing inspection requests. The program specialist's voice mail message should include the Branch Chief's telephone number and the scheduling email address, iebscheduling@dc.gov, as alternatives for scheduling pre-construction meetings and inspections.

1.3 To create an assignment, the program specialist enters the following information into the database:

1.3.1 Construction permits (building permit, raze permit, etc.).

1.3.2 Property address.

1.3.3 Name of developer.

1.3.4 Contractor permittee contact information.

1.3.5 Date inspection request received.

1.3.6 Type of inspection requested (Erosion & Sediment Control or Stormwater), and

1.3.7 Contact information.

1.4 Once the data is entered, the system will automatically generate an e-mail informing the inspector and the Branch Chief that a request for a pre-construction meeting or inspection has been received for the inspector's attention. The email should include all information needed by the inspector to conduct the pre-construction meeting or requested inspection.

1.5 Inspectors assigned to a specific construction site will be responsible for inspecting for both erosion and sediment control (ESC) and for construction of the Stormwater Management (SWM) best management practices (BMPs) approved for the site. Thus, the assigned inspector will conduct both ESC inspections and SWM facility construction inspections, if required for the site location.

1.6 Inspectors receiving pre-construction requests directly from permit holders or their agents should be directed to contact the program specialist at (202) 535-2977, as described on the DDOE plan approval sticker affixed to approved ESC and SWM Plans and also stipulated in the SWM and ESC Guidebooks, DDOE Website, and informational brochure.

2.0 Pre-Construction Meeting

2.1 Once the inspector receives the assignment, it is his/her responsibility to follow up with the owner/agent/contractor permittee to arrange the pre-construction meeting. The pre-construction meeting is the first step in all stormwater management facility construction inspections.

2.2 Inspections are performed at different stages of construction of the SWM facility. At the pre-construction meeting an inspection schedule and requirements for compliance with District regulations for construction of stormwater management facilities are discussed.

2.3 Inspectors attend the pre-construction meetings to review and discuss the implementation of the SWM plan (SWMP) with the owner/agent of the SWM facility before the start of construction.

2.4 The Inspector prepares a SWM Facility Construction File for the facility that includes:

2.4.1 "General Information" from the storm water approval;

2.4.2 A copy of the Building Permit;

2.4.3 The appropriate Stormwater Management Facility Construction Inspection Report; and

2.4.4 An Erosion and Sediment Inspection Report.

2.5 Any inspector who enters a construction site where the contractor failed to schedule a pre-construction meeting shall ask the permit holders or their agents to contact the IL/I at (202) 535-2297 to schedule a pre-construction meeting and, where appropriate, issue an enforcement notice for noncompliance with District regulations as described in the Standard Operating Procedure Enforcement Guidance for failure to schedule a pre-construction meeting.

3.0 Pre-Inspection Procedures

3.1 Prior to the inspection, the inspector should review available documents, such as permits and copies of the SWMP. Check for any previous inspections, violations and enforcement actions.

3.2 Before going to the site, the inspector must have the necessary inspection materials, such as:

3.2.1 Proper DDOE credentials;

3.2.2 Copies of the permit and appropriate inspection forms;

3.2.3 Field notebook.

3.2.4 Digital camera. Ensure that the date/time stamp is accurate, the battery is fully charged (or take extra batteries), and enough memory is available (or take extra memory cards).

3.2.5 Cell phone.

3.2.6 Computer or tablet (if assigned), and

3.2.7 Personal Protective Equipment, as necessary, such as:

3.2.7.1 Hard hat;

3.2.7.2 Steel-toed boots;

3.2.7.3 Protective goggles; and

3.2.7.4 Protective vest.

3.3 Vehicle. When using a government vehicle, complete an online reservation form. Log in and out the inspection destination and mileage on the logbook that is maintained in the vehicle. Inspectors with an assigned government vehicle must leave the keys for the vehicle with the Branch Chief before going on leave.

4.0 Scheduling Inspections

4.1 Initial Inspection. After the pre-construction meeting and after approval for the construction of the SWM facility has been given, the inspector conducts an initial inspection before construction may begin.

4.2 Inspectors conduct inspections at pre-determined stages of the facility construction, as specified on the approved SWMP and the Stormwater Management Facility Construction Inspection Report, or determined at the pre-construction meeting. DDOE may require additional inspections at a particular stage of construction by specifying that requirement in the pre-construction inspection report or in the report of the pre-construction meeting.

4.3 The owner/operator may not proceed with work past a stage of construction that has been identified as requiring an inspection until:

4.3.1 The inspector inspects the work previously completed, records the inspection event on the appropriate Stormwater Management Facility Construction Inspection Report, and enters the inspection event into the RMP tracking database;

4.3.2 DDOE has approved a plan modification that eliminates the inspection requirement; or

4.3.3 DDOE otherwise eliminates or modifies the inspection requirement in writing.

4.4 DDOE shall make reasonable efforts to accommodate a request by the owner/operator for an inspection outside of DDOE's normal business hours if the request:

4.4.1 Is made during the DDOE's normal business hours;

4.4.2 Includes the information the DDOE requires, including the matters to be inspected, the location of the site work to be inspected, and details for site access; and

4.4.3 Includes payment or proof of payment of the after-hours inspection fee.

4.5 If the inspector is not contacted for inspections as determined at the pre-construction meeting and specified on the SWM Facility Construction report, the inspector who conducted the pre-construction meeting or the inspector assigned to the permitted site for SWM facility construction inspections shall conduct an inspection within six months of the pre-construction meeting to obtain an update of the status of the SWM facility construction.

4.6 In order to schedule an inspection required for a stage of construction or other construction event, the owner/agent must contact DDOE at least three (3) business days before the anticipated inspection.

4.7 Final Inspection. The owner/agent is responsible for notifying the DDOE to request a final construction inspection within one week of completion of the SWM facility. See procedures below for final SWM facility construction approval.

5.0 SWM Facility Construction Inspection Procedures

5.1 Act in a courteous and professional manner. Be on time for the inspection and call the owner/agent if entering late. Develop a working relationship with the construction operator or other members of the public at the site.

5.2 Take safety precautions. The inspection of construction sites always poses a certain degree of safety risk. To avoid unnecessary risks, the inspector should be familiar with all safety obligations and practices and should:

5.2.1 Use safety equipment in accordance with available guidance and labeling instructions;

5.2.2 Maintain safety equipment in good condition and proper working order;

5.2.3 Dress appropriately for the particular activity and wear appropriate protective clothing. For example, wear a hard hat when on the construction site;

5.2.4 Use any safety equipment customary in the establishment being inspected (e.g., hard hat, safety vest, or safety glasses);

5.2.5 Never enter confined spaces unless properly trained, equipped, and permitted (if applicable); and

5.2.6 For any safety-related questions, check with supervisor.

5.3 Upon entering a construction site for inspection, the inspector identifies himself by presenting a picture identification with badge to the owner or agent in charge of the construction activity. The following steps should be taken once an inspector arrives on-site:

5.3.2 Introduce yourself as a DDOE inspector, show credentials, and explain the authority and purpose of the inspection. The proper DDOE badge indicates that the holder is a lawful representative of the agency and is authorized to perform inspections. The badge must be presented whether or not identification is requested.

5.3.3 Establish the identity of all responsible parties, including the person you are interviewing, from the owner contractor. Document the names, titles, address, telephone numbers, and email of all parties with whom you speak during the inspection. Collect business cards if possible.

5.4 The professional engineer on record or agent responsible for certifying the As-built plans for the project may accompany the inspector on facility construction inspections at any time, but is not required to do so.

5.5 Each inspection should be thorough, consistent, and cover all areas of the construction site to ensure compliance with the SWM regulations and that the construction is in compliance with the approved SWMP.

5.6 Document the Inspection. The inspector should document and track all findings at the construction site using inspection checklists, photographs, notes, or written logs. The inspector enters all inspection events into the DOEE BMP Tracking Database. This documentation will aid the inspector in supporting enforcement actions, escalating enforcement, or pursuing more stringent penalties if the site is in continuous noncompliance. As much as possible, the inspector should fill out inspection reports while at the construction site being inspected. See Storm Water Management Facilities Inspection Report. All documents should be retained in the SWM site construction file maintained by the inspector or Central Records.

5.6.1 Immediately record observations, conversations, and documentation in the notebook using coherent sentences and precise terminology. The inspection notebook should contain sufficient detail to allow the inspector to complete his/her inspection report and to support observed issues of compliance.

5.6.1.1 Use a bound notebook and record entries in ink.

5.6.1.2 Record facts and pertinent observations. Avoid ambiguity to prevent problems when the information is reviewed at a later date.

5.6.1.3 Do not record personal feelings or terminology.

5.6.2 In addition to completing the inspection checklist, the inspector may record the following types of information that will substantiate evidence:

5.6.2.1 Weather conditions. Note weather conditions such as snowfalls, rain events prior to and during the inspection.

5.6.2.2 Unusual conditions and problems. Describe in detail unusual conditions and problems.

5.6.2.3 Names and Titles. List the names and titles of the construction personnel and any statements they have made.

5.6.2.4 Permit information. List information regarding the presence or absence of permits on the site, and

5.6.2.5 Samples collected.

5.6.3 When possible, photographs should be taken to document problems and to identify areas where contractors may need to make corrections.

5.6.3.1 Document each photograph so that its content can be identified with the site, date and time. If a date and time stamp are not set by the camera who took the photograph, and a short description

5.6.3.2 Photograph, diagram, if necessary, and identify the location of each potential violation or regulatory concern

5.6.3.3 Photos should be clear, well lit, and at proper range to show that the photo was taken at the inspected site and to show the violation in context

6.0 Changes to the SWM Plan (SWMP)

6.1 An approved SWM Plan (SWMP) must be on-site at the time of the inspection

6.2 A person may not change an approved SWMP or its implementation without DDOE approval

6.3 If the change is not substantial, the owner/operator may secure written approval from the inspector in the field or WPD staff. If an inspector is not sure whether the change is substantial, he or she should see the SWM Guidebook 6.1.1 Resubmission of SWMPs or ask for guidance from the Branch Chief

6.4 If the change is substantial, the owner/operator must resubmit a revised plan to DDOE for approval of any revisions, alternative designs, or any changes to approved plans

6.5 A change in an approved plan is substantial if it may result in failure to comply with the SWM requirements or has a significant effect on the discharge of pollutants to the District's waters.

6.6 Substantial and Non-Substantial changes are defined in the DDOE Stormwater Guidebook 2013

7.0 SWM Facility Construction Inspection Reports

7.1 The SWM Facility Construction Case File should contain:

7.1.1 A copy of the building permit,

7.1.2 Plan approval general information sheet,

7.1.3 All inspection reports with the file number and site address,

7.1.4 Event dates,

7.1.5 Copies of all enforcement notices (if any);

7.1.5 Copies of all enforcement notices (if any).

7.1.6 Photos of the site.

7.1.7 Final Approval Notice; and

7.1.8 Any other information the inspector deems pertinent to the case

7.2 Inspectors should maintain and update the SWM Facility Construction File in the BMP Tracking Database within 24 hours or one business day of inspection.

7.3 The inspection report documents all inspections and enforcement actions. Record the dates and times of all phone calls made or received regarding the inspections of the site. Describe any follow-up action taken (if any) in response to the calls.

7.4 If a digital camera was used to take pictures, download and authenticate your pictures immediately for your file. Record the following information on each picture:

7.4.1 Name and address of the property and owner/contractor.

7.4.2 When the picture was taken – date and time.

7.4.3 Brief description of the photo; and

7.4.4 Your signature.

7.5 Complete, sign and date the inspection report.

7.6 A signed copy of each inspection report for SWM facility construction is to be given to the owner/agent and maintained in the SWM case file.

8.0 Enforcement of SWM Facility Construction Requirements

8.1 If, upon final inspection, or during any interim inspections, the inspector determines that the owner/agent has failed to comply with the SWMP, the inspector shall use appropriate enforcement actions as described in the Enforcement SOP.

8.2 **Re-inspection.** Re-inspection of properties for which there are pending violations is imperative. Violations cannot be considered abated without re-inspection. Unabated items cannot be referred for enforcement action unless it has been verified that the violations still exist and efforts at compliance have not been made. After re-inspection of the facility:

8.2.1 Indicate the item or condition on the deficiency list of the inspection report that has been abated.

8.2.2 Indicate those conditions on the deficiency list that have been partially corrected.

8.2.3 Attempt to contact by telephone the responsible person to ascertain the reason for non-compliance and/or to verify the receipt of orders. If unable to contact the responsible person during working hours, telephone in the evening, early morning, or on weekends. Record the essentials of the call and how, where and when to contact the responsible person in the future.

8.2.4 Take the following action if the responsible person is contacted:

8.2.4.1 If a valid reason is given, recommend an additional reasonable time for compliance.

8.2.4.2 In the absence of a valid reason for non-compliance, proceed with a notice of infraction.

8.2.5 Add the record of the re-inspection report to the case history file.

8.3 If an inspector discovers a violation at a construction site that they have not been assigned to, he or she should either search the DER BMP Tracking Database for the assigned inspector or contact his/her supervisor to determine if the site is assigned to another inspector. Prior to taking any enforcement action, the inspector must check with the inspector assigned to the site.

9.0 As-Built Plan Review and Approval

9.1 The inspector provides a signed copy of the Final Inspection Report for the SWM facility construction to the owner agent, with a notice of the due date that the owner agent must submit the As-built plans to the DER for review and approval. A copy of the Final SWM Facility Construction Inspection Report is kept in the case file.

9.2 Within twenty one (21) days of the final facility construction inspection date, the owner agent must submit an as-built package containing a Mylar copy of the as-built SWMF certified by a professional engineer licensed in the District of Columbia and the supporting documents specified in the DDOE Stormwater Management Guidebook (SWMG).

9.3 The inspector reviews the As-built plan using the As-built plan checklist or review sheet.

9.4 If the As-built plan does not meet DDOE requirements, it is returned with comments to the project engineer or agent for revision.

9.5 If the As-built plan does meet DDOE requirements and is approved, the arrival date of the As-built is entered into the BMP Tracing Database.

9.6 After receipt and approval of the As-built plan, the inspector prepares a SWM Final Approval Notice (FAN) for distribution to the permit holder and the DER maintenance team. The FAN is addressed to the owner agent listed on the building permit and sent within 30 days of the As-built approval date.

9.7 The date of the FAN is recorded in the BMP Tracking Database within one business day of its issuance.

9.8 The inspector submits the As-built Plan and complete SWM Facility Construction File to Central Records for archive within five business days of issuance of the FAN.

8.2.4 Take the following action if the responsible person is contacted:

8.2.4.1 If a valid reason is given, recommend an additional reasonable time for compliance.

8.2.4.2 In the absence of a valid reason for non-compliance, proceed with a notice of infraction.

8.2.5 Add the record of the re-inspection report to the case history file.

8.3 If an inspector discovers a violation at a construction site that they have not been assigned to, he or she should perform an inspection documenting the violation(s) and contact the inspector assigned to the area and inform them of your intent to issue an Enforcement Notice for the site, and provide the assigned inspector with a copy of the inspection Report and Enforcement Notice (for the SWM site construction file). The inspector shall then update the BMP tracking database with information about the inspection type and date, and the date and type of Enforcement Notice.

9.0 As-Built Plan Review and Approval

9.1 The inspector provides a signed copy of the Final Inspection Report for the SWM facility construction to the owner agent, with a notice of the due date that the owner agent must submit the As-built plans to the IEB for review and approval. A copy of the Final SWM Facility Construction Inspection Report is kept in the case file.

9.2 Within twenty-one (21) days of the final facility construction inspection date, the owner agent must submit an as-built package containing a Mylar copy of the as-built SWMP certified by a professional engineer licensed in the District of Columbia and the supporting documents specified in the DDOE Stormwater Management Guidebook (SWMG).

9.3 The inspector reviews the As-built plan using the As-built plan checklist or review sheet.

9.4 If the As-built plan does not meet DDOE requirements, it is returned with comments to the project engineer or agent for revision.

9.5 If the As-built plan does meet DDOE requirements and is approved, the arrival date of the As-built is entered into the BMP Tracking Database.

9.6 After receipt and approval of the As-built plan, the inspector prepares a SWM Final Approval Notice (FAN) for distribution to the permit holder and the IEB maintenance team. The FAN is addressed to the owner agent listed on the building permit and sent within 10 days of the As-built approval date.

9.7 The date of the FAN is recorded in the BMP Tracking Database within one business day of its issuance.

9.8 The inspector submits the As-built Plan and complete SWM Facility Construction File to Central Records for archive within five business days of issuance of the FAN.

10.0 Reference Documents

10.0 Reference Documents

10.1 Soil Erosion and Sediment Control Inspections SOP

10.2 Storm Water Management Facilities Inspection Report

10.3 Enforcement of Soil Erosion and Sedimentation Control and Storm Water Management SOP

10.4 Stormwater Management Guidebook 2013, found at http://dnr.dekalbcountyga.gov/sites/default/files/dnr/sites/dnr/page_content attachments/2013%20SW%20Rule.pdf

Watershed Protection Division

DOCUMENT NUMBER
SOP #WPD-320

TYPE
Inspection and Enforcement Branch

REVISION
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TITLE
Soil Erosion and Sediment Control Inspections

EFFECTIVE DATE
MAY 20 2014

PURPOSE

This procedure provides instructions for conducting inspections in the District of Columbia for compliance with erosion and sedimentation control regulations.

TABLE OF CONTENTS

REVISION SUMMARY

Revision 0 is new procedure.

APPROVED BY

Branch Chief: [signature] Date 4/3/14

Associate Director: [signature] Date 4/3/14

Director: [signature] Date 05/20/14

The Inspection and Enforcement Branch (IEB) of the District Department of the Environment (DDOE) Watershed Protection Division is authorized to inspect land disturbing activities in the District of Columbia for compliance with erosion and sediment control regulations set forth in Title 21 DCMR Chapter 5. As part of the requirements of the District of Columbia building permit process, IEB inspectors conduct periodic inspections to enforce compliance with approved erosion and sediment control plans and to determine whether the measures required in the plan are effective in controlling erosion and sedimentation for land disturbing activities. These procedures set forth the steps for conducting soil erosion and sediment control inspections.

1.0 Pre-Construction Meeting Requirements

1.1 After obtaining a building permit from the D.C. Department of Consumer and Regulatory Affairs (DCRA), an owner/agent must contact the Inspection and Enforcement Branch (IEB) of the Watershed Protection Division at 202-535-2977 to schedule a pre-construction meeting at least 72 hours before the start of excavation or the land disturbing activity.

1.2 The Program Specialist enters the information regarding the pre-construction meeting and inspection request into the IEB database. In the absence of the program specialist, the Branch Chief, or the Branch Chief's designee, may be contacted for processing inspection requests. The program specialist's voice mail message should provide the Branch Chief's telephone number and the scheduling email address, ieb-scheduling@dc.gov, as alternatives for scheduling pre-construction meetings and inspections.

1.3 To create an assignment, the program specialist enters the following information into the database:

1.3.1 Permit type and number (building permit, raze permit, etc.);

1.3.2 Property address;

1.3.3 Name of developer;

1.3.4 Contractor permittee contact information;

1.3.5 Date inspection request received;

1.3.6 Type of inspection requested (Erosion & Sediment Control or Stormwater); and

1.3.7 Contact information.

1.4 Once the data is entered, the system will automatically generate an e-mail informing the inspector and the Branch Chief that a request for a pre-construction meeting or inspection has been received for the inspector's attention. The email should include all information needed by the inspector to conduct the pre-construction meeting or the requested inspection.

1.5 Inspectors assigned to a specific construction site will be responsible for inspecting for both erosion and sediment control (ESC) and for construction of the Stormwater Management (SWM) best management practices (BMPs) approved for the site. Thus, the assigned inspector will conduct both ESC inspections and SWM facility construction inspections, if required, for the site location.

1.6 Inspectors receiving pre-construction requests directly from permit holders or their agents should direct them to contact the program specialist at (202) 535-2977, as described on the DDOE plan approval sticker affixed to approved ESC and SWM Plans and also stipulated in the SWM and ESC Guidebooks, DDOE Website, and informational brochure.

2.0 Pre-Construction Meeting

2.1 Once the inspector receives the assignment, it is his/her responsibility to follow up with the owner/agent/contractor permittee to arrange the pre-construction meeting. The inspector will also be responsible for arranging any subsequent inspections of the site.

2.2 Inspectors shall attend pre-construction meetings to review and discuss the implementation of the soil erosion and sediment control measures before the start of excavation. At the pre-construction meeting, the inspector should review with the owner/agent/contractor permittee:

2.2.1 A description of all pollutant control measures (i.e., BMPs) that will be implemented as part of the construction activity to control pollutants in stormwater discharges. Each major activity in the site construction process should be clearly defined and the BMPs related to that activity should be listed.

2.2.2 A description of interim and permanent stabilization practices for the site, including a schedule of when the practices will be implemented.

2.2.3 A description of the intended construction sequencing and timing of major events, including major grading activities, when construction activities are to cease temporarily or permanently on a portion of the site and when stabilization measures are to be initiated.

2.2.4 A description of structural practices to divert flows from exposed soils, retain/detain flows or otherwise limit runoff and/or the discharge of pollutants from exposed areas of the site.

2.2.5 A description of all post-construction stormwater management measures that will be installed during the construction process to control pollutants in stormwater discharges after construction operations have been completed.

2.2.6 A description of the measures to prevent the discharge of solid or hazardous materials or any other pollutant other than sediment, including building materials, to the waters of the United States, as required by the Stormwater Pollution Prevention Plan (SWPPP), where applicable, and

2.2.7 A description of the measures to minimize, to the extent practicable, off-site vehicle tracking of sediments onto paved surfaces and the generation of dust.

2.3 A pre-construction meeting with IEB is optional for minor construction activity (where less than 50 square feet of disturbance will occur, the total construction cost does not exceed $2,500, and an ESC plan is not required).

2.4 Any inspector who enters a construction site where the contractor failed to schedule a pre-construction meeting should ask the permit holders or their agents to call (202) 535-2293, the telephone number at DLR, to schedule a pre-construction meeting. Where appropriate, the inspector may issue an enforcement notice for noncompliance with District regulations as described in the Standard Operating Procedure Enforcement Guidance for failure to schedule a pre-construction meeting.

3.0 Pre-Inspection Procedures

3.1 Prior to the inspection, the inspector should review available documents, such as permits and copies of the site plan. Check for any previous inspections, violations and enforcement actions.

3.2 Before going to the site, the inspector must have the necessary inspection materials, such as:

3.2.1 Proper DOEE credentials;

3.2.2 Copies of the permit and appropriate inspection forms;

3.2.3 Field Inspection Notebook;

3.2.4 Digital camera. Ensure that the date/time stamp is accurate, the battery is fully charged (or take extra batteries), and enough memory is available (or take extra memory cards);

3.2.5 Cellphone;

3.2.6 Computer or tablet, if assigned; and

3.2.7 Personal Protective Equipment, as necessary, such as:

3.2.7.1 Hard hat;

3.2.7.2 Steel-toed boots;

3.2.7.3 Protective goggles; and

3.2.7.4 Protective vest.

3.3 Vehicle. When using a government vehicle, complete an online reservation form. Log in and out the inspection destination and mileage in the logbook that is maintained in the vehicle. Inspectors with an assigned government vehicle must leave the keys for the vehicle with the branch chief before going on leave.

4.0 ESC Inspection Procedures

4.1 Scheduling Inspections

4.1.1 Where applicable, after the pre-construction meeting and approval for the installation of the soil erosion and sediment BMPs has been given, the inspector shall conduct an initial inspection before grading and/or excavation may begin at the site to ensure that the ESC measures have been installed in accordance with the approved ESC plan and District Standards and Specifications for Erosion and Sediment Control. After excavation begins, the inspector shall conduct periodic inspections throughout the construction process as are deemed necessary to ensure that all control measures installed are being maintained until construction is complete.

4.1.2 Site inspections shall be conducted on a routine basis throughout the duration of the land-disturbing activity. The number of inspections shall be scheduled based on project phase. For example, during heavy grading activities, the inspections should be more frequent, while once interior building activity has begun, less frequent inspections are required. Wet-event inspections of construction sites shall be completed within 24 hours of an appreciable rainfall event.

4.1.3 The inspector should plan his or her inspection schedule to target sites that are in priority areas, such as sites discharging to water quality-impaired waters, sites near surface waters, areas undergoing rapid development, large construction sites over an acre, or sites with a history of noncompliance.

4.1.4 Inspectors shall conduct a Final Inspection for ESC of the completed earth disturbance, stabilization, and landscaping, as per the approved ESC plan within two (2) weeks after receiving a notice or request for Final Inspection for ESC.

4.2 Act in a courteous and professional manner. Be on time for the inspection and call the owner/agent if running late. Develop a working relationship with the construction operator or other members of the public at the site.

4.3 Take safety precautions. The inspection of construction sites always poses a certain degree of safety risk. To avoid unnecessary risks, the inspector should be familiar with all safety obligations and practices and should:

4.3.1 Use safety equipment in accordance with available guidance and labeling instructions.

4.3.2 Maintain safety equipment in good condition and proper working order.

4.3.3 Dress appropriately for the particular activity and wear appropriate protective clothing, for example, wear a hard hat when on the construction site.

4.3.4 Use any safety equipment customary in the establishment being inspected (e.g., hard hat or safety glasses).

4.3.5 Never enter confined spaces unless properly trained, equipped, and permitted (if applicable).

4.3.6 For any safety-related questions check with supervisor.

4.4 Upon entering a construction site for inspection, inspectors shall identify themselves by presenting their picture identification with badge to the owner or agent in charge of the construction activity. The following steps should be taken once an inspector arrives on-site:

4.4.1 Request to see the owner, operator or site foreman, supervisor.

4.4.2 Introduce yourself as a DDOE inspector, show credentials, and explain the authority and purpose of the inspection. The proper DDOE badge indicates that the holder is a lawful representative of the agency and is authorized to perform inspections. The badge must be presented whether or not identification is requested.

4.4.3 Establish the identity of all responsible parties, including the person you are interviewing, from the owner/contractor. Document the names, titles, addresses, telephone numbers, and email of all parties with whom you speak during the inspection. Collect business cards if possible.

4.4.4 Establish an understanding of the procedures being implemented.

4.5 The owner/agent shall be given the opportunity to accompany the inspector during the inspection.

4.6 Each inspection should be thorough, consistent, and cover all areas of the construction site and all BMPs. Throughout the life of the project, the inspector needs to ensure that erosion and sediment controls are installed and maintained properly and are in working order in accordance with the construction site plans. The inspector should:

4.6.1 Assess perimeter controls (e.g., silt fence);

4.6.2 Assess construction entrances;

4.6.3 Perform a walk-through of the site to assess stabilization practices (e.g., seeding), structural sediment control practices (e.g., sediment traps), discharge points, and housekeeping practices described on the plan (e.g., general construction site waste management); and

4.6.4 Assess off-site areas to determine if adjacent properties or receiving waters are being adversely affected by construction activities.

4.7 Document the Inspection. The inspector should document and track all findings at the construction site using inspection forms and checklists, photographs, and field notes. This documentation will aid the inspector in supporting enforcement actions, escalating enforcement, or pursuing more stringent penalties if the site is in continuous noncompliance.

4.7.1 As much as possible, the inspector should fill out inspection reports while at the construction site being inspected and have the owner/agent sign to receive a copy of the inspection report or forward a copy to the owner/agent.

4.7.2 In addition to documenting observations as part of the specific ESC Field Inspection Report, field notes may be recorded in an Inspection Notebook or secure electronic file. The notes should contain sufficient detail to allow the inspector to complete his/her inspection report and to support observed issues of compliance.

4.7.2.1 Record facts and pertinent observations. Avoid ambiguity to prevent problems when the information is reviewed at a later date.

4.7.2.2 Do not record personal feelings or terminology.

4.7.3 In addition to completing the inspection checklist, the inspector may record the following types of information that will validate evidence:

4.7.3.1 Weather conditions. Note weather conditions such as snowfalls, rain events prior to and during the inspection.

4.7.3.2 Unusual conditions and problems. Describe in detail unusual conditions and problems.

4.7.3.3 Names and Titles. List the names and titles of the construction personnel and any statements they have made.

4.7.3.4 Permit information. List information regarding the presence or absence of permits on the site, and

4.7.3.5 Samples collected.

4.7.4 When possible, photographs should be taken to document problems and to identify areas contractors will need to take corrective action to be in compliance.

4.7.4.1 Document each photograph so that its content can be identified with the site, date, who took the photograph, and a short description of the purpose of the picture (if this information is not entered into the camera).

4.7.4.2 Photograph, diagram, if necessary, and identify the location of each potential violation or regulatory concern.

4.7.4.3 Photos should be clear, well lit, and at proper range to show that the photo was taken at the inspected site and to show the violation in context.

4.8 All ESC Inspection Events are to be entered into the ESC database within 24 hours or the next business day. All documents should be retained in the soil erosion and sediment control or SWM Construction site file maintained by the inspector or Central Records. See Section 6.0, below.

5.0 Changes to the ESC Plan

5.1 Except for minor construction activity, an approved ESC plan must be on-site at the time of the inspection.

5.2 During an inspection, if it is determined by the inspector that the soil erosion and sediment control measures in the approved plan are inadequate, the inspector is authorized to request that the owner agent install additional control measures or make minor changes (such as seed and straw for temporary ground cover, additional silt or super silt fencing, additional straw bale dikes, use of portable sediment traps or relocation of construction entrance locations and tire wash stations). A justification as to why minor changes are needed for the approved ESC are to be included in the Inspection summary of the ESC Inspection Report.

5.3 Major or substantial plan changes as described by the ESC Guidebook (structural measures including earth dike use and location, excavated sediment traps and ponds as well as grading changes) require a revised Erosion and Sediment Control plan to be submitted to Technical Services Branch (TSB) through the Department of Consumer and Regulatory Affairs (DCRA) One Stop Permit and Business Center for review and approval by the TSB.

6.0 ESC Construction File

6.1 The ESC Construction Site File should contain ESC inspection reports with the file number, site address, copy of the building permit, copy or notice of any violation infraction (if any), event dates, and photos of the site.

6.2 Inspectors should maintain and update the Construction Site File and BMP Tracking Database within 24 hours or the next business day after inspection.

6.3 Complete an ESC Field Inspection Report for every ESC inspection event (Pre-Construction, Initial, Routine, Final).

6.3 Record the dates and times of all phone calls made or received regarding the inspections of the site. Describe any follow-up action taken (if any) in response to the calls.

6.4 If a digital camera was used to take pictures, download and authenticate your pictures immediately for the ESC Construction File. Record the following information on each picture:

6.4.1 Name and address of the site;

6.4.2 When the picture was taken – date and time;

6.4.3 Your signature.

6.5 Sign and date the inspection report.

6.6 A signed copy of each inspection report for ESC is to be given to the owner agent and maintained in the case file for ESC, and where applicable, in the Stormwater Management Facility Construction file.

6.7 Tracking Inspections.

6.7.1 For the purpose of tracking the number of inspections, inspection of all temporary erosion and sediment control measures should be considered one inspection event.

6.7.2 Use a specific inspection form for each SWM BMP and for all inspection events during its construction.

6.7.3 Use one inspection form for each inspection event for LSC inspections.

7.0 Enforcement

7.1 If upon final inspection, or during any interim inspection, the inspector determines that the owner/agent has failed to comply with the LSC plan, the inspector shall use appropriate enforcement action(s) as described in the SOP for Enforcement of Soil Erosion and Sedimentation Control and Stormwater Management.

7.2 Re-inspection. Re-inspection of properties for which there are pending violations is imperative. Violations cannot be considered abated without re-inspection. Unabated items cannot be referred for enforcement action unless it has been verified that the violations still exist and efforts at compliance have not been made. After re-inspection of the site:

7.2.1 Indicate the item or condition on the deficiency list of the inspection report that has been abated.

7.2.2 Indicate those conditions on the deficiency list that have been partially corrected.

7.2.3 Attempt to contact by telephone and/or email the responsible person to ascertain the reason for non-compliance and/or to verify the receipt of orders. If unable to contact the responsible person during working hours, telephone in the evening, early morning, or on weekends. Record the essentials of the call and how, where and when to contact the responsible person in the future.

7.2.4 Take the following action if the responsible person is contacted:

7.2.4.1 If a valid reason is given, recommend an additional reasonable time for compliance.

7.2.4.2 In the absence of a valid reason for non-compliance, proceed with a Corrective Action Notice (CAN), Notice of Violation (NOV), or Notice of Infraction (NOI).

7.2.5 Add the record of the re-inspection report to the case history file.

7.3 If an inspector discovers a violation at a construction site that they have not been assigned to, he or she should perform an inspection documenting the violation (s) and contact the inspector assigned to the area and inform them of your intent to issue an Enforcement Notice for the site, and provide the assigned inspector with a copy of the Inspection Report and Enforcement Notice (for the SWM/LSC site construction file). Update the BMP tracking database with information about the inspection type and date, and the date of the Enforcement Notice.

8.0 Reference Documents

8.1 Stormwater Management Facility Construction Inspection SOP

8.2 Erosion and Sediment Control Field Inspection Report Site Inspection Checklist

8.3 Enforcement of Soil Erosion and Sedimentation Control and Stormwater Management SOP

8.4 Stormwater Management Guidebook 2013, found at:
http://dnr.maryland.gov/sites/default/files/dnrweb_per/page_content/attachments/2013%20SWM%20Rule.pdf

I List of FY 2013 and FY 2014 Erosion and Sediment Control Enforcement Actions

Location	Enforcement Action	Date of Inspection	Nature of Inspection	Corrective Action
2 M St NE	NOV	10/2/2012	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
3134 Ellicott ST NW	NOV	10/4/2012	Erosion and Sediment Control	Provide approved Stormwater Management Plan and install/ maintain perimeter controls
4601 Western Ave NW	NOV	10/9/2012	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
1601 16th St SE	NOV	10/11/2012	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
1400 Block Foxhall Rd NW	NOV	10/11/2012	Erosion and Sediment Control	Install and maintain erosion and sediment control measures

Location	Enforcement Action	Date of Inspection	Nature of Inspection	Corrective Action
5000 Block of Rockwood Parkway NW	NOV	10/11/2012	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and provide approved Erosion and Sediment Control Plan
3314-3440 Wisconsin Ave NW	NOV	10/15/2012	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan and obtain required permits.
100 Florida Ave NE	NOV	10/18/2012	Erosion and Sediment Control	Stabilize area
2725 Newlands St NW	NOV	10/18/2012	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
2840 Newlands St NW	NOV	10/18/2012	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and clean public space
First Sterling Access Road	NOV	10/19/2012	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and clean catch basin within site
2000 G St NW	NOV	10/25/2012	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and clean sediment from public space
Brown Elementary School NE	NOV	10/26/2012	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
1212 4th St SE	NOV	10/31/2012	Erosion and Sediment Control	Install and maintain a dewatering structure and clean, maintain, and protect storm drain inlets
815-825 Juniper St NW	NOV	11/7/2012	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and provide approved Erosion and Sediment Control Plan

Location	Enforcement Action	Date of Inspection	Nature of Inspection	Corrective Action
6000 Block Willow St NW	NOV	11/7/2012	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
5207 Sherier Pl NW	NOV	11/13/2012	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
4507 River Rd NW	NOV	11/16/2012	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan and install and maintain erosion and sediment control measures
2828 Brandywine St NW	NOV	11/20/2012	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and provide approved Erosion and Sediment Control Plan
2108	NOV	11/20/2012	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
0 Willow St NW	NOV	11/21/2012	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan, provide Building Permits, install and maintain erosion and sediment control measures
801 Monroe St NE	NOV	11/27/2012	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
712 Anacostia Ave NE	NOV	1/17/2013	Erosion and Sediment Control	Stabilize area
5025 Garfield St NW	NOV	1/29/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
3336-3406 Wisconsin Ave NW	NOV	1/31/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
5204 Sherier Place NW	NOV	2/12/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures

Location	Enforcement Action	Date of Inspection	Nature of Inspection	Corrective Action
3134 Ellicott ST NW	NOV	6/25/2013	Erosion and Sediment Control	Provide approved permits, provide approved Erosion and Sediment Control Plan, install and maintain erosion and sediment control measures, and clean sediment from public space
5224 Manning Pl NW	NOV	6/26/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and provide approved Erosion and Sediment Control Plan
206 P St NW	NOV	6/27/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
4340 Nebraska Ave NW	NOV	6/27/2013	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan and permits, and install erosion and sediment control measures
514 V St. NW	NOV	7/1/2013	Erosion and Sediment Control	Stabilize area and clean street
Eagle Point Management	NOV	7/5/2013	Storm Water Management	Clean stormwater management facilities
1335 Maryland Ave NE	NOV	7/8/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and stabilize area
5827 Field Pl NE	NOV	7/8/2013	Erosion and Sediment Control	Prove building permits and approved Erosion and Sediment Control Plan
Shrine of the Most Blessed Sacrament	NOV	7/8/2013	Storm Water Management	maintain and repair stormwater management facility
1714 and 1716 3rd St NE	NOV	7/9/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures

Location	Enforcement Action	Date of Inspection	Nature of Inspection	Corrective Action
5116 Macomb St NW	NOV	2/13/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures, obtain required permits, provide approved Erosion and Sediment Control Plan
1 Anacostia Ave SE	NOV	2/15/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
Raymond Durford Athletic Field	NOV	2/21/2013	Storm Water Management	Comply with approved Stormwater Management Plan and Provide As-Built Plan
131 Tingey St SE	NOV	2/21/2013	Erosion and Sediment Control	Submit approved Erosion and Sediment Control Plan, install and maintain erosion and sediment control measures, and clean public space
1212 4th St SE	NOV	2/22/2013	Erosion and Sediment Control	sweep and maintain public space and comply with plan
Raymond Durford Athletic Field	NOV	2/28/2013	Erosion and Sediment Control	Install and maintain erosion and sediment measures
3642 New Hampshire Ave NW	NOV	2/28/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and provide approved Erosion and Sediment Control Plan
5115 D St SE	NOV	3/8/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and schedule appropriate inspections
4130 Albermarle St NW	NOV	3/13/2013	Erosion and Sediment Control	Develop plan for on-site management of stormwater discharge and erosion

Location	Enforcement Action	Date of Inspection	Nature of Inspection	Corrective Action
628 14th St NE	NOV	3/14/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures, provide approved Erosion and Sediment Control Plan
30 Channing St NW	NOV	3/14/2013	Erosion and Sediment Control	Obtain building permits and submit approved Erosion and Sediment Control Plan
36 Channing St NW	NOV	3/14/2013	Erosion and Sediment Control	Obtain building permits, install erosion and sediment control measures, and submit approved Erosion and Sediment Control Plan
1150 Varnum St NE	NOV	3/18/2013	Storm Water Management	Remove soil from batch basin and roadway and stabilize area
4720 Woodway Land NW	NOV	3/18/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
515 M St. SE	NOV	3/21/2013	Erosion and Sediment Control	Obtain required building permits and install erosion and sediment control measures
2220 Bryan Pl SE	NOV	3/28/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and clean public space
1800 Erie St SE	NOV	3/28/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and clean public space
1900 8th St NW	NOV	3/28/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
4865 Potomac Ave NW	NOV	4/2/2013	Erosion and Sediment Control and Stormwater Water Management	Install and maintain erosion and sediment control measures, obtain and provide an approved Erosion and Sediment Control Plan, comply with granted waiver

Location	Enforcement Action	Date of Inspection	Nature of Inspection	Corrective Action
4821 Bending Lane NW	NOV	4/2/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
255 and 235 Carroll St NW	NOV	4/4/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and clean sediment from public space
300 3rd St NE	NOV	4/11/2013	Erosion and Sediment Control	Provide preventative maintenance
904 Shepard ST NW	NOV	5/16/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
4860 Glenbrook Rd NW	NOV	6/5/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and provide approved Erosion and Sediment Control Plan
5200 2nd St NW	NOV	6/11/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
5136 Palisade Lane NW	NOV	6/12/2013	Erosion and Sediment Control	Provide Erosion and Sediment Control Plan, install and maintain erosion and sediment control measures, stabilize site
5505 5th ST NW	NOV	6/20/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
401 15th ST SE	NOV	6/24/2013	Erosion and Sediment Control	Provide an approved Erosion and Sediment Control Plan, stabilize area, install erosion and sediment control measures
2121 Dunmore Land NW	NOV	6/24/2013	Erosion and Sediment Control	Obtain required permits and install required erosion and sediment control measures

Location	Enforcement Action	Date of Inspection	Nature of Inspection	Corrective Action
1250 Constitution Ave NE	NOV	10/22/2013	Erosion and Sediment Control and Stormwater Water Management	Provide approved Erosion and Sediment Control Plan and submit a Stormwater Management Plan
1001 H St NE	NOV	10/28/2013	Erosion and Sediment Control	Stabilize site, install erosion and sediment control measures
2912 South Dakota Ave NW	NOV	2/24/2014	Erosion and Sediment Control	Obtain approved Erosion and Sediment Control Plan
2701 Wisconsin Ave NW	NOV	2/25/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
4711 Brandywine St NW	NOV	3/7/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures, work within scope of approved permits, and schedule pre construction meeting
4421 Chestnut Lane NW	NOV	3/10/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures, work inside the scope of approved plans
5333 Connecticut Ave NW	NOV	3/12/2014	Erosion and Sediment Control	Clean sediment from public space, install and maintain erosion and sediment control measures, and call for inspections.
4115 45th St NW	NOV	3/19/2014	Erosion and Sediment Control	Clean catch basins, install and maintain erosion and sediment control measures and work within the scope of approved plans
1251 Saratoga St NE	NOV	3/20/2014	Erosion and Sediment Control	Stabilize area

Location	Enforcement Action	Date of Inspection	Nature of Inspection	Corrective Action
1st St NE	NOV	7/9/2013	Erosion and Sediment Control	Prove building permits and approved Erosion and Sediment Control Plan
1373 Florida Ave NE	NOV	7/10/2013	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan
3432 Newark St NW	NOV	7/11/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and provide approved Erosion and Sediment Control Plan
1375 Mount Oliver Rd NE	NOV	7/11/2013	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan
1700 New York Ave NW	NOV	7/12/2013	Storm Water Management	Provide engineering report
3103 20th St NE	NOV	7/15/2013	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan
1510 Monroe St NE	NOV	7/15/2013	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan and obtain required permits.
300 Van Buren St NW	NOV	7/16/2013	Erosion and Sediment Control and Stormwater Water Management	Obtain required permits, provide Erosion and Sediment Control plan, and install required erosion and sediment control measures
4651 Nannie Helen Boroughs Ave NE	NOV	7/24/2013	Erosion and Sediment Control	Provide a building permit and install erosion and sediment control measures
3111 Macomb St NW	NOV	8/12/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
3310 Ross Pl NW	NOV	8/12/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures

Location	Enforcement Action	Date of Inspection	Nature of Inspection	Corrective Action
4544-4528 Westhall Dr. NW	NOV	8/14/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
5308 Dosett Pl NW	NOV	8/14/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
1307 Euclid St NW	NOV	8/20/2013	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan
3501 Springland Lane NW	NOV	8/28/2013	Erosion and Sediment Control	Schedule required inspection and provide approved Erosion and Sediment Control Plan
2929 49th St NW	NOV	8/28/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
1020 Kearny St NE	NOV	8/29/2013	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan
4305 38th St NW	NOV	8/29/2013	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan, schedule appropriate inspections, and install and maintain erosion and sediment control measures
636 Kenyon St NW	NOV	9/3/2013	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan
2100 Whitehaven Parkway NW	NOV	9/3/2013	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan, schedule appropriate inspections, and install and maintain erosion and sediment control measures
1001 Harvard St NW	NOV	9/9/2013	Erosion and Sediment Control	Follow approved plan
2905 11th St NW	NOV	9/9/2013	Storm Water Management	Follow approved plan
1625 14th St NW	NOV	9/13/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and schedule appropriate inspections

Location	Enforcement Action	Date of Inspection	Nature of Inspection	Corrective Action
501 New York Ave NE	NOV	9/17/2013	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan
4400 Massachusetts Ave NW	NOV	9/20/2013	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan, schedule appropriate inspections, and install and maintain erosion and sediment control measures
2532 11th St NW	NOV	10/1/2013	Erosion and Sediment Control	Install erosion and sediment control measures
1706 Columbia Rd NW	NOV	10/2/2013	Erosion and Sediment Control	Follow approved plan
800 Florida Ave NE	NOV	10/4/2013	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan
1100 Michigan Ave NE	NOV	10/8/2013	Erosion and Sediment Control	Stabilize area and install and maintain erosion and sediment control measures
3030 Chain Bridge Rd NW	NOV	10/9/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and clean public space
4920 45st NW	NOV	10/15/2013	Erosion and Sediment Control Plan	install and maintain erosion and sediment control measures
3675 Ely Place SE	NOV	10/16/2013	Storm Water Management	Remove construction and schedule inspections
4306 Hutching Pl NW	NOV	10/17/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
4351 Klingle St NW	NOV	10/22/2013	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and schedule appropriate inspections

Location	Enforcement Action	Date of Inspection	Nature of Inspection	Corrective Action
2025 14th St NW	NOV	3/20/2014	Erosion and Sediment Control	Clean catch basins
920 Randolph St NW	NOV	3/21/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures, stabilize area, clean catch basins
4616 Ellicott ST NW	NOV	3/25/2014	Erosion and Sediment Control	Working outside the scope of approved Erosion and Sediment Control Plan
4811 MacArthur Blvd NW	NOV	3/25/2014	Erosion and Sediment Control	Obtain approved Erosion and Sediment Control Plan and failure to comply with approved Stormwater Management Plan
1401 New York Ave NE	NOV	4/3/2014	Erosion and Sediment Control	Provide an approved Erosion and Sediment Control Plan and install erosion and sediment control measures
24 Seaton Place NW	NOV	4/9/2014	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan
625 H St NE	NOV	4/10/2014	Erosion and Sediment Control	Stabilize site
3221 12th St NE	NOV	4/15/2014	Erosion and Sediment Control	Obtain approved Erosion and Sediment Control Plan
619 D St SE	NOV	4/17/2014	Erosion and Sediment Control	Stabilize area and clean public space
Lock 7 Development	NOV	4/18/2014	Storm Water Management	Submit a Stormwater Management Plan and stop all activity
2007 Trumbull Terrace NW	NOV	4/23/2014	Storm Water Management	Provide engineering report, schedule inspections

Location	Enforcement Action	Date of Inspection	Nature of Inspection	Corrective Action
1734 6th ST NW	NOV	4/23/2014	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan, stabilize area, and install erosion and sediment control measures
1251 Saratoga St NE	NOV	4/28/2014	Erosion and Sediment Control	Install erosion and sediment control measures
915 12th St NE	NOV	5/6/2014	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan and install erosion and sediment control measures
4656 Garfield St NW	NOV	5/7/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and schedule appropriate inspections
5333 Connecticut Ave NW	NOV	5/7/2014	Erosion and Sediment Control	Clean catch basin
2709 36th ST NW	NOV	5/8/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and stabilize area
1369 New York Ave NE	NOV	5/12/2014	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan for new work
4900 32nd ST NW	NOV	5/21/2014	Erosion and Sediment Control	Provide Erosion and Sediment Control Plan, install and maintain erosion and sediment control measures
3717 Military Rd NW	NOV	5/22/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and schedule appropriate inspections
1601 5th St NW	NOV	5/23/2014	Erosion and Sediment Control	Work inside the scope of plan

Location	Enforcement Action	Date of Inspection	Nature of Inspection	Corrective Action
5034 Reno Rd NW	NOV	5/27/2014	Erosion and Sediment Control	Obtain approved Erosion and Sediment Control Plan
3145 Mount Pleasant St NW	NOV	6/9/2014	Erosion and Sediment Control	Stabilize area and install and maintain erosion and sediment control measures
5619 56th Place NE	NOV	6/13/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
4411 16th St NW	NOV	6/19/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
301 Bryant St NW	NOV	6/20/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
640 Anacostia Ave SE	NOV	6/30/2014	Storm Water Management	Conduct maintenance on stormwater facilities
415 NJ Ave NW	NOV	7/3/2014	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan
5020 Palisade Lane NW	NOV	7/9/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures, obtain Erosion and Sediment Control Plan, and schedule inspection and meeting
801 9th St NE	NOV	7/10/2014	Erosion and Sediment Control	Schedule pre-construction meeting and stabilize site
1805 Horband Rd NW	NOV	7/16/2014	Erosion and Sediment Control	Discontinue activity
3018 South Dakota Ave NE	NOV	7/17/2014	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan and Building Permits

Location	Enforcement Action	Date of Inspection	Nature of Inspection	Corrective Action
4249 Wisconsin Ave NW	NOV	7/17/2014	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan, Install and maintain erosion and sediment control measures, schedule inspections
4869 GlenBrook Rd NW	NOV	7/21/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and obtain approved Erosion and Sediment Control Plan
4550 Klingle St NW	NOV	7/22/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and schedule appropriate inspections
2930 Mills Ave NE	NOV	7/28/2014	Erosion and Sediment Control	Stabilize area, schedule a pre-construction meeting and obtain Erosion and Sediment Control Plan
1834 47th Pl NW	NOV	7/29/2014	Erosion and Sediment Control and Stormwater Water Management	Provide approved Erosion and Sediment Control Plan, install and maintain erosion and sediment control measures, obtain approved Stormwater Management Plan, schedule inspections
4400 Massachusetts Ave NW	NOV	7/31/2014	Storm Water Management	Obtain inspection and approval
3201 Fort Lincoln Drive NE	NOV	8/12/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control and sweep public space
2468 Baldwin Crescent	NOV	8/12/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and clean public space

Location	Enforcement Action	Date of Inspection	Nature of Inspection	Corrective Action
2938 Macomb St NW	NOV	8/13/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
1930 Fox View Circle NW	NOV	8/14/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
2601 30th ST NW	NOV	8/19/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures, stabilize area, work within approved plan
1200 17th ST NW	NOV	8/21/2014	Storm Water Management	Obtain inspection and approval
633 E St SE	NOV	8/28/2014	Erosion and Sediment Control	Obtain approved Erosion and Sediment Control Plan
30 P St. NW	NOV	9/9/2014	Erosion and Sediment Control	Install and maintain erosion and clean public space
1045 Wisconsin Ave NW	NOV	9/11/2014	Storm Water Management	Provide approved Stormwater Management Plan
4106 46th St NW	NOV	9/15/2014	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan and install and maintain erosion and sediment control measures
920 Randolph St NW	NOV	9/18/2014	Storm Water Management	Comply with Stormwater Pollution Prevention Plan and comply with approved Stormwater Management Plan
5700 Chevy Chase Pkway NW	NOV	9/18/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
435 R ST NW	NOV	9/19/2014	Erosion and Sediment Control	Stabilize area and install and maintain erosion and sediment control measures

Location	Enforcement Action	Date of Inspection	Nature of Inspection	Corrective Action
1310 Childress St NE	NOV	9/22/2014	Erosion and Sediment Control	Obtain approved Erosion and Sediment Control Plan and obtain approved Stormwater Management Plan
5016-5022 C St SE	NOV	9/22/2014	Erosion and Sediment Control and Stormwater Water Management	Install erosion and sediment control measures, provide approved Stormwater Management Plan and install stormwater management facilities
220 P St NW	NOV	9/23/2014	Erosion and Sediment Control	Install erosion and sediment control measures
4418 MacArthur BLVD NW	NOV	9/24/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and schedule a pre-construction meeting
3933 Garrison St NW	NOV	9/25/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and request inspection
3233 E St SE	NOV	10/2/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and call for inspection
1500 Pennsylvania Ave SE	NOV	10/7/2014	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan
3504 36th St NW	NOV	10/9/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and provide approved Erosion and Sediment Control Plan
3602 Ordway St NW	NOV	10/9/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures and obtain approved Erosion and Sediment Control Plan

Location	Enforcement Action	Date of Inspection	Nature of Inspection	Corrective Action
2913 Brandywine St NW	NOV	10/16/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
3101 Wisconsin Ave NW	NOV	10/16/2014	Erosion and Sediment Control	Clean catch basins and install and maintain erosion and sediment control measures
4948 Lowell St NW	NOV	10/20/2014	Erosion and Sediment Control	Schedule inspections and pre-construction meeting, work in the scope of approved plans, install and maintain erosion and sediment control measures
1230 Pennsylvania Ave SE	NOV	10/21/2014	Erosion and Sediment Control	Comply with approved Erosion and Sediment Control Plan
1101 9th St NE	NOV	10/23/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
440 K St NW	NOV	10/25/2014	Erosion and Sediment Control	Stabilize area and install and maintain erosion and sediment control measures
4334 Klingle St NW	NOV	10/28/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
1310 Childress St NE	NOV	10/29/2014	Erosion and Sediment Control and Stormwater Water Management	Schedule inspection, comply with approved stormwater management plan, maintain and comply with off-site retention volume
3401 4th St SE	NOV	10/29/2014	Erosion and Sediment Control	Perform preventative maintenance, stabilize site, and clean public space
5200 2nd St NW	NOV	11/3/2014	Erosion and Sediment Control	Provide As-Built Plan
800 22nd St NW	NOV	11/10/2014	Storm Water Management	Schedule inspections and approval

Location	Enforcement Action	Date of Inspection	Nature of Inspection	Corrective Action
Anacostia River Walk Area E	NOV	11/14/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures
4125 Fessenden St NW	NOV	11/20/2014	Erosion and Sediment Control	Install and maintain erosion and sediment control measures, obtain an approved soil and erosion control plan
100 Block of Xenia St SE	NOV	11/20/2014	Erosion and Sediment Control	Provide an approved Erosion and Sediment Control Plan, install adequate erosion and sediment control measures, stabilize area, call for site inspection
132 Mississippi Ave SE	NOV	12/1/2014	Erosion and Sediment Control	Provide an approved Erosion and Sediment Control Plan, install adequate erosion and sediment control measures, stabilize area.
43 Galveston Pl SW	NOV	12/1/2014	Erosion and Sediment Control	Provide an approved Erosion and Sediment Control Plan, install adequate erosion and sediment control measures, stabilize area
154 Forrester St SW	NOV	12/2/2014	Erosion and Sediment Control	Obtain an approved erosion and sediment control plan, install erosion and sediment control measures, stabilize area
41 Forrester St SW	NOV	12/2/2014	Erosion and Sediment Control	Provide an approved Erosion and Sediment Control Plan, install adequate erosion and sediment control measures, stabilize area.
119, 121, 123, 125 Wayne St SE	NOV	12/10/2014	Erosion and Sediment Control	Stabilize area, obtain and provide an approved Erosion and Sediment Control Plan, install adequate erosion and sediment control measures

Location	Enforcement Action	Date of Inspection	Nature of Inspection	Corrective Action
111 New Jersey Ave SE	NOV	12/16/2014	Erosion and Sediment Control	Stabilize area, perform preventative maintenance
420 Conn Ave NW	NOV	12/26/2014	Erosion and Sediment Control	Install adequate erosion and sediment control measures and stabilize site
1714 and 1716 3rd St NE	NOV	6/14/2013 and 6/17/2013	Erosion and Sediment Control	Provide approved Erosion and Sediment Control Plan and install and maintain erosion and sediment control measures

Respondent #1 Name	Location	Enforcement Action	Date of Inspection	DDOE Date of Service	DDOE Fine Payment Amount	OAH - Amount Paid	Case Closure Information	INTERNAL (DDOE) NOI NUMBER	
Steuart-H St LLC	360 H Street NE	NOI	9/28/2012	10/5/2012	$2,000		Paid	DDOE-12-K500599	
Essex Construction, LLC	50 Irving Street, NW	NOI	9/24/2012	11/13/2012	$1,000		Paid	DDOE-12-K500526	
6000 New Hampshire Avenue LLC	98 Peabody Street, NE	NOI	1/8/2013	1/15/2013	$2,000		Paid	DDOE-13-E500609	
Salmon & Salmon, LLC	1333 Euclid Street, NW	NOI	10/2/2012	10/5/2012			Other	DDOE-12-K500601	
Lend Lease Construction Inc.	1401 S St. NW	NOI	8/9/2012	3/8/2013	$15,000		Paid	DDOE-13-E500626	
Smoot Gilbane Construction	101 N Street, NW	NOI	2/7/2013	2/12/2013	$1,000		Paid	DDOE-13-E500613	
Sigal Construction Corporation	1200 Clifton Street, NW	NOI	10/2/2012	10/5/2012		$1,000	Paid	DDOE-12-K500598	
Foster, Douglas	3725 10th St. NW	NOI	1/2/2013	4/3/2013			Open	DDOE-13-E500631	
786 Harvard Street LLC	786 Harvard Street NW	NOI	12/21/2012	1/9/2013	$2,000		Paid	DDOE-13-E500604	
3232 Georgia Residential LLC	3232 Georgia Avenue, NW	NOI	1/2/2013	1/9/2013	$1,000		Paid	DDOE-13-E500603	
Unity-Parkside Property, Inc.	Kenilworth Terrace, NE	NOI	1/8/2013	1/14/2013	$1,000		Paid	DDOE-13-E500606	
New Hampshire Ave Ventures LLC	100 Peabody Street, NE	NOI	1/8/2013	1/14/2013	$2,000		Paid	DDOE-13-E500607	
Catholic University of America	716 Monroe Street, NE	NOI	1/29/2013	2/1/2013	$3,000		Paid	DDOE-13-E500610	
1515 14th Street, LLC	1525 14th Street, NW	NOI	2/5/2013	2/8/2013	$2,000		Paid	DDOE-13-E500612	
3511 13th Street, LLC	3511 13th Street, NW	NOI	1/2/2013	1/10/2013	$1,000		Paid	DDOE-13-E500605	

Respondent #1 Name	Location	Enforcement Action	Date of Inspection	DDOE Date of Service	DDOE Fine Payment Amount	OAH - Amount Paid	Case Closure Information	INTERNAL (DDOE) NOI NUMBER	
Bellview Development, Inc.	1333 Euclid Street, NW	NOI	10/2/2012	2/6/2013		$2,000	Paid	DDOE-13-E500611	
Hamel Builders	2515 Alabama Avenue SE	NOI	2/12/2013	2/12/2013	$750		Paid	DDOE-13-E500616	
Catholic University of America	625 Monroe Street, NE	NOI	3/28/2013	4/2/2013	$2,000		Paid	DDOE-13-E500632	
Catholic University of America	625 Michigan Ave, NE	NOI	4/15/2013	4/19/2013	$1,000		Paid	DDOE-13-E500633	
Catholic University of America	625 Monroe Street, NE	NOI	4/8/2013	4/22/2013	$5,000		Paid	DDOE-13-E500635	
Clark Builders Group	360 H St. NE	NOI	2/28/2013	4/3/2013		$2,000	Paid	DDOE-13-E500614	
2951 Mills Ave Inc.	1401 1st Street NW	NOI	4/17/2013	4/23/2013	$500		Paid	DDOE-13-E500638	
Essex Construction, LLC	50 Irving St. NW	NOI	9/28/2012	4/19/2013		$500	Paid	DDOE-13-E500634	
Sikder, Mohammad	5311 Bass Place, SE	NOI	5/20/2013	6/17/2013		$800	Paid	DDOE-13-E500617	
S2 Asset Company LLC	1928 3rd St. NE	NOI	10/2/2012	11/21/2012			Sent to CCU	DDOE-12-K500600	
Goodeon Kingston LLC	401 15th St. SE	NOI	11/15/2013	11/19/2013	$4,000		Paid	DDOE-13-E500647	
Plaza Construction	701 2nd St. NE	NOI	11/6/2013	11/13/2013	$2,000		Paid	DDOE-13-E500644	
Baylor, Anthony D.	4903 Grant Street, NE	NOI	4/15/2013	4/22/2013			Paid	DDOE-13-E500637	
New Hampshire Ave Ventures LLC	6141 Sligo Mill Rd. NE	NOI	11/12/2013	11/14/2013	$2,000		Paid	DDOE-13-E500645	
1845 North Capitol St NE, LLC	1845 N. Capitol St NE	NOI	10/12/2012	10/19/2012			Open	DDOE-12-K500602	

Respondent #1 Name	Location	Enforcement Action	Date of Inspection	DDOE Date of Service	DDOE Fine Payment Amount	OAH - Amount Paid	Case Closure Information	INTERNAL (DDOE) NOI NUMBER	
3517 14th LLC	3517 14th Street NW	NOI	4/11/2013	4/22/2013			Sent to CCU	DDOE-13-E500636	
Sherman, Jason B.	3205 Georgia Ave. NW	NOI	5/2/2013	5/8/2013			Sent to CCU	DDOE-13-E500628	
Bozzuto Management	Pennsylvania Ave. SE	NOI	1/11/2013	7/17/2013			Open	DDOE-13-E500640	
Powell Family LLC	St. NW also known as 1630 14th St.	NOI	11/13/2013	2/10/2014			Open	DDOE-14-E500652	
Veneto LLC	Dakota Ave. NE	NOI	2/24/2014	2/27/2014			Other	DDOE-14-E500658	
Kershner, Charles M.	Dakota Ave. NE	NOI	2/24/2014	2/27/2014			Open	DDOE-14-E500657	
2012 D Street LLC	NE	NOI	2/4/2014	2/7/2014			Open	DDOE-14-E500649	
Capitol Petroleum Group	Ave. NE	NOI	6/10/2013	11/6/2013	$1,000		Paid	DDOE-13-E500641	
21st Street NE LLC	400 21st St. NE	NOI	2/4/2014	2/7/2014	$2,000		Paid	DDOE-14-E500651	
1110 6th Street LLC	1110 6th St NE	NOI	11/6/2013	11/13/2013			Other	DDOE-13-E500642	
MCN Build	1375 Mount Olivet Rd. NE	NOI	3/12/2014	3/20/2014	$2,000		Paid	DDOE-14-E500662	
233 S Street Inc.	233 S St. NE	NOI	11/12/2013	11/18/2013		$2,000	Paid	DDOE-13-E500646	
1110 6th Street LLC	1110 6th St. NE	NOI	2/4/2014	2/7/2014			Open	DDOE-14-E500648	
Ryan Homes/Washington North	Lincoln Dr. NE	NOI	1/14/2014	3/18/2014			Other	DDOE-14-E500656	
901 Monroe Street, LLC	901 Monroe St. NE	NOI	2/19/2014	2/27/2014	$6,000		Paid	DDOE-14-E500659	

Respondent #1 Name	Location	Enforcement Action	Date of Inspection	DDOE Date of Service	DDOE Fine Payment Amount	OAH - Amount Paid	Case Closure Information	INTERNAL (DDOE) NOI NUMBER	
Skanska USA Building Inc.	Michigan Ave. NE	NOI	2/19/2014	2/26/2014	$2,000		Paid	DDOE-14-E500655	
Richardson, Estelle J.	NE	NOI	2/4/2014	2/7/2014		$1,015	Paid	DDOE-14-E500650	
1908 Bladensburg Road LLC	Bladensburg Rd. NE	NOI	3/24/2014	4/2/2014			Paid	DDOE-14-E500664	
1830 Bladensburg Road LLC	Bladensburg Rd. NE	NOI	3/24/2014	4/3/2014			Paid	DDOE-14-E500673	
1910 Bladensburg Road LLC	Bladensburg Rd. NE	NOI	3/24/2014	4/2/2014			Paid	DDOE-14-E500665	
1826 Bladensburg Road LLC	Bladensburg Rd. NE	NOI	3/24/2014	4/2/2014			Paid	DDOE-14-E500672	
1900 Bladensburg Rd Limited Partnership	Bladensburg Rd. NE	NOI	3/24/2014	4/3/2014			Paid	DDOE-14-E500674	
Goodeon Kingston LLC	401 15th St. SE	NOI	4/21/2014	4/25/2014	$4,000		Paid	DDOE-14-E500679	
J. River 901 D Street LLC	901 D Street NE	NOI	4/21/2014	4/24/2014	$2,000		Paid	DDOE-14-E500680	
1601 15th Street LLC	1601 5th St. NW	NOI	5/22/2014	5/29/2014	$1,000		Paid	DDOE-14-E500684	
Catholic University of America	620 Michigan Ave. NE	NOI	5/13/2014	6/3/2014	$4,000		Paid	DDOE-14-E500685	
1830 Bladensburg Road LLC	Bladensburg Rd. NE	NOI	3/24/2014	4/3/2014	$15,000		Paid	DDOE-14-E500671	
Woodridge Bible Way Church	2226 Evarts St. NE	NOI	4/17/2014	5/29/2014			Open	DDOE-14-E500683	
Otis Place LLC SGA Companies	3700 12th St. NE	NOI	5/28/2014	6/3/2014	$1,500		Paid	DDOE-14-E500686	
Bruce, Colin A. / Drummond, Nadine	4833 Dexter Terrace NW	NOI	4/7/2014	4/22/2014			Open	DDOE-14-E500677	

Respondent #1 Name	Location	Enforcement Action	Date of Inspection	DDOE Date of Service	DDOE Fine Payment Amount	OAH - Amount Paid	Case Closure Information	INTERNAL (DDOE) NOI NUMBER	
1900 Bladensburg Road LLC	Bladensburg Rd. NE	NOI	3/24/2014	4/2/2014	$15,000		Paid	DDOE-14-E500663	
1826 Bladensburg Road LLC	Bladensburg Rd. NE	NOI	3/24/2014	4/3/2014			Paid	DDOE-14-E500675	
Hess Construction Engineering Services	3401 4th St. SE	NOI	4/24/2014	5/16/2014			Open	DDOE-14-E500667	
Fort Myer Construction Corp.	2860 South Capitol St. SE	NOI	4/24/2014	5/16/2014			Open	DDOE-14-E500666	
1133 5th Street LLC	1131 - 1133 5th St. NE	NOI	11/6/2013	11/13/2013		$4,060	Paid	DDOE-13-E500643	
Economides, Frank	4825 Dexter Terrace NW	NOI	4/3/2014	4/22/2014		$1,000	Paid	DDOE-14-E500678	
Van Hoose Properties LLC	613 21st St. NE	NOI	2/6/2014	2/10/2014			Open	DDOE-14-E500653	
Renovation Specialists 100 LLC	2013 E St. NE	NOI	2/6/2014	2/10/2014		$1,000	Paid	DDOE-14-E500654	
Israel Manor	Washington Place NE	NOI	5/13/2014	5/20/2014		$2,000	Paid	DDOE-14-E500682	
Jackson Place LLC	3221 12th St. NE	NOI	5/5/2014	5/8/2014			Paid	DDOE-14-E500681	
Hu, Yeping	1320 Monroe St. NE	NOI	6/10/2014	8/13/2014			Open	DDOE-14-E500687	
Kessington Place LLC	2112 and 2114 3rd St. NE	NOI	6/12/2014	6/19/2014			Open	DDOE-14-E500688	
3rd and Randolph NE LLC	1714 & 1716 3rd St. NE	NOI	2/19/2014	2/27/2014			Open	DDOE-14-E500660	
Samuels, Troy	Dakota Ave. NE	NOI	2/24/2014	3/10/2014			Open	DDOE-14-E500661	
Akinleye, Monreti	1838 3rd St. NE	NOI	7/21/2014	7/29/2014	$1,000		Open	DDOE-14-E500692	

Respondent #1 Name	Location	Enforcement Action	Date of Inspection	DDOE Date of Service	DDOE Fine Payment Amount	OAH - Amount Paid	Case Closure Information	INTERNAL (DDOE) NOI NUMBER	
Horizon Hill Ventures	1214 Montello Ave. NE	NOI	7/29/2014	8/4/2014			Other	DDOE-14-E500694	
ARS Consulting	0 Delaware Ave. SW	NOI	8/12/2014	8/13/2014			Open	DDOE-14-E500696	
Turner Construction Co.	3779 Ely Pl. SE	NOI	7/21/2014	8/13/2014			Open	DDOE-14-E500695	
Intrangience Group, LLC	3350 9th St. NE	NOI	7/21/2014	7/29/2014			Open	DDOE-14-E500693	
1362 H Street NE, LLC	1362 H Street NE	NOI	5/29/2013	6/24/2013			Open	DDOE-13-E500639	
2724 12th Street, LLC	2728 12th St. NE	NOI	7/11/2014	7/16/2014			Other	DDOE-14-E500690	
2724 12th Street, LLC	2726 12th St. NE	NOI	7/11/2014	7/16/2014			Other	DDOE-14-E500691	
The Ella LLC	1839 6th St. NW	NOI	3/13/2014	4/14/2014			Open	DDOE-14-E500676	
2724 12th Street, LLC	1049 Franklin St. NE	NOI	7/11/2014	7/16/2014			Open	DDOE-14-E500689	
Richardson, Clyde	1459 S St. NW	NOI	9/16/2014	9/24/2014			Open	DDOE-14-E500697	
R Street Manor LLC	435 R St. NW	NOI	9/19/2014	9/25/2014	$1,000		Paid	DDOE-14-E500698	
Third Street Church of God	Jersey Ave NW	NOI	9/15/2014	9/25/2014			Open	DDOE-14-E500699	
C. & F. Evans Seafood Inc.	1100 Maine Ave. SW	NOI	2/27/2013	4/4/2013	$4,000		Paid	DDOE-13-I500504	
DNM Seafood Inc.	1100 Maine Ave. SW	NOI	6/6/2012	4/8/2013	$400		Open	DDOE-13-I500506	
DNM Seafood Inc.	1100 Maine Ave. SW	NOI	6/5/2012	4/8/2013	$400		Open	DDOE-13-I500505	

Respondent #1 Name	Location	Enforcement Action	Date of Inspection	DDOE Date of Service	DDOE Fine Payment Amount	OAH - Amount Paid	Case Closure Information	INTERNAL (DDOE) NOI NUMBER	
Braxton, Walter	1950 M St. SE	NOI	12/18/2012	4/24/2013			Sent to CCU	DDOE-13-I500507	
BRW Inc.	1100 Maine Ave. SW	NOI	12/4/2013	1/24/2014	$2,000		Paid	DDOE-14-I500510	
Stanley Steemer	355 I St. SW	NOI	5/20/2014	6/4/2014			Open	DDOE-14-I500511	
Right Hour Auto Sales Inc.	Channing St. NE	NOI	3/27/2013	5/21/2013			Paid	DDOE-13-I500508	
Right Hour Auto Sales Inc.	Channing St. NE	NOI	4/9/2013	5/21/2013			Paid	DDOE-13-I500509	
Estate of Mary Turner	613 Fern Pl. NW	NOI	8/25/2014	9/2/2014			Open	DDOE-14-I500512	

J Household Hazardous Waste Collection

WASHINGTON D.C. PERMANENT FACILITY HHW SUMMARY REPORT- FORT TOTTEN

2013-2014

CATEGORIES AND AMOUNTS OF WASTE

Event Date	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	
PARTICIPATION (# of cars)	295	322	510	216	329	238	658	673	585	571	282	601	5280
WASTE CATEGORY	TOTAL GALLONS OR POUNDS												TOTALS
Lab Pack Waste Propane(Recycling) Unit Pounds	200	200	200	200	200	200	200	800	200	400	200	400	3400
Lab Pack Waste Fire Extinguishers (Unit Pounds)	200	200	200	200	200	200	200	600	200	200	0	600	3000
Lab Pack WasteFlammable Solid (Unit Pounds)	200	0	0	0	0	25	0	200	0	0	0	0	425
Bulk Waste Flammable Liquid (Gas, Thinners, Solvents, Automotive Products, Kerosene, Paint) unit gallons	330	660	605	330	990	350	450	850	250	450	150	300	5715
Lab Pack Waste Flammable Liquid (Paints, Roofing Tar, Driveway Sealers) unit gallons	600	1400	2000	1500	1120	1700	4000	4650	3300	3700	1950	2700	28620
Lab Pack Waste Oxidizers (Pool Chemicals, Household Cleaners) unit pounds	200	400	200	200	400	200	600	200	400	400	0	1000	4200
Lab Pack Organic Peroxides (Treatment)	0	0	0	0	0	0	0	0	0	0	0	0	0
Lab Pack Waste Pesticides Liquid (Insecticides) unit pounds	600	600	400	600	1000	400	800	1800	400	1200	400	800	9000
Lab Pack Waste Pesticides Solid (Insecticides) unit pounds	400	600	400	600	1200	400	800	1000	400	1200	400	600	8000
Lab Pack Waste Corrosive Acid (Household Cleaners, Photographic Supplies, Battery Fluid) unit pounds	400	400	400	400	400	200	1000	800	200	400	0	1000	5600
Lab Pack Waste Corrosive Basic (Household Cleaners, Photographic Supplies, Battery Fluid) unit pounds	1000	1800	800	800	1600	800	2200	3800	1200	1400	800	1200	17400
Lab Pack Waste Toxic unit pounds	0	0	200	400	0	200	400	400	200	0	0	0	1800

WASHINGTON D.C. PERMANENT FACILITY HHW SUMMARY REPORT- FORT TOTTEN

2013-2014

CATEGORIES AND AMOUNTS OF WASTE

Event Date	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	
Lab Pack Mercury Light Bulbs (fluorescent bulbs & mercury lamps) unit pounds	100	1000	200	0	450	500	1050	1350	200	250	200	600	5900
Lab Pack Rechargeable Batteries (Recycling)	0	0	0	0	0	0	0	0	0	0	0	0	0
Lab Pack Non Regulated Dry Cell Batteries (AA, A, C & D) unit pounds	0	0	0	0	0	0	0	0	0	0	0	0	0
Asbestos (Secure Landfill)	0	0	0	0	0	400	600	600	0	1200	600	600	4000
Lab Pack Mercury unit pounds	0	0	0	0	0	300	0	200	0	0	0	400	900
Bulk Non-Regulated Motor Oil unit gallons	55	0	0	55	0	150	0	100	100	100	200	0	760
Bulk Non-Regulated Antifreeze unit gallons	0	0	0	0	0	0	0	0	0	0	0	0	0
Car Batteries (Recycling)	0	0	0	0	0	0	0	0	0	0	0	0	0
Propane Tanks	0	0	0	0	0	0	0	6	9	0	0	0	15
Lab Pack FlammableAerosols unit pounds	600	600	600	600	1200	600	1000	1800	800	1200	800	1200	11000
PROJECT SUBTOTAL													
Total Drums	36	64	47	41	67	49	106	137	73	90	50	76	836
Total Gallons	985	2060	2805	2285	2110	2800	5450	6600	3850	5450	2900	3600	40895
Total Pounds	3900	5800	3400	3600	6650	3825	7850	12550	4000	0	2800	7800	62175

K Trash Cleanup Event Data

Entity	Date	Location	Watershed	Number of Volunteers	Bags of Trash	Tires	Bags of Beverage Containers	Pounds of Bulk Trash	Gross Total Weight (pounds)	Method for Data Collection
Alice Ferguson Foundation	4/5/2014	Diamond Teague Park	Anacostia River	57	15	0	0	100	475	Assumed weight of 25 lbs per bag and 25 lbs per tire
Horton's Kids Community Center	5/18/2014	Horton's Kids Community Center	Anacostia River	100	47	2	0	100	1,325	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/26/2014	Kimball Elementary School	Anacostia River	23	18	8	15	0	650	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/26/2014	Burrville Elementary School	Anacostia River	34	10	6	15	150	550	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	5/1/2014	Houston Elementary School	Anacostia River	91	30	0	0	0	750	Assumed weight of 25 lbs per bag and 25 lbs per tire

Entity	Date	Location	Watershed	Number of Volunteers	Bags of Trash	Tires	Bags of Beverage Containers	Pounds of Bulk Trash	Gross Total Weight (pounds)	Method for Data Collection
Anacostia Watershed Society	4/5/2014	Kingman & Heritage Islands (RFK)	Anacostia River	277	268	3	0	250	7,025	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	8/2/2014	Rhode Island Avenue Cleanup	Anacostia River	5	2	0	3	0	50	Assumed weight of 25 lbs per bag and 25 lbs per tire
DDOE	4/5/2014	River Terrace/Anacostia Fringe Wetlands	Anacostia River	200	118	2	133	500	3,127	All bags and unusual items were weighed. Total weight of tires is based on assumed weight of 25 lbs per item.
Horton's Kids Community Center	5/18/2014	Horton's Kids	Anacostia River	100	47	2	0	100	1,325	Assumed weight of 25 lbs per bag and 25 lbs per tire
Anacostia Watershed Society	4/5/2014	Joint Base Anacostia Bolling	Anacostia River	213	154	1	0	30	3,905	Assumed weight of 25 lbs per bag and 25 lbs per tire

Entity	Date	Location	Watershed	Number of Volunteers	Bags of Trash	Tires	Bags of Beverage Containers	Pounds of Bulk Trash	Gross Total Weight (pounds)	Method for Data Collection
Alice Ferguson Foundation	5/14/2014	WPGC Cleanup 1	Anacostia River	30	22	49	13	1375	3,150	Assumed weight of 25 lbs per bag and 25 lbs per tire
Anacostia Watershed Society	4/5/2014	Seafarers Yacht Club	Anacostia River	318	415	5	0	500	11,000	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/5/2014	Anacostia Park	Anacostia River	120	65	0	0	0	1,625	Assumed weight of 25 lbs per bag and 25 lbs per tire
The Ocean Conservancy	9/20/2014	Anacostia Park	Anacostia River	100	All bags weighed	0	0	0	741	All bags were weighed

Entity	Date	Location	Watershed	Number of Volunteers	Bags of Trash	Tires	Bags of Beverage Containers	Pounds of Bulk Trash	Gross Total Weight (pounds)	Method for Data Collection
DDOE/National Park Service	4/5/2014	Fort Dupont Park	Anacostia River	75	110	38	0	0	2,166	Average weight was taken for several full bags. That average weight was then multiplied by the number of bags. The total weight of tires was calculated using the assumed 25 pounds per tire weight.
Alice Ferguson Foundation	4/5/2014	Melvin Hazen East-Trash	Rock Creek	23	19	3	0	181	731	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/5/2014	Mouth of Rock Creek	Rock Creek	51	81	1	0	3000	5,050	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/5/2014	Mouth of Rock Creek	Rock Creek	52	82	1	0	3,645	5,720	Assumed weight of 25 lbs per bag and 25 lbs per tire

Entity	Date	Location	Watershed	Number of Volunteers	Bags of Trash	Tires	Bags of Beverage Containers	Pounds of Bulk Trash	Gross Total Weight (pounds)	Method for Data Collection
Alice Ferguson Foundation	4/6/2014	Normanstone Creek	Rock Creek	10	7	0	0	0	175	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/1/2014	Sherrill Drive and Beach Drive	Rock Creek	10	20	0	0	0	500	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/5/2014	Picnic Area 22 (Ross Dr. & Joyce Rd.)	Rock Creek	21	7	0	0	75	250	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/5/2014	Soapstone Valley	Rock Creek	40	11	0	0	40	315	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/5/2014	Piney Branch-Crestwood	Rock Creek	46	32	0	0	360	1,160	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/5/2014	Luzon Branch	Rock Creek	8	29	0	9	0	438	All bags were weighed

Entity	Date	Location	Watershed	Number of Volunteers	Bags of Trash	Tires	Bags of Beverage Containers	Pounds of Bulk Trash	Gross Total Weight (pounds)	Method for Data Collection
Alice Ferguson Foundation	4/5/2014	Pinehurst Tributary, Rock Creek Park	Rock Creek	10	11	1	10	150	450	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/5/2014	P Street	Rock Creek	22	23	0	0	200	775	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/5/2014	Broad Branch Tributary	Rock Creek	57	31	5	0	100	1,000	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/5/2014	Pierce Mill	Rock Creek	52	49	0	0	0	1,225	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/5/2014	Fenwick Tributaries to Rock Creek	Rock Creek	25	30	0	0	100	850	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/5/2014	Piney Branch- Mt. Pleasant	Rock Creek	19	26	0	0	100	750	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/5/2014	Dumbarton Oaks Tributary at Rock Creek Park	Rock Creek	20	10	0	0	0	250	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/5/2014	Melvin Hazen West	Rock Creek	25	12	0	0	50	350	Assumed weight of 25 lbs per bag and 25 lbs per tire

Entity	Date	Location	Watershed	Number of Volunteers	Bags of Trash	Tires	Bags of Beverage Containers	Pounds of Bulk Trash	Gross Total Weight (pounds)	Method for Data Collection
Alice Ferguson Foundation	4/5/2014	16th St and Holly St	Rock Creek	13	10	3	0	150	475	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/5/2014	Carter Barron	Rock Creek	30	8	0	0	0	200	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/5/2014	Piney Branch Rock Creek	Rock Creek	46	32	0	0	350	1,150	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/5/2014	National Zoo	Rock Creek	21	23	0	0	200	775	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/5/2014	Rosemount- Mt. Pleasent	Rock Creek	18	16	0	0	0	400	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/5/2014	Glover Archbold Park South	Rock Creek	15	35	0	0	300	1,175	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/5/2014	West Beach Drive	Rock Creek	4	4	0	0	60	160	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/6/2014	Pinehurst Tributary	Rock Creek	10	11	1	0	150	450	Assumed weight of 25 lbs per bag and 25 lbs per tire

Entity	Date	Location	Watershed	Number of Volunteers	Bags of Trash	Tires	Bags of Beverage Containers	Pounds of Bulk Trash	Gross Total Weight (pounds)	Method for Data Collection
Restore Sheperd Parkway	4/22/2014	Shepherd Parkway	Potomac River	8	12	15	0	425	1,100	Assumed weight of 25 lbs per bag and 25 lbs per tire
Restore Sheperd Parkway	6/14/2014	Shepherd Parkway	Potomac River	120	129	41	0	0	4,250	Assumed weight of 25 lbs per bag and 25 lbs per tire
Restore Sheperd Parkway	6/14/2014	Shepherd Parkway	Potomac River	150	129	41	0	1475	5,725	Assumed weight of 25 lbs per bag and 25 lbs per tire
Restore Sheperd Parkway	9/13/2014	Shepherd Parkway	Potomac River	13	19	3	0	0	550	Assumed weight of 25 lbs per bag and 25 lbs per tire
Restore Sheperd Parkway	11/8/2014	Shepherd Parkway	Potomac River	34	15	3	0	75	525	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/5/2014	Fletchers Cove	Potomac River	41	13	5	0	350	800	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	7/1/2014	Southern Ridge-CPDC	Potomac River	11	8	0	0	0	200	Assumed weight of 25 lbs per bag and 25 lbs per tire

Entity	Date	Location	Watershed	Number of Volunteers	Bags of Trash	Tires	Bags of Beverage Containers	Pounds of Bulk Trash	Gross Total Weight (pounds)	Method for Data Collection
Alice Ferguson Foundation	4/5/2014	Tidal Basin	Potomac River	44	20	0	4	0	500	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/5/2014	Glover Archbold Park @ Reservoir Road	Potomac River	100	30	0	0	0	750	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	4/5/2014	Glover Archbold Park-Whitehaven	Potomac River	10	12	0	0	100	400	Assumed weight of 25 lbs per bag and 25 lbs per tire
Alice Ferguson Foundation	6/28/2014	Wheeler Terrace Community Clean Up	Potomac River	13	2	0	0	0	50	Assumed weight of 25 lbs per bag and 25 lbs per tire

Summary	Total
Total collected from Rock Creek Watershed (lbs)	24,774
Total collected from Potomac River Watershed (lbs)	14,850
Total collected from Anacostia River Watershed (lbs)	37,864
Total Trash Collected (lbs)	**77,488**
Total number of volunteers engaged throughout year	**2,935**

L Trash Monitoring Locations

Monitored Outfall
Monitoring Site Drainage Area
Existing Land Use
Land Use Designation
Low Density Residential
Low-Medium Density Residential
Medium Density Residential
High Density Residential
Commercial
Transport, Communication, Utilities
Industrial
Mixed Use
Institutional
Federal Public
Local Public
Public, Quasi-Public, Institutional
Parks and Open Spaces
Parking
Roads; Alleys; Median
Transportation Right of Way
Undetermined
Water

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Monitoring Site Drainage Area
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Low-Medium Density Residential
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Monitoring Site Drainage Area

Existing Land Use

Land Use Designation

- Low Density Residential
- Low-Medium Density Residential
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- High Density Residential
- Commercial
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New York Avenue BMP
MS4 Trash Monitoring Site

M Dry Weather Monitoring Data

		Anacostia High		Gallatin & 14th St, NE		Walter Reed/Fort Stevens		Soapstone Creek		Battery Kemble		Oxon Run	
		4/3/2014	7/22/2014	4/3/2014	7/23/2014	4/3/2014	7/22/2014	4/3/2014	7/22/2014	4/3/2014	7/23/2014	4/3/2014	7/22/2014
Parameter	**Units**	**Dry 1**	**Dry2**	**Dry 1**	**Dry2**	**Dry 1**	**Dry2**	**Dry 1**	**Dry2**	**Dry 1**	**Dry2**	**Dry 1**	**Dry2**
1,1,2,2-Tetrachloroethane	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NDF	ND	ND
1,1,2-Trichloroethane	ug/L	ND	ND	ND	1.4	ND	ND	ND	ND	ND	NDF	ND	ND
Arsenic	mg/L	0.0022	ND	0.0041	ND	ND	ND	ND	ND	ND	NDF	ND	ND
Bis(2-Ethylhexyl)phthalate	ug/L	5.03	ND	93.6	ND	ND	ND	ND	ND	ND	NDF	ND	ND
BOD	mg/L	6.2	2.1	ND	2.3	ND	ND	ND	2.7	ND	NDF	ND	ND
Cadmium	mg/L	0.00074	ND	ND	ND	0.00058	ND	0.0007	ND	ND	NDF	ND	ND
Cholroform	ug/L	1.95	ND	0.541	ND	ND	ND	0.229	ND	0.383	NDF	0.934	ND
Chlorophyll a	ug/L	2.2	ND	ND	1.9	27	ND	6.7	4.4	ND	NDF	ND	ND
Chromium	mg/L	0.01	ND	0.051	ND	ND	ND	0.002	ND	ND	NDF	ND	ND
COD, Total	mg/L	58	20	ND	14	ND	ND	ND	16	11	NDF	11	13
Copper	mg/L	0.048	0.0032	0.011	0.0042	0.0024	ND	0.027	0.0092	0.0032	NDF	0.003	0.0017
Cyanide, Total	mg/L	0.014	ND	0.07	ND	ND	ND	ND	ND	ND	NDF	ND	ND
Dieldrin	ug/L	ND	ND	ND	0.0158	ND	ND	ND	0.0159	0.0176	NDF	0.0168	0.0256
E. Coli	MPN/100 mL	>1600	>1600	46	1600	2	1600	>1600	>1600	130	NDF	>1600	170
Fecal Coliform	MPN/100 mL	>1600	>1600	46	1600	2	1600	>1600	>1600	130	NDF	>1600	170
Fecal Streptococcus	MPN/100 mL	>1600	>1600	46	1600	2	1600	>1600	>1600	130	NDF	>1600	170
gamma-BHC	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NDF	ND	ND
Hardness (As $CaCO_3$)	mg CaCO3/L	200	240	200	240	280	310	330	310	480	NDF	140	170

		Anacostia High		Gallatin & 14th St, NE		Walter Reed/Fort Stevens		Soapstone Creek		Battery Kemble		Oxon Run	
		4/3/2014	7/22/2014	4/3/2014	7/23/2014	4/3/2014	7/22/2014	4/3/2014	7/22/2014	4/3/2014	7/23/2014	4/3/2014	7/22/2014
Lead	mg/L	0.031	0.0046	ND	0.0017	ND	0.0011	0.0042	0.0019	ND	NDF	ND	0.0022
Nickel	mg/L	0.021	0.011	0.012	0.0089	0.019	0.014	0.013	0.009	ND	NDF	0.014	0.0062
Nitrogen, Total	mg/L	2.8	3.5	5	4.8	3.6	3.6	2.1	6.8	2.8	NDF	3.4	4.4
Oil & Grease	mg/L	6	ND	6	ND	ND	ND	ND	7	5	NDF	7	ND
PCB, Total	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NDF	ND	ND
pH		7.62	7.9	7.19	7.61	7.08	6.77	7.05	7.09	7.14	NDF	7.1	7.1
Phenolics, Total Recoverable	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NDF	ND	ND
Phosphorus, Dissolved (As P)	mg/L	0.066	0.08	0.33	0.18	0.014	0.031	0.025	0.11	ND	NDF	ND	0.0087
Phosphorus, Total (As P)	mg/L	0.55	0.1	0.42	0.18	0.012	ND	0.13	0.14	ND	NDF	0.022	ND
Temperature	C	54.3	72.86	54.7	73.4	54.06	70.3	54.48	66.56	52.52	NDF	56.6	70.88
Tetrachloroethene	ug/L	ND	ND	0.526	ND	ND	ND	770	ND	ND	NDF	3.12	2.9
Total Dissolved Solids	mg/L	380	410	1700	470	990	1100	ND	680	720	NDF	360	330
Total Suspended Solids	mg/L	150	6.3	6.2	1.8	2.8	ND	16	1.8	2.4	NDF	11	9.1
Trichloroethylene	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NDF	0.793	ND
Zinc	mg/L	0.24	0.024	0.029	0.016	0.022	0.015	0.032	0.024	0.0063	NDF	0.016	0.0094
Estimated Flow Rate	gpm	448.8	280	982	336	12.47	1.26	233.8	187	6.23	NDF	149.6	112
ND - Analyte not detected at or above the reporting limit													