GOVERNMENT OF THE DISTRICT OF COLUMBIA
WASHINGTON, DC

Vincent C. Gray
Mayor

ANNUAL REPORT

Municipal Separate Storm Sewer System
NPDES Permit No. DC0000221

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LIST OF ACRONYMS AND ABBREVIATIONS

AFV	Alternative Fuel Vehicle
AWRP	Anacostia Watershed Restoration Partnership
AWS	Anacostia Watershed Society
BMP	Best Management Practice
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CFR	Code of Federal Regulations
CSO	Combined Sewer Overflow
CWA	Clean Water Act
District	District of Columbia
DCMR	District of Columbia Municipal Regulations
DCPS	District of Columbia Public Schools
DCRA	Department of Consumer and Regulatory Affairs
DC Water	District of Columbia Water and Sewer Authority
DDOE	District Department of the Environment
DDOT	District Department of Transportation
DOH	Department of Health
DPR	Department of Parks and Recreation
DPW	Department of Public Works
DRES	Department of Real Estate Services
EE-CARS	Environmental Education for the Compliance of Automotive Repair Shops
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FHA	Federal Highway Administration
FY	Fiscal Year
GAO	Government Accounting Office

GIS	Geographic Information System
GPS	Global Positioning System
GSA	General Services Administration
HWD	District Department of the Environment Hazardous Waste Division
ICPRB	Interstate Commission on the Potomac River Basin
IPNM	Integrated Pest and Nutrient Management
LID	Low Impact Development
LQG	Large Quantity Generator
MAR	Master Address Repository
MOU	Memorandum of Understanding
MS4	Municipal Separate Storm Sewer System
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NWF	National Wildlife Federation
NWS	National Weather Service
OCTO	Office of the Chief Technology Officer
OPEFM	Office of Public Education Facilities Modernization
PCB	Polychlorinated Biphenyl
PEPCO	Potomac Electric Power Company
Permit	National Pollutant Discharge Elimination System Permit
QAPP	Quality Assurance Project Plan
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
SGC	Schoolyard Greening Consortium

SQG	Small Quantity Generator
SWEEP	Solid Waste Education and Enforcement Program
SWMD	Stormwater Management Division
SWMP	Stormwater Management Plan
TMDL	Total Maximum Daily Load
USDA ARS	U.S. Department of Agriculture, Agricultural Research Service
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WLA	Waste Load Allocation
WPCCP	Water Pollution Control Contingency Plan
WPD	Watershed Protection Division
WPS	Worker Protection Standards
WQD	Water Quality Division

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DISTRICT OF COLUMBIA
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
MUNICIPAL SEPARATE STORM SEWER SYSTEM DISCHARGE PERMIT

I. BACKGROUND

The Government of the District of Columbia (District) submits this Annual Report on stormwater pollution control for fiscal year (FY) 2010 (October 1, 2001 – September 30, 2010) in compliance with the requirements established in Title 40 of the Code of Federal Regulations (CFR) 122.42(c) and the District's National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Water System Permit No. DC0000221 (Permit). The Permit authorizes discharges of stormwater from the Municipal Separate Storm Sewer System (MS4) to the Potomac and Anacostia Rivers and their tributaries in accordance with the conditions of the Permit. A copy of the Permit is posted on the DDOE Stormwater Management Division website (www.ddoe.dc.gov). The purpose of the District's MS4 program is to reduce pollutant loadings from the MS4 to receiving waters, to the maximum extent practicable towards meeting District water quality standards and the approved Total Maximum Daily Loads (TMDLs) for those waters. This Annual Report details MS4 Permit-related activities conducted by District agencies during FY 2010 to reduce and control pollutant discharge from the MS4 to the Potomac and Anacostia Rivers and their tributaries. The District agencies responsible for implementing the activities required by the Permit are the District Department of the Environment (DDOE), the District of Columbia Water and Sewer Authority (DC Water), the Department of Parks and Recreation (DPR), the Department of Public Works (DPW), the District Department of Transportation (DDOT), the District Department of Real Estate Services (DRES), the Office of Planning (OP) and the Office of Public Education Facilities Modernization (OPEFM). Prior to June of 2010, DC Water was known as WASA.

This Annual Report is submitted together with the FY 2012 Implementation Plan in compliance with the reporting requirements defined in Parts III.A, III.B, III.C, III.D, IV.A.I, VI, and IX.B of the Permit.

The 2011 Annual Report contains sections in the following order: Background, Overview, and Standard Permit Conditions (Permit Administration Legal Authority, Source Identification, Monitoring Program, Management Programs, TMDL Waste Load Allocation (WLA) Plans, Funding, and Fulfillment of the Clean Water Act (CWA)). Highlights of the MS4 program

during FY 2010 are provided in the Overview-Summary of Findings section of this report. The report is organized based on the headings of the Permit to document accomplishments for specific requirements stated in the Permit.

I.A MS4 Permit and Letter Agreement

The U.S. Environmental Protection Agency (EPA) issued the MS4 Permit to the District on April 19, 2000, effective for a three-year term. The Permit authorizes discharges from the MS4 to the Potomac and Anacostia Rivers and their tributaries in accordance with the conditions of the Permit. On October 19, 2002, the District applied to renew the Permit and submitted an upgraded Stormwater Management (SWM) Plan for approval. The SWM plan describes the District's plan to control pollutant discharge from the MS4 to the Potomac and Anacostia Rivers and their tributaries. On August 19, 2004, EPA renewed the District's MS4 Permit for a five-year term. Table 1 presents the time line of events pertaining to the Permit.

This 2004 Permit was challenged by a number of environmental groups. This challenge ultimately led to an EPA Environmental Appeals Board-mediated process wherein the District and challenging environmental organizations attempted to reach agreement on permit provisions. While this process failed to reach a settlement, the District and EPA did reach a two-party agreement on a series of enhancements to the District's MS4 Permit. These enhancements are described in detail in a Letter Agreement between DDOE and EPA Region III, dated November 27, 2007, and amended August 1, 2008. As per our agreement with EPA we are completing the prescribed suite of BMPs. An update on the status of their implementation and compliance can be found in Appendix G: Letter of Agreement Update. The FY12 Implementation Plan details the budget and fiscal resources necessary to meet these requirements.

The 2004 Permit as modified by the Letter Agreement requires significant new activities, with its emphasis shifting from planning (in the original term NPDES permit) to implementation of plans submitted by the District, many with specific and measurable benchmarks and commitments. In particular, the Permit requires the District to demonstrate measurable progress towards compliance with the TMDL assigned to the MS4 for these watersheds, including activities outlined in the Anacostia River and Rock Creek TMDL WLA Implementation Plans. The District is currently demonstrating measurable progress towards compliance by completing the prescribed suite of BMPs as detailed in the Letter of Agreement, dated November 27, 2007.

On February 13, 2009, the District submitted to 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. The final permit had not been issued by EPA before the end of the reporting period covered in this document.

I.B Memorandum of Understanding

DDOE has executed independent MOUs with DDOT, DPW, DRES, OPEFM and DC Water. These MOUs require the agencies to implement activities required under the Permit, and specify the amount to be reimbursed for the implementation of these activities. Copies of these MOUs can be found in Appendix A of this report.

I.C Stormwater Advisory Panel and Technical Workgroup

In March of 2009, the District's Comprehensive Stormwater Management Enhancement Amendment Act became effective. Among the purposes of this legislation was to improve coordination and cooperation among the District agencies. The Act expanded the District's Stormwater Advisory Panel (SWAP) to include more agencies with stormwater management responsibilities. The SWAP is comprised of the Directors of DDOE, DDOT, DPW, DRES, Office of Planning (OP), Office of Public Education Facilities Modernization (OPEFM), Department of Parks and Recreation (DPR), as well as the General Manager of DC Water, the District's Chief Financial Officer, and the City Administrator. The legislation clarified that the SWAP is intended to provide a forum for Executive-level coordination among agencies implementing programs under the MS4 NPDES permit. The legislation requires the SWAP to meet at least twice per year; the first SWAP meeting was held in September of 2009, with meetings continuing through FY 2010. SWAP meetings focused on the April 2010 draft MS4 Permit were held on May 27 and June 10 2010.

In addition, the Act established a Technical Workgroup (TWG) to provide for ongoing, staff-level coordination on stormwater issues. The TWG continued to meet monthly throughout FY 2010.

I.D TMDL WLA Implementation Plans

On February 19, 2005, the District submitted the Anacostia River Watershed TMDL WLA Implementation Plan to EPA in compliance with the 2004 MS4 Permit. The TMDL WLA Implementation Plan for the Rock Creek Watershed was delivered on August 19, 2005. These plans analyze the cost effective methods for reducing pollutants discharged from the MS4. Both plans have been approved by EPA. The implementation schedule and budget provided in each of

the TMDL WLA Implementation Plans began in FY 2007. District agencies and DC Water have begun implementing these activities, as described in Section III.F of this report.

Table 1. Permit Time Line of Events.

Date	Event	Summary
April 2000	EPA issues MS4 Permit	Information gathering, planning, program development, and a requirement to control stormwater pollution
December 2000	District Agencies sign a Memorandum of Understanding (MOU)	Interagency agreement between the Department of Health (DOH), DPW, and DC Water that delegates responsibilities of permit-related activities. The responsibilities of each agency were outlined in a matrix attached to the MOU.
		Mandates the preparation of an annual Agency Compliance Plan, which sets forth each agency's proposed budget plan dedicated to MS4 Permit compliance activities. The 2007 Agency Compliance Plan can be found on the SWMD website.
June 2001	Stormwater Permit Compliance Amendment Act of 2000 (DC Law No. 13-311) becomes effective	Created a Stormwater Administration within DC Water and established DC Water as the lead agency to coordinate actions among other District agencies in connection with permit compliance activities.
		Authorized DC Water to collect a flat stormwater fee from retail water customers within the District.
		Established an Enterprise Fund from the stormwater fee to reimburse participating agencies for costs incurred because of MS4 Permit mandated activities. Activities include administration, operations, and capital projects.
		Designated DOH, DPW, and DC Water responsible for the MS4 permit.
		Required the preparation of a Semi-Annual Report to the Mayor and the DC Council that describes the activities undertaken in the previous six months and outlines activities planned for the following six months.
July 2001	DC Water begins collection of Stormwater Fee (Enterprise Fund)	DC Water began collecting the stormwater fee with the July billing cycle: • Single-Family: $7 per year • Multi-Family: 1.4 percent of water bill • All other properties: 2.0 percent of water bill
October 2002	DDOT assumes some of the DPW Permit-related responsibilities	Newly formed DDOT assumed selected permit-related activities previously allocated to DPW.
August 2004	EPA renews MS4 Permit	Requires a shift from planning and development of programs to implementation.
		Requires the District to demonstrate significant progress towards pollutant reductions.
		Requires the development of TMDL WLA Implementation Plans for Anacostia River and Rock Creek watersheds.
		Requires the District to prepare an Annual Report, Implementation Plan, and Discharge Monitoring Report annually for submission to EPA.

Table 1. Permit Time Line of Events.

Date	Event	Summary
		A new matrix of activities based on the 2004 Permit was revised by the Task Force agencies to reflect the new allocation of responsibilities. However , due to the Permit challenge, the revision was not completed until 2007.
December 2004 through 2007	Environmental organizations challenge the District MS4 Permit	Environmental organizations challenge and appeal the District's MS4 Permit, leading to a lengthy mediation and negotiation process overseen by EPA's Environmental Appeals Board.
February 2006	DDOE assumes DOH Permit-related responsibilities	Newly formed DDOE assumed all permit-related activities previously allocated to the Water Quality and Watershed Protection Divisions within DOH.
February 2007	DDOE becomes administrator of the Stormwater Program	District legislation established DDOE as the new administrator of the District's Stormwater Program.
		DDOE coordinates activities among other District agencies including DPW, DDOT, and DC Water.
		DC Water continues to collect the stormwater fee first established in 2001.
	EPA Region III Office of Compliance, Enforcement, and Environmental Justice audits the District MS4 program	EPA conducted an in-office and field audit of the MS4 program a few days after DDOE assumed responsibility for MS4 Permit administration. The EPA audit report was issued during FY 2008.
July 13, 2007	Stormwater hearing	DDOE, DPW, DRES and other District Agencies presented testimony on stormwater management activities before the Council of the District of Columbia.
September 9-12, 2007	Trip to Portland, OR	Representatives from several District Agencies traveled to Portland, Oregon to learn about new and progressive stormwater management techniques implemented by the Portland Bureau of Environmental Services
November 2007	DDOE and EPA Region III sign the MS4 Permit Letter Agreement	DDOE submitted to EPA a detailed schedule of specific and measurable commitments and benchmarks that will be implemented under the MS4 Permit in the interests of managing stormwater pollution.
August 2008	DDOE and EPA Region III modify and finalize the MS4 Permit Letter Agreement	DDOE submitted to EPA a revised schedule of commitments and benchmarks that clarifies tasks to be carried out under the MS4 Permit and tasks supported by EPA 319 grant funding.
November 2008	DDOE enacts first Stormwater Fee adjustment	DDOE adjusted the stormwater fee to raise additional revenue necessary to comply with the requirements of the MS4 Permit Letter Agreement. The revised fee structure charged: • Single Family Residence: $1.98 per month • Multi-Family Residence: 4.4% of water and sewer bill • All other properties: 6.3% of water and sewer bill
February 2009	DDOE submits application for the renewal of the District's MS4 Permit.	DDOE submitted the application for renewal of the District's MS4 Permit in accordance with Part III section A and E of the 2004 MS4 Permit.

Table 1. Permit Time Line of Events.

Date	Event	Summary
March 2009	Comprehensive Stormwater Management Enhancement Amendment Act of 2008 (D.C. Law 17-0371) becomes effective	Established the Stormwater Advisory Panel (SWAP); expanded the number of District agencies involved in stormwater management tasks; required DDOE to update the stormwater fee to be based on impervious surface, and to establish a stormwater fee discount program; streamlined reporting requirements to do away with semi-annual reports; banned sale, application, and permitting of coal-tar based pavement products in the District of Columbia.
May 2009	DDOE revises Stormwater Fee to be based on impervious surface	DDOE passed regulations revising the stormwater fee to be based on impervious surface, rather than a flat fee for single family residences and a volumetric basis for multi-family residences and commercial properties. Under the impervious fee structure, every 1,000 square feet of impervious surface (considered 1 Equivalent Residential Unit, or ERU) is billed $2.57 per month. Single family residences are charged based on 1 ERU per month. All other properties are billed based on their total impervious surface area, rounded down to the nearest hundred square feet.
September 2009	First Stormwater Advisory Panel (SWAP) meeting	DDOE convened the first meeting of the Stormwater Advisory Panel, which consists of the Directors of each District agency (and DC Water) with stormwater management responsibilities. Discussion topics included improving interagency coordination and what DDOE expected to see in the next MS4 Permit.
April 2010	EPA releases draft of next MS4 Permit	EPA released a draft of the District's next MS4 Permit for public comment. DDOE submitted comments on the draft on behalf of the District. At the time of publication of this report, a final Permit had yet to be issued.
May and June 2010	SWAP meetings	DDOE held two meetings of the SWAP. The focus of these meetings were to discuss the content of the draft MS4 Permit issued by EPA, and to coordinate District agency input into the development of the District's official comments to EPA on the permit.

I.E Annual Reporting

In FY 2010 the District submitted the FY 2009 Annual Report and the FY 2011 Implementation Plan on August 19, 2010 (per requirements of the Permit).

The Annual Report described MS4 permit-related activities conducted by District agencies during FY 2009, while the Implementation Plan projected activities scheduled for FY 2011.

This Annual Report includes information on other MS4 related activities, such as the District's administrative and regulatory actions and the capital improvements of stormwater facilities, that occurred during FY 2010.

I.F Permit Administration

DDOE was designated by the 2005 DDOE Establishment Act as the MS4 Permit Administrator, and assumed this responsibility in February of 2007. At that point, EA Engineering, Science, and Technology, Inc. was under contract with WASA to provide engineering consulting and administrative support for the MS4 Permit-related activities. EA's contract expired on September 30, 2007. Since then, DDOE staff have addressed all MS4 Permit administration responsibilities, with the exception of stormwater sampling. Since 2008, DDOE has contracted with Environmental Design & Construction, Inc. (EDC) to perform all MS4 sampling activities in support of permit monitoring requirements.

II. OVERVIEW: SUMMARY OF ACTIVITIES

This Annual Report delineates the achievements made in FY 2010, addressing the required provisions of the Permit. The following subsections summarize the activities of FY 2010.

II.A Source Identification

The existing MS4 infrastructure and outfall location data have been combined with current outfall inspection data to develop a comprehensive database. Outfall locations are verified in the field during the course of routine inspections as it is needed. This database identifies 410 outfalls as being located in the MS4 area. In addition, DDOE has conducted a desktop analysis using storm sewer counter maps, ArcGIS, and Google Street View. This desktop analysis has identified an additional 174 potential MS4 outfalls. Of these 174 potential outfalls, 32 have been field verified as existing. Furthermore, 5 outfalls have been found in the MS4 during the course of inspections which are not indicated on any map. The District will continue efforts to field verify outfalls identified by the desktop analysis to update the MS4 outfalls database.

The outfall coordinates obtained by Global Positioning System (GPS) have been recorded in the MS4 Program outfall database. This database contains information on the shape, size, construction material(s), and location descriptors as well as photographs from every outfall inspection. In FY 2007, the GPS coordinates were converted to the Maryland State Plane coordinate system, which is the District Office of the Chief Technology Officer (OCTO)-Geographic Information Systems (GIS) standard. The comprehensive outfall database has been converted to a geodatabase for enhanced utility with mapping applications and continued to be updated through FY 2010.

II.B Monitoring Program

The 2011 Discharge Monitoring Report will provide data and analysis of the dry weather monitoring program and the wet weather screening program for MS4 outfalls located in the Rock Creek watershed. In accordance with the permit, DDOE monitors all three major watersheds in the District (Anacostia River, Rock Creek, Potomac River direct) on a rotating basis. Due to a previous error on the part of the sampling contractor (EDC), DDOE and EDC submitted a corrective action plan (CAP) to EPA on July 3, 2008. Wet weather samples in all three watersheds were required to be retaken. In addition to the 2010 DMR, the final round of re-sampling results for the Potomac River direct watershed was submitted to EPA on July 22, 2010. Submittal of this document effectively completed the District's requirements under the CAP.

The District continues to monitor for oil and grease in the Hickey Run watershed as part of its Water Quality monitoring program. Auto repair facilities continue to be targeted for education on proper disposal of waste oil. As of FY 2007, Hickey Run is no longer on the 303(d) list of Impaired Waters for oil and grease. Throughout FY 2010, DDOE continued to work toward the installation of a large trash trap and oil separator at the Hickey Run outfall located on the property of the National Arboretum, with construction of the BMP expected to begin in FY 2011.

II.C Management Programs

II.C.1 Commercial, Residential, and Federal and District Government Areas

The District has developed and continues to implement a program to control stormwater discharges from commercial, residential, federal and District-government areas. The management plan for stormwater pollution control on commercial, residential and federal and District government areas entails a mixture of programs emphasizing structural and non-structural BMPs and educational programs. Stormwater pollution control activities by District agencies not party to the Permit are listed in Appendix A. The District provides guidelines, such as the *2003 District of Columbia Standards and Specifications for Soil Erosion and Sediment Control* and the *Storm Water Management Guidebook,* that have been developed to help control stormwater pollution from commercial, residential, federal and District government areas. In FY 2007, DDOE began the process to revise and update the *Storm Water Management Guidebook,* selecting the Center for Watershed Protection to conduct this work. The current documents were provided to EPA as attachments to the 2007 Annual Report.

Programs and/or activities related to Permit compliance include:

- Functional landscaping programs, such as the use of structural BMPs and riparian buffer zones on new roadway construction.
- Low Impact Development (LID) practices.
- Catch basin cleaning, maintenance of the MS4, street sweeping, and leaf collection.
- Rain leader disconnection.
- Education programs on pet wastes, fertilizers, and landscaping.
- Methods of measuring the performance of activities.
- Strengthening erosion control for new construction.
- Continuing to work with federal and District facilities in order to implement and maintain

stormwater pollution controls on new and re-build construction.

II.C.2 Industrial Facilities

The establishment of a comprehensive database of industrial facilities in the District and the initiation of the wet weather screening program are primary components of the Industrial Facilities Program. The implementation of the management plan for industrial facilities will help to control and reduce stormwater pollution from industrial facilities in accordance with the requirements of the CWA. The industrial facilities database is a compilation of industrial facilities within the MS4 area.

II.C.3 Construction Sites

DDOE has an inspection and enforcement program for construction sites in commercial and residential areas and is working continually to strengthen its erosion control program for new construction. The management plan for stormwater pollution control on construction sites emphasizes the review and approval process for erosion and sediment control plans, and the inspection and enforcement procedures of the construction permitting program, as well as construction site and plan educational programs, traffic pollution control strategies, and air pollution compliance activities.

DDOE has refined and updated the District's automated database system for tracking stormwater management facilities inspected for maintenance to include tracking of construction projects with stormwater management BMPs. The number of inspections of construction sites in FY 2010 was 7,990.

II.C.4 Flood Control Projects

Flood Insurance Rate Maps (FIRMs) for the District have been revised by the Federal Emergency Management Agency (FEMA) using the latest technologies and the most current data. FEMA's letter of final determination (LFD), which indicated the new map changes, was issued to the District on March 26, 2010. The new LFD supersedes the first LFD issued by FEMA on March 26, 2008 and rescinded on June 16, 2008. The new FIRM along with an accompanying flood insurance study (FIS) became legally effective on September 27, 2010. As part of the compliance with FEMA's requirements the District's Flood Hazard Rules were also updated to reflect the new changes. As a condition of FEMA's issuance of the LFD, the District was required to complete design and construction work to improve the 17th Street levee as part of

a larger partnership with federal agencies to provide flood protection for the monumental core. The design work has been completed and construction is expected to be completed by January 2012. Upon completion, if the US Army Corps of Engineers determines that the As-Built levee has met the appropriate standard, FEMA will re-determine the extent of the new 1% chance flood boundary.

II.C.5 Monitor and Control of Pollutants from Municipal Landfills and Other Municipal Waste Facilities

There are no active landfills within the boundaries of the District**.** In FY 2007, EPA conducted a field audit of the Benning Road municipal transfer station, which is located in the MS4 area of the city. The audit report was issued on January 21, 2008. No program deficiencies were noted for the Benning Road facility.

II.C.6 Monitor and Control of Pollutants from Hazardous Waste Sites

DDOE continues to update federal and District facilities information as needed based on the MS4 monitoring effort. DDOE has prepared a database that includes facilities in the District that are registered with federal and state regulators because they generate, store, or have released hazardous materials.

DDOE continues to conduct inspections of Resource Conservation and Recovery Act (RCRA) hazardous waste facilities to determine compliance with hazardous waste regulations. DDOE conducted inspections at several RCRA Large Quantity Generator (RCRA-LQG), Small Quantity Generator (RCRA-SQG), and Conditionally Exempt Small Quantity Generator (RCRA-CESQG) facilities within the District between October 1, 2009 and September 30, 2010.

II.C.7 Pesticides, Herbicides, and Fertilizer Applications

The DDOE Pesticide Management Program outlines the mission, goals and implementation of the regulations that affect commercial applications of pesticide and herbicides. The program outlines the requirements for certification and training for the application of pesticides and herbicides in the District. The program also outlines requirements for enforcement actions and programs for protecting endangered species, ground water, and workers. Revised District pesticide regulations (20 DCMR §§ 20-25) are currently being developed by DDOE. Control of pesticide, herbicide, and fertilizer applications has also been integrated into the Public Education Program. EPA has also developed a Pesticide General Permit. Coverage under this General

Permit will be required for discharges to waters of the United States resulting from pesticide applications beginning October 31, 2011.

II.C.8 Deicing Activities

The District uses a 23 percent sodium and 77 percent water solution as a pretreatment on bridge surfaces to reduce pollutant loading to receiving waters from deicing activities. Brine is currently stored at the maintenance facility located at 401 Farragut Street, NE, and salt is stored at four other salt dome facilities.

II.C.9 Snow Removal

Dumping of snow in areas adjacent to water bodies, wetlands, or drinking water sources is not part of the District's snow management plan, and will be avoided except as necessitated by extreme emergencies. These aspects of the snow removal plan are routinely reviewed for applicability; no revisions are needed at this time. FY 2010 represented a record annual snowfall and accumulation for the District (65 inches), which required snow removal from DC streets on three occasions.

II.C.10 Detect and Remove Illicit Discharges

DDOE with the support of DC Water maintains an Illicit Discharge Detection and Elimination (IDDE) program, issue notices of violation as needed, and monitor corrective actions taken by violators. Illicit connections to the MS4 may also be referred to the Plumbing Inspection Branch, Building and Land Regulation and Administration, Department of Consumer and Regulatory Affairs (DCRA) for additional enforcement action. Illicit discharge detection and enforcement procedures have been developed in conjunction with dry weather outfall screening, inspection of industrial housekeeping practices, and public education programs. These procedures were part of the Draft *Water Quality Division Enforcement and Compliance Manual* but have now been replaced with *The Environmental Enforcement Process in the District of Columbia*. Both documents were provided as attachments to the 2007 Annual Report. *The Environmental Enforcement Process* was also included in the 2009 SWMP.

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.

II.C.11 Enforcement Plan

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 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.

In FY 2007, the Office of Inspection and Enforcement was created within DDOE. During FY 2010, the Inspection and Enforcement Branches within the Water Quality and Water Protection Divisions continued to use a GIS based tool to locate SWM facilities. The use of the GIS tool has improved efficiency in conducting inspections for maintenance.

DDOE investigates illicit discharges and enforces the District's Water Pollution Control Act regulations in accordance with the District's water quality standards. During FY 2010, DDOE personnel conducted a total of 393 inspections and investigations. This number includes illicit discharge investigations, responses to emergency situations, outfall inspections, and routine industrial facility inspections.

II.C.12 Public Education

DC Water, DDOT, DPW and DDOE conduct public education activities related to stormwater pollution. Public education programs continue to include an environmental education resource center, public meetings, environmental fairs, conservation education, teacher training workshops, and grants for promoting pollution prevention. A major component of DDOE's public education activities in recent years have related to anti-littering and trash prevention efforts, including a targeted outreach program developed in cooperation with the Alice Ferguson Foundation.

II.D Program Funding

The District's Stormwater Permit Compliance Amendment Act of 2000 established a Stormwater Permit Compliance Enterprise Fund to provide money for implementing the activities required by the 2004 MS4 Permit. Starting July 1, 2001, WASA began collecting a stormwater fee for the Enterprise Fund. This fee structure was designed to raise $3.1 million/year, which at the time was the estimated cost of the activities required to comply with the 2000 MS4 permit. In 2008, in response to the DDOE/EPA MS4 Letter Agreement, DDOE updated its estimate of permit

compliance costs to approximately $13.2 million per year. In order to secure this funding, DDOE proposed and enacted the first stormwater fee adjustment since the fee's inception.

In addition, the Comprehensive Stormwater Management Enhancement Amendment Act of 2008 directed DDOE to update the stormwater fee structure to be based on impervious surface. In May of 2009, DDOE revised the stormwater fee structure to comply with this requirement. A property's impervious surface area is a more direct measure of the stormwater runoff generated by that property, and therefore provides a more accurate and equitable method for apportioning the District's stormwater management costs among ratepayers. The District's impervious stormwater fee uses Equivalent Residential Units (ERUs) of 1,000 square feet as billing units (1,000 square feet was determined to be the average amount of impervious surface on residential properties in the District). Each ERU in the District is charged $2.67 per month for the stormwater fee. Beginning in November 2010, single family residences are billed according to a tiered structure that reflects their property size, while all other properties are charged based on their total impervious surface area, rounded down to the nearest hundred square feet and converted into ERUs.

III. STANDARD PERMIT CONDITIONS

III.A Next Permit Cycle

The District's current Permit, which expired in August 2009, has been administratively extended and remains in force until a new permit is issued.

III.B Permit Administration

An organization chart for the agencies responsible for MS4 permit compliance is shown in Table 2. The responsibilities of each agency are set forth in inter-agency MOUs and an associated matrix of commitments. The MOUs and matrix have been updated to reflect the requirements contained in the 2004 MS4 Permit and the 2007 Permit Enhancement Agreement.

III.C Legal Authority

Performance Standard: The District maintains the legal authority to control MS4 discharges through the application of the regulations provided in the District of Columbia Municipal Regulations (DCMR). In addition, the District developed and maintains the legal authority to enforce erosion and sediment control and the control of stormwater pollution within the MS4 drainage area.

MS4 Discharges

The MS4 Permittee has the legal authority to control all discharges into the waters of the District under the Comprehensive Stormwater Management Enhancement Amendment Act of 2008, D.C. Official Code § 8-151.51 *et seq.,* Storm Water Permit Compliance Amendment Act of 2000, D.C. Official Code §34-2202.02(a) *et. seq*., the Water Pollution Control Act of 1984, D.C. Official Code § 8-103.01 *et. seq.,* and the Soil Erosion and Sedimentation Control Act of 1977, codified in 21 DCMR §§ 500-507, and the implementing regulations in DCMR Title 21 Chapters 5 and 11.

Erosion and Sediment Control

The Water Pollution Control Act of 1984, as amended, D.C. Official Code § 8-103.01 *et. seq.*, and the Sedimentation Control Act of 1977, as amended, codified in 21 DCMR §§ 500-507 provide the legal authority to enforce the erosion and sediment control provisions of the SWM Plan.

Table 2. Agencies Responsible for District of Columbia 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
	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
	Catch basin cleaning
	Illicit discharge detection
DPW	Street sweeping
	Seasonal leaf and holiday tree collection program
	Pollution prevention
	Household hazardous waste collection
	Stormwater management at municipal waste transfer stations
DDOT	Pollutant reduction from vehicles and roadways
	Pollution prevention
	LID practices in public right of way (ROW)
	Deicing and snow removal
DRES	LID practices on District-owned, DRES managed properties
	Pollution prevention
DPR	LID practices in District parks and at District recreation centers
	Pollution prevention
OP	Planning for neighborhoods, public facilities, parks and open spaces, etc.
	Urban design and land use review
OPEFM	LID practices on District schools
All Agencies	Public outreach and education
	Annual reporting to EPA and Mayor
	Monthly Task Force meetings

*Agency addresses:
DDOE: District Department of the Environment, 1200 First Street, NE, Fifth Floor, Washington, DC 20002
DDOT: District Department of Transportation, 55 M Street, SE, Suite 400, Washington, DC 20002
DPW: Department of Public Works, 2000 14th Street, NW, Washington, DC 20009
DPR: Department of Parks and Recreation, 3149 16th St., NW, Washington, DC 20010
DRES : Department of Real Estate Services, 2000 14th Street, NW, Washington, DC 20009
DC Water: Water and Sewer Authority, 5000 Overlook Avenue SW, Washington, DC 20032
OP: Office of Planning, 1100 4th St., SW, Suite E650, Washington, DC 20024
OPEFM: Office of Public Education Facilities Modernization, 2400 E. Capitol Street, SE Washington, D.C. 20003

Illicit Discharges

Removal of illicit connections to the MS4 is enforced through the Plumbing Inspection Branch of DCRA. Enforcement authority prohibiting the dumping of used motor vehicle fluids is provided in D.C. Official Code § 8-103.07(e).

On January 1, 2010, the Anacostia River Clean-up and Protection Act (D.C. Official Code §8-102 *et. seq.*) went into effect. This legislation places a 5-cent fee on disposable shopping bags in the District of Columbia, with revenue generated by the fee placed in a dedicated fund for water quality-related clean-up and restoration projects. This new legislation is a major component of the District's efforts to address trash control. This was the only additional law added to the legal authority of the District regarding SWM during FY2010. The current laws are otherwise deemed adequate to provide compliance with the Permit. However, during FY 2010 work continued on revisions to the District's Stormwater Management regulations.

III.D Source Identification

Part II of the Permit describes the requirements for Source Identification. The Permit requires the District to compile and submit information and significant changes affecting the MS4 due to land use activities, population estimates, runoff characteristics, major structural controls, landfills, publicly owned lands, and industries. A summary of these compliance activities follows.

III.D.1 Land Use Activities

The District is highly urbanized, with little available land for further development. The MS4 drainage area contains approximately 26,500 acres (two-thirds of the District). The combined sewer overflow (CSO) drainage area encompasses approximately 12,640 acres (one-third of the District). All new development and redevelopment of existing areas is subject to the District's stormwater regulations with a review by DDOE. The land use and impervious area must be indicated on all 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 reviewed in FY 2010 have not resulted in a significant change for the existing land use activities in the portion of the District served by the MS4. Table 3 provides the existing land use by planning area in the District (MS4 and CSO).

III.D.2 Population Estimates

The Bureau of the Census reported in the 2010 Census of Washington, DC that there were 601,723 people residing within the District, representing a 5.2 percent population increase in the ten years since the previous complete census. While the population increase over this period is not considered significant with respect to sources of pollution in stormwater, a continued trend in population growth could result in future change. Additional details of the 2010 U.S. Census for the District can be found at http://www.census.gov/.

III.D.3 Runoff Characteristics

As noted in Section III.D.1, no significant changes in land use activities were identified in FY 2010. Therefore, no significant changes in runoff characteristics were identified in the MS4 drainage area as a result of land use activities**.**

Table 3. Acres of Existing Land Use by Planning Area, 2005.

	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 (%)
Road 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
Permanent Open Space	296	678	1,321	729	533	141	354	878	2,011	1,038	7,980	20
Rail, Communication, Utilities	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	2776	5,305	4,687	1,884	1,971	2,259	4,757	7,982	5,645	39,225	100.0
Water	*117*	*509*	*135*	*1,791*	*1,295*	*46*	*239*	*19*	*313*	*89*	*4,554*	
TOTAL	2,075	3,284	5,440	6,474	3,179	2,017	2,498	4,776	8,288	5,735	43,766	

Source: Office of Planning, Comprehensive Plan District Elements, December 2006

III.D.4 Major Structural Controls

Ongoing maintenance of the MS4 infrastructure including structural controls is conducted to ensure consistent performance of MS4 components. There have been no major structural controls added or removed from the MS4 conveyance system in FY 2010. Table 4 provides a list of traditional and non-traditional BMPs by structure type and the number approved or installed within the District during FY 2010. The SWM facilities listed include both facilities approved through the District's regulatory review process as well as those installed as part of DDOE incentive programs.

Table 4. Stormwater Facilities by Structure Type approved/installed during FY 2010.

BMP	BMP Structure Type	Number
Aqua-Shield/Filter	Dry Detention Pond and Hydrodynamic Structures	0
Basin, Detention	Wetponds and Wetlands	2
Basin, Infiltration	Wetponds and Wetlands	0
Basin, Retention	Wetponds and Wetlands	0
Baysaver	Dry Detention Pond and Hydrodynamic Structures	5
Bioretention	Filtering Practice	14
Catch Basin	Water Quality	0
Downspout Filter	Filtering Practice	0
Downstream Defender	Dry Detention Pond and Hydrodynamic Structures	0
Dry Pond	Dry Detention Pond and Hydrodynamic Structures	0
Dry Well	Dry Detention Pond and Hydrodynamic Structures	0
Enviropod	Catch basin insert	0
Ex-filtration trench	Filtering Practice	5
Filterra/Tree Box	Filtering Practice	2
Green Roof	Impervious Surface Reduction/Non-structural Practices	2
Infilteration Basin	Infiltration Practice	1
Infilteration Trench	Infiltration Practice	6
Leaching Tank	Filtering Practice	0
Modified Manhole	Dry Detention Pond and Hydrodynamic Structures	2
Modular Rain Tank	Filtering Practice	1
Oil-Grit Separator	Dry Detention Pond and Hydrodynamic Structures	0
Permeable Pavement	Impervious Surface Reduction	3
Rain Barrel	Dry Detention Pond and Hydrodynamic Structures	0
RainStore System	Infiltration Practice	4
Sandfilter	Filtering Practice	2
Sandfilter, bisected CMP	Filtering Practice	0
Sandfilter, underground	Filtering Practice	2
Storm Chamber System	Infiltration Practice	0
Stormceptor	Dry Detention Pond and Hydrodynamic Structures	3
Stormfilter	Dry Detention Pond and Hydrodynamic Structures	12
Synthetic Turf – Gravel Storage w/ Underdrain	Filtering Practice	4
Underground Retention	Infiltration Practice	4
Vegetated Biolfilter, Swale, Strip	Filtering Practice	5
Water Quality Inlet	Dry Detention Pond and Hydrodynamic Structures	2
Water Quality Manhole	Dry Detention Pond and Hydrodynamic Structures	3
Water Quality Swale	Dry Detention Pond and Hydrodynamic Structures	0
Wetland	Wetponds and Wetlands	0
Total		**84**

Source: BMP Types defined from information provided on the Chesapeake Bay Tributary Tools website: http://www.chesaeakebay.net/info/wqcriteriatech/tributary_tools.cfm#resources

III.D.5 Landfills

There are no active landfills within the District.

III.D.6 Publicly Owned Lands

The National Park Service (NPS) is the primary public entity holding land within the MS4 area of the District. According to Government Accounting Office (GAO) Report No. GAO-05-378, NPS manages 356 Federal properties in the District covering approximately 6,735 acres of land. A majority of NPS properties are referred to as circles, squares and triangles less than one acre in size; however, parks and parkways represent approximately 93 percent of the total acreage for the 356 properties.

The U.S. Department of Agriculture Agricultural Research Service (USDA ARS) runs the National Arboretum. The Arboretum is 446 acres in size and has not increased or decreased in size in the past five years.

The DC Department of Parks and Recreation (DPR) also controls significant acreage in the District. The Parks and Recreation Master Plan website (http://www.bakerprojects.com/dprmasterplan/) states that there are approximately 1,000 acres of land managed by DPR. The amount of publicly owned lands in the District has increased slightly as the federal government transfers lands over to the District. Table 5 presents the acreage of publicly owned land in 2010.

DDOT manages the District's public right-of-way, which is comprised of interstates, freeways and expressways, principal arterial roads, minor arterial roads, collector streets, local streets, alleys, and any associated sidewalks. These areas comprise 10,174 acres, or approximately 26% of the total land area in the District.

Table 5. Acreage of Publicly Owned Lands as of 2010.

Agency	Total Acres
National Park Service	6,735
United Stated Department of Agriculture Agricultural Research Service	446
DC Department of Parks and Recreation	~1,000
DC Housing Authority	280
District Department of Transportation	10,174

III.D.7 Industries

No significant changes in industrial activity were identified in FY 2010. The Industrial Facilities Database has been updated and is discussed in detail in Section III.F.2 of this report. The database will continue to be used to track changes in industrial activity in the District.

III.D.8 Electronic Mapping

Existing counter maps of the separate storm sewer conveyance system have been digitized and combined with the data regarding storm sewershed and outfall locations as verified in field inspections to create a comprehensive database of the MS4 infrastructure. Verification of the District outfalls is on-going. The database contains information including outfall size, type and condition. There District's MS4 outfall database identifies 410 outfalls as verified to be located in the MS4 area. Table 6 presents the number of these outfalls in the MS4 by watershed. Sewer data or delineations do not currently exist for the remaining outfalls.

Table 6. Number of MS4 Outfalls Identified and Verified by Watershed

Watershed	Number of Outfalls
Anacostia River	141
Potomac River	113
Rock Creek	107

The District has a GIS layer of the federal and local roads that are part of the MS4 system. DC Water has completed mapping of the sewer network and infrastructure and a GIS dataset depicting outfalls, gravity lines, junctions, catch basins, and other components of the conveyance system is available. Based on detailed analysis of the existing maps, and Google Street View, there are currently an estimated 174 outfalls in the MS4 which were never found or field verified, but which are likely to exist. 32 of these outfalls have been field verified, with the remained in the process of being field verified. Upon verification, the outfall database and corresponding map and GIS datasets are updated as information becomes available. An additional 5 outfalls that do not appear on any sewer maps have been identified during the course of inspections. The District will continue efforts to field verify outfalls identified by desktop analysis to update the MS4 outfall database. Basic geographic information compiled to date is included in Table 7.

III.D.9 GIS Stormwater Model

Part V of the Permit describes reporting requirements for the development of a GIS stormwater model. The stormwater pollution control model uses GIS to compile information concerning the District. Specific GIS information regarding the MS4 system, outfall inspection, pollutant estimates provided by the District and federal government agencies have been added to the MS4 data.

Both DC Water and DDOE use storm and water quality modeling for planning and maintenance activities. At DDOE, storm water modeling is done to compute TMDL and to prepare TMDL implementation plans. The TMDL implementation plans contain the locations of planned control systems per sewershed or subwatershed. At DC Water, storm water modeling is routinely applied to evaluate the condition and sewer capacity of critical elements of the sewer system. Results of the modeling analysis help DC Water with maintenance activities and schedules.

Performance Standard: The District maintains a database of existing mapping information and updates the database as pertinent data are developed.

DC Water is currently using the Danish Hydraulic Institute's Mike Urban storm water quality model, Version 2008. Version 2008 integrates the Model of Urban Sewers (MOUSE) and ArcGIS functionality. This is a valuable tool in determining how a collection system responds to rainfall events, the causes of overloading, (e.g., backwater effects or insufficient capacity), and the impacts of improving key components in the collection system. DC Water runs the model to plan for upgrades in the collection system and other rehabilitation projects of the MS4 infrastructure. Please refer to Section IV.D.10 for more information on modeling.

Table 7. OCTO-GIS Information.

Basic Geographic Information Compiled – DC Base Map Layer
District Boundaries
DC property (Schools, DPR, Housing)
Street maps and names
Schools
Federal building locations
Waterway and water body information
Zoning information
Floodplains
Field Verification Information
MS4 piping system
Outfall location information (type, size, condition)*
Storm drain locations
GIS Data from the MS4 Task Force Agencies
Structural BMP locations
Non-structural BMP locations
School yard and community gardens
Illicit discharge and inspection activities
DPW street sweeping routes
DDOT BMP installations on roadway projects
DC Water catch basin maintenance work

* Conducted by EA Engineering, Science, and Technology Inc. under contract to WASA

DDOE has established an MOU with the District's Office of the Chief Technology Officer to provide onsite staff support for GIS. OCTO-GIS personnel are assisting DDOE in obtaining and consolidating District GIS data, and using it to develop analyses and GIS products.

FY 2011 Goals: To compile additional GIS data from other District agencies.

III.D.10 TMDL Modeling

The TMDLs for District waters have been developed using well known water quality modeling tools such as Hydrological Simulation Program - FORTRAN, Water Quality Analysis Simulation Program, and Environmental Fluid Dynamics Computer Code. These models were used to estimate loads from point and nonpoint sources, simulate fate and transport of contaminants, and develop allocations. The models and various technical approaches used are described in the relevant TMDL documents (available at DDOE website at: http://ddoe.dc.gov/ddoe/cwp/view,a,1209,q,495456.asp).

III.E Monitoring Program

III.E.1 Outfall Monitoring

The District's MS4 Permit requires that three wet weather and two dry weather samples and analyses be conducted as part of the characterization of MS4 discharges. The sampling schedule followed a watershed based monitoring approach whereby the stations within one of the three watersheds are to be sampled within a given calendar year. Table 8 below shows the schedule for the most recent cycles of monitoring and reporting for each watershed.

Table 8. Stormwater Sampling and Analysis Cycle in the District of Columbia

Watershed	Monitoring Year	No. of Stations	DMR Due Date
Anacostia River	2008	9	August 19, 2009
Rock Creek	2009	6	August 19, 2010
Potomac River	2010	7	August 19, 2011

According to the schedule, the principal milestones for FY 2010 (Oct 2009 – Sept 2010) were to complete the Rock Creek watershed monitoring by December 2009, to complete and transmit the Discharge Monitoring Report (DMR) by August of 2010, and to begin the Potomac River watershed monitoring by January 2010.

The monitoring schedule was modified under the corrective action plan (CAP) submitted to the U.S. Environmental Protection Agency (EPA) on July 3, 2008. Irregularities on the part of the sampling contractor required re-sampling of several events in all three watersheds. An accelerated schedule of re-sampling was conducted in each of the watersheds concurrently. The final DMR required by the CAP was completed for the Potomac watershed and submitted to EPA on July 22, 2010.

The sampling and analysis activities are now on schedule and are only limited by the availability of qualifying rainfall and/or field conditions. The Discharge Monitoring Report for the Rock Creek watershed was completed and submitted to the EPA on schedule.

A total of twenty two (22) wet weather samples and eighteen (18) dry weather samples were to be analyzed for over one hundred and forty (140) parameters including volatile organic compounds, acid and base neutral extractable compounds, pesticides, PCBs, metals, and other pollutants.

Monthly average and observed rainfall recorded at the Ronald Reagan Washington National Airport for FY 2010 are summarized in Figure 1. As can be seen from the Figure, the rainfall amounts for October, November, December, July and September were well above the monthly average for those months. For the remaining months, the rainfall amounts were at or below the monthly average. It is to be noted that the rainfall intensity, duration and antecedent conditions impose additional constraint to the storm events that can be sampled.

Figure 1. Average and Observed Monthly Precipitation at Ronald Reagan Washington National Airport for FY 2010

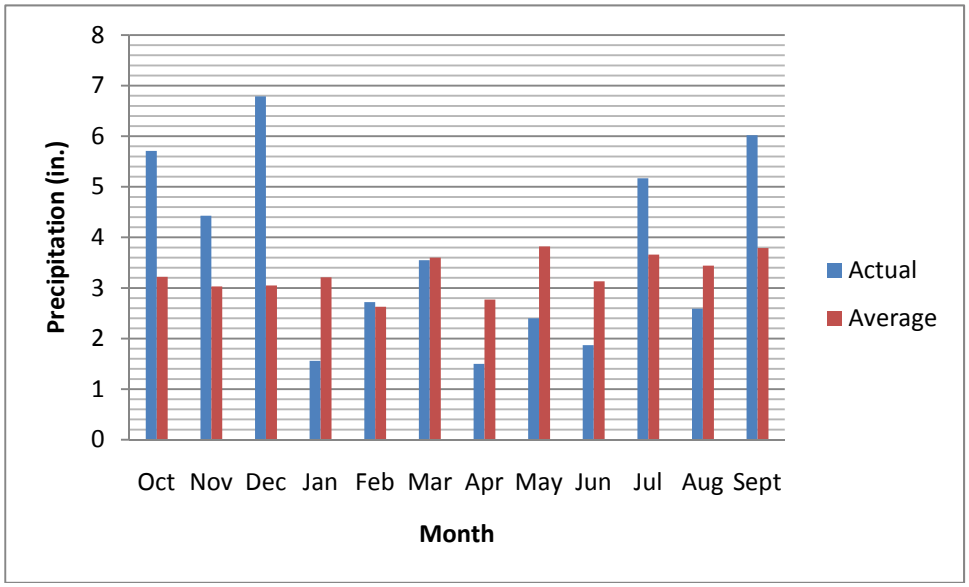


Table 9 below shows the difference in the average of pollutant Event Mean Concentrations for two monitoring periods in the Rock Creek watershed.

Table 9 - Differences in Mean Concentrations in the Rock Creek Watershed

	Average of Event Mean Concentrations (mg/L unless otherwise noted)		Percent Change
	2003-2005	2009-2010	
BOD	28.62	16.47	-42
COD	92.67	97.71	5
TDS	156.47	252.73	62
TSS	55.17	52.12	-6
TN	3.11	3.58	15
TKN	1.56	3.25	108
TP	0.33	0.32	-3
DP	0.24	0.24	0
FC[a]	11,238	20,467	82
O&G	6.0	2.38	-60
Cd[b]	0.41	0.42	2
Cu[b]	58.53	53.97	-8
Pb[b]	30.48	34.87	14
Zn[b]	107.22	62.64	-42

[a] Units are in MPN/100 ml

[b] Units are in µg/L

As part of the 2010 Discharge Monitoring Report (DMR), storm water quality data from eighty three (83) rainfall events collected from 2003 through 2010 was examined. The compilation of concentrations for all detected parameters in the Rock Creek watershed is presented in Table 10.

Table 10 DETECTED PARAMETERS IN THE ROCK CREEK WATERSHED (From 83 storm water sampling events 2003 through 2010)

Detected Parameters	Concentration Range	Detected Parameters	Concentration Range
(A) Volatile Organic Compounds*		**(E) Metals, Cyanide, and Phenols** **	
Benzene	5.3 - 5.3	Antimony, Total	0.0015 - 0.05
Chloroform	0.63 - 5	Arsenic, Total	0.0015 - 0.034
1,3-Dichloropropylene (trans-1,3-Dichloropropene)	500 – 1,300	Beryllium, Total	0.00012 -0.0013
Ethylbenzene	3.5 – 3.5	Cadmium, Total	0.0005 -0.031
Toluene	0.42 - 22	Chromium, Total	0.0005 -0.058
(B) Acid Extractable Compounds*		Copper, Total	0.0028 -0.36
4- Nitrophenol	1.3 – 2.9	Lead, Total	0.003 -0.28
Pentachlorophenol	11 - 11	Mercury, Total	0.0002 -0.0014
Phenol	1.1 -1.1	Nickel, Total	0.003 - 0.11
(C) Base/Neutral Extractable Compounds *		Selenium, Total	0.002 -0.067
Benzo(a)anthracene	6.3 -6.3	Silver, Total	0.001 - 0.002
Bis(2-ethylhexyl)phthalate	0.8 - 32	Thallium, Total	0.002 - 0.255
Butylbenzylphthalate	4.1 – 4.1	Zinc, Total	0.017 -0.344
Chrysene	0.62 – 0.65	Cyanide, Total	0.01 -0.047
1,4- Dichlorobenzene	11 - 11	Phenols, Total	0.00012 - 0.54
Dibenzo(a,h)anthracene	3.4 – 3.4	**(F) Conventional Pollutants****	
Diethylphthalate	3.1 - 84	Total suspended solids	5 -2,600
Di-n-butylphthalate	1.6 – 5.6	Total dissolved solids	30 -4,700
Napthalene	1.7 – 1.7	COD	0.043 - 510
Pyrene	0.84 – 0.88	BOD_5	2 -110
(D) Pesticides/PCBs*		Oil and Grease	2.8 - 16
4,4'-DDT	0.012 – 0.012	Fecal Coliform***	2 - 3,000,000
4,4'-DDE	0.002 – 0.07	Fecal Streptococcus***	2 - 1,100,000
4,4'-DDD	0.005 -0.009	Total Kjeldahl Nitrogen (TKN)	0.48 - 780
Dieldrin	0.0015 – 0.013	Nitrate + Nitrite ($NO_2 + NO_3$)	0.064 - 22
Endrin	0.004 -0.004	Dissolved Phosphorous	0.00009 - 1.1
Heptachlor epoxide	0.004 -0.004	Total Phosphorous (TP)	0.076 - 13

* Units µg/l

** Units mg/l unless otherwise noted

*** Units MPN/100ml

III.F Management Programs

The District continues to monitor existing structural BMP and LID projects as well as implement new projects in the MS4 area.

III.F.1 Commercial, Residential, and Government Areas

Part III.B.1 of the Permit requires the District to implement the October 19, 2002 SWM Plan and to reduce the discharge of pollutants into the District MS4 from residential, commercial, Federal and District-owned areas. The District has developed and continues to implement a program to control stormwater discharges from federal and District government areas. The District does not have jurisdiction over federal lands to require the installation of structural retrofits to control stormwater pollutants from federal lands. Some federal properties have their own NPDES permits such as Bolling Air Force Base. District regulations require federal agencies to comply with the District's erosion and sediment control regulations with respect to new construction and re-construction on federal properties in the District. In addition, DDOE signed agreements with DDOT and the General Services Administration (GSA), which require federal contractors working on buildings or highway improvements to comply with the District's erosion and sediment control regulations. DDOE also reviews construction plans submitted by DPW, DDOT and DC Water with respect to these erosion and sediment control requirements.

The management plan for stormwater pollution control on commercial, residential and federal and District government areas entails a mixture of programs emphasizing structural and non-structural BMPs and educational programs:

- District regulatory requirements, such as the *District of Columbia Standards and Specifications for Soil Erosion and Sediment* and the *Storm Water Management Guidebook, 2003*.
- Functional landscaping programs, such as the use of structural BMPs and riparian buffer zones on new roadway construction.
- LID practices.
- Catch basin cleaning, maintenance of the MS4, street sweeping, and leaf collection.
- Rain leader disconnection.
- Education programs on pet wastes, fertilizers, and landscaping.
- Methods of measuring the performance of activities.
- Strengthening erosion control for new construction.

- Continuing to work with federal and District facilities in order to implement and maintain stormwater pollution controls on new and retrofit construction.

The following sections detail progress for each activity in FY 2010.

DC Stormwater Manual

Performance Standard: The District requires engineering standards and specification to be followed by all District builders.

The *District of Columbia Soil Erosion and Sediment Control Standards and Specifications* (2003) and the District's *Stormwater Management Guidebook* are followed by all District builders, whether private, commercial, federal or District, for all new and rebuild construction sites. These manuals, which are available to the public at the DDOE offices, require builders to use stormwater BMPs for new and rebuild construction through the plan review process.

FY 2010 Activities: In FY 2010, DDOE continued to contract with the Center for Watershed Protection to update the *Storm Water Management Guidebook, 2003* based on the pending revised soil erosion and sediment control and stormwater management regulations. The Guidebook will be updated after promulgation of the new regulation, anticipated to occur in FY 2012. DDOE continued to provide hardcopies of the *Storm Water Management Guidebook* to the public upon request, and continued providing technical assistance on issues related to stormwater management and erosion and sediment control.

FY 2011 Goals: The District will continue promotion of stormwater BMP and LID practices in construction plans including education on District standards and specifications for erosion and sediment control, stormwater management plans and the DC building permit process.

Functional Landscaping

Performance Standard: The District encourages developers through training sessions and preliminary design review to incorporate functional landscaping techniques in their site development plans.

FY 2010 Activities:

- DDOT construction projects at the following sites include improved functional landscape designs to provide larger soil volume and water for street trees:
    - Georgia Ave NW, including structural soil and permeable pavers around trees, was under construction in FY2010.
    - Pennsylvania Ave SE, including root paths for street tree growth, was under construction in FY2010.
    - Nannie Helen Burroughs Ave NE, including structural soil for tree growth and permeable pavers around trees, will start construction early FY2011.
- DDOT's Urban Forestry Administration (UFA) manages its planting program to increase survivability through appropriate species selection, oversight, and tracking. UFA is continuing to use its GIS based work management system to improve the tree inventory which allows for data analysis that is used in programmatic planning. In addition, UFA has initiated a volunteer watering and street tree stewardship program to increase survivability. In FY 2010, UFA planted 4,063 trees along the street in the right-of-way.
- DDOT reviews all development and construction site plans that impact the public ROW to identify opportunities to reduce impervious surface, maximize tree growing space, and minimize storm-water run-off in the public ROW. In FY 2010, 462 plans were reviewed by DDOT through preliminary design meetings with developers, public space permit applications, Zoning applications, and DDOT project reviews.
- DDOT began a program in FY 2010 to remove impervious surface in the Combined Sewer area to reduce runoff to the system. The program continues in FY 2011.
    - 20,039 square feet of pavement was removed at the following areas in FY10:
        - 400 and 500 block of 20th and 21st street NW
        - 700 - 1000 block of East Capital Street
        - 300-500 block of A St NE
        - Seaton School, 1503 10th St NW
    - Green Median Renovation was performed in the median on Washington Avenue SW in Capitol Hill where 6,848 square feet of pavement was removed.

DDOT's UFA worked with the Office of Planning and the Office of Zoning to provide recommendations for increasing tree cover requirements in parking lots in the ongoing revision of the Zoning Regulations. Recommendations were developed during FY08 to increase the percent minimum landscaping, require an overall parking lot canopy coverage, and require a specific minimum caliper inch size and soil volume for each tree

in parking lots. The Zoning Commission has approved the changes and updates are planned to be implemented in FY12. Final recommendations are available at http://www.dczoningupdate.org/parking.asp?area=pkg.

The Office of Planning coordinated with DDOE to develop recommendations to provide minimum green space requirements in the ongoing revisions of the Zoning Regulations. Recommendations were approved in FY 2010 to Green Area Ratio sets integrated environmental requirements for landscape elements and site design that contribute to the reduction of stormwater runoff, the improvement of air quality, and the mitigation of the urban heat island effect. In FY 2011 the proposed text was approved by the Zoning Commission.

In FY 2009, the District adopted a goal of increasing tree canopy throughout the District to 40 percent by 2035. During FY 2010, DDOE coordinated with DDOT, Casey Trees, and other stakeholders to develop a strategy for achieving that Tree Canopy Goal.

FY 2011 Goals: The District will continue to provide training, guidance, and recommendations to developers, professional engineers, architects, homeowners, and government officials regarding functional landscaping techniques. DDOT will continue projects to remove pavement and convert them to functional landscape areas using trees and soil. The District will continue tree planting efforts at a rate of at least 4,150 trees annually, and will finalize a strategy for achieving the 40 percent Tree Canopy Goal.

Low Impact Development Practices

Performance Standard: The District promotes the use of LID techniques throughout the District through plan review and educational activities.

FY 2010 Activities: The District continued to promote, encourage, and review the use of LID techniques throughout the District through plan review and educational activities that focus on LID practices. The District continued to review and approve SWM plans encouraging the use of LID techniques in stormwater projects. DDOT is increasing the inclusion of LID techniques in its road construction projects to manage and treat stormwater runoff.

The District's LID review and inspection activities in FY 2010 included the following:

- 70 out of the 131 SWM facilities approved for construction were LID projects.

- Seven projects on federal land reviewed involve LIDs.

- The District responded to 61 customer complaints on issues related to stormwater management and erosion and sediment control.

During FY 2010, DDOE continued to track green roof projects in the District from the plan review database. The plan review database contains projects that are regulated through the submission of plans because they are over 5,000 sq. ft. in area. GIS was used to determine those located within the MS4 or CSO drainage areas. Twenty-eight green roof projects for a square footage of 181,244 were approved in FY 2010. Nineteen of these projects are in the CSO portion of the city and nine are in the MS4. They will bring the total square footage of green roof area in the District to 845,743 square feet. The projects approved in FY 2010 are listed in Table 11. The geographic location of the green roof projects can be accessed at the DC Atlas website: http://dcgis.dc.gov/dcgis/cwp/view,A,1192,Q,487938,dcgisNav,%7C30634%7C.asp.

The District has also developed a Master LID Implementation Plan. This provides an overview of the feasibility and status of LID projects that are planned or currently undergoing implementation. The Master LID Implementation Plan is included as Appendix C in this document. Note that this list is preliminary and has not been cleared for utility conflicts. If utility conflicts occur during construction, nearby or similar locations will be selected for LID installations.

Table 11. Green Roof Projects Approved for Construction

Location	Square Footage (sq. ft.)
3030 12th St. NE	2,599
1120 19th St. NW	8,700
1250 24th St. NW	27,750
631 7th St. NE	190
283 First St. SE	10,000
3200 Benning Rd. NE	3,471
3935 Benning Rd. NE	12,000
4665 Blue Plains Dr. SW	15,000
1927 Capitol Ave. NE	1,093
2724 Chain Bridge Rd. NW	1,500
616 East Capitol St. NE	1,829
1201 First St. NE	230
1302 Gallaudet St. NE	36,600
3531 Georgia Ave. NW	1,500
421 H St. NE	1,600
417 H St. NE	483
3511 Idaho Ave NW	505
1430 Independence Ave. SE	450
4400 Massachusetts Ave. NW	430
4400 Massachusetts Ave. NW	2,763
4400 Massachusetts Ave. NW	8,900
1300 New Jersey Ave. NW	9,600
945 Rhode Island Ave. NW	9,500
3214 Sherman Ave. NW	4,000
1439 Sherman Ave. NW	520
1439 W St. NW	480
1827 West Virginia Ave. NE	15,750
4200 Wisconsin Ave. NW	3,900
Total Drainage Area	**181,244**

District LID work focused on specific regions and watersheds of the District and included the continuation of design and planning for several projects. In FY 2010:

- Watts Branch Watershed: DDOE worked to obtain the necessary FEMA, Army Corps of Engineers, and local permits for the Watts Branch stream restoration project. Stream restoration designs were revised to meet 100-year floodplain and floodway requirements.

- Fort Dupont Watershed: DDOE worked to maintain bioretention cells installed throughout the Fort Dupont watershed in previous fiscal years.

- Pope Branch Watershed: DDOE did not construct any new LID projects in the Pope Branch Watershed in FY2010. However, completed its RiverSmart Homes pilot project in Pope Branch in early 2010.

- DDOE continued work on several LID demonstration projects:

    - Installation was completed of a stormwater/harvest reuse system at the DPR Lafayette Park. This project will collect up to 8,000 gallons of runoff from stormwater as well as a children's sprinkler system. The water is held in underground cisterns that will be used to irrigate dense native plantings throughout the park.

    - Work continued to install green roofs on two Fire Stations. Installation was completed on an approximately 6,700 square feet roof in the CSO. Work on another 5,600 square feet roof in the MS4 was delayed but underway during FY10.

    - The District continued to offer Green Roof Subsidy programs to properties in the CSO and MS4. District property owners can qualify for a subsidy of $5 per square foot of vegetated roof installed, up to $20,000 per building. Using ARRA funds, DDOE continued a parallel green roof subsidy program targeted at retrofits of large existing buildings, commercial properties and multifamily dwellings.

    - The environmental flagship school project planned with OPEFM/DCPS at the Woodson High School in Watts Branch was completed during FY10. The modernization plan included a 100% demolition of the existing site. New construction incorporated green roofs, green walls, and a large harvest/reuse system. The site design would aim for no stormwater release for rain events less than one inch. In addition, DDOE coordinated with OPEFM to plan, design, and install a 7,700 square foot green roof on Wilson High School, and a 20,000 square foot green roof and 20,000 gallon rainwater harvest/reuse system on Anacostia High School. The Wilson HS project will be completed in FY11, while the Anacostia HS project will be completed in FY12.

- DDOE is working with the USDA Natural Resources Conservation Service (NRCS) through the LID Grant and Construction Program to provide funds for direct services for the design and construction of LID stormwater control BMPs to be in the District.

A potential LID project at MacFarland Middle School is being considered for inclusion as part of the RiverSmart Washington project.

- DDOE partnered with Casey Trees to create a multi-tiered green infrastructure demonstration site at Casey Trees Headquarters. This project incorporates three types of green roof systems (for a total of 2,599 square feet of green roof), a large bioretention, and a harvest/reuse system to provide drought irrigation for the bioretention area. The project was funded with 319 grant funding and was completed in FY10.

- Construction began on a large green roof and green infrastructure project on the University of the District of Columbia campus. This project will retrofit 6 buildings on the UDC campus with green roofs. In addition, a large pedestrian plaza (which is also the roof deck of an underground parking lot) is to be retrofitted with a green roof, multiple cisterns for stormwater harvest/reuse, and bioretention. In total this project will retrofit 120,000 square feet of impervious surface, and will manage the first inch of stormwater runoff.

- DDOE planned a project to demonstrate LID in public space by installing a bioretention area in a triangle park in the Golden Triangle Business Improvement District. Installation of this project is expected to be completed during FY11.

- DDOE began work on a infiltration project to address a longstanding drainage issue on Jay St. NE near Watts Branch, a tributary to the Anacostia River. Stormwater runoff from the road will be directed to infiltration basins near the stream buffer of Watts Branch. The benefits to the Anacostia River will include treating and infiltrating stormwater on site, helping to recharge groundwater levels, and diminishing the impact from polluted stormwater rushing to local streams during storm events. Engineering designs were nearing completion in FY10, with construction scheduled for FY11.

- DDOE partnered with the District Fire and Emergency Medical Service (FEMS) to install rainwater harvest and reuse systems on two fire engine houses. Fire Engine House #3 and Fire Engine House #25 have each installed 3,230 rainwater tanks.

The following DDOT road construction projects were completed in FY10:

- The Nebraska Avenue NW project: Installation of two bioswales along the street and two bioswales in the triangle near the intersection with Oregon Ave NW to reduce and treat stormwater flow from the street.

- The Metropolitan Branch Trail from New York Ave NE to Franklin St NE: Installation of one bioretention area and infiltration trenches to manage runoff from the trail.

The following DDOT construction projects completed design or started construction in FY10:

- The Pennsylvania Avenue SE Great Street project includes three large bioretention areas, permeable pavement sidewalks, numerous functional landscape areas, and tree planting. Construction began in November 2009 and is expected to be complete in December 2011.

- The Georgia Ave NW Great Street project includes three bioretention areas, permeable pavement in tree spaces and conversion of a half-block lane of roadway into green space and park area. Construction started in mid-FY10 and is planned to finish in early FY12.

- The Nannie Helen Burroughs Avenue NE Great Street project. The design includes three bioretention cells, one bioswale, eleven bioretention planters, 300 feet of porous concrete sidewalk, and several areas of pervious pavers over the tree space. This project was awarded a grant through the EPA Green Highways Initiative and DDOT will monitor the water quality from three storm sewer outfalls or catch basins before and after the LID construction to measure the effectiveness of the LID. The extent of this monitoring will be determined based on available funding. Construction began in October 2010 and is planned to finish in March 2012.

- The 11th Street SE Bridge over the Anacostia River will be managing stormwater from the new and replacement bridge through three bioretention areas and two wet ponds. Construction on the bridge project began in early FY10 and is planned for completion in 2013.

- The 9th St NE Bridge over New York Avenue and Railroad will be managing stormwater in three bioretention areas. Construction started in mid FY09 and is planned for completion in FY11.

The following DDOT projects are in the design or concept phase and are proposed to include LID:

- Pennsylvania Ave SE Bridge & Anacostia Freeway includes a bioretention area
- Minnesota Ave NE Great Street design includes stormwater planters along the full length of the roadway project area
- Klingle Trail NW Environmental Assessment and concept design includes a permeable pavement trail and LID.
- C Street NE from 15th St to 21st St Traffic Calming Study includes concepts to combine traffic calming and LID.
- K St NW Transitway from 9th to 23rd St concept plan includes streetside stormwater planters.
- Oxon Run Trail in SE includes significant LID in the concept plan to manage runoff from the trail and adjacent streets.
- DDOT is conducting the first three of twenty-one city-wide livability studies to review each area for safe passages, sustainable living, and prosperous places. Greening opportunities and combined traffic calming and LID sites are being identified through the studies.
- Oregon Avenue NW beginning Environmental Assessment
- Broad Branch NW, beginning Environmental Assessment

DDOT is initiating stand-alone retrofit projects to reduce stormwater volume and improve water quality before the water flows into the sewer system. These projects are separate from any road reconstruction project.

- East Beach Drive NW: bioswales and grass paving to manage 3,000 feet of roadway
- Fort Dupont St & Q St SE: traffic calming incorporating bioretention planters
- Fitch Pl NE at Division Ave: streetside bioretention area

- Erie St SE between Pomeroy St & Morris Rd: bioretention bumpouts

- Green Alleys: citywide effort to install permeable paving in alleys

- Q St Green Alley: conversion of an alley to a pedestrian pathway and stormwater management area

- DDOE, DDOT, and WASA have jointly initiated the River Smart DC project to retrofit two sewersheds with LID and green practices based on the Green Buildout Model. The areas will be monitored for pre and post construction runoff to measure the runoff reduction and quantify the benefit of the practices. Green practices will be implemented on public and private lands and partnerships with Friends of Rock Creek Environment and Casey Trees have been established to complete the project. Pre-construction monitoring occurred in FY10, design is planned for FY11, and construction for FY12.

DDOT is working with private development to coordinate and approve projects that install LID in the public ROW to manage street runoff. The following projects were constructed in FY10:

- The Constitution Square development installed six streetside bioretention planters along the east side block of 1st St NE from M St to N St.

- The Yards development installed streetside bioretention planters along three blocks in the Anacostia Riverfront area near the Navy Yard. The planters were installed on 3rd St and 4th St SE from Tingey St to Water St and on Water St SE between 3rd and 4th St.

- Casey Trees installed streetside bioretention planters with silva cells at its new headquarters building on 12th St NE.

The following private development projects and DDOE led projects are in design or concept phase to include LID to manage road runoff in or near the right-of-way:

- Consolidated Forensics Lab: The DC Department of Real Estate services plans to install streetside bioretention at this new building on 4th St and School St SW. Construction is planned for FY11.

- 34th St and Texas Ave SE at Pope Branch: DDOE will install three regenerative stormwater conveyances to manage stormwater from the streets that lead into Pope Branch. Construction is planned for FY11.

- Broad Branch Stream Restoration: DDOE will install three bioretention areas to capture runoff from alleys and streets to capture recharge water for the stream restoration project.

- 17th & Shepherd St NW: DDOE is planning a project to install a bioretention area in a grassed right of way area to capture runoff from 17th St.

- City Center: This multi-block private development at the site of the Old Convention Center between 9th St, 11th St, H St, and New York Ave NW will install LID along several streets. Construction is planned to start in FY11

- DC Courts: As part of its perimeter security project, the courts plan to install streetside bioretention along 4th St, 5th St, E St, and F St NW.

- The Yards: The entire site development will be installing streetside stormwater planters on 12 blocks. Construction is phased over several years.

DDOT continues to work both internally and with other District of Columbia agencies to develop a maintenance program for LID/BMPs within the public rights of way. In FY10, DDOT worked with DDOE and other agencies on a city-wide LID maintenance task force to develop strategies for maintaining LID sites long term. DDOT continues to work with its Business Opportunity and Workforce Development Center and the University of the District of Columbia Community College to develop a training program for landscape contractors to maintain bioretention areas.

Throughout FY 2010 DDOE continued work on revising and updating the District's regulations for stormwater management and soil erosion and sediment control. Based on stakeholder input provided during FY2009, the District is revising its regulatory proposal to update its stormwater management and soil erosion and sediment control regulations. These regulations are being drafted in accordance with the requirements of the draft MS4 Permit and will set a 1.2-inch retention standard for new development projects in the District. The revised regulations are also being drafted to incorporate in innovative off-site mitigation / stormwater retention credit trading system, which will provide flexibility

to projects unable to meet the full retention requirement on-site. Also, due to this delayed promulgation of the new stormwater regulations DDOE is working with Center for Watershed Protection (CWP) to add low impact development practices to the existing 2003 Design Manual. CWP continued work on the updated Guidebook in FY10; the updated Guidebook is expected to be completed during FY12. In addition, CWP will be providing training sessions on the new Guidebook to engineers from DDOE, other District agencies and the private design community.

FY 2011 Goals: The District will work with non-profit organizations to implement LID projects throughout the city. The District will continue to refine and implement the Master LID Implementation List. The District will also continue to expand its efforts to encourage green roof construction via incentive programs. The District will continue to send technical staff to conferences and workshops. DDOT will continue design of LID practices in its roadway projects and continue design of LID retrofit projects.

Catch Basin Cleaning and Street Sweeping Activities

Performance Standard: The District conducts routine catch basin cleaning and street sweeping activities.

FY 2010 Activities: During FY 2010, the District continued catch basin cleaning activities (clean each catch basin once every six months to a year). The District continued street sweeping activities (sweep District streets as often as once every week to no less than once each month). DPW continued the project to identify improvements in sweeping frequency/techniques to reduce pollutant loading in the MS4 by evaluating street sweeping practices and schedules.

DPW is responsible for street sweeping activities in the District, while DC Water conducts catch basin cleaning as part of its maintenance of the MS4 conveyance infrastructure. DPW uses two basic methods to clean and sweep streets: mechanical street sweeping, and litter vacuum personnel, complemented by a truck crews that clean streets where the density of parked cars prohibit the effectiveness of mechanical cleaning.

In FY 2010, DPW and DC Water continued to implement street sweeping and catch basin activities, respectively. A total of 87,837 miles of streets, freeways, and highways were cleaned mechanically and manually during FY 2010. DPW also swept 2,397 alley segments and collected 7,834 tons of litter from litter receptacles. DPW swept

27,994,137 Square footage of street swept per week in the MS4 area, which can be seen in Appendix H.

Street Sweeping Activities

Table 12 illustrates the ten-year trend of street sweeping activities. The number of alley and street miles doubled in 2002 with the purchase of new equipment, including litter vacuum carts for the manual collection of litter. Street miles increased through FY 2004. The tonnages collected are influenced by the number of warm days permitting outside activities and the response of the public to both anti-littering outreach efforts in the streets and alleys, and the continued use of trash cans.

DPW completed the first phase of a Street Sweeping Study in FY 2008. Phase I was conducted to determine the effectiveness of DPW's mechanical sweeping program with regard to removing fine particulate matter from the roadways in the MS4 area. This sampling study analyzed both the composition of materials collected during the sweeping process, as well as the fine particulate matter that remains on the street. It also began a comprehensive review of the DPW street sweeping program, and developed a tentative street classification and sweeping frequency to enhance the District's sweeping program for fine particle removal.

In FY 2010, DPW completed Phase II of the street sweeping study. This study was conducted to develop newly designed routes for the signed sweeping areas that accounted for drivability, and also provide for an optimal travel path. Phase II also consisted of developing sweeping regions for unsigned streets that were designated by the District as "environmental hotspots." In FY 2010, DPW also began the process to implement the recommendations from the report. DPW will launch its improved mechanical street sweeping program in March 2011. Appendix H includes a map of DPW's current sweeping routes plus the environmental hotspot areas identified by the sweeping study.

The success of DPW's street sweeping efforts will be measured by an increase in tons collected as a result of street cleaning activities. Street sweepers with the License Plate Recognition System (LPRS) installed will be monitored to determine increases/decreases in compliance with No Parking signs in areas signed for mechanical street sweeping.

Table 12. Ten-Year Trend Results of Street Sweeping Activities.

Fiscal Year	Street Miles	Alleys Swept*	Litter Receptacles	
			Number	Tonnage
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

***** Represented as alley miles prior to FY2006, and alley segments beginning in FY 2006

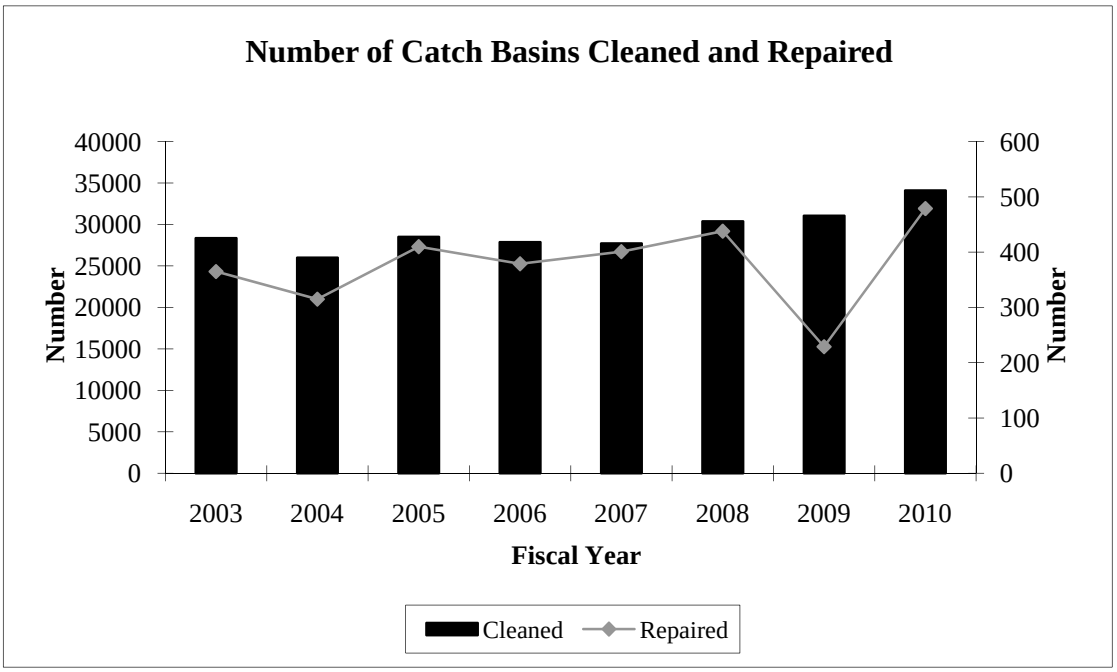
Catch Basin Cleaning Activities

DC Water currently conducts the operation and maintenance of pipes and conduits carrying stormwater flow. There are approximately 25,000 catch basins located within the public right-of-way in the District. Approximately one-half of these catch basins are in the MS4 area, with the remainder in the CSO area. DC Water's cleaning program does not differentiate between the two systems and works to keep all catch basins clean.

Crews operate on a predetermined schedule, cleaning catch basins by ward. During each work day, six two-man crews clean approximately 20 catch basins each. In FY 2010, DC Water crews cleaned 34,095 basins for an average cleaning frequency of once every 12 months. Based on the OCTO GIS database, approximately 14,434 catch basins are located in the MS4. DC Water crews repaired 479 basins as part of the basin repair program during FY 2010. Repair tasks vary from resetting the tops of the catch basins to redesigning the catch basin to avoid damage, to rebuilding the entire structure.

Figure 2 shows the eight-year trend for the cleaning and repair of the District catch basins. The number of catch basins cleaned and repaired has remained relatively constant since FY 2003.

Figure 2. Eight-Year Trend of Catch Basins Cleaned and Repaired.



FY 2011 Goals: DPW will begin to implement the recommendations of the street sweeping study to optimize street sweeping routes in the MS4 area of the city. Catch basin cleaning activities will continue at current levels.

Coordination of Leaf Collection

Performance Standard: The District conducts curbside collection of leaves from District residences.

FY 2010 Activities: DPW activities were conducted through their Leaf and Holiday Tree Program, including the seasonal curbside vacuum collection of leaves from residences in the District. Residents rake leaves into piles, place leaves into a tree box space in the front of their property, or bag leaves and place them in the tree box. Leaves are then vacuumed by one of the District's leaf vacuum trucks. DPW coordinates the leaf and holiday tree collections through the following activities:

- Prior to leaf collections district residents are mailed a flyer, which can be found on the web at http://www.dpw.dc.gov/dpw/cwp/.
- The districts within the eight wards comprising the District have leaves collected twice during the collection season on specified days from each ward-district.

- Leaf collection activities for FY 2010 were conducted from November 2009 through January 2010.

As a result of the Leaf and Holiday Tree Program, 8,050 tons of leaves and holiday trees were collected during the collection season. These tonnages represent leaves primarily collected by the vacuum trucks. The resulting tonnage from two bagged leaves "blitz" weekends conducted during the leaf collection season are also included in the total tonnage of leaves collected for FY 2010.

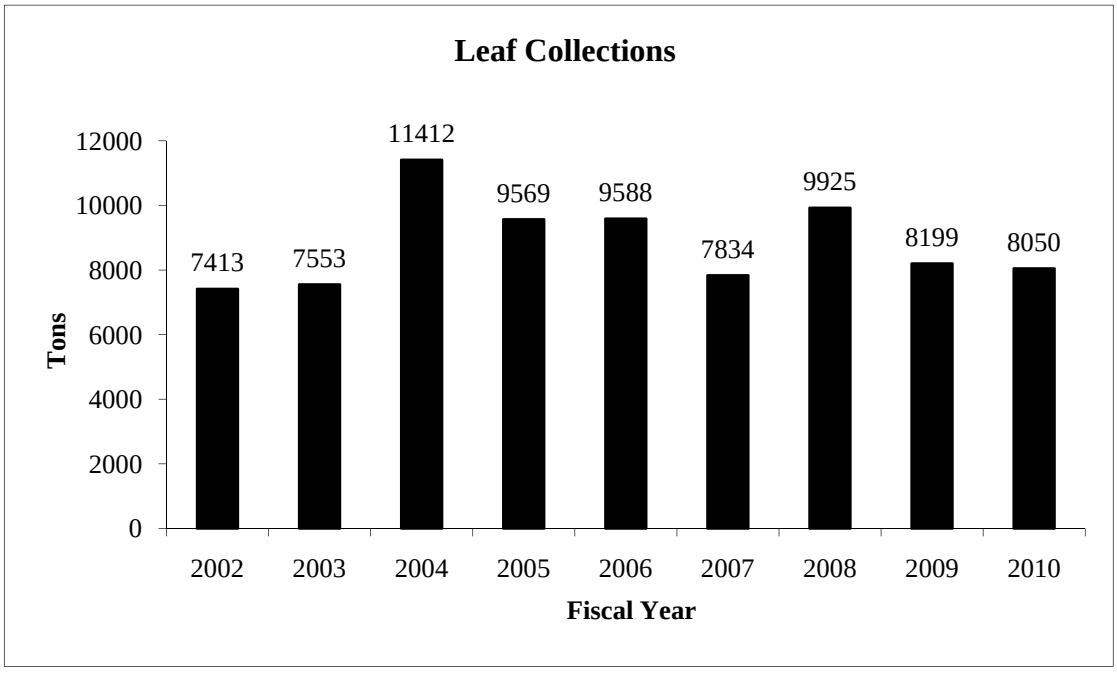
Figure 3 shows the nine-year trend of leaf collection activities in the District.

FY 2011 Goals: The District will continue to collect leaves and holiday trees.

Rain Leader Disconnect Program

Performance Standard: The District will allow disconnection of rain leaders in new construction and existing buildings so that runoff can be channeled to localized infiltration areas. The Rain Leader Disconnect Program was developed to reduce stormwater runoff from government, commercial, and residential activities.

Figure 3. Nine-Year Trends for the Leaf and Holiday Tree Collection Program.



FY 2010 Activities: During FY 2010, DDOE offered the RiverSmart Homes program city-wide. "RiverSmart Homes" is a lot-level education and incentive program which encourages property owners to adopt stormwater reduction practices, including rain barrel installation, rain garden installation, "Bayscaping" or landscaping with native plants, planting shade trees, and removing impervious surfaces to replace them with pervious ones.

RiverSmart Homes hinges around "stormwater audits" of the properties of interested homeowners that are performed by DDOE personnel. These audits identify ways that homeowners can reduce stormwater pollution from their property and provide valuable time with homeowners to educate them about stormwater pollution.

Homeowners then choose which landscape enhancements they would like to pursue, with the District covering a cost up to $1,200 for most households. DDOE works through a grantee to install each of the stormwater reduction practices. DDOE oversees the grantee's installation work up to the $1,200 threshold with costs to homeowners amounting to $100 for native landscaping, $75 for a rain garden, $50 per shade tree, and $30 for the rain barrel. For the installation of pervious surfaces, the homeowner covers the cost of replacement above $1,200. Rain garden installations may be covered up to $1,600 in some circumstances. Once the work is complete, DDOE personnel return and inspect the installation. If the work is done properly, the DDOE releases the cost of installation to the grantees that oversee the installation work.

After the completion of the pilot phase DDOE conducted 883 city wide audits in each of the eight Wards of the city. In FY10 125 rain barrels were installed, 729 trees were planted, 55 rain gardens were installed, 108 BayScapes were installed, and 18 impervious surfaces were replaced with pervious surfaces. By hiring an additional staff member DDOE has reduced the amount of time from 4-6 months down to 2-4 months that a homeowner waits for a stormwater site audit.

In addition DDOE awarded a contract to design an online tool named Green Up that will launch in early August 2011. The tool includes a marketplace that will allow homeowners to choose the option of receiving a stormwater site audit and receiving recommendations from DDOE or vetting and self selecting a contractor certified by DDOE to install either pervious pavers, BayScaping, or a rain garden. DDOE expects the "marketplace" to increase popularity of the program and have developed an online web based tool for residents, businesses, and other property owners. This tool will teach property owners about their property's stormwater discharge as well as actions they can

take to reduce stormwater releases. In addition, the tool will allow them to report positive actions they have taken to reduce their environmental impact. This tool will aid DDOE in sending targeted messages to, and receiving feedback from, property owners that opt to register as site users.

DDOE followed up with all the homes that participated in the program to survey them on their satisfaction. Of the homeowners that returned the survey,49% were either satisfied or very satisfied with their experience of the entire process and installation. The majority surveyed felt they were "knowledgeable" about stormwater runoff issues after the stormwater site audit. The remaining homeowners were "very knowledgeable" or "somewhat" knowledgeable with just a few feeling "not at all." The top three motivations for becoming a RiverSmart Home were to "beautify your yard," "to help the environment and rivers," and "reduce erosion on your property."

FY 2011 Goals: For the next two years DDOE will use MS4 funds and Bag Bill funds to pay for RiverSmart Homes installations. DDOE anticipates installing 75 rain gardens, 70 BayScaping (native plant landscaping) sites, 10 pervious paver retrofits, 500 trees on private property, and 500 rain barrels over this time period.

Education of Public on Pet Wastes, Fertilizing, and Landscaping

Performance Standard: The District maintains a program to develop and distribute public education materials regarding the control of pet wastes, the use of fertilizers, and the promotion of landscaping practices.

These programs are discussed under Section III.F.12

Methods of Measuring the Performance of Activities

Performance Standard: The District has taken steps to develop a series of tracking methods to measure the performance of stormwater management activities to reduce pollution loading to receiving waters. The demonstration of water quality improvements requires a thorough understanding of the existing water quality throughout the MS4.

FY 2010 Activities: The District continued monitoring the performance of stormwater management activities to reduce pollution loading to the Anacostia and Potomac River watersheds. Significant progress has been made in this area including:

- Use of the Master Address Repository (MAR) geocoder to determine if a project is located within the MS4 or CSO areas of the District,
- Verification of the MS4 database system,
- Estimating pollutant loading using the Simple Method equation for constituent seasonal and annual loads,
- Enhancing regulatory and promotional programs with respect to the use of BMPs, and
- Developing a financial tracking system to better define stormwater related expenses.

FY 2011 Goals: The District will continue to refine measurement tools to provide the necessary performance metrics for establishing a method to measure performance of MS4 activities. The District will continue to develop the Stormwater Pollution Tracking Database that will contain all existing and potential new databases pertaining to District agencies' activities that will ultimately reduce storm water pollution.

Strengthening Erosion Control Programs for New Construction

Performance Standard: The District maintains a plan review erosion control program for new construction coupled with a field inspection program to ensure compliance with the District erosion control regulations.

FY 2010 Activities: During FY 2010, DDOE continued to review plans, inspect construction sites, and implement the inspection and enforcement program as part of the sediment and erosion control program for compliance with erosion and sediment control and SWM regulations. DDOE WPD promoted its *District of Columbia Standards and Specifications for Soil Erosion and Sediment Control* and *Storm Water Management Guidebook, 2003*. DDOE continues to coordinate a future contract with the Center for Watershed Protection to update and revise the *Storm Water Management Guidebook 2003* after the Draft Regulations are finalized. DDOE hired two full-time inspectors to increase new construction review and field inspection to ensure compliance with the District's erosion control regulations. DDOE will also complete a revision to the *Storm Water Management Guidebook 2003* to reflect a pending revision of the District's stormwater management regulations. The revised SWM regulations will require construction site managers to have erosion control training.

This program is discussed under Section III.F.3 Management Plan for Construction Sites.

Federal Facilities Program

Performance Standard: The District maintains consent agreements between District and federal agencies to comply with the District sediment and erosion control requirements.

DC laws specify that all builders, including federal contractors, must follow the sediment and erosion controls, including sediment and erosion controls on new and re-build construction sites. The Water Pollution Control Act of 1984, as amended, D.C. official Code § 8-103.01 *et.seq*., and the Soil Erosion and Sedimentation Control Act of 1977, as amended, codified in 21 DCMR §§ 500-507 provide the legal authority to enforce the erosion and sediment control provisions of the SWM program.

FY 2010 Activities: GSA and DDOE signed a consent agreement in FY 2000 that requires federal work under contracts through GSA to comply with the same sediment and erosion control requirements as commercial, residential, and industrial operations in the District. This consent agreement assists the District in ensuring that federal facilities comply with the Soil Erosion and Sediment Control Act. DDOE and GSA continue to work under this agreement.

The District continued to implement existing agreements with District and federal agencies. In FY 2010, DDOE approved 10 stormwater BMP plans for proposed projects on federal facilities. These projects included a variety of BMP types. These proposed projects are located in the Northwest, Northeast, Southwest and Southeast quadrants of the District, and each of the projects were located in the MS4 area. Table 13 presents the types of BMPs proposed for federal properties and the District quadrant they are located in.

FY 2011 Goals: The District will maintain consent agreements with federal agencies for compliance with erosion control regulations including the review of stormwater BMP plans.

Table 13. BMP Types on Federal Properties, FY 2010

BMP Type	Federal Facility	D.C. Quadrant Location
Stormceptor	Delcarlia Reservoir	NW
RainStore System and Vegetated Bioswale	Rock Creek Park	NW
Permeable Pavers	C & O Canal Park	NW
Baysaver	Martin Luther King, Jr. Memorial	SW
Filterra Tree Box	Washington Navy Yard	SE
Bioretention and Porous Pavement	Anacostia Boat House	SE
Stormfilter	Francis Gregory Library	SE
Gravel Filter	Kenilworth-Parkside Center	NE
Bioretention	Deanwood Library	NE

District Facilities Program

Information specific to DDOT is provided in Section III.F.3.

Continuance of Current Programs

Information about agency-specific cooperative programs is provided in Section III.F.12.

III.F.2 Industrial Facilities

Part III.B.2 of the Permit requires the District to implement a program to monitor and control pollutants in stormwater discharged to the District's MS4 from industrial facilities, and to continue to maintain and update the industrial facilities database.

The management plan of stormwater pollution control from industrial facilities emphasizes the tracking of facilities through a database system, the monitoring and inspection of industrial facilities, and the District's spill prevention and response program. Compliance activities are provided in the following eight areas:

- Industrial facilities database,
- Solid waste transfer stations,

- Hazardous waste treatment, disposal and/or recovery plants,
- Industrial facilities subject to Superfund Amendments and Reauthorization Act (SARA) Title III or the Emergency Planning and Community Right-to-Know Act (EPCRA),
- Industrial facilities with a discharge to the MS4,
- Wet-weather screening program,
- Spill prevention, containment and response program, and
- Review and approval process.

Industrial Facilities Database

Performance Standard: The District maintains a database of prioritized industrial facilities with stormwater NPDES permits for the purpose of establishing baseline facility information and supporting MS4 related monitoring efforts. The database includes a listing of facilities in the District (whether on private, federal or District properties) in addition to those with NPDES permits which are registered with federal and state regulators and generate, store, or have released hazardous materials. Information for this database is collected from the Business and Professional Licensing Administration DCRA and is verified by field inspection and GIS analysis. Site verification is conducted periodically by DDOE WQD staff which updates all basic information at the time of inspection including: location, facility name, description of facility's services, contact person(s) and phone number(s). Field verified information undergoes further GIS analysis to locate the facility within a known sewershed.. This database framework also allows for relating compliance inspection information for each facility. Currently there are 232 individual facilities in the facility inspection database. These facilities provide different services such as automotive repair, dry cleaning, laundry, gas/oil stations, etc. The database can be searched by several criteria including type of service rendered, sewershed, sub-watersheds, wards, and zip codes.

FY 2010 Activities:

In FY 2010, WQD DDOE maintained its database of 232 facilities in the MS4 area in the District with 12 individual or site-specific stormwater federal NPDES permits. Nine of the permitted sites are located in the MS4 service area (not counting the District permit for the MS4 itself). The list of facilities is provided in Appendix D.

DDOE also targeted automotive repair, car wash, laundry and dry cleaning facilities for facility inspections in FY 2010. More detail on these targeted facility inspections can be found in Section III.F.10.

FY 2011 Goals: To continue tracking facilities and expanding the industrial facilities database to include a range of industrial facilities in MS4 area.

Solid Waste Transfer Stations

The District's government does not operate any solid waste disposal sites within the District. Instead, municipal solid waste collected by DPW is deposited at two municipal waste transfer stations and then transferred out of the District for disposal at licensed facilities. Private companies also operate two transfer stations in the District. These four facilities are located in the MS4 area. The locations of these facilities are provided in Table 14.

Pollution from stormwater runoff at the municipal transfer facilities is being managed under the Solid Waste Facility Permit Act. DCRA, DDOE, and DPW enforce these regulations as part of their responsibility to manage pollution from stormwater runoff at municipal waste facilities within the District.

Table 14. Locations of Municipal and Private Solid Waste Transfer Stations within the MS4.

Municipal Solid Waste Transfer Facilities		
4900 Bates Road, NE.		
3200 Benning Road, NE		
Private Solid Waste Transfer Facilities		
Name	**Operator**	**Location**
Brentwood	Consolidated Waste Industries, Inc.	1220 W Street, NE
Queens Chapel	Waste Management	2160 Queens Chapel Road, NE

Hazardous Waste Treatment, Disposal, and/or Recovery Plants

Performance Standard: The industrial facilities database includes a listing of facilities in the District that generate, store, or have released hazardous materials. Information for this database is collected from site verification and GIS analysis.

FY 2010 Activities: Presently, the U.S. Navy's Naval Research Laboratory in Southwest DC is the District's only active regulated RCRA Treatment Storage and Disposal Facility. There are 22 RCRA Large Quantity Generators (LQGs), 76 RCRA Small Quantity Generators (SQGs) and 572 Conditionally Excluded Small Quantity Generators (CESQG's) within D.C. RCRA regulations outline handling, storage, and spill control requirements at those facilities.

Facility addresses were used to determine whether the facilities are part of the MS4 area.

- The one Treatment Storage and Disposal Facility in the District that appeared in EPA's RCRA Info database is not located in the MS4 service area.
- There were 76 SQGs and 572 CESQGs in the RCRA Info database. Based on facility addresses provided, approximately 50% of the facilities are in the MS4 service area.
- In FY 2010, no spills were reported to DDOE from these sites.

Inspection and monitoring of hazardous waste facilities is the responsibility of DDOE's Hazardous Waste Division (HWD), which has procedures in place to investigate sites and spills. These procedures include notification and coordination with DDOE of any incidents that impact the city's water resources. According to recent data from EPA's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS), there are 32 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) facilities in the District (Appendix D).

Based on facility addresses, there are 18 facilities or more within the MS4 area. Due to the temporary nature of some CERCLA facilities, several facilities cannot be mapped or field verified. CERCLA status is not permanent as the sites are cleaned-up they are moved of the active list.

FY 2011 Goals: The District will continue tracking and verifying database information on RCRA sites within the District.

Industrial Facilities Subject to Superfund Amendments and Reauthorization Act Title III or the Emergency Planning and Community Right-to-Know Act

In accordance with the Permit, the District tracks industrial facilities within the District that are subject to regulation under CERCLA. Six years after CERCLA was enacted, SARA amended it. SARA Title III, also known as EPCRA, requires facilities to report on the storage, use or release of certain chemicals and provides for information about potentially

dangerous chemicals being made available to the public. One of the means EPA uses to make information available is through the CERCLIS database.

- There are currently 32 CERCLA sites registered with federal and state regulators within the District. The list includes private and federally owned sites. The list of sites is given in Appendix D.

- Of the 32 sites, only the Washington Navy Yard is on the final National Priorities List.

Industrial Facilities with a Discharge to the MS4

DDOE staff maintained a list of industrial facilities in the District and verified NPDES permit holders.

- Nine out of the 12 industrial facilities with individual or site-specific NPDES permits are located in the MS4 service area.

- One facility is in the CSO area.

- The remaining permits are for the District's MS4 itself and a facility in Virginia.

Wet Weather Screening Program

The Wet Weather Screening Program as defined in Section IV.C of the Permit is being implemented as part of the Wet Weather Outfall Monitoring Program and in conjunction with the illicit discharge detection program.

Performance Standard: This program is required to determine the source(s) of pollutants that contaminate stormwater runoff.

FY 2010 Activities: The District continued to evaluate, upgrade, and implement the wet weather screening program. Screening procedures were developed and included in the Quality Assurance Project Plan (QAPP) which is presented in detail in the Discharge Monitoring Reports.

FY 2011 Goals: The District will continue the wet weather screening program including the QAPP and present detailed results in future Discharge Monitoring Reports.

Spill Prevention, Containment and Response Program

FY 2010 Activities: The District continues to implement the *Water Pollution Control Contingency Plan* (WPCCP), which 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. In FY 2010, the District continued to operate under the WPCCP established in 1999. DPW,DDOT and DC Water coordinate spill prevention, containment, and response activities with DDOE.

FY 2011 Goals: The District will continue to perform compliance and enforcement activities in accordance with EPA regulations.

III.F.3 Construction Site Activities

Part III.B.3 of the Permit is titled "Management Plan for Construction Sites" and details the permit requirements for control of stormwater pollutants from construction sites in the District.

The management plan for stormwater pollution control on construction sites emphasizes the review and approval process, and the inspection and enforcement procedures of the construction permitting program, as well as construction site and plan educational programs, traffic pollution control strategies, and air pollution compliance activities. A summary of these compliance activities includes:

- The review and approval process
- Inspection and enforcement procedures
- Site inspections and loading estimates
- Educational measures

Review and Approval Process

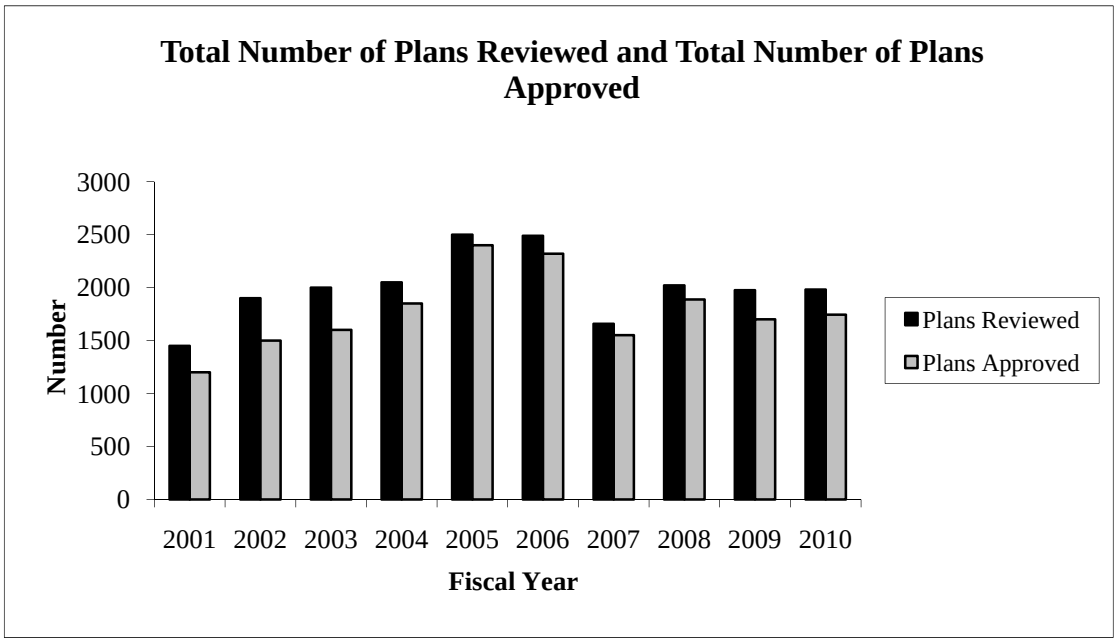
Performance Standard: The District reviews and approves construction plans through its "One-Stop Permitting Center". Plan review and site inspections are coordinated with DDOE enforcement staff and DCRA to ensure that deficiencies in the permit process are corrected when they are encountered. DDOE Technical Services Branch has staff stationed at the "One-Stop Permit Center" at DCRA to provide assistance to customers and to ensure that permit applications, construction plans, and environmental forms and

documents meet regulatory requirements. Each year DDOE staff are given refresher training to improve efficiency and effectiveness in plan review.

FY 2010 Activities: District agencies continue to provide a "One-Stop Permitting and Business Center" for the approval of plans and to provide quality control of reviewed plans. Minor projects are reviewed at the permit center and are either approved or rejected. Plans for major or more complex projects are reviewed and approved at the DDOE main office. During 2010, DDOE reviewed 1,736 construction plans for compliance with sediment and stormwater pollution control. This review process led to the approval of 1,613 of these plans. DDOE processed 62 requests for information on soil characteristics and reviewed approximately 72 geotechnical reports to assess soil suitability for various construction projects.

Figure 4 shows the nine-year trend of projects reviewed and approved through the "One Stop Permitting and Business Center". The approved projects indicate the number of projects that have been reviewed under the most recent stormwater regulations, which require both stormwater volume and water quality control. The number of plans reviewed and approved is dependent on development and re-development trends in the District.

Figure 4. Nine-Year Trend in Projects Reviewed and Approved.



FY 2011 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.

Inspection and enforcement procedures

This program is discussed under Section III.F.11 Enforcement Plan.

Site inspections and loading estimates

This program is discussed under Section III.F.11 Enforcement Plan.

Educational measures

This program is discussed under Section III.F.12 Public Education.

Roadways

Performance Standard: The District operates and maintains the local roadways to reduce the discharge pollutants resulting from vehicular traffic from its SWM systems.

Other activities conducted by MS4 Task Force agencies included actions to reduce the amount of pollutants resulting from traffic on public roads that enter SWM systems throughout the District.

FY 2010 Activities: DDOT has a staff of two engineers and one landscape architect to focus on stormwater issues including water quality. The DDOT Stormwater Management Team reviews drawings to resolve drainage issues, ensure proper compliance with erosion and sediment control requirements, ensure use of water quality catch basins (or other water quality practices) in new roadway reconstruction projects, and identify opportunities for installing BMPs and LID. Starting in 2008, the majority of DDOT roadway reconstruction projects install Water Quality Catch Basins to manage stormwater runoff. This catch basin design traps floatables and sediments in specified basins so that they can be removed by maintenance crews.

Additionally, to reduce the impact of traffic related pollution, DDOT is working diligently to improve the Districts network of trails. During FY 2010, DDOT continued to expand its bicycle and pedestrian transportation programs with major trails: Metropolitan Branch Trail, alongside the Red Line of the metro system, the Anacostia Riverwalk Trail, which follows the Anacostia River from the Potomac River to the

Maryland border and the Watts Branch Bike Trail, which follow the Watts Branch stream through Marvin Gaye Park. DDOT continues efforts for bicycle safety education and enforcement activities.

In FY10, DDOT launched the Capital Bikeshare program, a short term bicycle rental program which allows users to rent a bike at one station and return to another. The initial phase will install 100 stations across the city.

In FY10, DDOT installed a public use electric vehicle charging station at 14th St and U St NW.

DPW has elected to purchase alternative fuel vehicles (AFVs) to reduce particulate vehicle emissions that contribute to stormwater runoff. In FY 2010, DPW purchased 46 AFVs that are powered by natural gas or E-85 (85 percent ethanol, 15 percent gasoline). This brings the total number of AFV's in DPW's fleet to 802, including 17 electronic forklifts.

III.F.4 Flood Control Projects

The District Floodplain Management Program of the DDOE Watershed Protection Division reviews plans for development projects located in District floodplains. Evaluations are made on quantity control and potential water quality impacts for proposed flood management projects according to the laws and regulations that govern the District Floodplain Management Program:

1. D.C. Law No. 2-23 (The District of Columbia Soil Erosion and Sedimentation Control Act of 1977)

2. D.C. Law No. 1-64 (The District of Columbia Applications Insurance Implementation Act of 1976); D.C. Code 5-301; Mayor's Order 84-193, dated November 2, 1984

3. D.C. Law No. 8-36 (The District of Columbia Environmental Policy Act of 1989)

4. D.C. Law No. 6-216 (Construction Codes Approval and Amendments Act of 1986)

5. Clean Water Act, 33 U.S.C. 1251 *et. seq*.

6. The District of Columbia Water Pollution Control Act of 1984, D.C. Official Code § 8-103.01 *et. seq*.

7. 21 DCMR § 5 (D.C. Soil Erosion and Sediment Control Stormwater Management Regulations)

Part III.B.4 of the Permit details the permit requirements for documenting and evaluating flood control projects in the District.

The management plan for stormwater pollution control through flood control management emphasizes the following:

- Water quality impact and beneficial use assessment.
- Existing flood control devices retrofit assessment.
- Floodplain mapping.
- Floodplain development procedures and reviews.
- Impervious surfaces evaluation.

In FY10, DDOE processed 117 requests for flood zone determinations at various properties in the city. Flood zone information is critical in determining the availability of flood insurance and eligibility for federal assistance in the event of natural disasters caused by floods.

Existing Flood Control Devices Retrofit Assessment

The District of Columbia operates and maintains flood control devices including BMPs, pump stations, flood and tide gates, weirs, canals, and stormwater collection and conveyance systems. The District has levees located at Potomac Park, Lincoln Memorial, Constitution Avenue, Fort McNair, and along Anacostia Park. The levees are inspected annually and maintained by the United States Army Corps of Engineers (USACE). Privately owned and maintained flood and tide gates are located in Washington Harbor at the Georgetown Waterfront Development. The flood and tide gates are used under high water conditions in the Potomac River to control flooding in the harbor area. Two grade control structures constructed at Watts Branch to control peak flows and sediment movement to alleviate repetitive downstream flooding are maintained by the District.

The District Floodplain Management Program of WPD evaluates quantity control and potential impacts on water quality for proposed flood management projects. The quantity control and water quality evaluation is conducted following the laws and regulations that govern the District Floodplain Management Program.

FY 2010 Activities: According to the National Capital Planning Commission's Federal

Capital Improvements Program for FY 2007-2012, there is a flood protection project for downtown, Washington, D.C. that consists of retrofitting the existing levees between the Lincoln Memorial and Washington Monument. Design work for this project has been completed and construction is expected to be completed by January, 2012.

The Watts Branch stream restoration project is currently under construction. The stream restoration project for Watts Branch consists of the construction of step-pool structures in front of the existing downstream grade control structures. During a stream assessment conducted by USFWS, the segment of the tributary located upstream of the grade control structures was found to be stable, with little channel and bank erosion and a well-developed riparian buffer. No restoration of that segment is necessary at present.

Floodplain Mapping

Performance Standard: The District coordinates with FEMA in identifying District areas prone to flooding.

FY 2010 Activities: Flood hazard mitigation and floodwater pollutant removal requires identification of at-risk areas through floodplain mapping. Through the nation's flood insurance policy, FEMA has developed floodplain maps for all areas of the United States. The FEMA Q3 FIRMs for the District have been revised by FEMA using the latest technologies and most current data, and updated studies based on Light Detection and Ranging topography and new hydraulics.

On March 26, 2010, FEMA issued a new letter of final determination (LFD) for the District's proposed digital flood insurance rate maps (DFIRMS) and flood insurance study (FIS). The new LFD supersedes the first LFD issued by FEMA on March 26, 2008. The new FIRM along with the accompanying flood insurance study (FIS) became legally effective on September 27, 2010. As part of the compliance with FEMA's requirement the District Flood Hazard Rules were also updated to reflect the new changes. As a condition for FEMA's issuance of the LFD, the District was required to complete design and construction work to improve the 17th Street levee as part of a larger partnership with federal agencies to provide flood protection for the monumental core. It is anticipated that the improvements to the levee will be completed by January 2012. Upon completion, if the US Army Corps of Engineers determines that the As-Built levee has met the appropriate standard, FEMA will re-determine the extent of the new 1% chance flood boundary.

FY 2011Goal: The District will continue coordination with FEMA and other partners and stakeholders regarding the District's floodplain management program.

Floodplain Development Procedures and Reviews

Performance Standard: The District reviews and assesses the impact of flood control projects.

The MS4 Permit requirements for floodplain development procedures and review are met through the promulgation of Title 20 (Chapter 31- Flood Hazard Rules) of the DCMR. These regulations describe in detail how projects proposed in floodplains will be reviewed to ensure proper consideration of pollutant reduction in flood-prone areas. Together, these rules regulate, restrict, or prohibit certain uses, activities, and development, which alone or in combination with current or future uses will cause unacceptable increases in flood heights, velocities, and frequencies.

FY 2010 Activities: The District reviewed development within the District floodplain as provided in 20 DCMR Chapter 3100 and the DOH *Nonpoint Source Management Plan II* (provided as attachments to the 2007 Annual Report). Of the proposed projects reviewed for MS4 areas, six were located in a floodplain or a flood-prone area.

FY 2011 Goal: The District will continue review of development projects in the Development and Activity Database maintained by the Office of Planning.

Impervious Surfaces Evaluation

Performance Standard: The District reviews and assesses the impervious area on lots undergoing construction or re-construction.

The permit requires the collection of data on the percentage of impervious area located in floodplain boundaries for all existing and proposed development. Since the effective date of the Permit, this has been done for proposed developments through the construction plan information submitted with construction permit applications under 20 DCMR and the Water Pollution Control Act of 1984, D.C. Official Code § 8-103.01 *et. seq*. DDOE has initiated a program to collect data to evaluate impervious surfaces for both proposed and existing development in floodplains.

FY 2010 Activities: DDOE, in collaboration with OCTO, performed an analysis to determine the percentage of impervious surface on the District floodplains using FEMA

Q3 flood data for three floodplain types: 100-year with velocity hazard (Zone A), 100-year floodplain (Zone AE), and 500-year floodplain (Zone X500). Features analyzed included buildings, sidewalks, and roads. The resulting percentage of total impervious surface area that is within the floodplains was calculated using GIS and is summarized in Table 15.

Table 15. Impervious Surface Analysis of Floodplains.

	Total Impervious Area (sq.ft.)	Total Area, Excluding Water (sq. ft.)	Percentage Impervious Area
Zone A	581,948 (0.02 sq. mi.)	3,529,384 (0.12 sq. mi.)	16.49%
Zone AE	17,151,553 (0.6 sq. mi.)	843,602,241 (3.03 sq. mi.)	20.27%
Zone X500	20,667,372. (0.7 sq. mi.)	49,849,324 (1.79 sq. mi.)	41.46%
Complete City (sq. mi.)	**26.43**	**61.31**	**43.10%**

FY 2011 Goal: The District will continue review of development projects in the Development and Activity Database maintained by the Office of Planning to allow continued updating of the amount of proposed impervious surface added to the floodplains (through projected development) to ensure consideration of pollutant reduction in the floodplains.

III.F.5 Monitor and Control of Pollutants from Municipal Landfills or Other Municipal Waste Facilities

Part III.B.5 of the Permit pertains to the Control of Pollution from Municipal Landfills and Other Municipal Waste Facilities. The management plan for stormwater pollution control with respect to municipal landfills and municipal waste facilities emphasizes:

- Municipal waste reduction, and
- The prioritization of municipal waste reduction controls.

Performance Standard: The District maintains its municipal solid waste transfer stations in order to minimize the stations' stormwater impacts and to keep up with increasing waste and recyclable loads in the District.

FY 2010 Activities: DPW worked to control pollutants in runoff from municipal waste facilities, including waste transfer stations and equipment storage and maintenance

facilities, by continuing the evaluation of additional BMPs to be incorporated at the Fort Totten and Benning Road transfer stations.

Municipal Waste Reduction Program

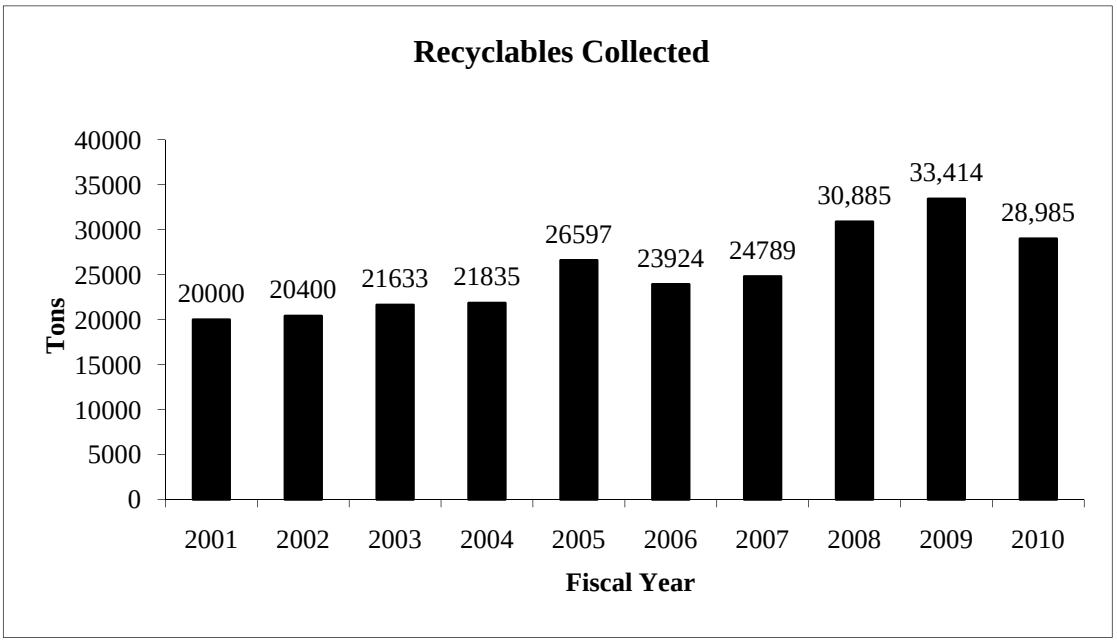
The Municipal Waste Reduction Program was developed to identify measures to evaluate, inspect, enforce, monitor, and reduce pollutants in stormwater discharges from facilities that handle municipal waste including sewage sludge. Regulatory programs directly supporting the District's nonpoint source stormwater protection and waste reduction efforts include DDOE's *Nonpoint Source Management Plan II*, which cites the Solid Waste Management and Multi-Material Recycling Act of 1988. This Act requires the recycling of certain wastes, thereby materially reducing the activities at waste handling facilities, further reducing stormwater pollution. The District provides recycling service to residential and multi-family residences of three or fewer dwelling units and requires commercial businesses and government offices to have a private recycling contractor. In FY 2010, DPW collected an estimated 104,322 tons of solid waste (trash, bulk, leaves not composted), plus 28,985 tons of recyclables (curbside, e-waste, shredded paper, leaves composted) from the residential population.

Figure 5 shows the ten-year trend of recyclable collection tonnage collected by the District.

The District does not operate any solid waste disposal sites within the District. Instead, municipal solid waste collected by DPW is deposited at either the I-95 Energy Resource Recovery Facility or private landfills in Virginia.

Improvements at the municipal solid waste transfer stations at Fort Totten and Benning Road, including improvements in the paving and drainage systems, were completed in previous Fiscal Years. The land surface within the District waste handling facilities is predominantly paved and/or highly developed. In FY 2010, the District waste handling facilities were swept with mechanical sweepers several times per week.

Figure 5. Ten-year Trend in Recyclables Collected.



The management program for the municipal facilities targets the nonpoint source runoff with particular focus on the control of pollutants that build up on the paved and/or developed portions of the facility site. DPW is developing a program to provide water quality control at the District municipal waste facilities including waste transfer stations and equipment storage and maintenance facilities.

Prioritization of Municipal Waste Reduction Controls

The Permit requires the District to develop priorities and procedures for implementing control measures for pollutant reduction at sites within the District's MS4. The initial phase of the program included procedures to evaluate, inspect, and monitor regulated sites. Based on the evaluation of the results of this monitoring, the District's solid waste management now includes waste reduction, recycling, and disposal.

FY 2011 Goals: The District will continue to maintain the municipal solid waste transfer stations to reduce impacts to stormwater.

III.F.6 Monitor and Control of Stormwater Pollutants from Hazardous Waste Sites

Part III.B.6 and Part III.B.10 of the Permit outline the requirements for monitoring and control of pollutants from hazardous waste sites. The management program for

stormwater pollution control from hazardous waste sites emphasizes identification and mapping of facilities and monitoring of stormwater discharges.

Performance Standard: The District is active in identifying and monitoring hazardous waste from the industries and businesses within the District.

FY 2010 Activities: The formal procedures DDOE uses to control the impact and extent of hazardous waste on the MS4 are discussed in: *Hazardous Waste Division Administration, Hazardous Waste Management Strategic Plan for Enhancement of Environmental Health, and Standard Operating Procedures.* Based on established procedures in this document DDOE developed inspection protocols to govern field investigations, including the investigation of facilities that generate or store hazardous waste. The *Hazardous Waste Division Administration, Hazardous Waste Management Strategic Plan for Enhancement of Environmental Health,* and *Standard Operating Procedures* was provided as an Attachment to the 2007 Annual Report.

Illicit discharge detection is another component of the program to identify facilities that contribute a substantial pollutant loading to the MS4. Identifying and sampling discharges from connections provides information that may identify hazardous waste facilities with illicit connections. In FY 2010, DDOE MS4 staff conducted 48 illicit discharge investigations. One of these investigations occurred at a facility listed in the RCRA/CERCLA database for hazardous materials (Bolling Air Force Base). This illicit discharge concern was resolved subsequent to DDOE's inspection.

DDOE Hazardous Waste Division (HWD) conducts inspections of RCRA hazardous waste facilities to determine compliance with hazardous waste regulations. HWD conducted 49 inspections at LQG, SQG facilities, and CESQG facilities within the District between October 1, 2009 and September 30, 2010. While HWD inspections do not directly address water quality, inspectors reported spills (that could pose a water quality threat) to DDOE or DC Water for further water quality investigation.

FY 2011 Goal: The District will continue to identify and monitor hazardous waste from industries and businesses within the District through the use of inspections and investigations in water quality.

Industrial Facilities Database

This program is discussed under Section III.F.2.

III.F.7 Pesticides, Herbicides, and Fertilizer Application

Part III.B.7, Part III.B.10, and Part III.B.12 of the Permit outline the requirements for pesticide, herbicide, and fertilizer application. The management plan for stormwater pollution control of pesticides, herbicides and fertilizers entails a mixture of programs emphasizing efforts to control pesticide, herbicide, and fertilizer applications. A summary of these activities is provided and includes control programs for pesticide, herbicide and fertilizer application on District and private property as well as public educational programs specifically targeting these environmental pollutants. Details of the public education program on pesticides, herbicides and fertilizer application are provided in Section III.F.12.

EPA is also developing a Pesticide General Permit. Beginning on October 31, 2011, coverage under this General Permit will be required for discharges to waters of the United States resulting from application of pesticides.

FY 2010 Activities: The District worked to control pesticide, herbicide, and fertilizer runoff, and the use of other toxic substances as detailed in the SWM Plan and existing regulations. As part of the Intergrated Pest and Nutrient Management Program (IPNM), the District continued to provide information about educational programs to private property owners through pamphlet distribution to residents.

Pesticide, Herbicide, and Fertilizer Application Activities

Performance Standard: The District's Pesticide Program is active in educating and training the public on the correct handling and application of pesticides and herbicides.

As of FY 2010, the District has 1,345 pesticide applicators certified in various categories.

FY 2011 Goals: The District will continue to educate the public on the appropriate use of pesticides, herbicides, and fertilizers to reduce these substances in the MS4; to train District applicators in the safe use and handling of pesticides, herbicides and fertilizer; and to coordinate with the EPA on Federal Worker Protection Standards (WPS).

Pesticide and Nutrient Control on District Property

The Pesticide Program goal is to train and certify pesticide applicators in the safe use and handling of pesticides and to promote the incorporation of IPNM principles with a reduction in pesticide use as a goal. The Pesticide Control Program is implemented by DDOE. The agency inspects stores that have the potential to sell pesticides to monitor the

products that are for sale and to determine their registration status. This program also continues to regulate pesticide use in the District by certifying and licensing applicators and conducting compliance inspections both routine and "for cause".

Additionally, in a previous reporting period DRES developed a companion Policy Handbook to serve as a policy compliance checklist reference guidebook to promote practices to achieve cleaner and healthier environments by requiring the use of maintenance methods and products that conserve resources, minimize toxic pollution, and maximize indoor air quality. Among them, Integrated Pest and Nutrient Management (IPNM), a safer strategy to effectively reduce the potential health and environmental risks associated with pesticide and fertilizer use, and Stormwater Management practice to limit the disruption and pollution of natural water flows by managing stormwater runoff.

Landscaping contracts are limited to grass cutting activities, mulching, fertilizer in accordance with IPNM practices, and debris removal (with a small number of building requiring some seasonal annuals or perennials plantings). The Contractors are required to fertilizer in accordance with IPNM practices giving preference to employing physical, mechanical, and biological tactics to prevent conditions that promote pest infestations and excess nutrient use. Application of fertilizers and pesticides is kept to a minimum. A summary of the DRES IPNM Policy is included as Appendix E.

In the case of green roofs, specially blended organic fertilizers and nutrients, are applied about once per year.

Pesticide Control Program on Private Property

DDOE provides educational outreach to private property owners to better inform them about the proper use and disposal of pesticides, herbicides, and fertilizers, and safer alternative methods. The program distributes pamphlets to residents that provide information on environmentally sound practices with regard to the use of pesticides in the yard or garden, the introduction of "good" pests into the garden, lawn care services, the District Nutrient Management Program, and IPNM.

Source Characterization Screening

Performance Standard: The District waters are tested regularly for the presence of pesticides, herbicides and fertilizers.

FY 2010 Activities: Pesticides are monitored as part of the overall wet- and dry-weather storm water sampling and analysis program. In previous years, pesticides have been detected in some of the samples collected from the outfalls. In the 2010 monitoring year for the Rock Creek watershed, no pesticides were detected in samples collected.

FY 2011 Goal: The District will continue to monitor sites within the MS4 for the presence and levels of pesticides, herbicides, and fertilizer chemicals.

III.F.8 Deicing Activities

Section III.B.8 of the Permit, "Deicing Activities", details the permit requirements to minimize the impact of deicing materials on water quality.

The management plan for stormwater pollution control in deicing activities emphasizes:

- Evaluation of deicer materials,
- Application of deicer materials, and
- Deicer materials storage facilities.

Evaluation of Deicer Materials

Performance Standard: The District actively seeks to use the most effective and environmentally safe products available while keeping the streets and highways of the District ice free.

The District continued to use a brine solution on bridge surfaces and other critical roadway infrastructure to reduce pollutant loading to receiving waters from deicing activities. The District has begun using Geomelt to supplement brine for pretreatment of roadways for deicing. Brine alone can be more easily displaced by wind and traffic, and Geomelt helps hold the brine to the pavement longer. Geomelt is similar to brine in its environmental impacts. However, Geomelt costs significantly more than brine.

Application of Deicer Materials

Performance Standard: The District is active in keeping the streets and highways of the District ice free. DDOT will use a brine pretreatment solution on bridge surfaces to reduce pollutant loading to receiving waters. Application rates and techniques will be evaluated as per the comparison study, and modifications will be made to the deicing program as necessary.

FY 2010 Activities: DDOT's primary obligation in snow management and deicing activities is to provide for the safe movement of emergency vehicles and other vehicular traffic as quickly as possible following winter storms. DDOT employs a variety of techniques, including plowing, salt application and deicing chemical application on various roads, depending on the amount and type of precipitation expected. In the FY2010 season, DDOT used 78,000 tons of salt for deicing and snow control during multiple large events.

DDOT uses a brine pretreatment solution and Geomelt on bridge surfaces, overpasses, and know hilly and areas with typical ice buildup to reduce sodium chloride use and pollutant loadings to receiving waters. DDOT has also started pre treating specific Light Plow Routes and residential streets that are hilly and difficult to plow. DDOT operates nine chemical trucks and four light plow trucks that each contains a 500 gallon liquid spray tank for chemical application. The brine solution is 23 percent sodium and 77 percent water. The use of the brine pre-treatment reduces in the amount of salt used during winter months for control of snow and ice. Geo-melt helps hold the brine longer to the pavement.

FY 2011 Goals: The District will continue to use brine and Geomelt for pretreatment of critical roadway infrastructure, providing a reduction in the amount of salt used during the winter months. DDOT will increase the liquid spray pre-treatment in difficult and hilly Light Plow areas. In addition, DDOT will consider expanding this program through the purchase of additional spray trucks.

Deicer Materials Storage Facilities

Performance Standard: The District utilizes stormwater management facilities at its salt storage sites to control runoff and water quality from the sites.

The District operates five salt storage facilities. At all of the facilities, the run-off 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 fifth location, 1241 W Street, NE, is within the CSO 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. All DDOT salt dome storage facilities are constructed with stormwater BMP structures for load discharge reductions. The site at 1241 W St NE has a Stormwater Pollution Prevention Plan which was completed in FY10.

FY 2011 Goal: DDOT will continue inspection and maintenance of the salt storage facility per the SWM maintenance plan.

III.F.9 Snow Removal

Permit Part III.B.9 requires the Permittee to establish a program and operating plan to ensure excessive quantities of snow and ice control materials do not enter the District's water bodies. The management plan for stormwater pollution control through snow removal emphasizes the snow and deicer control program.

Snow Control Program

Performance Standard: The District implements its 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 stormwater runoff from snow and ice that enters the MS4.

FY 2010 Activities: The District snow removal program is discussed on the DDOT web site at the following link:
http://ddot.dc.gov/DC/DDOT/On+Your+Street/Traffic+Management/Snow/District+of+Columbia+Winter+Snow+and+Ice+Plan

DDOT regularly prepares a Performance Measures Report that includes targets and achievements for a number of performance measures, including snow removal. In the FY 2010 snow-season, 65 inches of snow fell, the largest annual snowfall on record for the District. DDOT conducted snow plowing and during 3 events, snow was required to be removed from the roadways.

FY 2011 Goal: To continue to provide efficient snow removal and safe roadways within the District while providing the minimum impact to the stormwater runoff entering the MS4.

Alternative Snow Stockpile Areas

Performance Standard: Currently no plans to develop an alternate snow removal plan exist.

The District's current snow removal and deicing program is designed to avoid snow deposits in areas adjacent to water bodies, wetlands, and areas near public or private water wells except during a declared snow emergency. The plan is routinely reviewed for its applicability, and there is no need to revise the plan at this time.

FY 2011 Goals: No program goals are necessary at this time.

III.F.10 Management Plan to Detect and Remove Illicit Discharges

Part III.B.10 of the Permit pertains to the Management Plan to Detect and Remove Illicit Discharges.

The stormwater pollution control management plan for detection and removal of illicit discharges entails a mixture of program activities that include the following:

- Illicit discharge detection and elimination.
- Floatables reduction.
- Waste collection.
- Inspection plan.
- Enforcement plan.
- Spill response plan.

Illicit Discharge Detection and Elimination

Performance Standard:

The District maintains an illicit discharge program designed to detect and eliminate illicit discharges within the District. DDOE, with the support of DC Water and DPW, conduct activities related to illicit discharge detection and elimination.

The District continued an illicit discharge detection and elimination (IDDE) program as required by the MS4 Permit to prevent improper disposal of pollutants into the storm sewer system as required by federal regulations. DDOE works closely with multiple District agencies and programs to improve environmental compliance of automotive repair shops, dry cleaner and laundry shops, with the District's environmental regulations.

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 will try to work with property owners to bring the property into compliance with the District code. If SWEEP staff cannot obtain voluntary compliance from a property owner,

the Department may clean the property and charge the property owner twice the cost of the cleanup effort. This cost will be added to the property owner's next property tax bill. The SWEEP program is authorized for a staff of 36 field investigators.

DDOE has implemented an ongoing program to detect illicit discharges and to prevent improper disposal into the storm sewer system as required by federal regulations. DDOE personnel continued to investigate potential illicit discharges in response to reports by citizens or government personnel. Calls made to the Office of Emergency Management pertaining to environmental discharge complaints are directed to DDOE. DDOE personnel conduct detailed investigations of each complaint. Often DDOE is able to respond immediately by sending personnel into the field. Depending on the characteristics of the discharge described, DDOE might alternatively refer the case to a more appropriate District agency (e.g., in the case of water main breaks or other sewer infrastructure problems DC Water is contacted to resolve the problem). Depending on the extent and source of the discharge, federal entities such as EPA, U.S. Coast Guard or NPS may be called upon for assistance with sample analysis, investigation, or containment.

In FY 2010, DPW SWEEP responded to 10,095 requests for action for illegal dumping complaints, overgrown lots, poor trash containerization and sanitation violations. The sites investigated were located throughout the entire District.

WQD staff conducted 49 illicit discharge investigations, 17 emergency response, 163 targeted facility inspections and 154 outfall inspections in FY 2010. Investigations were conducted to discover the nature and sources of potential discharges to waters of the District.

As a result of the 393 total investigations and inspections, DDOE issued 195 compliance requests, and has worked with all facilities to obtain compliance. The largest numbers of cases were targeted inspections focusing on auto repair, car wash, laundry and dry cleaning facilities in the MS4 area of the city. About two thirds of the investigations were outfall and facilities inspections and the remaining number were initiated based on complaints or reports from citizens, other District departments, or District contractors engaged in MS4-related field activities, or as emergency responses. Detailed information on these inspections and investigations are provided in Appendix F.

DDOE also visually inspected MS4 outfalls to identify illicit discharges to the stormwater system at the point where storm sewer pipes outfall into the natural environment. Illicit

discharges discovered this way alert the inspectors to illegal activity occurring within the sewershed and prompt further investigation.

FY 2011 Goals: The District will continue to maintain clean private and public spaces by investigating illegal dumping complaints, overgrown lots, poor trash containerization and other sanitation violations; continue the program to detect illicit discharges as described in the upgraded SWM Plan and the Permit, and to prevent improper disposal into the storm sewer system as required by federal regulations. DDOE plans to expand inspection of facilities in the MS4 areas that show high frequency of detections and/or high quantities of pollutants at outfalls (as soon as staffing allows). DDOE personnel will continue to investigate potential illicit discharges in response to reports by citizens or government personnel.

Floatable Reduction & Trash Removal Program

According to the District's 2006 and 2008 Water Quality Assessments (305(b) and 303(d) Integrated Reports), both the Upper and Lower Anacostia River were cited for being impaired for trash. Since then, the District has undertaken several important initiatives to reduce trash from entering local waterways. Most importantly in FY10, the District, in partnership with Maryland's Montgomery and Prince George's Counties, developed a TMDL for trash (primarily floatables) for the Anacostia River. EPA approved the TMDL on September 21, 2010. A specific WLA for trash was assigned to the District's MS4.

Performance Standard: The District operates a river pollution control program that seeks to reduce the floating debris found in the District's rivers.

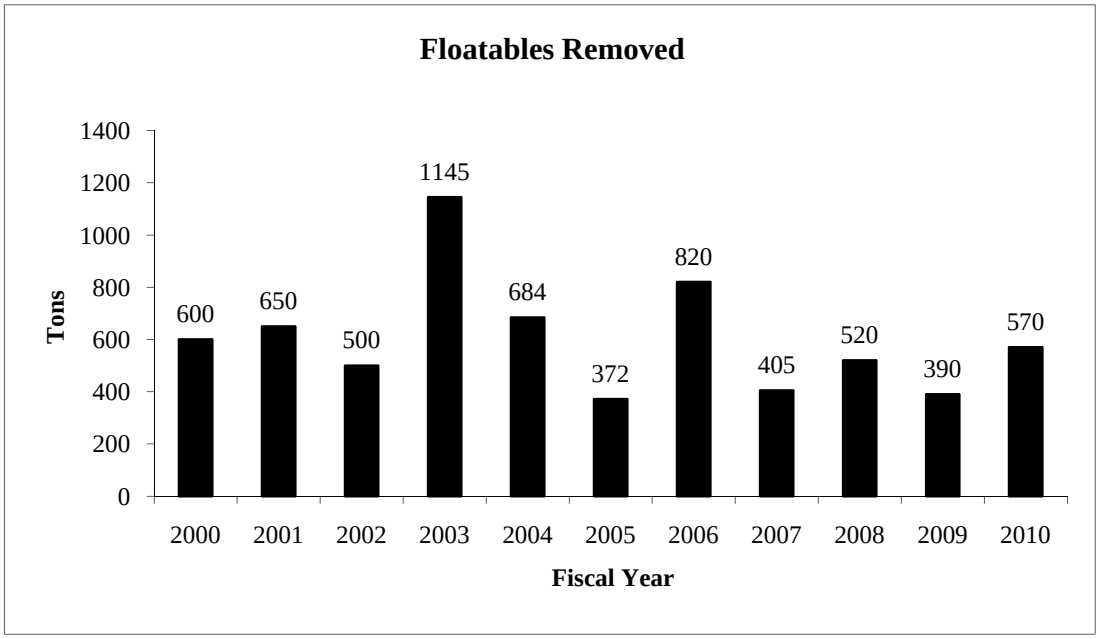
The District continued to conduct the Floatables Reduction Program for the Potomac and Anacostia Rivers.

The Anacostia River Floatables Debris Removal Program was initiated in August 1992 to remove floating debris from the Anacostia and Potomac Rivers on a routine basis. The program is operated by the DC Water Department of Sewer Services, Inspection and Maintenance Division. The floating debris removal program utilizes two 6,000-lb capacity skimmer boats and support boats to remove floatable debris from the rivers as well as trash that accumulates on the river banks and in mud flats at low tide. The boat docking area and roll-off containers are located on the west bank of the Anacostia River in the vicinity of M and 14th Streets, SE.

The boats pick up debris five days per week.

FY 2010 Activities: During FY 2010, the skimmer boats removed 570 tons of debris. Figure 6 shows the eleven-year trend of floatables tonnage removed from the District's rivers.

Figure 6. Eleven-Year Trend of Floatables Removed



FY 2011 Goal: The District will continue the Anacostia River Floatables Debris Removal Program for the Anacostia and Potomac Rivers.

Performance Standard: During a previous reporting period the District provided a grant to the Anacostia Watershed Society (AWS) to complete a survey of baseline conditions of trash pollution within the District's portion of the Anacostia watershed, and use those survey results to develop a trash reduction plan. Subsequent to that effort, the District has worked with local and regional partners to implement recommendations included in that report.

FY 2010 Activities: During a previous reporting period, the District funded local non-profits to install litter capture devices in tributaries to the upper Anacostia River. In FY 2008, the Anacostia Watershed Society was funded to install, maintain, and monitor a custom designed litter trap on Nash Run, just below the District/Prince George's County line (see Figures 7 and 8). At the completion of FY 2010, AWS reported that the Nash

Run litter trap has prevented 2,399 lbs of trash from entering the Anacostia River since its installation in FY 2008. AWS is responsible for maintaining the trash trap on a weekly basis, as well as holding monthly volunteer clean-ups to remove trash captured by the trap.

Figure 7. Location of litter capture devices in Watts Branch and Nash Run

Figure 8. Volunteers cleaning the Nash Run trash trap

In FY 2009, the District funded the Anacostia Riverkeeper and the Earth Conservation Corps (ECC) to install a Bandalong® Litter Trap at the mouth of Watts Branch, a tributary just south of Nash Run (See Figures 7 and 8). This installation marks the first time a device of this type had been installed in the western hemisphere. At the close of FY 2010, ECC estimated that 6,405 lbs of trash and debris were collected by the Bandalong since its installation.

FY 2010 activities also focused on efforts to research new trash reduction technologies and implement recommendations found in the AWS 2008 Anacostia Trash Reduction Plan. On October 15, 2010, ECC and Howard University submitted the results of a study comparing the effects of custom designed catch basin screens, commercial catch basin screens, and the Watts Branch Bandalong litter trap. Results of that study showed that custom designed catch basin screens were the most cost - effective practice.

Beginning in FY 2010, DDOE partnered with the Alice Ferguson Foundation (AFF) to develop and implement a social marketing campaign aimed at litter prevention and trash reduction. This project consisted of behavioral study to assess why people in the Deanwood neighborhood in NE litter. Results of that study were used to develop and

implement a concentrated education and outreach effort in Deanwood towards the end of FY 2010. AFF also subcontracted with James and Cynthia Collier, private consultants who also conducted the 2008 trash baseline study for AWS, to monitor trash conditions in Deanwood to assess the effectiveness of the anti-littering campaign.

Figure 9. Bandalong® Litter Trap in Watts Branch

Also of note, the "Anacostia River Clean Up and Protection Act of 2009' (Bag Bill) (D.C. Official Code §8-102 *et. seq.*) was signed into law on July 6, 2009 and became effective January 1, 2010. This bill bans the use of non-recyclable plastic carryout bags and establishes a special purpose revenue fund dedicated to the cleanup and protection of the Anacostia River. While the District has not established an ambient monitoring protocol for trash in the Anacostia River, there is evidence from local trash clean-ups that the Bag Bill has significantly reduced the number of plastic bags from reaching the District's local rivers and streams. Data collected during the annual AFF Potomac watershed wide trash clean-up event, specifically for clean-up sites in the District, showed a 66% drop in the number of plastic bags collected between 2009 and 2010.

FY 2011 Goals: The District will continue development of an Implementation Plan to comply with the requirements of the Trash TMDL. In addition, the District is continuing to work with local non-profit partners to maintain litter capture devices in Watts Branch

and Nash Run. The District is researching several new structural and non-structural approaches to reducing trash from entering local waterways. Lastly, the District is collaborating with Montgomery and Prince George's County to meet the requirements of the Trash TMDL.

Waste Collection Program

Performance Standard: The District provides household hazardous waste collection and seasonal leaf collection each fall.

The Permit prohibits the discharge of used motor vehicle fluids, household hazardous wastes (HHW), grass clipping, leaf litter, and animal waste into separate storm sewers. The existing program for the collection of motor vehicle fluids and household hazardous waste has been expanded. Accepted materials include paint, batteries, pesticides, solvents, motor oil, furniture polish, nail polish and remover, and other possibly toxic items.

FY 2010 Activities: During FY 2010, DPW operated weekly HHW dropoff sites at the Ft. Totten Transfer Station. Each Saturday, residents are able bring their HHW materials and unwanted electronics for proper disposal. In addition, DPW provides shredding services for confidential papers.

The dropoff sites average a total of 200 vehicles each Saturday. The HHW dropoff program collected the following materials from 9,469 vehicles during FY 2010:

- 1,281 drums of HHW liquids, including aerosols and flammables
- 111 car batteries
- 3,515 pounds of fluorescent bulbs and mercury lights

Table 16 shows the eight-year trend of household hazardous waste reduction in the District.

Bagged grass clippings and leaves are collected throughout the year with regular garbage collection. Leaf litter is collected during November, December, and January by DPW utilizing vacuum trucks. A discussion of Leaf and Holiday Tree collection activities is provided in Section III.F.1 of this report.

FY 2011 Goals: The District will strive to increase the number of citizens participating in the household hazardous waste and leaf collection programs through public education and the continuation of HHW collection at one Transfer Station on a monthly basis.

Table 16. Eight-Year Trend in Household Hazardous Waste Reductions.

Fiscal Year	Collection Events	Participants (No. of Cars)	Household Hazardous Waste (55 gallon drums)	Electronics (tons)
2002	2	1,500	148	4
2003	5	3,178	261	63
2004	6	4,490	249	117.5
2005	6	6,261	375	142
2006	4	4,678	387	93[a]
2007	2	2,748	274	65
2008	Ongoing	3,283	363	173
2009	Ongoing	5,640	648	
2010	Ongoing	9,469	1,281	132

[a] Includes two tons of electronics collected during an e-cycling collection November 15-22, 2005 at the Benning Road PEPCO station.

Inspection Plan

Performance Standard: The District maintains an inspection program for illicit discharges.

FY 2010 Activities: The DDOE continued to implement its revamped illicit discharge inspection and enforcement program during FY 2010. It has developed a complete schedule of inspections for facilities and outfalls in the MS4 area. The facility inspection schedule ensures that all auto repair, laundry, car wash, and dry cleaning facilities in the MS4 area are inspected. Additionally, over 232 facilities of various other categories have been added to the inspection list.

DDOE also continued visual inspection of MS4 outfalls to detect illicit discharges. Each outfall has been mapped in ArcGIS and ranked as high, medium, or low priority in accordance with size, land use, and historical knowledge of the outfall drainage basin. Outfalls are inspected every 6 months, 2 years, or 5 years for high, medium, and low priority outfalls, respectively, in order to complete all outfall inspections within a 5 year period. This protocol targets facility inspection areas that show high frequencies of detection and quantities of pollutants. It describes a stepped process by which inspectors

will prioritize the District's water bodies according to the level of impairment, correlate the pollutants to broad categories of potential sources, locate individual business that fall under the identified sources, plan compliance inspections for these facilities, and resolve compliance issues.

FY 2011 Goals: The DDOE will continue detection and elimination of illicit discharges through a targeted enforcement protocol for the Inspection Plan. It will also continue to assess and update the outfall prioritization database as a result of scheduled inspections. In addition to visual observation, DDOE will also collect and analyze water samples if necessary in order to facilitate IDDE investigations.

Enforcement Plan

Performance Standard: The District maintains an enforcement program for illicit discharges.

FY 2010 Activities: The District continued the enforcement plan program to prohibit the discharge or disposal of motor vehicle fluids, household hazardous wastes, grass clippings, leaf litter, and animal waste into separate storm sewers. DDOE revised the Draft Water Quality Division Enforcement and Compliance Manual that describes inspection and enforcement efforts. It has been replaced by "The Environmental Enforcement Process in the District of Columbia". Copies of both documents were provided as Attachments to the 2007 Annual Report and the 2009 SWMP. The manual details the written enforcement strategy outlining how enforcement actions, such as violation notices, notices of infractions, and stop work orders, are issued and adjudicated. The strategies outlined in the manual provide the standard operating procedures for enforcement within the District. The manual establishes the guidelines for compliance inspections conducted by DDOE. A discussion of enforcement activities is provided in Section III.F.11. In addition, in FY 2008 the District and EPA signed a Memorandum of Understanding pertaining to enforcement efforts. The District continues to make progress toward the goals of this enforcement MOU.

The District 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. Implementing regulations at 21 DCMR § 529 control stormwater runoff for oil, grease, organic animal wastes and other discharges that violate the water quality standards of receiving waters in the District.

FY 2011 Goals: The District will continue detection and elimination of illicit discharges through a targeted enforcement protocol of the Enforcement Plan.

Spill Response Plan and Pollution Prevention

Performance Standard: The District has developed and implements the procedures specified in the *Water Pollution Control Contingency Plan* (WPCCP) for spills and chemical releases. 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 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 framework of the plan developed in 1999. The WPCCP is currently under revision.

Good housekeeping involves using practical, cost-effective methods to identify ways to maintain a clean and orderly facility and keep contaminants out of the separate storm sewer. It includes establishing protocols to reduce the possibility of mishandling chemicals or equipment and training employees in good housekeeping techniques. These protocols must be described in the facility SWM Program and communicated to appropriate facility personnel.

A spill or release episode includes any spillage or leakage of fuel from fuel storage tanks, piping, dispensing equipment, or vehicles. If the spill is less than 25 gallons, then the Fuel Services Supervisor is immediately notified. The Fuel Services Supervisor will then follow established DPW procedures to clean up the spill. If the spill is more than 25 gallons, then notification is given to the DC Fire Prevention Division. Response

procedures may include tank gauging, vapor monitoring, groundwater monitoring, and secondary containment. The response procedure will also include sample collection of soil and other material that will be analyzed for known and unknown contaminants. A spill assessment chart will be developed with physical and chemical properties clearly outlined in the response plan. Spill response plans will also include lists of materials containing the following: acid neutralizing agents, oil absorbents, biohazard absorbents, approved absorbents rolls, absorbents containers and fuel tank breathers.

FY 2010 Activities: DDOE continued work to update its current outreach program on spill prevention and pollution prevention for facility managers. Educational posters for auto service employees are currently handed out during all automotive inspections. DDOE has also increased efforts to provide assistance to District agencies in developing stormwater pollution prevention plans to better address spills and contingencies at their facilities. In FY 2010 DDOE WQD has contracted with Metropolitan Washington Council of Governments to update the existing WPCCP.

FY 2011 Goals: While continuing work on the updated WPCCP, the District will continue to operate under the 2009 revised WPCCP. DDOE will also continue to provide District agencies with assistance in developing or updating their stormwater pollution prevention plans.

III.F.11 Inspection and Enforcement Plan

Inspection and Maintenance Plan

Facility inspections and visual inspections of the sewer system are integral parts of the plan to detect illicit discharges. Inspectors use outfall monitoring data to identify the pollutants of concern and where they are appearing in the sewer system. Literature and professional experience can then be used to determine what kinds of sources or activities are associated with the problem pollutants. Concurrently, inspectors can use their knowledge of the sewer system, maps and other resources to begin tracing back to the geographic origin of the pollutants. If a facility is found to be a contributor or potential contributor of the detected pollutants as a result of an inspection, DDOE will attempt to bring it into compliance with stormwater regulations, which might entail education and/or recommendation for fines or other enforcement actions against the facility. New Notice of Inspection forms were developed and printed for enforcement purposes.

The industrial facilities database (discussed in Section III.F.2) and GIS tools (discussed in Section III.F.10) are powerful resources for completing this task. As more facility information (on location and wastes generated) is collected through routine compliance inspections, the District will increase its capacity to quickly identify potential sources of illicit discharges in the geographic area of interest through the data integrated in the GIS. These tools will not only be used in response to illicit discharges that have already occurred, but to direct or focus the routine inspections in a manner that would also facilitate proactive interactions with businesses and prevent illicit discharges.

Industrial Facilities

In FY 2010, DDOE inspected industrial facilities for compliance with stormwater regulations. As a result of the compliance inspections, DDOE issued 131 compliance directives in FY 2010, and worked with all facilities to obtain compliance.

Construction Site Inspections and Loading Estimates

Performance Standard: The District conducts inspections for the installation and maintenance of SWM and erosion control devices at commercial, residential and road construction projects. The District also conducts inspections at construction sites and their SWM BMPs.

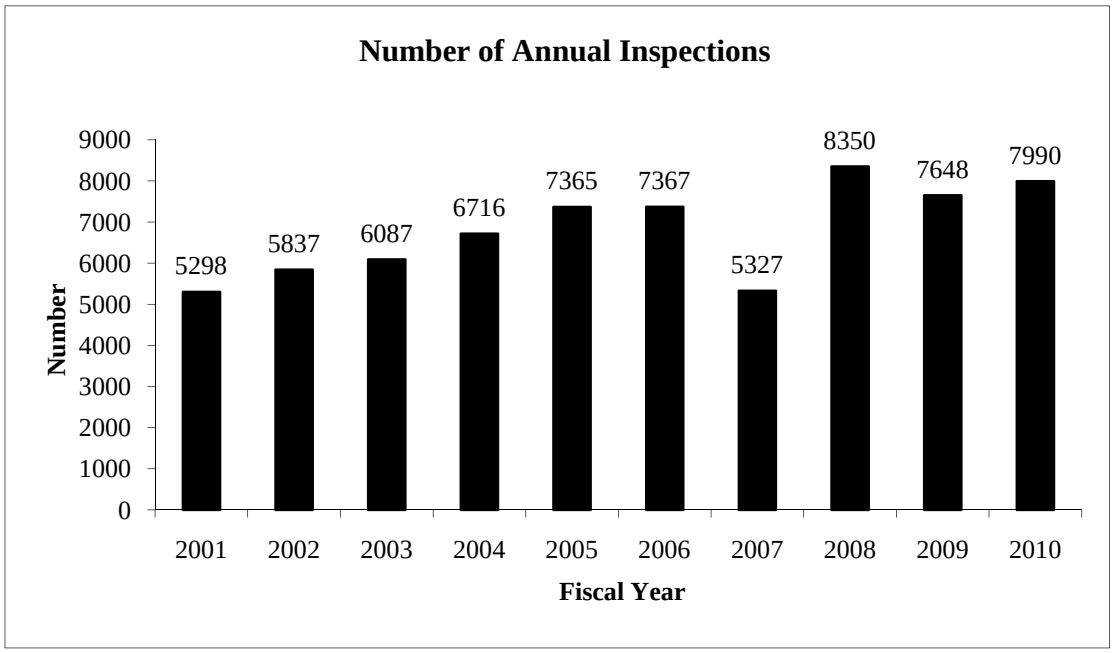
Inspection procedures are outlined in 21 DCMR § 534 *Water Quality and Pollution Regulations* (provided as an Attachment to the 2007 Annual Report) and the Nonpoint Source Management Plan for the District. The legal basis for conducting inspections related to stormwater management is outlined in 21 DCMR § 545. Procedures for conducting an inspection are detailed in the *Standard Operating Procedure for the Enforcement of Soil Erosion and Sedimentation Control and Storm Water Management Regulations* and the *Standard Operating Procedures for Soil Erosion and Sedimentation Control and Storm Water Management Inspection.* Copies of these two documents were provided as attachments to the 2007 Annual Report.

DDOE has refined and updated the District's automated database system for tracking stormwater management facilities inspected for maintenance to include tracking of construction projects with stormwater management BMPs, "Final Inspection" completion and "Final Inspection Notification Letters" to SWM applicants, as well as monitoring receipt of "As-Built Plans" of completed stormwater projects.

The updated database system contains data for BMPs constructed since the inception of the program in the District of Columbia 1988 and has enabled faster and more efficient rescheduling of inspections and retrieval of maintenance records.

FY 2010 Activities: DDOE conducts site inspections and calculates loading estimates from construction sites within the District. In FY 2010, DDOE conducted 7,990 inspections at construction sites and issued 184 enforcement actions. Note that each time DDOE personnel visit a construction site is logged as an "inspection;" as a result individual construction projects may be inspected numerous times. Figure 10 shows the ten-year trend of the construction inspection program. Figure 11 shows the ten-year trend of annual enforcement actions.

Figure 10. Ten-Year Trend in the Number of Annual Construction Site Inspections



In FY 2010, 61 citizen complaints relating to soil erosion and drainage problems were investigated and resolved by DDOE.

DDOE also inspected stormwater management facilities within the District in FY 2010. A total of 458 SWM facilities were inspected and 369 post-construction maintenance inspections occurred to ensure proper maintenance of the facilities. Figure 12 shows the trend in the number of SWM facilities inspected each year.

Loading estimates are prepared as part of the plan review process as detailed in the *Stormwater Management Guidebook, 2003.* A copy of the current guidebook was provided as an attachment to the 2007 Annual Report. Plan review, site inspection and loading estimates are required for commercial, residential, and road development land uses.

Figure 11. Ten-Year Trend in Annual Enforcement Actions

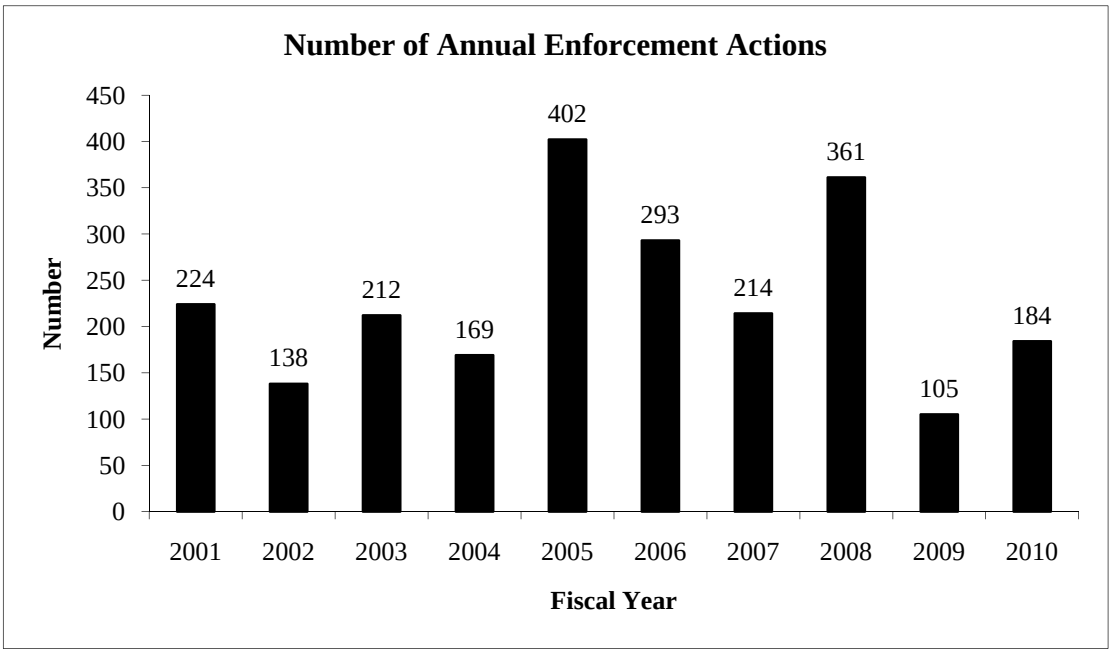
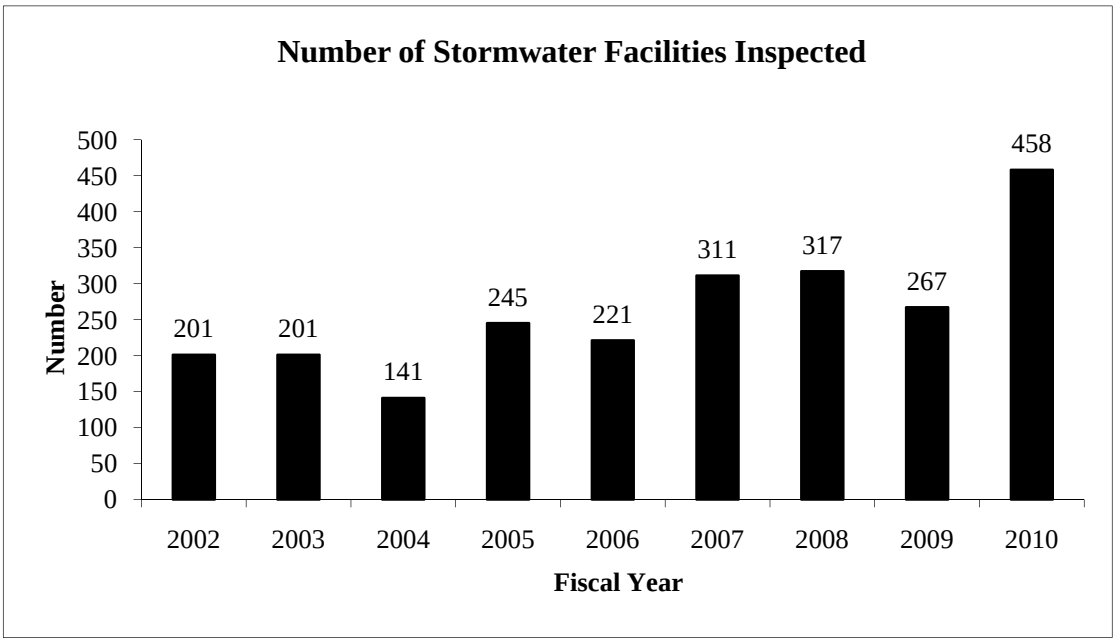


Figure 12. Nine-Year Trend for Stormwater Facility Inspections



FY 2011 Goals: The District will continue inspections of commercial, residential, and road construction projects for the maintenance and implementation of erosion control devices and BMPs. DDOE will continue to track SWM facilities inspected and their BMPs through the automated database system.

Preventive Maintenance Inspections for Stormwater Management Facilities

Performance Standard: The District conducts inspections and maintenance of District SWM facilities.

The District continued inspections and necessary maintenance of all District SWM facilities. Coordination between District agencies will continue in conducting inspections, and the District will maintain the database of all SWM facilities and schedules of inspections.

DC Water Department of Sewer Services continues to conduct inspections of stormwater control devices, including 15 stormwater pumping stations as part of their routine maintenance program. These maintenance inspections include greasing of bearings, draining condensate, exercising equipment, checking oil levels, visual inspections, and housekeeping.

DC Water also performs maintenance on the storm sewer system. These maintenance activities include responding to reports on blockages or defects, the clearing of lateral channels, and ensuring that the outlet structures of the MS4 remain clear.

21 DCMR §534.2 states that "the owner of the property on which a stormwater management facility has been constructed shall maintain the facility in good condition, and promptly repair and restore whenever necessary all grade surfaces, walls, drains, structures, vegetation, erosion and sediment control measures, and other protective devices." A maintenance schedule for stormwater management facilities is to be developed and submitted as part of the facility's stormwater management plan. The District inspects the preventive maintenance of all infiltration systems, swales, retention, or detention structures. Maintenance and operation inspections occur within one year of completion of construction of a storm water facility. There after they are prioritized by type of facility, land use request for inspections by owners and contractors, and complainants.

FY 2010 Activities: During FY 2010, DC Water performed inspected stormwater control devices and/or pumping stations on a regular basis as part of a set schedule. The SWM facilities inspected for maintenance are located within all four quadrants of the District.

DDOE maintains a SWM facility maintenance database system for tracking BMPs. The database enables more efficient scheduling and retrieval of maintenance records. Since FY 2006, DDOE has used the Master Address Repository (MAR) geocoder program to provide accurate address data. DDOE will continue to use the MAR tool to verify the existing addresses of stormwater management facilities located in the maintenance database.

DDOE requires the submittal of a Declaration of Covenant for SWM for residential and business property owners as part of the approval process for new construction activities. These covenants state that the owner must provide a schedule of maintenance activities, the stormwater management devices will be inspected periodically, and the owner will be responsible for correcting any deficiencies noted, at the owner's expense. The SWM facilities are located in all four quadrants of the District. It is estimated that approximately 57-60 percent of the facilities inspected for maintenance are within the MS4.

FY 2011 Goals: The District will continue inspections and maintenance of SWM facilities. DDOE will continue to require the submittal of a Declaration of Covenant for

SWM facilities for residential and business property owners as part of the approval process for new construction activities.

Enforcement Plan

The Permit in Part III.B.11 requires that the Permittee develop and implement an enforcement plan for carrying out the objectives of the SWM Plan.

Performance Standard: The District implements the stormwater pollution control enforcement plan which emphasizes enforcement activities and resources, documentation of violations, and assessment of enforcement effectiveness.

Enforcement Activities and Resources

Performance Standard: The District uses a database system for SWM facilities maintenance inspection to track the use and maintenance of construction projects with SWM BMPs. The *Environmental Enforcement Process in the District of Columbia* details the written enforcement strategy concerning enforcement actions. A copy was provided as an attachment to the 2007 Annual Report.

DDOE has refined and updated the database system for SWM facilities maintenance inspection to include tracking of construction projects with SWM BMPs. The updated database system contains data for BMPs constructed since the inception of the program in 1988 and has enabled faster and more efficient rescheduling of inspection and retrieval of maintenance records.

FY 2010 Activities: As a result of illicit discharge investigations, DDOE personnel issued Notices of Violation, Notice of Infractions, and separate Site Directives for corrective actions last year. Furthermore, DDOE has allocated three environmental engineers and two environmental specialists in support of these activities. These staff members are fully dedicated to stormwater management issues related to implementation of the SWM Plan and the Permit.

During FY 2010, the District continued to enforce its prohibition on the sale, use, and permitting of coal-tar based pavement products (enacted during FY 2009). The District also began inspection and enforcement activities related to the disposable bag fee. In addition, the District began formal enforcement proceedings relating to significant petroleum contamination at the Benning Railyard.

FY 2011 Goals: The District will continue to update the SWM facilities maintenance database for tracking inspections and data on constructed BMPs, and will continue inspection and enforcement activities related to the coal-tar pavement product ban and the disposable bag fee.

Documentation of Violations

Performance Standard: The District maintains a list of violations of the DCMRs pertaining to stormwater and soil erosion. This listing is reviewed by DDOE staff for needed enforcement actions. The listing of violations and enforcement actions is used as a measure of the effectiveness of the Enforcement Program.

DDOE conducted inspections of construction sites for violations of water quality pollution and soil erosion and sediment control regulations.

FY 2011 Goals: The District will continue to provide for the updating and review of violations of the DCMRs pertaining to stormwater and soil erosion.

Assessment of Enforcement Effectiveness

Performance Standard: The District maintains tracking and effectiveness metrics of its inspection and enforcement actions.

Inspection procedures are outlined in the 21 DCMR § 534 *Water Quality and Pollution Regulations* and the *Nonpoint Source Management Plan* for the District (provided as attachments to the 2007 Annual Report). The legal basis for conducting inspections related to stormwater management is outlined in 21 DCMR § 534. Procedures for conducting an inspection are detailed in the *Standard Operating Procedures for Soil Erosion and Sedimentation Control and Storm Water Management Inspection* and the *Standard Operating Procedure for the Enforcement of Soil Erosion and Sedimentation Control and Storm Water Management Regulations* (both provided as attachments to the 2007 Annual Report).

DDOE has refined and updated the District's automated database system for tracking stormwater management facilities inspected for maintenance, including any tracking of construction projects with stormwater management BMPs. As previously discussed earlier in this Section, the updated database system contains data for BMPs constructed since the inception of the program in 1988 and has enabled faster and more efficient rescheduling of inspection and retrieval of maintenance records. Additional refinements

to the automatic database system were made in 2005 and include the use of an Excel database to track "Final Inspection" completion and "Final Inspection Notification Letters" to SWM applicants, as well as monitoring the receipt of "As-Built" plans for completed stormwater projects.

FY 2011 Goals: The District will continue inspections and to update the database system.

III.F.12 Public Education Program

The Permit in Part III.B.12 requires that the District develop a public education program to reduce pollutant loading from the MS4 to receiving waters.

The stormwater pollution control public education program entails a mixture of programs:

- Public web site development and update.
- Education and outreach.
- Household hazardous waste collection and disposal.
- Pesticides, fertilizer and pet wastes program.
- Industrial facility education program.
- Construction site operators' education program.
- Agency cooperation program.
- Library submittals.

Public Web Site Development

Performance Standard: The Stormwater Management Division maintains a public web site which seeks to discuss all pertinent aspects of the MS4.

FY 2010 Activities: With the transfer of the Stormwater Administration from WASA to DDOE in February of 2007, DDOE established a Stormwater Management Division section of its website. This includes several pages of background on the history of the Stormwater Management Division, the District's MS4 system, and the MS4 Permit. There are also links to report documents prepared by DDOE, an overview of each District Agency's stormwater activities, and a Frequently Asked Questions page. A GIS application is also linked which allows residents to determine what watershed and sewershed their address is located in. Finally, links are also included for other stormwater-related topics, such as the recently completed Stormwater Administration

Study Report, the DC Council's Stormwater Management Task Force, and the Palisades Neighborhood Drainage Study.

FY 2011 Goals: DDOE will continue to update, add to, and refine the MS4 website to display all relevant information including reports, accomplishments and fact sheets.

Education and Outreach

Performance Standard: The District provides environment and stormwater awareness outreach programs targeted to teachers, environmental educators and students throughout the District.

FY 2010 Activities: The FY 2009 outreach programs are described in detail below.

Education & Outreach

DDOE, Watershed Protection Division, sponsors and conducts environmental education and outreach activities targeted to teachers, environmental educators and students throughout the District. These programs and resources include the following:

Environmental Education Resource Center – This center provides resources and materials that teachers and other environmental educators may use to enhance the classroom curriculum and implement conservation projects.

- 37 teachers and 365 students received 402 cloth shopping bags from the resource center at the Anacostia Fair.
- 37 teachers received educational resources and curriculums, maps, posters, and magnetic clips, totaling 370 pieces of material, from the resource center at the Anacostia Fair.
- 365 students received posters, maps, rulers, pencils and activity booklets, totaling 1,825 pieces of material, from the resource center at the Anacostia Fair.
- 22 teachers at Ludlow-Taylor ES received PLT and Project WET activity guides from the center through participation in an 8-hour certification workshop.

Conservation Education (Project Learning Tree, Project WET, and Project WILD) – These internationally recognized programs are utilized to train educators in innovative techniques for exploring a wide range of environmental concepts with students and teaching critical thinking skills that lead to environmental stewardship (grades K-12).

- Provided 22 teachers at Ludlow-Taylor ES with an 8-hour Project Learning Tree certification workshop.

Teacher Training Workshops – Teacher-training workshops in environmental education, provide teachers with continuing education credits through accredited environmental curriculums that support the DCPS teaching and learning standards and provide students with meaningful environmental education experiences via outdoor activities and events.

- In the spring of 2010, The Student Conservation Association (SCA) worked in partnership with the District Department of the Environment (DDOE) to provide:
  - 24 teachers with four teacher-training workshops to engage students in their environment using their conservation sites
  - 11 teachers with in-class curriculum and teaching support
  - 208 students with environmental education programming
- WPD and NOAA Watershed Wise DC partners presented a professional development workshop for teachers who participated in the Watershed Wise DC Program. The workshop, held in Rock Creek Park near Pierce Mill on October 2, 2010, focused on macroinvertebrates and stream assessment. 18 teachers and seven presenters from partnering organizations participated.

RiverSmart Schools – RiverSmart schools works with applicant schools to install Low Impact Development (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.

- Brent ES, Anne Beers ES, Stokes ES, St. Peters School, Center City Public Charter School and Banneker High School attended a 16 hour training series on stormwater runoff, soils, composting, the value of trees, natives vs. non-native plants, wildlife habitat, the Chesapeake Bay watershed, and how to start a school garden. 25 teachers received the training, provided by DDOE/WPD and Student Conservation Association.
- A Volunteer Maintenance Program was developed for RiverSmart schools to assist teachers in maintaining the gardens and continuing to use the gardens to teach about the Bay. There were 38 teachers and volunteers in attendance for the 16 hour training. The course was taught by Common Good City Farm and DDOE/WPD staff. A total of 22 volunteers were placed in 18 schools.

- DDOE provided funding for the Center City Public Charter School project through a $50,000 donation from FedEx to create an upland forest, outdoor classroom, raised bed vegetable and herb garden and butterfly garden. The Center City PCS ground-breaking ceremony and work day was held on May 18, 2010. Eleven raised beds were built and filled with soil. Grass was removed and the soil was tilled and amended with aggressive compost on the planting site. Three trees, shrubs and about 100 mainly native plants were planted by 30 FedEx and NWF volunteers, and 40 students. The students and volunteers received instruction on how to install various plants. A brief ceremony was conducted with remarks by the DDOE Director and school and FedEx dignitaries.

The District of Columbia Environmental Education Consortium (DCEEC) – DDOE helps to organize a network of environmental educators throughout the city so that ideas and resources can be shared among them. 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 the Healthy Schools Act legislation, DDOE is tasked to develop an Environmental Literacy Plan (ELP) with other DC agencies (OSSE, DCPS, DPR) and stakeholders. A working group of DCEEC members has been meeting since June, conducting extensive background research on what other states are doing, how other states define environmental literacy, and which stakeholders should be involved in the process.

The Anacostia River Environmental Education Fair - This annual outdoor event offers District school children a variety of educational experiences designed to promote in them a conservation and stewardship ethic toward their watersheds, the Anacostia and Potomac Rivers, and the Chesapeake Bay. The fair also provides additional resources to District teachers interested in enriching their curriculum through environmental studies.

The Anacostia Fair took place on Friday, May 14, 2010. Nine DCPS schools, 37 teachers, 365 students, and 17 exhibitors were a part of the event. Students took part in activities on and off the water and learned about human behaviors and the connections between the health of their watersheds and the Bay.

Meaningful Watershed Educational Experiences (MWEEs)

- Alice Ferguson Foundation (AFF), with DDOE funding, successfully conducted seven overnight field-study trips for 145 4th and 5th grade students at Hard Bargain Farm from May 11 through June 11, 2010.
- The Anacostia Watershed Society (AWS), with DDOE funding, successfully provided 120 students with field experiences on the Anacostia River as well as restoration experiences that will impact their local watershed and the Chesapeake Bay.
- DDOE/WPD provided a hands-on meaningful watershed experience for 300 students at John Tyler Elementary School by engaging them in a schoolyard garden installation project. DDOE/WPD provided $21,500 for plants, soil, tools, and classroom materials that will help teachers to integrate the site into the curriculum. Volunteers from the Navy and City Year AmeriCorps assisted students, teachers and parents with the planting of 8 trees, 40 shrubs and 2000 plants on September 18 and 24.
- WPD conducted a Watershed Aquatics Environmental Education Camp - August 2-6, at the Boys and Girls Club of Greater Washington with the Fisheries and Wildlife Division. A total of 40 campers and youth summer workers participated from 9 to 2. The following topics were covered: Introduction to Watershed and Aquatics, Fish Habitat and Fishing, Wetlands, and Native Plants. A boat tour on the Anacostia was provided and a native plant garden was installed by the campers at the Boys and Girls Club.

Integrated Pest Management and Nutrient Management

DDOE has developed an education and outreach program on Integrated Pest Management (IPM) and Nutrient Management. The purpose of the program is to better inform the public on the proper use and disposal of pesticides and on the use of safer alternatives. The program provides education and outreach activities designed to property owners and managers about environmentally sound practices with regard to the use of pesticides in the yard or garden and the introduction of "good" pests into the landscape. Through DDOE's Nutrient Management Program, the property owners receive education regarding the proper amount of fertilizer to use on a lawn. In addition to fertilizer use, this program addresses the proper way to mow, the proper use of mulch, and the effects of applying too much mulch.

Furthermore, the DDOE 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. A part of this program involves the use of IPM.

WPD Storm Drain Marker Program

In FY2010, the DDOE Watershed Protection Division installed 1,023 storm drain markers throughout the District of Columbia with private citizens, individuals from various volunteer groups and DCPS school groups.

Low Impact Development (LID)

Low Impact Development Practices are focused on four main practices: cistern installation, establishment of bioretention cells, retrofit of vegetated (green) roofs and installation of pervious pavers.

In FY2010, DDOE/WPD partnered with Casey Trees to create a multi-tiered green infrastructure demonstration site at Casey Trees Headquarters at 3030 12th St NE. This project created a destination showcase on the commercial main street in the Brookland neighborhood, within walking distance to a metrorail stop. This site is now set up to illustrate how a high-density, small-footprint redevelopment is able to manage all the annual runoff on site. Green infrastructure on this project begins with rooftop treatment of stormwater with three varieties of green roof systems (2,500 square feet) including trays with plant plugs, trays with mature plants, and built-in-place pre-grown mats. The downspouts from the non-vegetated roof areas drain to a large onsite bioretention (1,023 square feet), as does the adjacent parking lot. Downspouts serving the vegetated roofs are routed to a harvest system (1,500 gallons) and that collected water provides drought irrigation for bioretention and curbside bioretention at 12th St. NE. The site is designed to manage the one-inch design event and is expected to retain, use and infiltrate 35,000 gallons of stormwater annually.

Further accomplishments include:

- Completed schoolyard retrofit with bioretention at Tyler DCPS.
- Installed curbside bioretention and LID retrofits along 12th St. NE.
- Installed a large volume cistern at Common Good City farm to harvest stormwater runoff to irrigate the community garden

Pollution Prevention

DDOE issued several grants for support of the Clean Marina Program (below) and to implement IPM at schoolyards and community gardens. DPW distributed a monthly

calendar that includes information regarding DPW's activities (household hazardous waste collection, leaf collection, block cleanups, etc.) to all District citizens.

Clean Marina Program

DDOE and the NPS-National Capital Region partner with marinas in the District to educate the public on environmentally responsible boating practices. The program encourages marina, boatyard, and boat club operators, as well as the boating public, to reduce pollution through maintenance, operation and storage of recreational vessels. In FY 2010, six marinas were re-certified as Clean Marinas. Marinas require recertification every two years.

RiverSmart Homes

In FY 2007, DDOE began the RiverSmart Homes Program that offers incentives to homeowners for implementing various practices (installation of rain barrels and rain gardens, planting large trees, replacing impervious surfaces with pervious surfaces, etc.) in their yards that will reduce stormwater runoff. Efforts to date on this program are described in more detail in Section III.F.1.

Household Hazardous Waste Collection and Disposal

Performance Standard: The District maintains a household hazardous waste collection and disposal program.

The District now maintains two permanent household hazardous waste collection facilities. The District promoted the collection and disposal of household hazardous waste through collection days previously discussed in Section III.F.10. These activities are promoted through the use of a public education pamphlet and press releases discussing solid and household hazardous waste.

FY 2011 Goals: The District will continue to provide educational opportunities to District residents to properly dispose of and ultimately reduce the amount of household hazardous waste and to operate permanent household hazardous waste facilities.

Pesticides, Fertilizer, and Pet Wastes Education Program

Performance Standard: The District continues to provide educational materials as part of its IPM/Nutrient Management Program.

Pesticides: DDOE has developed an education and outreach program entitled "Integrated Pest Management/Nutrient Management." The purpose of the program is to better inform the public on the proper use and disposal of pesticides and on safer alternatives to pesticides. The programs provide education and outreach activities designed to educate citizens about environmentally sound practices with regard to the use of pesticides in the yard or garden and the introduction of "good" pests into the garden.

District residents are educated on the proper application of pesticides through the IPM. This program gives residents guidance on how to choose an appropriate pesticide, how to choose a pest control company, and what regulatory requirements exist regarding commercial companies applying pesticides. This pamphlet also informs residents that there is a water quality impact associated with the application of too much pesticide.

In FY 2009, DDOE continued to implement an IPM campaign to inform gardeners within the District about Integrated Pest Management and its role in reducing non-point source pollution. As part of this campaign, presentations were delivered to audiences at community gardens and master gardening classes. In addition, DDOE also gave IPM presentations to staff members at DC Parks and Recreation facilities.

Fertilizers: Through DDOE's nutrient management program, the public is educated about the proper amount of fertilizer to use on a lawn. In addition to fertilizer use, this program addresses the proper way to mow, the use of mulches and the effects of applying too much mulch.

In FY 2009, DDOE distributed educational materials such as Nonpoint Source brochures and videos that provide suggestions on proper lawn fertilization, disposal of household waste, and application of pesticides and herbicides. The materials were primarily distributed through the Environmental Resource Center at environmental events where the target audience is teachers and District residents.

Pet Wastes: DDOE has developed an 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. Currently there are laws in the District requiring pet owners to remove animal wastes. A brochure outlining the requirement of the law is available to all residents to inform them that runoff from animal waste is a source of nutrient pollution in the waters of the District. The brochures are sent to veterinarian hospitals, to the DC Animal Shelter, and to dog park community organizations. Soon DDOE hopes to also include flyers in real

estate transaction packets: informing and reminding residents (at the time of purchase or rental) of the legal requirement to pick up pet waste in all areas of the City.

In FY 2010, DDOE continued to distribute Pooper Scooper brochures concerning pet wastes to DPR, the DC Animal Shelter, veterinarian offices, Martin Luther King, Jr. Public Library, public events, and teacher training workshops.

FY2010 Industrial Facilities Education Program

Performance Standard: The District provides industrial facilities with educational materials, seminars and conferences regarding the proper handling and storage of chemicals.

FY 2010 Activities: The District continued the industrial facility outreach program including the distribution of pamphlets on preventing discharges to Hickey Run. DDOE personnel used inspections to promote awareness of the proper methods of chemical storage. Based on what they observe on-site, inspectors can make facility-specific recommendations to improve their compliance with stormwater regulations.

FY 2011 Goals: The District will continue to disseminate educational materials and information through seminars and workshops to the industrial facilities within the MS4 drainage area.

Construction Site Operators' Education Program

Performance Standard: The District provides educational materials to construction site operators.

Educational training for construction site operators is conducted during the site inspection process. This training includes distribution of the District's *Stormwater Management Guidebook*s and the *Erosion & Sediment Control Handbook* (provided as attachments to the 2007 Annual Report), and addresses particular needs and questions of the operators. These books outline the regulatory requirements of the District for construction activity.

FY 2010 Activities: In FY 2010, DDOE continued to distribute guidance manuals demonstrating the proper maintenance of sand filter water quality structures and copies of a video that illustrates the proper maintenance of the sand filter, which is a commonly used BMP on construction sites. The videos were distributed to property management

companies, SWM facility maintenance service providers, and individual building engineers and property managers.

DDOE maintained a list of qualified stormwater management facility maintenance contractors registered to do business in the District. The list is made available to all persons responsible for the maintenance of individually owned private stormwater management facilities. To ensure proper maintenance of stormwater management facilities, DDOE established inspection procedure guidelines as required by 21 DCMR § 534.1. DDOE policy requires the submission and approval of a work plan before restorative maintenance of the filter bed of any District sand filter facility can proceed.

FY 2011 Goals: The District will continue to provide educational materials to construction site operators and to enforce the inspection procedure guidelines set forth in 21 DCMR § 534.1.

Agency Cooperation Education Program

Performance Standard: District agencies work with local, regional, and federal government agencies, non-governmental agencies, and universities to prepare, promote, and distribute public educational materials.

The District conducted public education programs to address stormwater topics. The District developed public education materials in coordination with other agencies.

The District continues to maintain partnership arrangements with regional and local organizations. A thorough discussion of partnerships and cooperative efforts, including public education, between the DDOE and other federal, regional, and local agencies and organizations appears in the *Nonpoint Source Management Plan II*. These partnerships help promote stormwater pollution control issues.

Regional Organizations: District agencies are currently working with the Interstate Commission on the Potomac River Basin (ICPRB), the Metropolitan Washington Council of Governments, and the Anacostia Watershed Restoration Committee (AWRC). These agencies meet regularly.

District agencies and the ICPRB have identified and developed information on toxic substances problems, and in FY 2007 they completed and submitted to EPA for approval a TMDL for polychlorinated biphenyls (PCBs). DDOE continues working with the AWRC and other agencies to reduce trash and improve water quality, wetlands, forest

cover, and ecological integrity of fish habitat in the Anacostia watershed. DDOE is monitoring restored wetlands for vegetation type and coverage. This data is being collected twice per year by DDOE and U.S. Geological Survey (USGS) and is analyzed by USGS. DDOE also continued working with the State of Maryland, Prince George's and Montgomery Counties, and EPA Region III to develop a trash management plan.

Local and Federal Government Agencies: EPA is providing technical and program support to the Nonpoint Source programs of the District.

Watts Branch Stream Restoration: DDOE continued to work with the USFWS on the stream restoration plans for Watts Branch. As of FY 2010, construction on the stream restoration project had begun.

Pope Branch Stream Restoration: Work continued on the Pope Branch stream restoration project in FY 2010, with DDOE and DC Water working with a new contractor to make significant changes to the designs. DDOE and other partners (DC Water and DPR) continued to attend regular meetings with community representatives to keep them apprised of the status of the work. Issuance of the contract was delayed by DC Water contracting however a contract is expected to be awarded for construction of the project in late 2011, with constructed anticipated in FY 2012.

Fire Engine House Green Roofs: DDOE Watershed Protection Division (DDOE/WPD), working with the District Fire and Emergency Medical Services selected two Fire Engine Houses with scheduled roof replacement projects to retrofit with vegetated roof systems (green roofs). Implementation of the first green roof at Engine House 6 was completed in 2010. Engine House 30 is expected to be completed in 2011.

Other Agencies

DDOE worked with USGS and NPS to quantify damage to restored wetlands by resident Canada geese. This study (led by USGS) will scientifically show the impacts of resident Canada geese upon previously completed wetland restoration projects.

USGS maintained gauging stations along Rock Creek and Watts Branch that provide data for the discharge monitoring program described in Section III.D of this report.

Universities

Universities in the District provided research and support services to the MS4 programs of the District government. These services included assessment of petroleum and hydrocarbons in groundwater, groundwater hydrology and wetlands, toxic organic compounds, educational videos and projects on nonpoint sources and pollution prevention. In addition, they provided interns for public educational and biological monitoring programs.

Nonprofit/Environmental Group Partnerships

Alice Ferguson Foundation

DDOE has partnered with the Alice Ferguson Foundation to develop targeted anti-littering outreach efforts, including behavioral research into the reasons why people litter, and social marketing campaigns aimed at modifying that behavior.

Anacostia Watershed Society

DDOE partnered with AWS to continue operating its successful green roof subsidy program during FY 2010. This program offers a rebate of up to $5 per square foot for green roof installations, up to $20,000 per project.

DDOE has partnered with AWS on the construction and maintenance of custom designed trash trap in Nash Run, a tributary to the Anacostia River. AWS will continue to monitor and maintain the device through FY 2012.

Keep Washington Beautiful

DPW participates as a member of the Board of Keep Washington Beautiful providing planning and support of major events. Through their Helping Hands Program, DPW also acts as a year-round resource distributing kits for neighborhood groups committed to keeping their communities clean through block-party cleanup events. DPW provides packers and sweepers in support of community cleanups.

Pope Branch Citizens Group

The Pope Branch Citizens Group continued to work with District government agencies on the Pope Branch stream and sewer line restoration project. They met with District agencies throughout FY 2010. The Pope Branch Citizens Group worked to improve water quality along Pope Branch by participating in cleanup events organized by other local non-profit organizations such as Earth Conservation Corps.

Library Submittals

Performance Standard: The District places all Permit records and documents on file with the public library for use by the general public.

The Permittee has established a system to ensure that Permit records and documents are available for public review in a single location at the Martin Luther King, Jr. Public Library.

FY 2010 Activities: Submittals included:

- All annual reports.
- Annual Implementation Plans and the specific TMDL Implementation Plans for the Anacostia and Rock Creek Watersheds.
- Annual Discharge Monitoring Report.
- A copy of all intergrated pest and nutrient management information on file.

FY 2011 Goals: DDOE will maintain the same level of submittals to the Martin Luther King, Jr. Public Library. In addition, all documents will be available on DDOE's Stormwater Management Division website.

III.G Total Maximum Daily Load Waste Load Allocation Implementation Plans

Part IX.B of the Permit requires the District to submit implementation plans to reduce discharges consistent with any applicable EPA-approved WLA component of any established TMDL.

The Permit specified that TMDL WLA Implementation Plans be submitted to EPA for the Anacostia and Rock Creek watersheds. These Plans were completed in 2005.

The Annual Implementation Plans summarize the tasks conducted by the District to control pollutants in stormwater discharged from the MS4. The FY 2012 Implementation Plan includes budgetary analysis and planned activities for FY 2012, which covers the period October 01, 2011 through September 30, 2012.

During FY 2010, TMDL WLA Implementation Plan activities were underway as listed below:

Street Sweeping

- DPW continued implementation of its enhanced street sweeping activities.

Catch Basin Cleaning

- DC Water continued ongoing activities at their current level; no new activities were planned.

Household Hazardous Waste

- DPW managed the collection and disposal of 1,281 55-gallon barrels of household hazardous waste and 132 tons of unwanted electronics for recycling.

Inspection and Enforcement

- DDOE continued inspections for illicit discharges in the field in response to complaints, performing visual inspections of selected outfalls, and working with DC Water and/or other responsible parties to ensure the correction of illicit discharges.

- DDOE continued to prevent illicit discharges by providing on-site recommendations to facilities and participating in public education and outreach events, such as the Annual Anacostia Environmental Fair and Earth Day.

- DDOE continued:

    - Incorporating updated mapping layers into the GIS,
    - Incorporating the MS4 outfall/infrastructure verification data into the GIS,
    - Combining updated industrial facility location data into the GIS (based on field verification for 60 facilities within the MS4 service area that are part of NPDES, CERCLA, and/or RCRA databases), and
    - Generating maps to support field investigations.

Constructed LIDs and BMPs

- DDOE continued to strengthen its erosion and sediment control program, and conducted training for construction staff and inspectors.

- DDOT completed construction of four bioswales as part of the Nebraska Avenue NW road construction project.

- DDOT completed work on the Metropolitan Branch Trail between New York Avenue NE and Franklin Street NE, including one bioretention area and infiltration trenches.

- DDOT initiated construction on the Georgia Avenue NW Great Street Project, and continued construction on the Pennsylvania Avenue SE and Nannie Helen Burroughs Avenue NE Great Street Projects. Each of these projects includes numerous LID elements.

- DDOT initiated construction on the 11th Street SE Bridge and continued construction on the 9th Street NE Bridge. Both projects incorporate LID elements such as bioretention and wet ponds.

- DDOT identified a number of upcoming construction projects for opportunities to incorporate LID into transportation projects and as stand-alone retrofit opportunities.

III. H Program Funding

The District's Stormwater Permit Compliance Amendment Act of 2000 established a Stormwater Permit Compliance Enterprise Fund to provide money for implementing the activities required by the 2004 MS4 Permit. Starting July 1, 2001, WASA began collecting a stormwater fee for the Enterprise Fund. This fee structure was designed to raise $3.1 million/year, which at the time was the estimated cost of the activities required to comply with the 2000 MS4 permit. In 2008, in response to the DDOE/EPA MS4 Letter Agreement, DDOE updated its estimate of permit compliance costs to approximately $13.2 million per year. In order to secure this funding, DDOE proposed and enacted the first stormwater fee adjustment since the fee's inception.

In addition, the Comprehensive Stormwater Management Enhancement Amendment Act of 2008 directed DDOE to update the stormwater fee structure to be based on impervious surface. In May of 2009, DDOE revised the stormwater fee structure to comply with this requirement. A property's impervious surface area is a more direct measure of the stormwater runoff generated by that property, and therefore provides a more accurate and equitable method for apportioning the District's stormwater management costs among ratepayers. The District's impervious stormwater fee uses Equivalent Residential Units (ERUs) of 1,000 square feet as billing units (1,000 square feet was determined to be the

average amount of impervious surface on residential properties in the District). Each ERU in the District is charged $2.67 per month for the stormwater fee. Beginning in November 2010, single family residences are billed according to a tiered structure that reflects their property size, while all other properties are charged based on their total impervious surface area, rounded down to the nearest hundred square feet and converted into ERUs.

A cost benefit analysis of current and planned MS4 permit activities is included in the FY 2012 Implementation Plan submitted together with this report. The Implementation Plan explains the activities and anticipated budgets planned for FY 2012. Implementation of the budgeted activities outlined in the FY 2012 Implementation Plan will substantively fulfill the requirements of the current Permit. The Implementation Plan that was submitted last year consists of a cost benefit and affordability for FY11. The plan will continue current activities to manage stormwater pollution and encourage improved stormwater management techniques, while providing the organization, legal framework, technical evaluation, and specific data necessary to ensure progress and track improvement in the quality of stormwater discharged from the MS4. Table 17 provides a summary of the Enterprise Fund expenditures by agency for FY 2001-FY 2010 for Permit-required programs.

Table 17. Summary of Enterprise Fund Expenditures for FY 2001- FY 20010 for Permit-required Programs.

Agency	FY01 - FY05	FY06	FY07	FY08	FY09	FY10	Total
DOH/ DDOE	$986,358	$263,643	$1,049,248	$1,192,658	$851,707	$4,192,155	$8,535,769
DDOT	$91,732	$350,240	$1,016,050	$843,888	$2,700,000	$1,538,700	$6,540,610
DPW	$2,473,752	$922,089	$1,373,723	$1,092,050	$800,000	$1,270,425	$7,932,039
DC Water	$3,413,292	$1,120,603	$1,477,686	$390,802	$154,850	$104,667	$6,661,900
Total	$6,965,134	2,656,575	$4,916,707	$3,519,398	$4,506,557	$7,105,948	$29,670,319

III.I Assessment of Controls

Assessing the effects of the SWM program in reducing pollution and achieving the requirements of the CWA involves a variety of measurement metrics and processes. According to EPA's *Guidance Manual For The Preparation Of Part 2 Of The NPDES*

Permit Applications For Discharges From Municipal Separate Storm Sewer Systems (Attachment A-8 on the CD), there are two ways to assess the SWM program. They are:

1. Direct Measurement, which includes the number of BMPs installed, removal efficiencies, stormwater volume reduction, event mean concentration reduction, and estimated pollutant loading reduction; and

2. Indirect Measurement, which includes but is not limited to, the amount of household hazardous waste collected, number of public hearings and attendance at these hearings, number of spill cleanups, number of sewer inlet stencils, number of educational brochures distributed, and number of erosion and sediment control permits issued.

In order to help provide direct assessment of the SWM program impact on water quality, the District is continuing its long-term monitoring program. The program rotates stormwater sampling from the Potomac watershed to the Anacostia watershed to the Rock Creek watershed on an annual rotation. By focusing monitoring in one watershed during a given year, a more complete measure of pollutant loading from that watershed is obtained.

Within each watershed, DDOE has selected outfalls that are representative of the MS4 for inclusion in the discharge monitoring program. By monitoring representative outfalls, an economy of time, effort, and resources can be made in assessing the impacts of the SWM program on pollutant discharge from the MS4 as a whole. Programs such as removing illicit connections, improved erosion and sediment controls for construction sites, and refurbishment of municipal waste transfer and salt storage areas will result in immediate and predictable reductions to pollutant loading to stormwater runoff in a known sewershed. Such measures require monitoring data and runoff modeling to quantify results.

Monitoring provides measurement of the pollutant levels in a watershed so as to evaluate the removal of pollutants by structural BMPs. These BMPs may include LID techniques, catch basin filters and/or inserts, oil and grease traps and flow reduction devices incorporated by new construction and redevelopment throughout the District. These structures are placed on individual sites by residents, businesses, and federal facilities and are designed to control the water flow and pollutants from the land area of that specific site. A reduction of pollutants at a monitoring site cannot be expected until after a significant amount of the monitored watershed area is controlled by BMPs.

The pollutant removal efficiency of a BMP is typically expressed as a percentage reduction in the concentration of a particular pollutant. In order to evaluate the effect of a BMP, knowledge of the pollutant level (in the water flowing from the site) prior to BMP construction is required. After construction, monitoring data should provide a new measure of the level of the pollutant so that a percentage reduction can be estimated. Examples of this may be a 70 percent reduction of oil and grease in a BMP installed near an automotive repair shop, or 80 percent reduction of floatable trash (total suspended solids) in a BMP near a public park area.

Progress of the SWM program under the SWM plan can also be assessed indirectly utilizing statistics regarding stormwater management activities reported by District agencies. While these measures are qualitative and not quantitative, the level of effort, equipment and manpower for each SWM activity under the SWM plan help to provide indirect measurement of pollution reduction achieved. Programs such as public education and contractor and equipment operator training produce effects that are dispersed over time and location. Impacts to the pollutant levels of the MS4 are usually indirectly measured by tracking the number of persons trained or through testing of comprehension.

Some SWM plan measures, such as long-term traffic and transit planning, and programs implemented by consumers like rain leader disconnection or other small-scale residential BMP installations, require significant time in planning and implementation. Thus, effects of today's work may not be measurable within the term of the current permit, or even the following one. Such measures, while quantifiable, require extended time intervals of measurement, or estimates of future implementation rates and efficiencies.

Methodologies for assessing the effects of the SWM program in reducing pollution and achieving the requirements of the Clean Water Act will continue to be developed and refined to provide a consistent measure of progress and success in the MS4 program.

III.J How This Program Meets Requirements of the Clean Water Act

Full implementation of this program is critical with respect to the CWA. The primary method by which the CWA imposes limitations on pollutant discharges is the permit program established under Section 402 and the NPDES program. Under the NPDES program, any person responsible for the discharge of a pollutant or pollutants into any waters of the United States from any point source must apply for and obtain a permit.

The District has developed watershed-specific implementation plans for two of the District's major watersheds, Anacostia River and Rock Creek. The implementation plans discuss the level of effort needed to meet the TMDL WLA determined for the watershed. These plans are being used as management tools to both direct future stormwater efforts and estimate the anticipated costs of the activities. In this manner, the implementation plans help to meet the requirements of the CWA.

III.J.1 Electronic Mapping and GIS Modeling

The District's stormwater model provides an important management tool for the coordination and evaluation of the stormwater pollution control effort. As the model continues to develop, the geographic data coupled with the monitoring data will provide information regarding the District area of greatest need. In this manner, as a management tool, the stormwater model helps to meet the requirements of the CWA.

III.J.2 Commercial, Residential, and Federal and District Government Areas

The District is involved in a number of activities which promote stormwater control and quality in commercial, residential, federal and District government areas. These activities include the following:

- Legal and regulatory activities which encourage citizens to use stormwater BMPs on their properties.

- Routine cleaning and maintenance activities related to the property, streets, stormwater catch basins and MS4 system within the District. Focus is on maintaining a beautiful city that is both clean and capable of reducing pollutants that might contribute to not meeting the water quality standard.

- Promotion of BMPs such as functional landscaping, LIDs, and rain leader disconnects which property owners can use to further reduce pollution from their stormwater runoff.

Together these activities seek to control potential pollutants before they enter the MS4 system (through sweeping and catch basin maintenance) and by promoting BMPs that reduce stormwater runoff at the point of entrance to the MS4 system.

III.J.3 Industrial Facilities

The District's management program for controlling stormwater pollution from industrial facilities seeks to encourage DC industries to control pollutants in their waste. Through routine inspections of industries with individual NPDES stormwater permits and monitoring and inspections throughout the District, the District enforces effluent restrictions to the MS4 to meet CWA requirements.

III.J.4 Construction Sites

The District seeks to control stormwater runoff from construction sites through the review of construction plans and the inspection of construction sites.

In the review process, the District is able to work with designers, promote stormwater BMPs, and encourage the use of stormwater quality controls on new and rebuild construction sites. In the long term, the cumulative effect of maintained or decreased levels of impervious land use and installation of stormwater BMPs on a large number of sites will help to decrease the peak runoff rates and pollutants discharged to the District's waterways. In the short term, the use of erosion and sedimentation controls on construction sites will decrease the levels of soils exiting a construction site. Through inspections the District is able to enforce the use of erosion and sedimentation controls so as to better ensure the water quality of runoff from construction sites and monitor the location of increases or decreases of impervious area due to construction.

III.J.5 Flood Control Projects

The District's flood control program acts to maintain existing flood controls on its waterways (Watts Branch and the Potomac River Tidal Basin) and ongoing flood impact programs with FEMA. These activities seek to minimize flooding impacts due to large storm events.

III.J.6 Control of Pollutants from Municipal Landfills or Other Municipal Waste Facilities

There are no municipal landfills within the District. District municipal waste transfer facilities are managed to minimize stormwater impacts and keep up with increasing waste and recyclable loads. By removing the waste materials handled by the facilities, the amount of stormwater runoff pollutants potentially originating from these materials is

reduced. In addition, stormwater BMPs (improved paving and drainage systems) installed in the transfer stations minimize pollutants in the runoff from the transfer facilities.

III.J.7 Pesticides, Herbicides, and Fertilizer Applications

The District's SWM program emphasizes control of specific pollutants found typically in herbicides, pesticides and fertilizers. The most effective program activity is proper application of the materials, which is taught through the IPNM program. When the materials are properly applied, the levels of pollutant constituents in the stormwater runoff are reduced.

III.J.8 Deicing Activities

In implementing its deicing program, the District is reducing the amount of salt that is applied to the roadways in order to provide a safe passage for its citizens. These activities directly impact the amount of salt in melted stormwater runoff entering into the MS4 and thereby help to meet the stormwater quality requirements of the CWA.

III.J.9 Snow Removal

In implementing its snow removal program, the District provides a safe passage for its citizens while using deicing materials that provide the minimum impact practicable to the melted stormwater runoff that enters the MS4. These activities directly impact the pollutant constituents in stormwater runoff entering into the MS4 and thereby help to meet the stormwater quality requirements of the CWA.

III.J.10 Illicit Discharges

The District's stormwater pollution control management program for the detection and removal of illicit discharges acts to eliminate illicit discharges of stormwater pollutants. The reduction of stormwater pollutants to the District's waterways helps to meet the water quality standards of the CWA.

III.J.11 Public Education

In urban areas, water pollution occurs when water, moving over land, picks up pollutants such as sediment, bacteria, nutrients, and toxicants and carries them to nearby waters. A cost-effective way to reduce water pollution from this stormwater runoff is by preventing the pollution at the onset. Pollution prevention is more cost effective than remediation.

DDOE accepts the premise that most citizens would protect their environment given the correct information. DDOE considers effective environmental education a natural complement to its regulatory functions. Realizing that habits formed early in life are more enduring, the outreach program has a major youth component.

DDOE has raised awareness of point and nonpoint pollution sources in the community and pollution prevention methods through its outreach to educational and community groups. These educational efforts begin with teacher training days, community outreach, and various fairs and festivals in the District. This methodology exposes children at an early age to their impacts on stormwater surface runoff and discharges to the MS4 and District waterways. This effort seeks to develop a pollution prevention mindset and is more cost effective than developing ways of mitigating runoff.

Who to Call if You Have a Watershed or Water Quality Question:

District Agencies

District Department of the Environment (DDOE) 202-535-2600
- Natural Resources Administration 202-535-1660
- Stormwater Management Division 202-535-1722
- Watershed Protection Division
  - Sediment and Stormwater Technical Services Branch 202-535-2240
  - Inspection and Enforcement 202-535-2240
  - Non Point Source Management 202-535-2241
- Water Quality Division 202-535-2190

District Department of Public Works (DPW) 202-673-6833
- Bulk Trash Collection 202-727-1000
- Residential Trash Collection 202-727-1000
- Office of Recycling 202-645-7190

District Department of Transportation 202-673-6813

Inter-District Agencies

Water and Sewer Authority (DC Water) 202-787-2000
- Water and Sewer Emergency Hotline 202-612-3400
- Water Quality Division 202-612-3440
- Documents and Permits (for Waterlines) 202-787-2057

APPENDIX A

Memoranda of Understanding

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE DISTRICT DEPARTMENT OF THE ENVIRONMENT
AND
WATER AND SEWER AUTHORITY
REGARDING MS4 STORMWATER PERMIT FISCAL ADMINISTRATION
AMENDMENT #2

The Memorandum of Understanding (MOU) between the District of Columbia Water and Sewer Authority (WASA) and the District of Columbia Department of the Environment (DDOE), dated July 25, 2008, is amended to specify the amount to be reimbursed by DDOE to WASA from the FY 2010 MS4 budget, extend the duration of the MOU and specify the activities to be performed.

SECTION III(A) is amended to add a new section #3, as follows:

3. For FY 2010, WASA shall provide:

a) Water quality catch basin maintenance services, including:

i) A list of dates for performance of maintenance on DDOE identified water quality catch basins located in the MS4 area will be submitted at the end of each fiscal year. The identification number (ID) will be included on the list.

ii) Cleaning and maintaining of all water quality catch basins located within the MS4 area at least once during FY 2010 within the amount funded for this task within the amended Section III (B) (3). Cleaning and maintenance shall be conducted in accordance with DDOE's standard operating procedure (Attachment B). WASA shall provide at least 72-hours notice to DDOE prior to performing the maintenance; and

iii) Invoices for reimbursement for services, as required by Section VI(B)(2), which shall also include a report of the date of cleaning, the amount of sediment collected, and the identification number of each water quality catch basin.

b) WASA staff participation in and support of the District's MS4 Technical Working Group activities.

SECTION III (B)(3): Delete item 3 and replace it with the following language, and add item 9 to read as follows:

3. For FY 2010, the Stormwater Administrator shall administer the Stormwater Permit Compliance Fund as follows:

Project	Funded Amount
a) Water Quality Catch Basin Maintenance	$500,000
b) DC WASA MS4 Technical Workgroup Staff Activities	$80,000
DC WASA Total FY 2010 Funding	**$580,000**

9. The Stormwater Administrator shall provide a current list of all water quality catch basins located in the MS4 area to WASA by October 1st of each year.

10. The remaining terms and conditions set out in the original MOU dated July 25, 2008 shall remain in full force and effect.

DISTRICT DEPARTMENT OF THE ENVIRONMENT

Keith A. Anderson, Interim Director — Date 4/28/10

Bernice I. Corman, General Counsel — Date 4/27/10

WATER AND SEWER AUTHORITY

George S. Hawkins, General Manager — Date 5/17/10

Avis M. Russell, General Counsel — Date 5/12/10

Olu Adebo, Chief Financial Officer — Date 5/13/10

MODIFICATION NO. 1
TO
MEMORANDUM OF UNDERSTANDING
BETWEEN THE
DISTRICT DEPARTMENT OF THE ENVIRONMENT
AND THE
DISTRICT DEPARTMENT OF TRANSPORTATION

The Memorandum of Understanding dated March 19, 2009 ("MOU") was entered into between the District of Columbia Department of the Environment, the buyer agency ("DDOE") and the District Department of Transportation, the seller agency ("DDOT"), collectively referred to herein as the "Parties." The Parties now desire to modify the MOU as follows:

I. **Section IV, DURATION OF MOU:** Pursuant to Section IV.B, the Parties hereby agree to extend the term of this MOU for one year commencing on October 1, 2009 through September 30, 2010.

II. **Section VI.A.1, FUNDING PROVISIONS is hereby modified as follows:**

Total cost for goods and services under this Modification to MOU shall not exceed One Million Five Hundred Thirty Eight Thousand Seven Hundred Dollars ($1,538,700.00) for Fiscal Year 2010. Funding for the services shall not exceed the actual cost of the goods or services based on the budget attached to this Modification as Attachment A.

All other terms and conditions of the MOU shall remain the same.

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

DISTRICT DEPARTMENT OF THE ENVIRONMENT

Keith A. Anderson
Interim Director

Date: 3/05/10

Bernice Corman, Esq.
General Counsel

Date: 2/17/10

DISTRICT DEPARTMENT OF TRANSPORTATION

Gabe Klein
Director

Date: 1/28/10

George Dines
Associate Chief Financial Officer

Date:

GOVERNMENT OF THE DISTRICT OF COLUMBIA
DEPARTMENT OF PUBLIC WORKS

Office of the General Counsel

February 23, 2010

Dr. Hamid Karimi
District Department of the Environment
51 N Street, NE- 5th floor
Washington, DC 20002

Dear Dr. Karimi:

On behalf of Department of Public Works Director William O. Howland, enclosed please find the current amendment to the MS4 stormwater permit fiscal administration memorandum of understanding. It has been signed by both you and Mr. Howland.

If you have any questions, please contact me at 202.671.2531 or katherine.kelley@dc.gov.

Sincerely,

PETER J. NICKLES
Attorney General for the District of Columbia

By: Katherine V. Kelley
KATHERINE V. KELLEY
Assistant Attorney General

Enclosure

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE DISTRICT DEPARTMENT OF THE ENVIRONMENT
AND
THE DISTRICT DEPARTMENT OF PUBLIC WORKS
REGARDING MS4 STORMWATER PERMIT FISCAL ADMINISTRATION
AMENDMENT

The MOU between DPW and DDOE, dated August 1, 2007, is amended to specify the amount to be transferred to DPW from the FY 2010 MS4 budget, identify the activities to be conducted by DPW to comply with the MS4 Permit and the duration of the MOU.

SECTION I.6: Delete item 6 on page 4 and replace with the following text:

For FY 2010, the Storm Water Administrator shall administer the Storm Water permit compliance fund as follows:

Department of Public Works .....$ 800,000

DPW has submitted its budget for the MS4 funds necessary for complying with DPW's obligations in the FY 2010 Implementation Plan. Reimbursement shall be for funding the activities requested by DPW and approved by the Director in the priority activities indicated below:

Activity	Amount	Priority
Hazardous waste collection from permanent DPW drop-off facility (Fort Totten)	400,000	1
Public Education (leaf collection brochures and Sweepcams for MS4 route sweepers). All brochures shall include the DDOE logo.	75,000	2
Operation and maintenance of MS4 regenerative air sweepers	150,000	3
Pollution Prevention Installation of BMPs on DPW facilities. Type of BMPs and efficiencies to be approved by stormwater administrator.	150,000	4
Pollution Prevention Purchase and utilize hazardous material spill kits	25,000	5
Total Amount	800,000	

SECTION III.1: Delete item 1 on page 5 and replace with the following text:

This MOU shall be effective as of August 19, 2010 through August 19, 2011

DISTRICT DEPARTMENT OF THE ENVIRONMENT

Maureen McGowan, Interim Director — Date 1/22/10

1/21/10

Bernice I. Corman, General Counsel Date

DISTRICT DEPARTMENT OF PUBLIC WORKS

2-16-2010

William O. Howland, Jr., Director Date

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 to 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, DDOT, 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 heading the Storm Water Administration, pursuant to the Establishment of the District Department of the Environment 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 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 DDOE, 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 or 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 O. Howland, Jr., Director, DPW — Date: 8-27-2007

Jerry N. Johnson, General Manager, DCWASA — Date

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE DISTRICT DEPARTMENT OF THE ENVIRONMENT
AND
THE DEPARTMENT OF REAL ESTATE SERVICES
AMENDMENT

The District Department of the Environment (DDOE) and the Department of Real Estate Services (DRES) hereby amend Memorandum of Understanding (MOU) dated August 10, 2009 (the "Amended MOU") to modify the amount to be reimbursed by DDOE to DRES for the activities to be funded from the FY 2010 MS4 budget administered by DDOE. The MOU is hereby modified as follows:

I. SECTION III. SCOPE OF SERVICES - B.4.

Delete text of Section III.B.4. and replace with the following text:

In FY 2010, the Stormwater Administrator shall fund the activities identified below:

Activity	Fund Amount
Design and install a bioretention to treat two parking lots of approximately 15,000 square feet at the proposed DC Evidence Control Facility Warehouse located at DC Village Lane in southwest.	$120,000
Construction of green roof of approximately 30,000 square foot at the Consolidated Forensic Lab and a green roof of approximately 24,360 at the Department of Employment Services.	$670,000
Total amount	$790,000

II. SECTION III. SCOPE OF SERVICES -B.5:

Replace the listed amount of $1,304,000 with $790,000.

III SECTION IV. DURATION OF MOU - A.1:

Replace period of October 1, 2009 through September 30, 2010 with March 1, 2010 through September 30, 2011.

IV SECTION VI. FUNDING PROVISIONS - A.1:

Replace the listed amount of $1,304,000 with $790,000 for fiscal years 2010 and 2011.

All other terms and conditions of the MOU shall remain the same.

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

DISTRICT DEPARTMENT OF THE ENVIRONMENT

Keith A. Anderson, Interim Director — Date: 4/19/10

Bernice I. Corman, General Counsel — Date: 4-19-10

DEPARTMENT OF REAL ESTATE SERVICES

Robin-Eve Jasper, Director — Date: 2-18-10

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE
DISTRICT DEPARTMENT OF THE ENVIRONMENT
AND
THE DEPARTMENT OF REAL ESTATE SERVICES

I. INTRODUCTION

This Memorandum of Understanding ("MOU") is entered into by and between the District Department of the Environment ("DDOE") and the District Department of Real Estate Services ("DRES").

II. OVERVIEW / PROGRAM GOALS AND OBJECTIVES

This MOU is entered into by and between DDOE and DRES to transfer funds to design and construct two green roofs. The first green roof will be located at the Consolidated Forensic Laboratory with an approximate area of 30,000 square foot, and the second green roof will be located at the Department of Employment Services (DOES) with an approximate area of 24,360 square foot. The green roof projects are implemented to retain storm water and reduce storm water pollutants from entering the municipal separate storm sewer system (MS4) under the National Pollutant Discharge Elimination System (NPDES) Permit MS4 Permit. The Director of DDOE, or his designee, was made the MS4 Permit Administrator ("Storm Water Administrator") with primary responsibility for heading the Storm Water Administration, pursuant to the Establishment of the District Department of the Environment Act of 2005, D.C. Official Code § 8-151.03(b)(2). The storm water management activities, such as green roofs, are supported by fees collected by WASA in a Storm Water Compliance Enterprise Fund and provided to DDOE to certify the sufficiency of the MS4 Permit budget.

III. SCOPE OF SERVICES

A. RESPONSIBILITIES OF DRES

1. DRES shall provide a copy of the architectural and engineering plan for the green roof to be constructed, indicating location, square footage and type of application/practice.

2. DRES shall obtain all applicable permits for the construction of the green roofs as detailed in Section II.

3. DRES shall provide a monthly report to detail progress towards the construction of the green roofs.

6. The Storm Water Administrator may request additional supporting documentation, if necessary, to evaluate the reconciliation.

7. The Storm Water Administrator's Budget Authority transmittal is subject to total approved budget limits as well as cash or revenues available in fund.

8. Budget Authority approved by the Storm Water Administrator will be submitted within five business days of approval.

IV. DURATION OF MOU

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

2. The Parties may extend the term of this MOU by exercising a one-year option period. Option periods may consist of a year, a fraction thereof, or multiple successive fractions of a year. DDOE shall provide notice of its intent to renew an option period prior to the expiration of the MOU.

3. The exercise of an option period is subject to the availability of funds at the time of the exercise of the option.

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 $200,000. Funding for the services shall not exceed the actual cost of the goods or services, **based on the actual cost spent by DRES.**

2. In the event of termination of the MOU, payment to DRES shall be held in abeyance until all required fiscal reconciliation, but not longer than September 30 of the current fiscal year.

B. PAYMENT

1. Payment for all of the goods and services shall be made through an Intra-District advance by DDOE to DRES based on the total amount of this MOU.

2. DRES shall submit reconciliations which shall explain the expenditure of the funds.
3. Advances to DRES for the services to be performed/goods to be provided shall not exceed the amount of this MOU.

4. DRES will relieve the advance and bill DDOE through the Intra-District process only for those goods or services actually provided pursuant to the terms of this MOU. DRES will return any excess advance to DDOE prior to the termination of this MOU.

5. 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 Financial Operations and Systems.

VII. TERMS AND RENEWAL OF MOU

This MOU shall be effective until September 30, 2011.

VIII. RESOLUTION OF 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 Financial Operations and Systems.

IX. NOTICE

The following individuals are the contact points for each Party under the MOU:

Jeffrey Seltzer
Associate Director Stormwater Management Division
District Department of the Environment
1200 First Street, 6th Floor
Washington, DC 20002
Phone 202-535-1603

Susan Riley-Laudadio,
Green Building Coordinator
Department of Real Estate Services
2000 14th Street, NW – 8th Floor
Washington, DC 20009
Phone (202) 724-4400

X. TERMINATION AND MODIFICATIONS

A. This MOU may be terminated without penalty. Either party can terminate this agreement, without cause, by written notification to the other party at any time.

B. This MOU may be modified or amended subject to the requirements in item IV above. The parties agree that any modification or amendment of this MOU shall be valid only when reduced to writing, duly signed, and attached to the original MOU.

XI. EFFECTIVE DATE

This MOU shall take effect upon signatures of the representatives. Each party affirms that they have read, understand, and agree to be bound by the terms and conditions of this MOU.

IN WITNESS WHEREOF, the parties have caused this MOU to be executed by their duly authorized representatives.

For the Department of the Environment:

Christophe A.G. Tulou
Acting Director

6.22.10
Date

Bernice I. Corman
General Counsel

6/21/10
Date

For the Department of Real Estate Services:

Robin-Eve Jasper
Director

6/29/10
Date

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE DISTRICT DEPARTMENT OF THE ENVIRONMENT
AND
THE UNIVERSITY OF THE DISTRICT OF COLUMBIA

I. INTRODUCTION

This Memorandum of Understanding (MOU) is entered into between the District of Columbia Department of the Environment (DDOE or DDOE/Storm Water Administrator) and the University of the District of Columbia (UDC), individually referred to herein as the "Party" and collectively referred to herein as the "Parties" for the transfer of funds from the Enterprise funds for the installation of green roofs at the UDC campus.

WHEREAS, storm water discharges from the municipal separate storm sewer system (MS4) are authorized by the National Pollutant 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 Director of DDOE, or his designee, was made the Storm Water Administrator with primary responsibility for heading the Storm Water Administration, pursuant to the Establishment of the District Department of the Environment 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 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, DDOE and UDC 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.

II. PROGRAM GOALS AND OBJECTIVES

MS4:	Municipal Separate Storm Sewer System
NPDES:	National Pollutant Discharge Elimination System
MS4 Permit:	Municipal Separate Storm Sewer System Permit
EPA:	Environmental Protection Agency

This MOU is entered into by and between DDOE and UDC to transfer funds to design and install approximately 92,000 square feet of green roofs at the UDC campus from the FY 2010 MS4 fund to reduce storm water pollutants to the District of Columbia, under the municipal separate storm sewer system (MS4) National Pollutant Discharge Elimination System (NPDES) Permit (MS4 Permit).

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 UDC:

1. Design and install approximately 92,000 square feet of green roofs systems at buildings 38, 39, 44, 46 (East and West), 47, 52 and additional environmental components at the plaza deck according to the plans submitted to DDOE.

2. Submit architectural and engineering plans of the projects stated above.

3. UDC shall submit to DDOE copies of invoices and other applicable documentation demonstrating how the funds were spent.

4. Establish an Environmental Management System (EMS) to track projects funded by this MOU. The EMS will track the status of the implementation of the projects listed above on a monthly basis.

B. RESPONSIBILITIES OF DDOE/STORM WATER ADMINISTRATOR:

1. DDOE/Storm Water Administrator may request additional information from UDC to justify the project or activity. Approval of the detailed budget request referenced in Section A (above) by

the Storm Water Administrator is pre-approval for transfer of budget authority from DDOE to UDC for the expenditures conducted by UDC for the approved project or activity.

2. DDOE/ 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.

3. In the event of a budget shortfall, DDOE/ 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 DDOE/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, DDOE/Storm Water Administrator may request that UDC make up the difference. UDC's obligation to pay the difference between the costs of the Storm Water Administration and the revenues from the Storm Water Fund is subject to future written approval by UDC and appropriation of necessary funds.

4. For FY 2010, DDOE/Storm Water Administrator shall administer the Storm Water Permit Compliance Enterprise Fund by providing funds as follows:

   University of the District of Columbia..... $ 2,200,000

5. Payment, in the form of PAYGO capital, for the MS4 agreement shall be made through an Intra-District transaction by DDOE to UDC in the amount stated above, $2,200,000.

6. The Storm Water Administrator may request additional supporting documentation, if necessary, to evaluate the reconciliation or to detail how the activity addresses the MS4 Permit requirements.

7. Budget Authority approved by DDOE/Storm Water Administrator will be submitted within five business days of approval of this MOU.

8. Any funds remaining in the MS4 Storm Water Compliance Enterprise Fund at the end of the fiscal year are to be redistributed to the member agencies of the MS4 Task Force based on need and projects that are ready to implement.

9. DDOE will provide access to a web-based EMS software and support for its use.

IV. DURATION OF MOU

A. The period of this MOU shall be from the date that the last Party signs this MOU and shall terminate on September 30, 2010, unless terminated in writing by the Parties prior to the expiration.

B. The Parties may extend the term of this MOU by exercising a one-year option period. Option periods may consist of a year, a fraction thereof, or multiple successive fractions of a year. DDOE shall provide notice of its intent to renew an option period prior to the expiration of the MOU.

C. The exercise of an option period is subject to the availability of funds at the time of the exercise of the option.

V. AUTHORITY FOR MOU

The Parties are authorized to enter into this MOU pursuant to D.C. Official Code § 1-301.01(k) (2009).

VI. FUNDING PROVISIONS

A. COST OF SERVICES

1. Total cost for services under this MOU shall not exceed Two Million Two Hundred Thousand Dollars ($2,200,000.00) for Fiscal Year 2010. Funding for the services shall not exceed the actual cost of the goods or services, based on the actual cost spent by UDC and as reported in the bi-annual reconciliations.

2. In the event of termination of the MOU, payment to UDC shall be held in abeyance until all required fiscal reconciliation, but not longer than September 30 of the current fiscal year.

B. RESOLUTION OF 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 Financial Operations and Systems.

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 (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.

VII. COMPLIANCE AND MONITORING

As this MOU is funded by District of Columbia funds, UDC will be subject to scheduled and unscheduled monitoring reviews to ensure compliance with all applicable requirements.

VIII. RECORDS AND REPORTS

UDC 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 the District of Columbia's request, make these documents available for inspection by duly authorized representatives of the buyer agency and other officials as may be specified by the District of Columbia at its sole discretion.

IX. 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, 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.

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.

XI. NOTICE

Any notice, modification, request or other communication required hereunder shall be in writing and may be delivered by hand and with receipt requested, via electronic mail, telefax or U.S. mail delivered to the Office of the Director for each Party. The following individuals are the contact points for each Party under this MOU:

Julia Evans, P.E.
Environmental Engineer
Stormwater Management Division
District Department of the Environment
51 N Street, N.E. Fifth Floor Room 5001J
Washington, D.C. 20002
Phone: (202) 497-7700
Fax: (202) 535-1364

Steven McKenzie
Project Manager
University of the District of Columbia
4200 Connecticut Avenue, NW
Washington, DC 20008
Phone (202) 724-4400
Fax (202) 727-9877

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 utilize 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 Act of 1985 (D.C. Official Code §2-301.01 *et seq.*) to procure the goods or services of the agent or third party.

XIV. MISCELLANEOUS

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

Maureen McGowan, Esq.
Interim Director

Date: 1/22/10

Bicky Corman, Esq.
General Counsel

Date 1/22/10

Robert Jose
Agency Fiscal Officer N/A

Date

UNIVERSITY OF THE DISTRICT OF COLUMBIA

Barbara Jumper
Associate Vice President Facilities and Real Estate

Date: 1/11/10

Ibrahim Korma
Chief Financial Officer

Date: 1/14/10

OFFICE OF CONTRACTING AND PROCUREMENT

David P. Gragan, CPPO
Chief Procurement Officer

Date

N/A

S061 V2.1 PRD DISTRICT OF COLUMBIA R*STARS 2.1 01/20/10 11:04 AM
LINK TO: _____ AGENCY BUDGET FINANCIAL INQUIRY DSNF

AGENCY: KG0 AY: 08 ORG CODE: 0100 PGM CODE: 2080 FUNC CODE: _____
AP FUND: _____ FUND: 0301 GRANT/PH: _____ __ PROJECT/PH: SWM04C 04
COMP SRC/GRP: 0041 OBJ/COBJ/AGY OBJ: _____ _____ _____ AGY OBJ GROUP: __
ORG LEVEL: 03 DDOE ORG LEVEL 3
PGM LEVEL: 02 WATERSHED PROTECTION
FUNC LEVEL:
INQ TYPE: MC (MA, YA, MY, YY, MC, YC) DETAIL/SUMMARY: D
INQ YEAR: 10 INQ MONTH: 04 ADJUSTED BUDG: 5,254,000.00
BUDGET AVAIL: 2,354,000.00 BUDG % AVAIL: 44.80
EXPEND/BUDG %: 0.00 ALLOT/BUDG %: 100.00
ALLOTMENT BAL: 2,354,000.00 UNEXPND ALLOT: 2,354,000.00

BT	TITLE	AMOUNT	BT	TITLE	AMOUNT
10	EXP BUD REV	5,254,000.00			
16	INTRA-DIST	2,900,000.00			
24	BUDGET ALLO	5,254,000.00			

SWMPG/2080A HK 1/20/10

INTERRUPTED FUNCTION RESTARTED

F1-HELP F2-DOC INQ F5-NEXT F9-INTERRUPT ENTER-INQUIRE CLEAR-EXIT

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE DISTRICT DEPARTMENT OF THE ENVIRONMENT
AND
THE DISTRICT OFFICE OF PUBLIC EDUCATION FACILITIES MODERNIZATION

I. INTRODUCTION

This Memorandum of Understanding (MOU) is entered into between the District Department of the Environment (DDOE) Stormwater Management Division and the District Office of Public Education Facilities Modernization (OPEFM), individually referred to herein as the "Party" and collectively referred to herein as the "Parties." The purpose of this MOU is to transfer capital funds from the Municipal Separate Storm Sewer System (MS4) Stormwater Enterprise Fund for 1) the design and installation of a system to harvest stormwater for toilet flushing at Woodrow Wilson Senior High School; 2) the design and installation of a system to harvest stormwater for irrigation at Woodrow Wilson Senior High School; and 3) the installation of 9,100 square feet of green roof at Anacostia Senior High School.

II. BACKGROUND

As consistent with the Clean Water Act's National Pollutant Discharge Elimination System (NPDES) permitting program, the District of Columbia is issued an MS4 permit by the US Environmental Protection Agency (EPA), Region 3, for the discharge of stormwater from the District's MS4 into District waters. On behalf of the District of Columbia, the District Department of the Environment (DDOE) administers the MS4 Permit, which establishes requirements impacting the quality and quantity of stormwater discharge.

DDOE also administers the MS4 Stormwater Enterprise Fund to support implementation of the MS4 permit, as consistent with federal and District law, including the District Comprehensive Stormwater Management Enhancement Amendment Act of 2008 (D.C. Official Code § 8-152.01).

The Parties are authorized to enter into this MOU pursuant to D.C. Official Code § 1-301.01(k); D.C. Official Code § 8-152.02; and D.C. Official Code § 38-453.

III. PROGRAM GOALS AND OBJECTIVES

This MOU is entered into by and between DDOE and OPEFM to transfer $1,190,000 from the MS4 NPDES Permit, FY 2010 MS4 Enterprise Fund, for the 1) the design and installation of a system to harvest stormwater for toilet flushing at Woodrow Wilson Senior High School; 2) the design and installation of a system to harvest stormwater for irrigation at Woodrow Wilson Senior High School; and 3) the installation of 9,100 square feet of green roof at Anacostia Senior High School. These projects will reduce and control the amount of stormwater pollutants to the stormwater sewers and the receiving waters of the District of Columbia.

IV. 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 OPEFM:

1. Design and install a stormwater harvest/reuse system for use in flushing water closets and urinals at Woodrow Wilson Senior High School, 3950 Chesapeake Street Northwest, 20016.
   a. Complete a water demand analysis for each bathroom being evaluated for the project, including the average monthly flushing demand during normal school operations for a minimum of 50 water closets and 15 urinals.
   b. Complete a stormwater runoff load analysis for each school site being evaluated for the project, to ensure stormwater harvest and storage is sufficient to supply the average monthly flushing demand during normal school operations for a minimum of 50 water closets and 15 urinals.
   c. Complete a site analysis to demonstrate a combined storage capacity sufficient to satisfy average monthly flushing demand during normal school operations for a minimum of 50 water closets and 15 urinals.
   d. Complete the design and specifications required for the construction of the system. Ensure that designs and specifications conform to municipal codes.
   e. Obtain required permits, including permits from the District of Columbia Department of Consumer and Regulatory Affairs (DCRA) and DDOE Watershed Protection Technical Services Branch for the construction of a stormwater runoff control Best Management Practice (BMP).
   f. Install a collection and distribution system to provide for the average monthly flushing demands during normal school operations, including:
      i. Ensure piping conveyance system has proper measures installed, typically backflow prevention valves and air gaps to protect municipal water supply from stormwater contamination.
      ii. Ensure access to stormwater storage tanks or cisterns to maintain pumps and electrical systems and to clean out settled particles as needed. This may require a manhole and an access ladder or may come as a prefabricated component of a cistern.
      iii. Ensure work conforms to applicable codes and regulations including safe access to various components of the harvest/reuse system.
      iv. Ensure system injects dye into stormwater used for toilet/urinal flushing in order to distinguish from potable water and highlight that toilets/urinals are being flushed with stormwater.
      v. Ensure that stormwater piping system is clearly distinguishable from potable water system.
      vi. Post signage about project at the facility and in bathrooms with stormwater-flushed toilets/urinals.
   g. Ensure appropriate system warranty and maintenance agreements, training, and/or operating manuals are supplied by equipment manufacturer, provider, and installer.

2. Design and install a system to harvest stormwater for use in irrigation of a minimum of 1500 sf of planted area at Woodrow Wilson Senior High School, 3950 Chesapeake Street Northwest, 20016.
   a. Complete a water demand analysis for the irrigation required for the project, including the average monthly irrigation demand during normal school operations by the 1500 sf of planted space in the combined area of the Eco Lab green house and adjacent exterior Rose Garden.
   b. Complete a stormwater runoff load analysis for each school site being evaluated for the project, to ensure stormwater harvest and storage is sufficient to supply the average monthly irrigation required during normal school operations by the 1500 sf of planted space in the combined area of the Eco Lab green house and adjacent exterior Rose Garden.
   c. Complete a site analysis to demonstrate a combined storage capacity sufficient to satisfy the average monthly irrigation required during normal school operations by the 1500 sf of planted space in the combined area of the Eco Lab green house and adjacent exterior Rose Garden.
   d. Complete the design and specifications required for the construction of the system. Ensure that designs and specifications conform to municipal codes.
   e. Obtain required permits, including permits from the District of Columbia Department of Consumer and Regulatory Affairs (DCRA) and DDOE Watershed Protection Technical Services Branch for the construction of a stormwater runoff control Best Management Practice (BMP).
   f. Install a collection and distribution system to provide for the irrigation required, including:

      i. Ensure piping conveyance system has proper measures installed, typically backflow prevention valves and air gaps to protect municipal water supply from stormwater contamination.

      ii. Ensure access to stormwater storage tanks or cisterns to maintain pumps and electrical systems and to clean out settled particles as needed. This may require a manhole and an access ladder or may come as a prefabricated component of a cistern.

      iii. Ensure work conforms to applicable codes and regulations including safe access to various components of the harvest/reuse system.

      iv. Ensure that stormwater piping system is clearly distinguishable from potable water system.

      v. Post signage about project at the facility and at appropriate locations where stormwater is being supplied for irrigation.
   g. Ensure appropriate system warranty and maintenance agreements, training, and/or operating manuals are supplied by equipment manufacturer, provider, and installer.
3. Install 9100 square feet of green roof on Anacostia Senior High School, 1601 16th St. SE, 20020. OPEFM shall:
   a. Ensure access to HVAC and other building utilities.
   b. Install walkway pavers and safety measures for maintenance workers where necessary.
   c. Install the following components in roof sections receiving the green roof system in accordance with ASTM standards Volume 04.12 E 2400-06.

These components can be installed as individual layers or as a pre-assembled tray system. Modifications to these components may be made if manufacturer innovation establishes alternates:

i. Waterproof membrane/material should be selected such that the manufacturer has explicitly designed and warranted it to accommodate standing water or the roof slope is sufficient to ensure standing water will not occur;
ii. Polystyrene insulation;
iii. Geotextile filter fabric;
iv. Drainage course, root barrier geotextile/filter fabric;
v. Curbing at the perimeter for soil retention;
vi. Growth media (4" depth min);
vii. Jute erosion blanket (if plants are not established); and
viii. Plant sedum and herb species on roof appropriate for an extensive green roof system.

d. Ensure work conforms to applicable codes and regulations including safe access to and occupancy of the roof.
e. Ensure green roof installer warranties 2 years of maintenance and a minimum plant survivability rate of 80% after 2 years to be replaced by installer at no cost.
f. Post street level signage at the facility about the project and recognizing DDOE's partnering role.

4. Submit to DDOE Stormwater Management Division final architectural and engineering plans for each of these systems (stormwater harvest for flushing toilets; stormwater harvest for irrigation; green roof). These are in addition to any plans submitted to DDOE's Watershed Protection Division's Technical Service Branch for erosion and sediment control and for stormwater management.
5. Document the construction process with photographs and submit digital photos to DDOE.
6. Submit to DDOE reconciliation and other applicable documentation demonstrating how the funds were spent.
7. Work with DDOE to provide access by appointment for educational and other tours of green roof and stormwater harvest systems.
8. Provide for long-term maintenance of stormwater harvest systems and green roof, including replacing or substituting plants as necessary. If green roofing is removed to repair the underlying roof, the green roofing shall be replaced after repairs are complete.

B. RESPONSIBILITIES OF DDOE/STORM WATER ADMINISTRATOR:

1. Budget a total not to exceed one million one hundred ninety thousand dollars ($1,190,000) for these projects, subject to the availability of funds.
2. Review and approve all programmatic changes or modifications to the project that might affect the estimated quantity of pollutants removed or the cost-benefit of the project.
3. Provide technical assistance, as needed.

4. Attend meetings with OPEFM and subcontractors, as necessary, and provide written and verbal input as needed with regards to the installation of the green roof and stormwater harvest systems.
5. Pursuant to D.C. Official Code § 8-108.15(b) and (c), access the project site(s) for inspection of work at interim phases of performance and after completion.

V. DURATION OF MOU

A. The period of this MOU shall be from the date that the last Party signs this MOU and shall terminate on September 30, 2012, unless terminated in writing by the Parties prior to the expiration.

B. The Parties may extend the term of this MOU by exercising a one-year option period. Option periods may consist of a year, a fraction thereof, or multiple successive fractions of a year. DDOE shall provide notice of its intent to renew an option period prior to the expiration of the MOU.

C. The exercise of an option period is subject to the availability of funds at the time of the exercise of the option.

VI. FUNDING PROVISIONS

A. COST OF SERVICES

1. Total cost for services under this MOU shall not exceed One Million One Hundred and Ninety Thousand dollars ($1,190,000.00) in capital funds for Fiscal Years 2010, 2011, and 2012. Funding for the services shall not exceed the actual cost of the goods or services, based on the actual cost spent by OPEFM and as reported in the semi-annual reconciliations. Funding shall be allocated as follows:
   a. Not to exceed $800,000 for the design and installation of a system capable of harvesting stormwater for flushing a minimum of 50 water closets and 15 urinals at Woodrow Wilson Senior High School.
   b. Not to exceed $200,000 for the design and installation of a system to harvest stormwater for use in irrigation at Woodrow Wilson Senior High School.
   c. Not to exceed $190,000 for 9,100 sf of green roof on Anacostia Senior High School.
2. If the cost of design, materials, and installation for these projects exceeds the amount allocated for each project, OPEFM shall provide the additional funds through other sources.
3. If OPEFM does not complete the green roof installation, OPEFM shall return to DDOE's Enterprise Fund the greater of either A) any funds unspent or B) an amount equal to the percentage of square footage of green roof that OPEFM did not install (i.e. $190,000 divided by 9,100 sq. ft. = $20.88 per sq. ft).
4. If OPEFM does not complete the installation of the stormwater harvest system for flushing of toilets/urinals at Woodrow Wilson Senior High School,

OPEFM shall return to DDOE's Enterprise Fund the greater of either A) any funds unspent or B) an amount equal to the percentage of the combined total of stormwater-supplied water closets and urinals that OPEFM did not install (i.e. $800,000 divided by 65 toilets = $12,307.69 per toilet).

5. If OPEFM does not complete the installation of the stormwater harvest system for irrigation at Woodrow Wilson Senior High School, OPEFM shall return to DDOE's Enterprise Fund the greater of either A) any funds unspent or B) an amount equal to the percentage of the area for which stormwater irrigation will not be provided (i.e. $200,000 divided by 1500 sq. ft. = $133.33 per sq. ft.).
6. In the event of termination of the MOU, payment to DDOE shall be held in abeyance until all required fiscal reconciliation has been completed, but no longer than 4 months from the date of MOU termination.

B. PAYMENT

Payment for goods and services shall be made through an Intra-District Budget Modification by DDOE to OPEFM based on an advance request submitted by OPEFM.

OPEFM shall submit semi-annual reconciliations for each requested activity. The reconciliations shall include: (1) List of materials and their costs, (2) Labor costs including hourly rates for all laborers, and (3) reasonable overhead.

Payment to OPEFM for the services to be performed/goods to be provided shall not exceed the amount of this MOU.

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 Financial Operations and Systems.

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 (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.

VII. COMPLIANCE AND MONITORING

As this MOU is funded by District of Columbia funds, OPEFM will be subject to scheduled monitoring reviews to ensure compliance with all applicable requirements.

VIII. RECORDS AND REPORTS

OPEFM 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 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.

IX. SPECIAL PROVISIONS FOR TERMINATION OF THE MOU

DDOE and OPEFM may terminate this MOU in whole or in part by giving ten (10) calendar days advance written notice to the other party on 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 District laws, rules, or regulations; or
F. Failure of either party to follow the terms of this MOU.

X. 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, policies. Information received by either Party in the performance of responsibilities associated with the performance of this MOU shall remain the property of DDOE.

XI. NOTICE

Any notice, modification, request or other communication required hereunder shall be in writing and may be delivered by hand and with receipt requested, via electronic mail, telefax or U.S. mail delivered to the Office of the Director for each Party. The following individuals are the contact points for each Party under this MOU:

FOR DDOE:

Jeff Seltzer
Associate Director, Stormwater Management Division, DDOE
1200 First St. NE, 6th Floor
Washington, DC 20002
Phone: 202-535-1603
Fax: 202-535-1364
jeffrey.seltzer@dc.gov

Brian Van Wye
Environmental Protection Specialist, Stormwater Management Division, DDOE
1200 First St. NE, 6th Floor
Washington, DC 20002

Phone: 202-741-2121
Fax: 202-535-1364
brian.vanwye@dc.gov

FOR OPEFM:

Allen Y. Lew
Executive Director, Office of Public Education Facilities Modernization
RFK Stadium, Lot 4, Gate F
2400 East Capitol Street, SE
Washington, DC 20003
Telephone: 202-698-7700

Charles Brown
Deputy General Counsel, Office of Public Education Facilities Modernization
RFK Stadium, Lot 4, Gate F
2400 East Capitol Street, SE
Washington, DC 20003
Telephone: 202-698-7700

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 utilize 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 Act of 1985 (D.C. Official Code §2-301.01 *et seq.*) to procure the goods or services of the agent or third party.

XIV. MISCELLANEOUS

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

Date: 7.8.10

Christophe A.G. Tulou
Acting Director
District Department of Environment

Date 7/10/10

Bicky Corman, Esq.
General Counsel

OFFICE OF PUBLIC EDUCATION FACILITIES MODERNIZATION

Date: 07/12/10

Allen Y. Lew
Executive Director

Date: 7/8/10

~~Scott Burrell, Esq.~~ Charles Brown
Deputy General Counsel

APPENDIX B

Comprehensive Stormwater Management Enhancement Amendment Act of 2008

ENROLLED ORIGINAL

AN ACT

Codification District of Columbia Official Code

2001 Edition

2009 Summer Supp.

West Group Publisher

IN THE COUNCIL OF THE DISTRICT OF COLUMBIA

To amend the District Department of the Environment Establishment Act of 2005 to establish stormwater management programs to reduce the amount of stormwater pollutants that are discharged into District rivers and streams and to collect scientific data on the effects of low impact development on reducing stormwater runoff and the potential for aggressive use of low impact development technologies to reduce the cost and size of any large-scale civil engineering solutions to reducing stormwater pollution of the area's waterways, to expand the authority and responsibilities of the Director of the District Department of the Environment relating to Stormwater Permit compliance and activities, to elevate the Stormwater Permit Compliance Enterprise Fund to the program level and to include fund activities in the Mayor's annual budget, to establish a Stormwater User Fee Discount Program to offer incentives to encourage the installation of innovative stormwater management controls, to provide for the reduction of impervious surfaces in public space, to institutionalize progressive stormwater management practices for District agencies, to expand the membership of the Stormwater Advisory Panel to improve stormwater management coordination between District agencies, and to create limitations on the usage and sale of coal tar pavement product; to amend the Water and Sewer Authority Establishment and Department of Public Works Reorganization Act of 1996 to modify the stormwater user fee structure using a city-wide impervious area methodology, and thereby establish a more accurate and equitable assessment of stormwater runoff generated from properties, and the costs associated with managing that runoff, to provide adequate and stable funding for MS4 permit implementation, to permit owners of properties charged stormwater user fees to contest stormwater user fee bills,, and to require the Mayor to offer financial assistance programs to mitigate the impact of increases in stormwater user fees on low-income residents of the District.

BE IT ENACTED BY THE COUNCIL OF THE DISTRICT OF COLUMBIA, That this act may be cited as the "Comprehensive Stormwater Management Enhancement Amendment Act of 2008".

Sec. 2. The District Department of the Environment Establishment Act of 2005, effective February 15, 2006 (D.C. Law 16-51; D.C. Official Code § 8-151.01 *et seq.*), is amended as follows:

(a) Section 101 (D.C. Official Code § 8-151.01) is amended to read as follows: **Amend § 8-151.01**

"Sec. 101. Definitions.

"For the purposes of this act, the term:

"(1) "CapStat" means an accountability program that examines performance data to improve government services to make the District of Columbia government run more efficiently, using a methodical process for focusing the attention of government representatives on improving performance in priority issues that cross agency boundaries.

"(2) "DDOE" means the District Department of the Environment.

"(3) "Director" means the Director of the District Department of the Environment.

"(4) "Environment" means the physical conditions and natural resources of the District, including the land, air, water, minerals, flora, and fauna in the District, and the waters adjacent to the District.

"(5) "Environmental Management System" or "EMS" means an interagency data system to inventory, track, and report on progress towards performance standards and activities. The term "EMS" includes an adaptive management approach that incorporates planning, implementing, monitoring, evaluating, and adjusting the interagency data system.

"(6) "Impervious area stormwater user fee" or "stormwater user fee" means a fee that attributes the cost of conveying stormwater run-off via a sewer from a given property, to the quantity of stormwater run-off generated from that same property, by use of impervious surface as a surrogate metric.

"(7) "Impervious surface" means a surface area that either prevents or retards the entry of water into the ground as occurring under natural conditions, or that causes water to run off the surface in greater quantities or at an increased rate of flow, relative to the flow present under natural conditions.

"(8) "Low Impact Development" or "LID" means stormwater management practices that mimic site hydrology under natural conditions, by using design techniques in construction and development that store, infiltrate, evaporate, detain, or reuse and recycle runoff.

"(9) "MS4" means the Municipal Separate Storm Sewer System serving approximately two-thirds of the District, and comprised of 2 independent piping systems: one system for sewage from homes and businesses, and one system for stormwater.

"(10) "Natural conditions" means the state of the environment prior to anthropogenic intervention.

"(11) "Primacy" means the grant or delegation of authority under certain federal environmental laws that allows states and the District to assume primary authority to enforce and implement the environmental laws and promulgate regulations pursuant to those laws.

"(12) "SDWA" means the Safe Drinking Water Act, approved December 16, 1974 (88 Stat. 1660; 42 U.S.C. § 300f *et seq*.).

"(13) "Sewer" shall have the same meaning as provided in section 201(9) of the Water and Sewer Authority Establishment and Department of Public Work Reorganization Act of 1996, effective April 18, 1996 (D.C. Law 11-111; D.C. Official Code § 34-2202.01(9))."

"(14) "Stormwater best management practice" means a structure used to reduce the volume or the pollutant content of a stormwater discharge.

"(15) "Stormwater Permit" or "MS4 Permit" means NPDES No. DC0000221, issued April 20, 2000 to the District of Columbia by the Environmental Protection Agency.".

(b) A new Title I-A is added to read as follows:

"TITLE I-A. STORMWATER MANAGEMENT.

"Sec. 151. Stormwater Administration.

"(a) There is established within the District Department of the Environment a Stormwater Administration ("Administration"), pursuant to section 103(b)(2). The Administration shall be responsible for monitoring and coordinating the activities of all District agencies, including the activities of the District of Columbia Water and Sewer Authority ("DC WASA"), which are required to maintain compliance with the Stormwater Permit. The Director shall designate a Stormwater Administrator to manage the Administration.

"(b) The expenses of the Administration shall be disbursed from the Stormwater Permit Compliance Enterprise Fund established pursuant to section 152.

"(c) The District Department of Transportation, the Department of Public Works, the Office of Planning, the Office of Public Education Facilities Modernization, the Office of Property Management, the Department of Parks and Recreation, and DC WASA, and any other District agency identified by the Director ("Stormwater Agencies"), shall comply with all requests made by the Director relating to stormwater related requests, compliance measures, and activities, including the adoption of specific standards, and the submission of information, plans, proposed budgets, or supplemental budgets related to stormwater activities. In coordination with the submission of the report required by subsection (f) of this section, the Stormwater Agencies shall submit annual reports of steps implemented to fulfill or exceed their MS4 Permit obligations, as defined by the Director.

"(d) At least once each fiscal year in a CapStat or comparable session, the Mayor shall review the compliance of the Stormwater Agencies with the requests made by the Director relating to MS4 Permit compliance and activities.

"(e) All budgets submitted by the Mayor to the Council shall include a written determination by the Director of whether the budget adequately funds MS4 Permit compliance and activities. The Director shall inform the Council of any deficiency, and indicate the revisions that shall be made to correct the deficiency.

"(f) The Director shall provide to the Mayor, the Council, and the public, the annual report submitted to the Environmental Protection Agency ("EPA") under the terms of the Stormwater Permit.

"(g) Within one year of the effective date of this section, the Director shall institute an Environmental Management System to inventory, track, and report on pollution prevention and stormwater management activities, and to hold the Stormwater Agencies accountable for progress toward meeting the performance standards and obligations required to meet the stormwater management plan of the Stormwater Permit.

"Sec. 152. Stormwater Permit Compliance Enterprise Fund.

"(a) There is established within the District Department of the Environment a Stormwater Permit Compliance Enterprise Fund ("Enterprise Fund"), pursuant to section 103(b)(2). The Director shall allocate the Fund resources to carry out the MS4 Permit activities that have the greatest impact on reducing stormwater pollution.

"(b) Beginning in fiscal year 2010 and each year thereafter, the Mayor shall propose the Fund with an agency level budget. The Mayor shall submit to the Council, as part of the annual budget, proposed budgets that include expenditures of the Enterprise Fund for stormwater programs, including intra-District funds sufficient to fulfill the MS4 Permit obligations of the Stormwater Agencies. The proposed budgets may include funding for large-scale, multiyear projects. The Mayor shall establish benchmark and performance-measure outcomes that connect stormwater programs with funding levels.

"(c) All revenues, proceeds, and moneys collected from the stormwater user fee or from grants made for stormwater activities that are collected or received, shall be credited to the Enterprise Fund and shall not, at any time, be transferred to, lapse into, or be commingled with the General Fund of the District of Columbia, the Water and Sewer Authority General Fund, the Cash Management Pool, or any other funds or accounts of the District of Columbia.

"(d) Monies from the Enterprise Fund shall only be used to fund the costs of complying with the MS4 Permit, including grants for stormwater activities, all administrative, operating, and capital costs of DC WASA and the agencies identified by the Director as having specific responsibilities under the, MS4 Permit and the Stormwater Administration established pursuant to section 151. The Enterprise Fund shall also be used for DC WASA's costs of billing and collecting the stormwater user fee, as authorized by District of Columbia Public Works Act of 1954, approved May 18, 1954 (68 Stat. 104; D.C. Official Code § 34-2101.01 *et seq*.).

"(e) Monies shall not be disbursed from the Enterprise Fund for costs associated with:

"(1) Stormwater management activities carried out prior to April 20, 2000, except to the extent those costs increased to comply with the terms of the Stormwater Permit; or

"(2) Stormwater management activities otherwise required by law or regulation, unless specifically permitted by the Director.

"(f) Within 90 days of the effective date of this section, the Office of the Chief Financial Officer shall convene quarterly meetings to coordinate with the fiscal officers of the Stormwater Agencies to ensure that each agency can access the Enterprise Fund to implement its activities in a timely manner.

"Sec. 153. Stormwater User Fee Discount Program.

"(a) Within one year of the enactment of an impervious area stormwater user fee by DC

WASA, the Mayor shall establish a Stormwater User Fee Discount Program to be coordinated between DC WASA and the Administration.

"(b) The program shall allow property owners who implement measures to manage stormwater runoff from their properties to receive a discount on the stormwater user fee assessed to them under section 216 of the Water and Sewer Authority Establishment and Department of Public Works Reorganization Act of 1996, effective April 18, 1996 (D.C. Law 11-111; D.C. Official Code § 34-2202.16).

"(c) Stormwater user fee discounts approved by the Mayor shall be retroactive to no earlier than the date of the implementation of the impervious area stormwater fee. A property owner may not qualify for a stormwater user fee discount until the stormwater management measures for which they seek a discount are demonstrated to be fully functional.

"(d) Any discount earned under this section will be revocable upon a finding by the Mayor of non-performance. Upon a finding of non-performance, the Mayor may require reimbursement of any portion of fees discounted to date.

"(e) Findings of non-performance by the Mayor may be appealed by an applicant pursuant to rules established by the Mayor.

"(f) Failure to reimburse may result in a lien being placed upon the property without further notice to the owner. The Mayor may enforce the lien in the same manner as in District of Columbia Public Works Act of 1954, approved May 18, 1954 (68 Stat. 102; D.C. Official Code § 34-2407.02).

"Sec. 154. Stormwater management and Low Impact Development grants.

"(a) The Mayor, in coordination with DC WASA, shall establish a grant program to provide Enterprise Funds for grants and direct services to property owners in the District to employ LID or stormwater best management practices.

"(b) Funding for such grants will be contingent on maintaining adequate Enterprise Funds to address District obligations pursuant to the MS4 Permit.

"(c) Within one year of the effective date of this section, the Director of the Department of Transportation ("DDOT") shall submit to the Director an action plan recommending policies and measures to reduce impervious surfaces and promote LID projects in the public space. The action plan shall incorporate:

"(1) New DDOT policies to reduce impervious surface and employ other LID measures in right-of-way construction projects and retrofit projects;

"(2) A revised DDOT public space permitting process and the development of a mechanism to minimize stormwater runoff from the public right-of-way;

"(3) Requirements and incentives for private developers to reduce impervious surface and employ LID measures when their projects extend into the public right-of-way;

"(4) Policies, including fees, for the use of public space to manage stormwater runoff from private property;

"(5) Policies to address ongoing maintenance of LID or stormwater best management practices installed in public right-of-way areas adjacent to private property;

"(6) Strategies to remove impediments to LID projects on residential properties relating to public space; and

"(7) Costs for each recommendation and a recommended timeline for funding in the Mayor's proposed budget. The Mayor shall incorporate these recommendations in the next and subsequent proposed annual budgets.

"(d)(1) Within one year of the effective date of this section, the Director, together with the Stormwater Agencies, shall prepare a study recommending policies and measures developed to implement LID and stormwater best management practices on District properties. The Mayor shall incorporate these recommendations in the next and subsequent proposed annual budgets.

"(2) For each LID or stormwater best management practice installed, the Mayor shall require a maintenance agreement by District agencies to provide for their ongoing operation and maintenance to ensure installed practices continue to function as designed and installed to provide stormwater pollution reductions.

"(e) The Director shall include among DDOE's public educational efforts a campaign to inform the public on the benefits of preventing pollution from stormwater runoff, and to provide recommendations on how the general public can help keep the District's waterways free of pollution. The Director shall also initiate outreach actions with upstream jurisdictions to encourage their implementation of similar stormwater reduction activities.

"(f) The Director shall work with DC WASA to collect and evaluate scientific data on the effects of low impact development on reducing stormwater runoff to develop a plan for aggressive use of low impact development technologies to reduce the cost and size of any large-scale civil engineering solutions to reducing stormwater pollution of the area's waterways. The Director shall inform the Stormwater Advisory Panel, and representatives of upstream jurisdictions, the Washington Metropolitan Area Transit Authority, and the federal government of the scientific data and analyses drawn from the data.

"Sec. 155. Stormwater Advisory Panel.

"(a) There is established within the District Department of the Environment a Stormwater Advisory Panel ("Panel"), pursuant to section 103(b)(2). The Panel shall coordinate the responsibilities of the agencies and DC WASA, and shall prepare comprehensive recommendations to the Council that identify the best means by which the District can meet or exceed all present and future federal regulatory and permit requirements, pertaining to the discharge of stormwater into receiving waters.

"(b) The Panel shall be comprised of the executive officers with responsibilities pursuant to the MS4 Permit, with oversight responsibility for the administrative and financial aspects of stormwater management, or that engage in activities that impact the District's stormwater discharge:

"(1) The members of the Panel shall be:

"(A) The City Administrator;

"(B) The Chief Financial Officer;

"(C) The Director, who will serve as the Panel's Chair;

"(D) The Stormwater Administrator;
"(E) The Director of the Department of Transportation;
"(F) The Director of the Department of Public Works;
"(G) The Director of the Office of Planning;
"(H) The Director of the Office of Public Education Facilities Modernization;
"(I) The Director of the Office of Property Management;
"(J) The Director of the Department of Parks and Recreation; and
"(K) The General Manager of DC WASA.

"(2) The Director may designate additional members from other agencies whose activities impact the District's stormwater runoff.

"(3) The Director shall engage and encourage participation from representatives of the Washington Metropolitan Area Transit Authority and the federal government, including the U.S. General Services Administration and the National Parks Service.

"(c) The Panel shall hold its first meeting within 90 days of the effective date of this section. The Panel shall hold at least one public hearing to receive testimony from citizens with respect to the issues stated in subsection (e)(1) and (2) of this section.

"(d) The Panel shall meet at least 2 times each year.

"(e) The Panel shall provide its recommendations in the annual report required to be submitted to EPA Region III under the MS4 Permit. The report shall make specific findings on:

"(1) Whether the existing allocation of stormwater management responsibilities among District agencies are capable of fulfilling or exceeding present and future regulatory requirements for stormwater discharge, and if not, what changes need to be made or new government entities created;

"(2) Comprehensive recommendations, specific standards adopted, and steps implemented by the respective agency to fulfill or exceed its obligation to meet its share of federal regulatory and MS4 Permit requirements pertaining to the discharge of stormwater into receiving waters; and

"(3) Whether the existing stormwater user fee structure and rates are equitable and sufficient for the District to fulfill or exceed its present and future regulatory requirements for stormwater discharge, and, if not, what changes in fee structure and rate would be required to fulfill these responsibilities.

"(f) Within one year of the effective date of this section, the Panel shall provide to the Council and the Mayor a study of the needs for achieving water quality compliance from the District's stormwater runoff.

"(g) Panel members shall ensure that their agencies participate in the Environmental Management System to track compliance with the District's MS4 Permit obligations and other stormwater management responsibilities required to reduce pollution to the District's waters.

"(h) Within 120 days after the effective date of this act, the Panel shall establish a Technical Working Group ("TWG") of agency technical staff.

"(1) The TWG shall consist of the following 14 members:

"(A) Each Panel member shall appoint one member of the TWG.

"(B) The Mayor, the Chairman of the Council of the District of Columbia, and the Chairman of the Council committee with oversight over the District Department of the Environment shall each appoint one member; provided, that the appointees shall be non-agency stakeholders who are geographically diverse, and shall have expertise in stormwater management, land development, hydrology, natural resources conservation, environmental protection, environmental law, or other similar stormwater management expertise.

"(2) TWG members shall serve a 2-year term, and without compensation.

"(3) The Chairperson of the TWG shall be the Stormwater Administrator.

"(4) The TWG shall attend monthly meetings with the Stormwater Administrator and coordinate tracking and reporting of stormwater management activities of their agencies' efforts. The TWG shall also:

"(A) Advise the Panel on technical matters and respective agency MS4 Permit compliance requirements;

"(B) Make recommendations to the Panel regarding existing District agency rules, regulations, and policies that might create barriers to the implementation of LID or stormwater best management practices in the District; and

"(C) Suggest programmatic incentives for best management practices which were successfully implemented in other jurisdictions to promote the implementation of these stormwater management practices on new and existing properties in the District.

"(5) DDOE shall provide staff assistance to the TWG.".

(c) A new Title I-B is added to read as follows:

"TITLE I-B. PRODUCT LIMITATION OF STORMWATER MANAGEMENT.

"Sec. 181. Coal tar limitations.

"(a) For the purposes of this section, the term "coal tar pavement product" means a material that contains coal tar and is for use on an asphalt or concrete surface, including a driveway or parking lot.

"(b) No person shall sell, offer for sale, use, or permit to be used, on property he or she owns, a coal tar pavement product.

"(c)(1) Any person who violates this section shall be liable to the District for a civil penalty in an amount not to exceed $ 2,500 for each violation.

"(2) For any violation, each day of the violation shall constitute a separate offense and the penalties prescribed shall apply separately to each offense.

"(3) Adjudication of any infraction of this section shall be pursuant to the Department of Consumer and Regulatory Affairs Civil Infractions Act of 1985, effective October 5, 1985 (D.C. Law 6-42; D.C. Official Code § 2-1801.01 *et seq*.).

"(d) This section shall apply as of July 1, 2009.".

Sec. 3. The Water and Sewer Authority Establishment and Department of Public Works Reorganization Act of 1996, effective April 18, 1996 (D.C. Law 11-111; D.C. Official Code § 34-2201.01 *et seq.*), is amended as follows:

Amend § 34-2202.01

(a) Section 201(9A) and (9B) (D.C. Official Code § 34-2202.01(9A) and (9B)) are repealed.

Repeal §§ 34-2202.06a, 34-2202.06b, 34-2202.06c

(b) Sections 206a, 206b, and 206c (D.C. Official Code §§ 34-2202.06a, 34-2202.06b, and 34-2202.06c) are repealed.

Amend § 34-2202.16

(c) Section 216 (D.C. Official Code § 34-2202.16).is amended as follows:

(1) Subsections (d-1) through (d-3) are amended to read as follows:

"(d-1) The Authority shall collect a stormwater user fee established by the Director of the District Department of the Environment ("Director"), which charge the Director shall establish by rule and may from time to time amend.

"(d-2) The fee shall be collected from each property in the District of Columbia, and shall be based on an impervious area assessment of the property.

"(d-3) The Mayor shall coordinate the development and implementation of the MS4 stormwater user fee with DC WASA's impervious area surface charge, to ensure that both fee systems employ consistent methodologies.".

(2) New subsections (d-4), (d-5), (d-6), and (d-7) are added to read as follows:

"(d-4) The Mayor shall offer financial assistance programs to mitigate the impact of any increases in stormwater user fees on low-income residents of the District, and shall evaluate the applicability of similar existing District low-income assistance programs to the stormwater user fee.

"(d-5) A landlord shall not pass a stormwater user fee charge to a tenant which is more than the stormwater user fee charge prescribed by the Director

"(d-6) The stormwater user fee shall be the obligation of the property owner. Failure to pay the stormwater user fee shall result in a lien being placed upon the property without further notice to the owner. The Mayor may enforce the lien in the same manner as in section 104 of the District of Columbia Public Works Acts of 1954, approved May 18, 1954 (68 Stat.102; D.C. Official Code § 34-2407).

"(d-7) Any owner or occupant of a property that is charged a stormwater user fee may contest a stormwater user fee bill rendered for managing stormwater runoff, according to the same procedures provided to owners or occupants of properties that receive water and sewer services, under section 1805 of the District of Columbia Public Works Act of 1954, effective June 13, 1990 (D.C. Law 8-136; D.C. Official Code § 34-2305).".

Sec. 4. Rules.

Within 180 days of the effective date of this act, the Mayor, pursuant to Title I of the District of Columbia Administrative Procedure Act, approved October 21, 1968 (82 Stat. 1204; D.C. Official Code § 2-501 *et seq.*), shall issue rules to implement the provisions of this act. The proposed rules shall be submitted to the Council for a 45-day period of review, excluding

Saturdays, Sundays, legal holidays, and days of Council recess. If the Council does not approve or disapprove the proposed rules, in whole or in part, by resolution within this 45-day review period, the proposed rules shall be deemed approved.

Sec. 5. Fiscal impact statement.

The Council adopts the fiscal impact statement of the Chief Financial Officer, dated December 15, 2008, as the fiscal impact statement required by section 602(c)(3) of the District of Columbia Home Rule Act, approved December 24, 1973 (87 Stat. 813; D.C. Official Code § 1-206.02(c)(3)).

Sec. 6. Effective date.

This act shall take effect following approval by the Mayor (or in the event of veto by the Mayor, action by the Council to override the veto), a 30-day period of Congressional review as provided in section 602(c)(1) of the District of Columbia Home Rule Act, approved December 24, 1973 (87 Stat. 813; D.C. Official Code § 1-206.02(c)(1)), and publication in the District of Columbia Register.

_____

Chairman
Council of the District of Columbia

_____

Mayor
District of Columbia

APPENDIX C

Master LID Implementation Plan

Facility Address/Site Name	LID Type	Area Treated		Notes	Cooperating Agency
subwatershed		**sq. ft.**	**acres**		
Potomac River					
Completed					
Throughout	Water Quality Catch Basin	22,500	0.52	Five installed; estimate each catch basin drainage area = 300 LF X 15 ft of roadway width	DDOT
Pedestrian ROW between Galena & Dorsett Pl. NW.	Bioswales	6,000	0.14	Replaced paved ROW between properties with grassed swales.	WASA
3610 Brothers St.SE.	RiverSmart Home	3,000	0.07	Homowner incentive program includes up to five LID practices: Shade Tree planting; Lawn replacement w/Native plantings; Rain Barrels; Rain Gardens; Permeable Pavers.	
In Progress					
Consolidated Forensic Lab: 4th & School Sts. SW.	Green roof; Harvest/Reuse System; Curbside Bioretention/Tree Box; Permeable Paving	351,000	8.06	Environmental Flagship development to include State-Of-The-Art Energy efficiancy as well as on-site stormwater management approaches; going for LEED Gold.	OPM/DDOT
South Capital & Atlantic Sts. SW	Green Roof	12,870	0.30	Affordable Housing Project; new construction going for LEED Silver; Intensive & Extensive g. roofs; some available to residents and community.	DHCD/CDC
Potomac Ave. NW	Bioswales	15,000	0.34	Curbless road using existing grassed are for roadside runoff capture/treatment through soil ammendments and plantings as well as in-road cuts to direct runoff.	DDOT
Exploratory					
Q St.& Q Pl. Alley NW	Bioretention	8,000	0.18	Existing 12 ft alleyway closing to all but pedestrian traffic and converting into raingardens. Adjoining properties have signed support documents and files for permission with DDOT; supporting 501C has submitted grant applications to fund project.	DDOT
3901 Tunlaw Rd. NW.	Green Roof	4,200	0.10	Condominium needs to replace flat roof, Association interested in applying for the green subsidy once it is extended to the MS4 area (contact amendment under consideration)	
4001 Calvert St. NW (Stoddard Elementary)				School will under go complete site renovations; discussions under way to incorporate LID; going for LEED Silver.	OPEFM/ DCPS

Facility Address/Site Name	LID Type	Area Treated		Notes	Cooperating Agency
subwatershed		sq. ft.	acres		
Rock Creek					
Completed					
Throughout	Water Quality Catch Basin	22,500	0.52	Five installed; estimate each catch basin drainage area = 300 LF X 15 ft of roadway width	DDOT
1375 Missouri Ave. NW.	Green Roof	33,300	0.76	Extensive system installed on new school addition with flat roof	
East Beech Dr. NW.	Bioretention; Bioswales	15,000	0.34	1000 LF roadway runoff directed to roadside right of way (ROW) through curbcuts; western side	DDOT
3820 Van Ness Rd. NW.	RiverSmart Home	3,000	0.07	Homowner incentive program includes up to five LID practices: Shade Tree planting; Lawn replacement w/Native plantings; Rain Barrels; Rain Gardens; Permeable Pavers.	
In Progress					
Broad Branch Rd. NW.	Bioretention; Bioswales	30,000	0.69	5000 LF roadway runoff directed to roadside right of way (ROW) through curbcuts; assumes 20% capture	DDOT
Oregon Ave. NW.	Bioretention; Bioswales	36,000	0.83	6000 LF roadway runoff directed to roadside right of way (ROW) through curbcuts; assumes 20% capture	DDOT
Klingle Rd. NW.	Bioretention; Bioswales; Infiltration Trenches; Permeable Paving; Native & Tree Planting	30,000	0.69	Former road being reconstructed as pedestrian path with LID throughout	DDOT
UDC Van Ness Campus NW. (Connecticut Ave.)	Green roof; Harvest/Reuse System; Curbside Bioretention/Tree Box; Permeable Paving	56,000	1.29	Current brick/concrete plaza over parking garage is leaking and developing structural problems; Scope of Work being defined that includes rebuild of plaza to incorporate Green Roof and other LID technologies to retain on-site 30% more than stormwater permit requires.	OPM/DDOT
1700 Newton St. NW (Bancroft Elementary)	Bioretention; Harvest/Reuse; Permeable Paving	14,200	0.33	Installing cisterns to capture roo runoff and using water to drip irrigate raingardens installed in current lawn area; removing current asphalt, stabilising soils and installing permeable paving. Waiting on contract document signatures. Work to be executed by USDA/NRCS. Abuts NPS land.	OPEFM/DCPS/ NPS/NRCS

Facility Address/Site Name	LID Type	Area Treated		Notes	Cooperating Agency
subwatershed		sq. ft.	acres		
Rock Creek					
Exploratory					
3100 Connecticut Ave. NW.	Green Roof	3,500	0.08	Condominium needs to replace flat roof, Association interested in applying for the green subsidy once it is extended to the MS4 area (contact amendment under consideration)	
Ashley Terrace NW.	Permeable Paving	6600	0.15	Potential Green Alley Site; current errosion and drainage problems investigated based on citizen complant.	DDOT
Klingle Rd. & Cathedral Ave. NW. (Tregaron Site)	Cistern; Bioretention	45,000	1.03	Privately held Historic Gardens open to the public is developing stormwater conservation to capture and reuse ~7000LF roadside runoff for irrigation needs.	DDOT
Tidal Anacostia					
Completed					
4529 Douglas St. NE.	RiverSmart Home	3,000	0.07	Homowner incentive program includes up to five LID practices: Shade Tree planting; Lawn replacement w/Native plantings; Rain Barrels; Rain Gardens; Permeable Pavers.	
Throughout	Water Quality Catch Basin	22,500	0.52	Five installed; estimate each catch basin drainage area = 300 LF X 15 ft of roadway width	DDOT
In Progress					
Hill East WaterfrontDevelopment SE. (Parcel 13)	WQ catchbasins; Green roof; Bioretention; Curbside Bioretention/Tree Box; Infiltration Trenches; Permeable Paving; Harvest/Reuse Systems	2,918,520	67	Redevelopment of DC General Hospital site for housing and commercial use; extending C St. & Massachusettes Ave down to Anacotia River connecting with River Walk; Development will use LID throughout; must meet Anacostia Environmental Standards Act 2008 requiring on-site retention of first 1"-24 hr event and water quality treatment on all releases.	DDOT
Southwest Waterfront Development	WQ catchbasins; Green roof; Bioretention; Curbside Bioretention/Tree Box; Infiltration Trenches; Permeable Paving; Harvest/Reuse Systems	2,047,320	47	Redevelopment of areas around new Baseball Field and Navy Yard will include LID throughout; must meet Anacostia Environmental Standards Act 2008 requiring on-site retention of first 1"-24 hr event and water quality treatment on all releases.	DDOT
Poplar Point Development	WQ catchbasins; Green roof; Bioretention; Curbside Bioretention/Tree Box; Infiltration Trenches; Permeable Paving; Harvest/Reuse Systems	5,662,800	130	Brown Fields to mixed use development will include LID throughout; must meet Anacostia Environmental Standards Act 2008 requiring on-site retention of first 1"-24 hr event and water quality treatment on all releases.	DDOT

Facility Address/Site Name	LID Type	Area Treated		Notes	Cooperating Agency
subwatershed		sq. ft.	acres		
Tidal Anacostia					
In Progress					
11th St Bridge	Water Quality Catch Basins; Bioretention; Infiltration Trenches	420,000	10	2500 LF construction will meet Anacostia Environmental Standards Act 2008	DDOT
South Capitol Bridge	Water Quality Catch Basins; Bioretention; Infiltration Trenches	90,000	2	1500 LF construction will meet Anacostia Environmental Standards Act 2008	DDOT
Anacostia River Walk Trail	Bioretention; Bioswales	9,300	0.21	Includes 900 LF of bioswales and six bioretention sites	DDOT
Kennilworth Ave. NE.	Trash Removal System: In River Device			Mechanical Pipe Collection/Removal System	DDOT
18th St & Good Hope Rd.	Bioretention; Curbside Bioretention/Tree Box; Infiltration Trenches; Permeable Paving			Rebuild of existing library site going for LEED Silver; To manage the 15 yr event on site with Bioretention	DCPL/DDOT
Exploratory					
3650 Ely Pl. SE (John P. Sousa Middle School)	Green roof; Cistern	9,000	0.21	North of Ft. Dupont Park	DCPS/OPEFM
Ft. Dupont					
Completed					
Throughout	Water Quality Catch Basin	45,000	1.03	Ten installed; estimate each catch basin drainage area = 300 LF X 15 ft of roadway width	DDOT
Burns St, & Ridge Rd. SE (next to DCP&R Pool)	Bioretention	95,040	2.18	Ecosite design, Gold Leaf Group constructed, DDOE site inspected, 2-yr maintenance contract out for bid. Modifications included curbcuts, ammended soils, & underdrain. DDOT ROW, abuts NPS.	
Burns St. SE -- Alabama Ave. to Ridge Rd.	Bioretention	29,250	0.67	Ecosite design, Gold Leaf Group constructed, DDOE site inspected, 2-yr maintenance contract out for bid. Modifications included curbcuts, ammended soils, & underdrain. DDOT ROW, abuts NPS .	
3779 Ely Pl. SE (Ice Rink)	Bioretention	108,000	2.48	Ecosite design, Gold Leaf Group constructed, DDOE site inspected, 2-yr maintenance contract out for bid. Modifications included curbcuts, ammended soils & flow deflectors. NPS concession. Parking lot islands.	NPS
Ridge Road SE -- Ft. Davis/ Ridge intersection to G St.	Bioretention	15,080	0.35	Ecosite design, Gold Leaf Group constructed, DDOE site inspected, 2-yr maintenance contract out for bid. Modifications included curbcuts, ammended soils & flow deflectors. Treats half the road. DDOT ROW; abuts NPS.	
Ft. Dupont Drive SE -- Activities Center	Bioretention	53,820	1.24	Ecosite design, Gold Leaf Group constructed, DDOE site inspected, 2-yr maintenance contract out for bid. Modifications included curbcuts, ammended soils & flow deflectors. Parking lot island and easement, NPS concession.	NPS

Facility Address/Site Name	LID Type	Area Treated		Notes	Cooperating Agency
subwatershed		**sq. ft.**	**acres**		
Ft. Dupont					
Exploratory					
V St. & Park Pl. SE. (alleyway)	Permeable Paving	6600	0.15	Potential Green Alley Site; investigated based on citizen interst in LID projects.	DDOT
Alabama Ave. & Burns St. SE intersection	Bioretention; Bioswales; Infiltration Trenches	19,125	0.44	To direct runoff into triangle Burns Rd. requires flow diversion w/ asphalt ridges. Infiltration into exisitng areas along Alabama w/curb cuts.	DDOT
Alabama Ave SE -- Burns St to Massachusetts Ave.	Bioretention; Infiltration Trenches	53,856	1.24	West road side able to accomadate street runoff; requires curbcuts and minor excavation	DDOT
Massachusetts Ave. SE -- Alabama - Minnesota Aves.	Infiltration Trenches	237,600	5.45	Both roadsides able to accomadate street runoff with curb cuts and minor excavation; storm drains available for overflow	DDOT
Ft. Dupont Drive SE -- Activities Center	Bioretention; Bioswales	95,040	2.18	Remove concrete channel in roadside swale; ammend soil; no road alteration required;	NPS
Ft. Dupont Drive SE --Access Road to Refueling Station (Fleet Maintenance)	Bioswales	25,344	0.58	Curb cuts to divert stormwater to exisitng grassy areas along roadside; amend soil and plant for bioretention.	NPS
Ft. Dupont Drive SE --Parking lot outside of Refueling Station	Bioretention; Bioswales; Infiltration Trenches	11,532	0.26	Curb cuts to divert stormwater to exisitng grassy areas along roadside; amend soil and plant for bioretention.	NPS
Pope Branch					
Completed					
Throughout	Water Quality Catch Basin	90,000	2.07	Ten installed; estimate each catch basin drainage area = 300 LF X 15 ft of roadway width	DDOT
3030 G St. SE	Bioretention	14,112	0.32	Theraputic Center front parking lot, 2-yr maintenance contract out for bid, DPR will assume maintenance afterwards	DPR
M Place SE -- Fairlawn and Minnesota Aves.	Bioretention	27,601	0.63	Strong resident support. Good landscaping opportunity for park. In Pope Branch Park. Riparian plantings. 2-yr maintenance contract out for bid. DPR will assume maintenance	DPR
M St. and Fairlawn Ave. SE	Bioretention	27,601	0.63	Curb cuts, ammended soil, under-drain into Pope Branch. 2-yr maintenance contract out for bid. DPR will assume maintenance afterwards	DPR
In Progress					
Pennsylvania Ave. SE	Water Quality CB; Bioretention	432,000	9.92	Great Street Reconstruction; two WQ Catchbasins per block (16 blocks); and three LID sites	DDOT
4000 Q St. SE. (intersection of Ft. Dupont; outside Ft. Davis Park)	Streetside Bioretention (Bumpouts)	18,000	0.41	Demonstration of innovative traffic slowing measures by bottle necking the roadway with bioretention areas placed in parking spaces areas; estimate four bumpouts with ~300 LF each	DDOT
Throughout	RiverSmart Home	240,000	5.51	Pilot Launch: Homowner incentive program includes up to five LID practices: Shade Tree planting; Lawn replacement w/Native plantings; Rain Barrels; Rain Gardens; Permeable Pavers. Anticipate completing 80 homes.	

Facility Address/Site Name	LID Type	Area Treated		Notes	Cooperating Agency
subwatershed		sq. ft.	acres		
Pope Branch					
Exploratory					
3985 Massachusetts Ave SE	Downspout disconnect; Bioretention	18,900	0.43	Dupont Park: 7th Day Adventist Church--bioretention siting: side street, alleyway; excavation, soil ammendment and planting	
3942 Alabama Ave. SE	Bioretention	16,122	0.37	Dupont Park: 7th Day Adventist School parking lot--bioretention siting: side street, alleyway; excavation, soil ammendment and planting	
3456 Pennsylvania Ave SE	Bioretention	24,409	0.56	Ft Davis: Church of Jesus Christ--LID in parking lot. Have a current drainage problem Contact: Darenda Downing & Charlene Belton	
Massachusetts Ave. SE -- Alabama to Minnesota Aves.	Bioretention	237,600	5.45	Road has recently been upgraded. Bioretention cells possible along length of street and at stormdrains; curbcuts; soil ammendments and plantings required.	DDOT
Park border of 34th & 35th St. SE	Plant Shade Trees	estimate 20 trees	0.60	Number of existing storm drains precludes LID. Ranks hign for tree planting.	NPS/Casey Tree
Branch Ave. & O St. SE	Bioretention	24,255	0.56	New curbs just installed, 2 existing catchbasins, requires curb cuts, soil ammendments.	DDOT
O St. & Pennsylvania Ave. SE	Bioretention	15,561	0.36	Upper parking lot 2 bioretention sites possible, asphalt removal, soil ammendment; Maybe a site included in the Pennsylvania Ave Great Street Reconstruction.	DDOT/MPDC
3320 Pennsylvania Ave. SE near Branch Ave.	Bioretention; Permeable Pavement; Infiltration Trenches	58,332	1.34	Large municipal parking lot; bioretention; permeable pavement; soak trenches; Could be part of Great Streets Pennsylvania Ave Project	WASA/DDOT
31st St. & Westover Dr. SE (Good Hope Hill near Pennsylvania Ave.)	Bioretention	34,848	0.80	Capture and treat street stormwater roadside areas; Agency discussions on-going: Steep slopes may require check dams.	DDOT
1650 30th St SE (Randal Highlands Elementary)	Bioretention; Native Planting	22,000	0.51	School adjacent to Pope Branch watershed. Renovations completed. Grassed areas adjacent to parking lot available for bioretention. Community interest. School has not been approached.	DCPS-OPEFM
38th St. & Pennsylvania Ave. SE (near Ft Davis Dr.)	Bioretention; Plant Shade Trees	7,362	0.17	Island area and roadside grassed area; requires curb cuts, soil ammendments and plantings.	DDOT/NPS
1639 - 1651 38th St. SE	Bioretention; Plant Shade Trees	8,928	0.20	Roadside grassed area; requires curb cuts, soil ammendments and plantings could include shade trees.	DDOT/NPS
Ft. Davis Dr. (through Ft Dupont)	Bioretention	99,742.61	2.29	Roadside grassed ROW w/ underdrains; oppportunities for water diversion to excavated areas w/ soil amendments and plantings.	DDOT/NPS
3849 Alabama & Pennsylvania Aves.	Bioretention	27,187.50	0.62	Surface Parking Lot. Existing 8 grass/landscape islands with workable drainage areas; will require excavation, curb cuts, plantings.	DCHS
30th & Massachusetts Ave. SE	Bioretention	50,049	1.15	Current runoff drains to grassy area; ammend soil and plant.	DDOT
No longer feasible					
Pennsylvania Baptist Church parking lot, 3000 Pennsylvania Ave.*	LID in parking lot	45,873	1.05	Connect to drain on O & 30th; Installed Baysaver	

Facility Address/Site Name	LID Type	Area Treated		Notes	Cooperating Agency
subwatershed		**sq. ft.**	**acres**		
Watts Branch					
Completed					
Throughout	Water Quality Catch Basin	90,000	2.07	Twenty installed; estimate each catch basin drainage area = 300 LF X 15 ft of roadway width.	DDOT
In Progress					
Woodson High School NE. & surrounding streets: Arch Drwgs Completed; Demolition started July 2008; Engineering Design In-prog;	Harvest/Reuse system; Green Roof (intensive/extensive); Green Walls; Bioretention; Curbside Bioretention/Tree Box		0.00	Building going for LEED Gold certification; looking for 100 yr event on-site management; innovative demonstartion of harvest reuse for interior low flush tiolets and HVAC systems as well as exterior drip irrigation throughout site; innovative demostration of indoor/outdoor green walls with dedicated harvest reuse irrigation cisterns. Intensive green roof systems with student accesibilty discussing rooftop gardening possiblities.	DCPS/OPEFM
Nannie Helen Burroughs Ave. NE. (NHB): Great Street Reconstruction Project; Water Quality Catchbasins along 7500 LF of roadway; LID where feasible along roadside or in the curbside/treebox area (~13% of drainage area)	Water Quality CB; Bioretention; Curbside Bioretention/Tree Box; Infiltration Trenches; Permeable Paving	370,260	8.50	Great Street Reconstruction Project; Water Quality Catchbasins along 7500 LF of roadway; LID where feasible along roadside or in the curbside/treebox area (~13% of drainage area)	DDOT
56th & Eads Sts. - 56th & Foote Sts. NE. (ROW/Drew Elementary School)	Bioretention	6600	0.15	Dead-end roadway to be retrofitted with LID; Discussions with school to increase drainage area; Curb cuts/ infiltration areas.	OPEFM/DDOT
56th & Clay Sts. NE.	Bioretention	6600	0.15	Dead-end roadway to be retrofitted with LID; Curb cuts/ infiltration areas.	DDOT
44th & Hayes Sts. NE.	Bioetention	6600	0.15	Dead-end roadway to be retrofitted with LID; Curb cuts/ infiltration areas.	DDOT
47th & FooteSts. NE	Bioretention	6600	0.15	LID along curbless section.	DDOT
4200 Grant St. NE. (alleyway between Grant & Gault Sts.)	Bioretention	6,600	0.15	Dead-end roadway to be retrofitted with LID; Curb cuts/ infiltration areas.	DDOT
Exploratory					
Ft. Circle Park: 44th & Hayes & Gault Sts. (alleyway)	Permeable Paving; Infiltration Trench	6,600	0.15	Green Alley site; Existing concrete surface considered for center strip removal and installation of permeable surface; infiltration may help connect existing ravines from disconnected	NPS/DDOT
49th St. & Fitch Pl. NE	Curbside Bioretention/Tree Box; Infiltration Trenches	6,600	0.15	Some trees exist in curb strip, curb strip is narrow, runoff ponds at catchbasin during high rain being considered for curbside bioretention.	WASA/DDOT
55th St. from Dix St. to Clay St. NE	Bioretention (curbside); Infiltration Trenches		0.00	No street trees in curb strips, significant grade on 55th St could direct flow of runoff into curbside treatment area; curbcuts, excavation, soil amendment, plantings required.	UFA/DDOT
58th St. & Blaine St. to 58th St. and Clay St. NE	Bioretention; Infiltration Trenches		0.00	New construction and curbside tree box to the west, open field to east that could be used for raingarden; Agency discussions on-going.	DCHA/DDOT
East Capitol St & Davey St NE (Capitol Heights Metro parking lot)	Bioretention; Infiltration Trenches	65,340	1.50	Good grade, lots of space for infiltration trenches or bioretention	WMATA/DDOT

Facility Address/Site Name	LID Type	Area Treated		Notes	Cooperating Agency
subwatershed		sq. ft.	acres		
Watts Branch					
Exploratory					
Eastern Ave. & Dix St. NE (Intersection)	Bioretention; Infiltration Trenches		0.00	Vacant land on north side of Dix St. could accomadate significant stormwater from Dix and a portion of Eastern Ave. Investigating land titles.	DCHA/DDOT
60th St. & Dix St. NE	Infiltration area		0.00	Currently no curb. Direct street runoff to roadside area.	DDOT
6200 Dix St. NE	Bioretention; Infiltration Trenches		0.00	Direct street runoff to roadside area.	DDOT
Eastern Ave. & Dix St. NE (Intersection)	Bioretention; Infiltration Trenches		0.00	Direct street runoff to roadside area.	DDOT
61st St.& Dix St. NE	Bioretention; Infiltration Trenches		0.00	Direct street runoff to roadside area.	DDOT
58th St. & Dix St. NE	Bioretention		0.00	Abandoned lot could be utilized for bioretention cell. Investigating land title.	DDOT
59th & Foote Sts. NE	Bioretention; Bioswales		0.00	Lot for sale, good slope, LID could be incorporated	DHCD/DDOT
58th & EadsSts. NE.	Bioretention		0.00	Tree boxes; Adjacent to bus stop	UFA/DDOT
44th & Grant Sts. NE.	Bioetention		0.00	Direct street runoff to roadside area.	DDOT
49th St. & NHB Ave. NE.	Bioetention		0.00	Direct street runoff to roadside area.	DDOT
No longer feasible					
Capitol Gateway Estates; 201 58th St NE	Permeable Pavers; Bioretention		2.00	Hope VI quasi public-private demo-rebuild; LID incorporated into new Senior Facility; did no install permeable paver or bioretention as originally designed; installed sand filters	DCHA
Hickey Run					
Completed					
Throughout	Water Quality Catch Basin	22,500	0.52	Five installed; estimate each catch basin drainage area = 300 LF X 15 ft of roadway width.	DDOT
Exploratory					
22nd & Rand Sts. NE.	Curbside Bioretention/Tree Box		0.00	Two tree boxes, NW and SW corners.	UFA/DDOT
24th St. & Rand Pl. NE.	Curbside Bioretention/Tree Box		0.00	Four tree boxes, NW and SW corners, Two inline on each side	UFA/DDOT
R St & Bladensburg Rd. NE.	Bioetention		0.00	SE corner, Biocell possible to treat Bladensburg runoff	
Montana Ave. & Bladensburg Rd. NE. (U-Haul Facility Parking lot)	Bioetention		0.00	Parking lot runoff	

Facility Address/Site Name	LID Type	Area Treated		Notes	Cooperating Agency
subwatershed		sq. ft.	acres		
Hickey Run					
Exploratory					
Montana Ave. NE. (south of 17th St--in front of Willy's Autobody)	Bioetention		0.00	Direct street runoff to roadside area.	DDOT
17th St. NE. (between West Virginia & Montana Aves.)	Bioswales		0.00	Vegetated swale along both sides of street. NO curbs and lots of parked cars causing lots of erosion and sediment loading.	DDOT
17th St. NE. (between West Virginia & Montana Aves.--Police Repair Facility)	Permeable Pavers		0.00	Heavily used parking lot could be retrofited with permeable pavers.	MDP
West Virginia Ave. NE. (between 15th & 17th--in front of cemetary)	Bioetention; Bioswales		0.00	South side of street could incorporate biocell of swale to treat street runoff from W. Virginia	
16th St. & West Virginia Ave. NE.	Bioetention		0.00	Biocell possibe on NE corner of street to capture runoff from parking lot and 16th street	
16th & Okie St NE. (north side near Hechts Building)	Curbside Bioretention/Tree Box		0.00	Two tree boxes on north side of Okie street near 16th.	UFA/DDOT
16th & Okie Sts. NE. (West side between New York Ave.)	Bioetention		0.00	Biocell possible to treat 16th street street runoff and adjacent UNPAVED parking lot runoff.	
New York Ave. NE. (access road International Limousine)	Bioretention		0.00	Biocell along border of parking lot and access road to treat parking lot	
3600 New York Aves. NE. (Washington Times & Distribution Center Parking lot)			0.00	Could be retrofitted with various types of LID	
33rd & V Sts. NE. (USPS Parking Lot)	Bioretention		0.00	Biocell in parking lot	USPS
33rd & Higdoll Sts. NE. (USPS Facility)	Bioretention		0.00	Large parking lot could incorporate biocell in parking lot; also could incorporate large biocell along access road behind USPS, V Street Annex	USPS
31st & Ames Sts. NE. (Metro Employee Parking Lot)	Bioretention		0.00	2 biocells along northern periphery of parking lot in public space, to treat parking lot.	WMATA
31st & Ames, NE corner	Bioretention		0.00	Large biocell possible in public space to treat 31st and Ames St. runoff.	DDOT
21st St. & Queens Chapel Rd. NE. (Teamsters Union Building)	Bioretention		0.00	Parking lot retrofit	
21st St. & Queens Chapel Rd. NE. (Teamsters Union Building)	Curbside Bioretention/Tree Box		0.00	Direct street runoff to treebox area	DDOT
33rd St. NE. (between Adams & Ames Sts.)	Bioretention		0.00	Large biocell in public space to treat Ft. Myers Construction Co, parking lot runoff and 33rd street runoff	DDOT
33rd & Ames Sts. NE.	Bioretention		0.00	Location has no curbs and parked cars are causing heavy erosion, which must be addressed.	DDOT
33rd & Adams Sts. NE. (corner)	Bioretention		0.00	Raised playfield eroding into street, which must be addressed.	DDOT
31st & Adams Sts. NE. (SW corner)	Curbside Bioretention/Tree Box		0.00	Tree box	UFA/DDOT
30th & Channing Sts. NE. (SW corner)	Curbside Bioretention/Tree Box		0.00	Tree box	UFA/DDOT
31st & Douglas Sts. (NW, NE, SW corners)	Curbside Bioretention/Tree Box		0.00	Tree box	UFA/DDOT
South Dakota Ave. & Bladesburg Rd. NE. (Sammy's Liquors)	Bioretention		0.00	Heavy sediment sources in alleys around Sammy's Liquors, which must be addressed. Biocell in parking lot	
Berry St. NE. (dead end)	Bioretention		0.00	Biocell at end of street	DDOT
Apple Road NE. (dead end)	Bioretention		0.00	Biocell at end of street	DDOT
Ft. Lincoln Park NE. (tennis courts & swimming pool parking lots)	Bioretention		0.00	Biocells at both locations possible to treat parking lots	DPR/DDOT

Facility Address/Site Name	LID Type	Area Treated		Notes	Cooperating Agency
subwatershed		sq. ft.	acres		
Hickey Run					
Exploratory					
30th & Evarts Sts. NE.	Curbside Bioretention/Tree Box		0.00	Tree box on NE corner of street.	UFA/DDOT
Evarts Rd. NE. (Western end)	Bioretention		0.00	Biocell at end of street	DDOT
Douglas St. NE. (Western end)	Bioretention		0.00	Biocell at end of street	DDOT
Adams Rd. NE. (Western end)	Bioretention		0.00	Biocell at end of street	DDOT
Bladensburg and Channing Rd. NE. (east side of Bladensburg along periphery of parking lot)	Bioretention		0.00	Biocell to treat parking lot.	DDOT
Bladensburg Rd. & V St. NE. (USPS corner Parking Lot)	Bioretention		0.00	Biocell to treat parking lot.	USPS
Bladensburg Rd. & V St. NE. (Metro Bus repair facility)	Bioretention		0.00	Parking lot could be retrofitted with biocells all along southern periphery	WMATA
Adams St. & Queens Chapel Rd. NE. (DC Govt. Facility)	Bioretention		0.00	Interior parking lots could be retrofitted with biocells in several locations	
Lawrence & Edwin Sts. NE.			0.00	Huge sediment source from construction materials recylcing plant. Catchbasin at Lawrence and Edwin needs to be modified to catch sediment or more drastic measures need to be taken.	DDOT
19th Street NE. (between Bryant & Adams Sts.)			0.00	This location is a huge sediment source. Needs to be repaved and curbs put in.	DDOT
Bryant St. NE. (Far eastern dead end)	Bioretention		0.00	Large biocell could be put in to catch trash, sediment etc.	DDOT
Bryant St. NE. (between 17th & 18th. Sts.)			0.00	North side of street is major sediment source. Slope needs to be stabilized.	DDOT
18th St. & Channing Rd. NE. (East & West sides of 18th. St.)	Curbside Bioretention/Tree Box		0.00	Tree box on each side.	UFA/DDOT
18th St. NE. (Washington Center Home)	Bioretention		0.00	Parking lot could use biocell to treat runoff at south end.	
17th & Downing Sts. NE.	Curbside Bioretention/Tree Box		0.00	Tree box on NW corner.	UFA/DDOT
Channing Rd. NE. (Dead end; east off of 18th St.)	Bioretention		0.00	Biocell at end of street to treat street runoff.	DDOT
17th & Evarts Sts. NE.	Curbside Bioretention/Tree Box		0.00	Tree boxes on NW, SW and SE corner.	UFA/DDOT
24th St & Channing Rd. NE. (along railroad tracks)	Bioretention		0.00	Biocell to collect stormwater at this low corner. Natural springs on this street causing constant seepage.	DDOT/WMATA
Douglas Ave.NE. (eastern end of street near railroad tracks)	Bioretention		0.00	Biocell to collect stormwater at this low corner.	DDOT/WMATA
26th & Evarts Sts. NE.	Bioretention		0.00	Biocell near train tracks to collect street runoff.	DDOT
17th & Franklin Sts. NE.	Curbside Bioretention/Tree Box		0.00	Tree boxes on NW, NE and SW corners.	UFA/DDOT
18th & Franklin Sts. NE.	Curbside Bioretention/Tree Box		0.00	3 in-line tree boxes at SW corner of intersection, and 3 on SE corner, and 2 on each side of catch basin on NW corner.	UFA/DDOT
24th & Franklin Sts. NE.	Curbside Bioretention/Tree Box		0.00	Tree box on SE and SW corner.	UFA/DDOT
20th & Franklin Sts. NE. (Langdon School)	Bioretention		0.00	Biocell along northern side of parking lot.	
18th & Girard Sts. NE.	Curbside Bioretention/Tree Box		0.00	Tree box on NW and SW corner.	UFA/DDOT

Facility Address/Site Name	LID Type	Area Treated		Notes	Cooperating Agency
subwatershed		sq. ft.	acres		
Hickey Run					
Exploratory					
18th & Franklin Sts. NE. (Public Park)	Bioretention		0.00	Two biocells inside park property treating runoff from both Franklin and 18th streets.	
20th St. NE. (between Hamlin & Franklin Sts.)	Bioretention		0.00	Biocell inside park property midway down 20th on western side treating runoff from 20th.	
16th & Girard Sts.	Bioretention		0.00	NW corner, green pubic space could accept a biocell to treat street runoff.	
17th & Girard Sts. NE.	Bioretention		0.00	SW corner public green space could accept biocell to treat street runoff.	
South Dakota Ave. & Bladesburg Rd NE. (Sammy's Liquors)	Curbside Bioretention/Tree Box		0.00	SW corner tree box	UFA/DDOT
Brentwood & 17th Sts. NE.	Curbside Bioretention/Tree Box		0.00	NW corner tree box.	UFA/DDOT
Brentwood & Hamlin Sts. NE. (Parking Lot at 17th St. corner)	Bioretention		0.00	Biocell at western corner to accept runoff from p-lot.	
Irving & 18th Sts. NE.	Curbside Bioretention/Tree Box		0.00	Tree box on NW and NE corners.	UFA/DDOT
18th & Hamlin Sts. NE.	Curbside Bioretention/Tree Box		0.00	Tree box on NE corner.	UFA/DDOT
Hamlin & King Sts. NE.	Bioretention		0.00	Large biocell inside park on souther side of Hamlin Street to treat street runoff.	DDOT
Mills & Hamlin Sts. NE (corner of pubic park)	Bioretention		0.00	Large biocell inside park on souther corner to treat street runoff.	DDOT/DPR
24th & Hamlin Sts. NE.	Curbside Bioretention/Tree Box		0.00	Tree box on NE corner.	UFA/DDOT
17th & Bryant Sts. NE.			0.00	Biocell on eastern side of Bryant south of the entrance to development to treat street runoff.	DDOT

APPENDIX D

DISTRICT OF COLUMBIA FACILITIES LISTED UNDER CERCLA OR HAVING AN NPDES PERMIT

APPENDIX D. DISTRICT OF COLUMBIA FACILITIES LISTED UNDER CERCLA OR HAVING AN NPDES PERMIT

Table D-1. List of D.C. Sites Subject to SARA Title III or EPCRA

CERCLIS EPA ID	SITE NAME
DCN000306144	2005 Inaugural Pre-Deployment Site
DCN000306631	2009 Inaugural Pre-Deployment Site
DC5570024443	Bolling Air Force Base
DCN000305703	Capitol Hill Anthrax Site
DCN000306094	Capitol Hill Ricin Site
DCN000306151	Cardozo High School Mercury Site
DCN000305870	Custis & Brown Barge Spill
DCN000305704	Diamond Ordnance Fuze Lab
DCN000305710	EPA Mail Rooms
DCN000306550	Former President Ford Funeral Security Detail
DC8210021004	Fort Leslie J McNair
DCN000306605	Fort Reno
DC8470090004	General Services Administration
DCN000305916	General Services Administration Building 410
DCN000306664	Georgia Avenue PCE Site
DCSFN0305462	Kenilworth Park Landfill Site
DC1170023476	Naval Security Station
DCD003254273	NPS - Anacostia Park Sections E & F
DCD983967951	PEPCO Benning Generating Station
DCN000305662	Poplar Point Nursery
DC0001401637	Seafarers Yacht Club ER
DC9751305997	St. Elizabeth Hospital
DC7120507432	US DA National Arboretum
DCN000305729	US Dept Of Commerce
DCN000306634	US Government Printing Office
DCN000305732	US Postal Service
DC9170024310	US Washington Navy Yard
DC9470090003	USA Fort Lincoln Barrel Site
DCN000305585	Vermiculite VPC1
DC4210021156	Walter Reed Army Medical Center
DCD983971136	Washington D.C. Chemical Munitions Site (Spring Valley)
DCN000306000	Washington D.C. Mercury Incident
DCD077797793	Washington Gas East Station

Based on data extracted from online EPA CERCLIS database July 2010 (www.epa.gov/enviro).

Table D-2. Industrial Facilities in the District of Columbia with Individual or Site-specific Storm Water NPDES Permits

Facility Name	NPDES Permit Number	Date Issued (Expiration)	Receiving Waters
CMDT Naval District Washington DC	DC0000141	27-Feb-01 (26-Feb-06)	Anacostia River
D.C. WASA (Blue Plains)	DC0021199	25-Feb-03 (24-Feb-08)	Potomac, Anacostia, & Piney Rivers
Government of the District of Columbia	DC0000221	19-Aug-04 (18-Aug-09)	Potomac River, Anacostia River & Tributaries
GSA-National Capital Region (NCR) Heating Operation and Transmission District (HOTD) (Central Heating Plant)	DC0000035	11-Sep-01 (10-Sep-06)	Rock Creek
JFK Center for Performing Arts	DC0000248	27-Jul-01 (26-Jul-06)	Potomac River
Mirant Potomac River LLC	DC0022004	20-Apr-00 (19-Apr-05)	Potomac River
PEPCO-Benning Gen. Sta.	DC0000094	17-Nov-00 (16-Nov-05)	Anacostia River
Super Concrete Corporation	DC0000175	12-May-03 (11-May-08)	Anacostia River
U.S. Army Corps of Engineers Washington Aqueduct Division Dalecarlia WTP	DC0000019	15-Apr-03 (14-Apr-08)	Potomac River
WMATA-Mississippi Avenue DPS	DC0000337	24-Jan-06 (23-Jan-11)	Oxon Run
Walter Reed Army Medical Center	DC0000361	23-Jul-08 (22-Jul-13)	Rock Creek
World War II Memorial	DC0000345	01-May-10 (30-Apr-15)	Tidal Basin

- Retrieved from online EPA Permit Compliance System (PCS) (www.epa.gov/enviro, July 2009).
- GSA Southeast Federal Center, D.C. Government, Washington Navy Yard, and WMATA hold site-specific storm water permit

APPENDIX E

OPM / DRES INTEGRATED PEST AND NUTRIENT MANAGEMENT POLICY

Integrated Pest and Nutrients Management (IPNM)

The purpose of this policy is to provide a safer strategy to effectively reduce the potential health and environmental risks associated with pesticide use at District government occupied buildings. The Integrated Pest Nutrients Management (IPNM) Policy will support OPM efforts to introduce practical pollution prevention guidelines associated with pest abatement practices and fertilizer applications.

Reduction

- No pesticide classified as Toxicity Category I by the United States Environmental Protection Agency (EPA) as of April 1, 2005, will be applied to any property owned or operated by OPM. In the event that new pesticides are added to the Toxicity Category I by the EPA, then pesticide will not be used after 6 months from its classification.

- No District agency or contractor shall apply any pesticide classified as a human carcinogen, likely to be carcinogenic to humans, a known/likely carcinogen, a probable human carcinogen, or a possible human carcinogen by the EPA Pesticide Program, except as provided for in the Exemptions section and the Waiver section of the this IPM policy.

- No District agency or contractor shall apply any pesticide classified by the California Office of Environmental Health Hazard Assessment as a developmental toxin as of April 1, 2005, except as provided for in the Exemptions section and the Waiver section of this IPM policy.

Exemptions

The restrictions established in the Reductions section of this IPNM policy shall not apply to the following:

- pesticides otherwise lawfully used for the purpose of maintaining a safe drinking water supply at drinking water treatment plants, wastewater treatment plants, reservoirs, and related collection, distribution and treatment facilities;
- anti-microbial pesticides;
- pesticides applied to professional sports playing fields, golf courses or used to maintain water quality in swimming pools;
- pesticides used for the purpose of maintaining heating, ventilation and air conditioning systems, cooling towers and other industrial cooling and heating systems;
- pesticides used for the purpose of rodent control in containerized baits or placed directly into rodent burrows or placed in areas inaccessible to children or pets;
- pesticides or classes of pesticides classified by the United States environmental protection agency as not requiring regulation under the federal insecticide, fungicide and rodenticide act, and therefore exempt from such regulation when intended for use, and used only in the manner specified;
- biological pesticides; and

- boric acid and disodium tetrahydrate, silica gels, diatomaceous earth, and non-volatile insect bait in tamper resistant containers.

Waiver

- Any District agency occupying OPM managed space or contractor servicing such is allowed to request, in writing, a waiver of the restrictions established this IPM policy.

Notification

Any District agency or contractor applying pesticides on property owned or leased by the District shall post a notice at publicly accessible locations on such site at least twenty-four hours prior to any such application, in a form described below, provided, however, that applications requiring immediate action for public health reasons, such as severe rodent infestations, where mosquito larvae are present, or where populations of infected mosquitoes are present shall require that notice be placed concurrently with such application. Such notice shall include, but not be limited to:

1. Date of posting, proposed date of pesticide application and two alternative dates to the proposed date of application when, due to weather conditions, the pesticide application on the proposed date is precluded;
2. Address of pesticide application and, if known, specific sites to which the pesticide is to be applied;
3. Pest to be controlled and method of pesticide application;
4. Common trade names of the pesticide, if applicable;
5. United States environmental protection agency registration number of the pesticide, the active ingredient(s) contained in the pesticide and information on how to obtain further information about the products applied, such as by calling the National Pesticides Information Center at 1-800-858-7378 or the National Capitol Poison Control Center at (202) 222-1222; and
6. Name and telephone number of the District agency or contractor responsible for the application. The District agency or contractor responsible for posting the notice required pursuant to subdivision a of this section shall not remove such notice for the longer of either three days subsequent to the last moment of pesticide application or the number of days required on the pesticide product label. The notification requirements established pursuant to this section shall not apply to pesticides listed in the Exemptions section of the IPM policy.

Recordkeeping and Reporting

Records for each pesticide application in an OPM operated building will be kept for a minimum of three years or such longer time period required by statute, regulation, or agency directive. The requirements for recordkeeping are outlined in the District of Columbia Pesticide Regulations, 20DCMR 22-25.

In addition to the records required by 20DCMR 22-25, the following additional recordkeeping requirements are required by this IPM policy.

1. EPA registration number of the pesticidal product;

2. Name and telephone number of the District agency or contractor responsible for the application;
3. Proof that required notice was provided;
4. A copy of any waiver that was granted under this IPM policy that affects the pesticide application.

Enforcement

Every contract to perform work or provide labor or services related to property owned and managed by OPM will contain the following provision: "To the extent that you apply pesticides to any property owned by the District, you, or any subcontractor you hire, shall comply with the OPM Pesticide Reduction Policy (IPNM practices)."

Upon receiving information that a contractor is in violation of this IPM policy, OPM shall review such information and offer the contractor an opportunity to respond. OPM finds that a violation has occurred, it shall take such action as may be appropriate and provided for by law, rule or contract, including, but not limited to, imposing sanctions, seeking compliance, recovering damages, and/or declaring the contractor in default.

APPENDIX F
DDOE WATER QUALITY DIVISION TARGETED FACILITY INSPECTIONS AND ILLICIT DISCHARGE INVESTIGATIONS IN FY 2010

Table F-1. Targeted Facility Inspection for FY 2010

Month	Facility Name	Facility Type	Address	In Compliance
October, 2009	Mama's Laundromat	Laundromat	4528 Benning Road, SE	Yes
	Goody Cleaners	Dry Cleaner	1911 Michigan Avenue, NE	Yes
	Bennings Transmission	Auto repair	1523 Kenilworh Avenue, NE	n/a
	Precision Truck Repair	Auto repair	1075 Kenilworth Avenue, NE	Yes
	Kenilworth BP	Auto repair	1535 Kenilworth Avenue, NE	Yes
	N/A	Auto repair	4604 Nash Street, NE	n/a
	Good Hope Auto Center	Auto repair	2300 Pennsylvania Avenue, SE	n/a
	N/A	Auto repair	2317 Pennsylvania Avenue, SE	n/a
	City Auto Service	Auto repair	1420 Rhode Island Avenue, NE	Yes
	Republic Motor Company	Auto repair	1908 Bladensburg Road, NE	n/a
	Brookland Exxon	Auto repair	1020 Michigan Avenue, NE	Yes
	N/A	Dry Cleaner	3232 Wisconsin Avenue, NW	n/a
	Express Auto Repair Service	Auto repair	5900 Sligo Mill Road, NE	Yes
	Randall's Auto Service	Auto repair	6007/6009 Dix Street, NE	n/a
	Rex Cleaners	Dry Cleaner	7346 Georgia Avenue, NW	Yes
	Liberty Service Station	Auto repair	3900 Martin Luther King Avenue, SW	Yes
	Jet Cleaners	Dry Cleaner	3507 Wheeler Road, SE	Yes
	Cabs, Inc	Auto repair	3399 Benning Road, NE	Yes
Nov. 2009	Gold Star Services	Auto repair	39 Q Street., SW	Yes
	Gold Star Services	Auto repair	45 Q Street, SW	Yes
	Kenilworth Citgo	Car Wash	1329 Kenilworth Avenue, NE	Yes
	Singh Transmission	Auto repair	1501 S. Capitol Street, SW	Yes
	Murphy's Auto Body Shop	Auto repair	1708 & 1710 Good Hope Road, SE	Yes
	Fort Davis Exxon Mobil	Auto repair	3825 Alabama Avenue, SE	Yes
	All Make Auto Inc.	Auto repair	1800 Adams Street, NE	Yes
	Hess Car Wash	Car Wash	1801 New York Avenue, NE	Yes
	Ft. Lincoln Auto parts and Services	Auto repair	2820 Bladensburg Road, NE	n/a
	Dial-a-Cab	Auto repair	2838 Bladensburg Road, NE	Yes
	C & S Auto Repair and Transmission	Auto repair	2912 Bladensburg Road, NE	Yes
	Georgetown Service Center	Auto repair	2145 Queens Chapel Road, NE	Yes
	Good Hope Auto Center	Auto repair	2300 Pennsylvania Avenue, SE	Yes
	Romulus Garage	Auto repair	3003 Earl Place, NE	Yes
	Galaxie Cleners	Dry Cleaner	5708 Connecticut Avenue, NW	Yes
Dec. 2009	Smart Automotive	Auto repair	1801 Adams Street, NE	Yes
	All Star Towing & Auto Body, Inc	Auto repair	2405 22nd Street, NE	Yes
	K.J. Auto Care	Auto repair	3426 18th Street, NE	Yes
	Sons of Otis	Auto repair	2251 Fairlawn Avenue, SE	Yes
	Greenhouse Cleaners	Dry Cleaner	4001 Gault Place, NE	n/a
	Parker's Exxon	Auto repair	4812 MacArthur Blvd., NW	Yes
	World Service Center	Auto repair	2417 Evarts Street, NE	Yes
	United Ventures Consortium	Auto repair	2711 26th Street, NE	Yes

Month	Facility Name	Facility Type	Address	In Compliance
	Able Auto Parts	Auto repair	2951 V Street, NE	n/a
	Dynasty Auto Body	Auto repair	2414 Douglas Street, NE	n/a
	Union Cab Corp	Auto repair	2710 26th Street, NE	n/a
Jan. 2010	FC Motors	Auto repair	301 Kennedy Street, NE	n/a
	Capital Toyota	Auto repair	934 Michigan Avenue, NE	Yes
	Airport Express	Auto repair	6000 Sligo Mill Road, NE	Yes
	BT & T Auto Service Inc.	Auto repair	3010 Rhode Island Avenue, NE	Yes
	Northeast Auto Body	Auto repair	3188 Bladensburg Road, NE	Yes
	T & J Auto Repair	Auto repair	1810 Bladensburg Road, NE	n/a
		Auto repair	1830 Rhode Island Avenue, NE	Yes
	M-Mat Auto	Auto repair	1851 Adams Street, NE	Yes
	Eastern Auto Repair	Auto repair	6129 Kansas Avenue, NE	Yes
	Connecticut Ave. Amoco. Inc.	Auto repair	5001 Connecticut Avenue, NW	Yes
	TenleyTown Exxon	Auto repair	4244 Wisconsin Avenue, NW	Yes
	Uptown Cleaners	Dry Cleaner	3333 Connecticut Avenue, NW	Yes
	ZIPS Dry Cleaners	Dry Cleaner	4418 Connecticut Avenue, NW	Yes
	PAN American Laundry and Dry Cleaning	Dry Cleaner	3715 Newark Street, NW	Yes
	Spring Valley Exxon	Auto repair	4861 Massachusetts Avenue, NW	Yes
	N/A	Car Wash	1331 Leegate Rd., NW	n/a
Feb, 2010	Kiran Auto Repair	Auto repair	1900 Bladensburg Road, NE	Yes
	A.T & K Motors Inc.	Used Auto sale	1900 E Bladensburg Road, NE	n/a
	Right Hour Auto Sales Inc	Auto repair	2201 Channing Street, NE	n/a
	Twin Rivers Auto Service Inc	Auto repair	2507 Bladensburg Road, NE	Yes
	E & E Auto Repair	Auto repair	2626 Evarts Street, NE	Yes
	Park Laundromat	Laundromat	7723 Georgia Avenue, NW	Yes
	District Line Auto Service	Auto repair	7825 Georgia Avenue, NW	Yes
	American Auto Body	Auto repair	6420 Chillum Place, NW	Yes
	Auto Body Express Service	Auto repair	6400 Chillum Place, NW	n/a
	Tiger Auto Repair	Auto repair	1850 Adams Street, NE	Yes
	Washington Transmission Specialist	Auto repair	4451 Nannie Hellen Burroughs Avenue, NE	Yes
	Unamed	Car Wash	2334 L'enfant Square, SE	Yes
	Mr. WAMS Auto Body	Auto repair	7053 Spring Place., NW	Yes
	Regal Custom Cleaners	Dry Cleaner	5021 Connecticut Avenue, NW	Yes
	C&C Custom Cleaners	Dry Cleaner	5511 Connecticut Avenue, NW	Yes
	Georgia Ave BP	Auto repair	7605 Georgia Ave., NW	Yes
March, 2010	S.A. Auto Repair	Auto repair	3011 Martin Luther King Avenue, SE	Yes
	NA	Dry Cleaner	3031 Naylor Road, SE	n/a
	Montana Double Wash	Car Wash	2327 Montana Avenue, NE	Yes
	T &W Auto Repair	Auto Repair	1736 Rhode Island Avenue, NE	Yes
	Dynast Auto	Auto Repair	3621 Benning Road, NE	n/a
	Super Salvage	Auto Repair	1711 1st Street, SW	No
	Han Cleaners	Dry Cleaner	4425 Wisconsin Avenue, NW	Yes

Month	Facility Name	Facility Type	Address	In Compliance
	American Valet	Dry Cleaner	4519 Wisconsin Avenue, NW	Yes
April, 2010	BON Auto Rental	Auto Repair	1910-1912 Bladensburg Road, NE	Yes
	Capital Auto	Auto Repair	1911A New York Avenue, NE	Yes
	Star Auto Center	Auto Repair	1911F New York Avenue, NE	Yes
	N/A	Auto Repair	2209 Channing Road, NE	n/a
	National Auto Care Inc	Auto Repair	1810 Edwin Street., NE	Yes
	Pan-Am Cab ASSN'N	Auto Repair	2204 Lawrence Avenue, NE	Yes
	International Limousine	Auto Repair	2300 T Street, NE	Yes
	Karma D.C. Inc	Auto Repair	1810 Edwin Street, NE	Yes
	Collision Auto Clinic	Auto Repair	2206 Lawrence Avenue, NE	Yes
	N/A	N/A	7717 14th Street, NW	n/a
	N/A	N/A	5483 30th Street, NW	n/a
	Mr. Wams Auto Body & Paint	Auto Repair	7053 Spring Place, NW	Yes
	Le Chat Noir	Restaurant	4907 Wisconsin Avenue, NW	Yes
	Metro Laundromat	Laundromat	1400 Rhode Island Avenue, NE	Yes
	Betty Brite Cleaners	Dry Cleaner	5123 N. H. Burrough Street, NE	Yes
	Airport Express, Inc	Auto Repair	6000 Sligo Mill Road, NE	Yes
	Keeping it clean car details	Car Wash	2101 Benning Road, NE	n/a
May, 2010	Ronnie Transmission Shop	Auto Repair	1800 Rhode Island Avenue, NE	Yes
	Dry Cleaning	Dry Cleaner	2149 Queens Chapel Road, NE	Yes
	AYT Auto Service	Auto Repair	2121 West Virginia Avenue, NE	Yes
	Laundromat	Laundromat	3915 Dix Street, NE	Yes
	Super Clean	Dry Cleaner	4415 Bowen Road, SE	Yes
	South Capitol Street Exxon LLC	Auto Repair	3900 MLK Jr. Avenue, SW	Yes
	JT Auto Sales and Service	Auto Repair	2400-A West Virginia Avenue, NE	Yes
	Tony Auto Repair	Auto Repair	2400-B West Virginia Avenue, NE	Yes
	Sangare's Auto Repair	Auto Repair	2400-C West Virginia Avenue, NE	Yes
	West Virginia Auto Repair	Auto Repair	2400-D West Virginia Avenue, NE	Yes
June, 2010	Betty Brite Cleaners	Dry Cleaner	2223 Minnesota Avenue., SE	Yes
	Good Wash Laundromat	Dry Cleaner	1603 Good Hope Road, NE	Yes
	Spincycle Coin Laundry	Laundromat	3250 Pennsylvania Avenue, SE	Yes
	Fort Dupont BP	Auto Repair	4101 Alabama Avenue, SE	Yes
	Georgetown Getty	Auto Repair	2715 Pennsylvania Avenue, NW	Yes
	Good Hope AutoCitgo	Auto Repair	2300 Pennsylvania Avenue, SE	Yes
	Wash & Shine Car Wash	Car Wash	5020 Wisconsin Avenue, NW	Yes
	Fort Davis Exxon	Auto Repair	3825 Alabama Avenue, SE	Yes
	N/A	N/A	5030 Connecticut Avenue, NW	n/a
	N/A	N/A	4602 Nash Street, NE	n/a
	T & A Used Auto Parts	Auto Repair	1215 Kenilworth Avenue, NE	Yes

Month	Facility Name	Facility Type	Address	In Compliance
	Sheriff Road Laundromat	Laundromat	4338 Sheriff Rd., NE	Yes
	Connecticut Ave. Amoco. Inc.	Auto Repair	5001 Connecticut Avenue, NW	Yes
	DP Auto Service	Auto Repair	4940 Connecticut Avenue, NW	Yes
	Flagship Car Wash	Car Wash	4432 Connecticut Avenue, NW	Yes
	Circle Exxon	Auto Repair	5521 Connecticut Avenue, NW	Yes
July, 2010	Minnesota Avenue Exxon	Auto Repair	4100 Hunt Pl., NE	Yes
	C&E Auto Services	Auto Repair	1729 Bladensburg Rd., NE	Yes
	Northeast Auto Body	Auto Repair	3188 Bladensburg Rd., NE	Yes
	TigerAuto	Auto Repair	1850 Adams St., NE	Yes
	Y & G Auto Body	Auto Repair	1851Adams St., NE	Yes
	N/A	N/A	3012 MLK Jr., Ave., SE	n/a
	Service Cleaners	Dry Cleaner	2841 Alabama Ave., SE	Yes
	Slow Nickel Series	Dry Cleaner	1101 C St., NE	n/a, CSO
	Long Bros Cleaners	Dry Cleaner	655 Lebaum St., SE	Yes
	Global Cleaners	Dry Cleaner	3700 MLK Jr., Ave., SE	Yes
	Quality Wash	Laundromat	2626 Naylor Rd., SE	Yes
	Dean Ave Cleaners	Dry Cleaner	4309 Nannie Helen Burroughs Ave., NE	Yes
	Good Year Auto Service	Auto Repair	3156 Bladensburg Road, NE	Yes
Aug, 2010	President Valet II	Dry Cleaner	4837 Wisconsin Avenue, NW	Yes
	Embassy Cleaners	Dry Cleaner	4215 Connecticut Avenue, NW	Yes
	President Valet	Dry Cleaner	5514 Connecticut Avenue, NW	Yes
	ClassiCleners	Dry Cleaner	4235 Wisconsin Avenue, NW	n/a
	Parker's Exxon	Auto Repair	4812 McArthur Blvd., NW	Yes
	Capital Auto Service	Auto Repair	4900 Wisconsin Avenue, NW	Yes
	Mamas Laundromat	Laundromat	4528 Benning Road, SE	Yes
	N/A	N/A	1345 S. Capitol Street, SW	n/a
	N/A	N/A	3012 MLK Jr. Avenue, SE	n/a
	Rufus Auto Restorer	Auto Repair	2902 Bladensburg Road, NE	n/a
	Eddie's Laundromat	Laundromat	2107 Alabama Avenue, SE	Yes
	The Auto Doctor	Auto Repair	4251 Minnesota Avenue, NE	Yes
Sep, 2010	Singh Transmission	Auto Repair	1505 S. Capitol Street, SW	Yes
	Auto Ward Inc.	Auto Repair	129 Q Street, SW	Yes
	Goody Cleaners	Dry Cleaner	1911 Michigan Avenue, NE	Yes
	Good Hope Auto Center	Auto Repair	2713 Good Hope Road, SE	Yes
	N/A	N/A	1523 Kenilworth Avenue, NE	n/a
	Comfy Laundry	Laundromat	333 Hawaii Avenue, NE	Yes
	Dr., King Brushless Car Wash	Car Wash	2735 MLK Jr. Avenue, SE	Yes
	Palace Cleaners	Dry Cleaner	5019 Wisconsin Avenue, NW	Yes
	National Auto Care	Auto Repair	3188 Bladensburg Road, NE	Yes
	Tara Thai	Restaurant	4849 Massachusetts Avenue, NW	Yes
	David Washington Transmission Service	Auto Repair	4451 Nannie Helen Brough Avenue, NE	Yes

N/A: Not Available
n/a: not applicable

Table F-2. Complaint-Driven Illicit Discharge Investigation for FY 2010

Case number	Location	Watershed	Issue	Resolved
091001	429 N Street, S.W	Potomac	Illicit discharge of swimming pool water	Yes
091106	Bolling Air Force Base-Capital Cove Marina	Anacostia	Unknown Quantity of oil discharged from storm drain in Capital Cove Marina	Yes
091109	2832 6th St., NE	Anacostia (CSO)	Oil released from heating oil tank	Yes
091124	Seafarer's Marina-CSX Train Bridge Area	Anacostia	Oil sheen on the surface of water	Yes
091215	4445 Volta Pl., NW	Potomac	Concrete slur on the street that is being washed and entering to the catch basin	Yes
100105	Watts Branch 61st and E. Capitol NE	Anacostia	pH levels above 12.0 were observed downstream in Watts Branch	Yes
100107	142 Elmira Street, SW	Anacostia	Unidentified clear water coming out from the retaining wall onto the sidewalk	Yes
100115	N Street and Branch Road, SE	Anacostia	Chlorinated water entering Pope branch from leaking fire hydrant	Yes
100122	3018 Daniel Lane, NW	Rock Creek	Storm water discharge from the roof drain to the street	Yes
100126	Potomac River (Vicinity of DCA)	Potomac	Oil sheen on water surface	Yes
100203	3303 Cleveland Avenue, NW	Rock Creek	Strong petroleum smells near storm drain	Yes
100224	700 5th Street, NE	CSO	Dumping of material down storm drain	Yes
100304	11 Underwood Street, NW	Anacostia	Dumping of material down storm drain	Yes
100304A	3700 10th Street, NW	Rock Creek (CSO)	Petroleum odor in the indoor office space	Yes
100310	3801 Nebraska Avenue, NW-Nebraska Complex (Homeland Security)	Rock Creek	Diesel fuel leaks from UST into the oil water separator.	Yes
100310A	RFK Stadium Parking Lot #8	Anacostia	Melting snow runoff causing erosion concern on the street and incoming of pollutants and debris directly into the Anacostia river	Yes
100310B	North Portal Rd., and 16th St., NW	Rock Creek	Dumping of chemical to the storm drain, and discoloration of water	Yes
100311	Potomac river north of Chain bridge road	Potomac	Sewage breaks	Yes

Case number	Location	Watershed	Issue	Resolved
100315	4604 15th Street, NW	Rock Creek (CSO)	Illicit dumping of paint in the back alley behind residential property	Yes
100315A	Foundary Branch	Rock Creek	Sanitary sewage overflow	Yes
100318	1400 42nd Street, SE	Potomac	Dumping of sewage from home down catch basin	Yes
100318A	3421 M Street, NW	Potomac	Cooking Grease dumped down drains	Yes
100325	809 Kennedy Street, NW	Rock Creek (CSO)	Strong toxic odor emanating from property	Yes
100330	1711 1st Street, SW – Super Salvage, Inc	Anacostia	Various form of fluids leaking from the property	Yes
100330A	4214 Hunt Place, NE	Anacostia	Multimedia inspection	Yes
100331	3636 16th Street, NW	Rock Creek	Discharge of oil from outfall 804 located on Piney Branch	Yes
100415	Potomac Pumping Station	Potomac	Sewage discharge	Yes
100504	Foundry Branch_ Intersection of Macomb St. and Mass Ave., NW	Rock Creek	Crack in sewer pipe underneath stream	Yes
100514	2800 Good Hope Road, SE	Anacostia	Raw Sewage Overflow	Yes
100518	3710 Roosevelt Place, NE	Anacostia	Food waste dumping to the catch basin	Yes
100518A	604 21st Street, SE	Anacostia	Leaking above ground heating oil tank	Yes
100520	2230 New York Avenue, NE	Anacostia	Suspected petroleum discharge to the stream	Yes
100524	2607 Military Road, NW-St. Johns College High School	Rock Creek	Unidentified pollutant discharge to the stream	Yes
100528	1213 Jefferson Street, NW	Rock Creek (CSO)	Discharge of unknown pollutant from the back yard	Yes
100609	Canal Road near Ashby Street and W Street, NW	Potomac	Sanitary Sewer Overflow	Yes
100609A	5019 8th Street, NW	Rock Creek (CSO)	Leaking heating oil tank	Yes
100707	7th & R Street, NW to 14th and U Street, NW	CSO	Cooking grease spill to street	Yes
100715	2040 West Virginia Avenue, NE-Tony Auto Repair Shop	Anacostia	Contaminated runoff discharging from the property to the street	No

Case number	Location	Watershed	Issue	Resolved
100720	Anacostia Park (DCParks and Recreation)	Anacostia	Chlorinated water discharge	Yes
100804	601 Farragaut Place, NE-DDOT Salt Storage	Anacostia	Possible leaking of hydrocarbons into residents basements from contaminated soils	Yes
100824	2515 R Street, SE	Anacostia	Sewage discharge to street	Yes
100825	500 N Street, SW	Potomac	Possible illicit connection from apartment building washing bay	Yes
100830	Outfall at 49th Street and N. Helen Burroughs, NE	Anacostia	Discharge of turbid water to Watts Branch	Yes
100901	500 N Street, SW-Harbor Square	Potomac	Possible Illicit Discharge from apartment building pond	Yes
100913	4600 Polk Street, NE	Anacostia	Discharge of gasoline to storm sewer system	Yes
100915	5001 Fort Totten Drive, NE	Anacostia	Diesel fuel spill of 35 gallons on property	Yes
100921	1300 W Street, NE	Anacostia (CSO)	Bad odors coming from storm drains in neighborhood	Yes
100922	Outfall ID # 872	Rock Creek	Sanitary sewage discharge/odor	Yes

Table F-3. Investigations based on Emergency Responses for FY 2010

Case Number	Location	Watershed	Issue	Resolved
091026E	4668 Broad Branch Road, NW	Rock Creek	Sewer blockage resulting in overflow reaching broad branch creek	Yes
091113	1000 Water St., SW	Anacostia	Diesel fuel spill from a sail boat	Yes
100129	1400 North Royal Street Alexandria Virginia - Mirant Power Plant	Potomac	Observed oil sheen on the Potomac river	Yes
100407	1400 North Royal Street Alexandria Virginia - Mirant Power Plant	Potomac	Waste water discharge	Yes
100420	Smithsonian Zoo	Rock Creek	Sewage overflow	Yes
100429	1063 Wisconsin Avenue, NW and C&O Canal	Potomac	Sanitary Sewage percolating to C&O Canal	Yes
100514	11th St and V St. NW	Rock Creek	Used oil leaks to the street	Yes
100527	DCWASA-Blue Plain	Potomac	Digester Dewatering Line Break	Yes
100609A	200 V Street, SW	Anacostia	Diesel fuel leaks	Yes
100614	321 Nicolson Street, NE	Anacostia	Transformer oil release	Yes
100819	U.S. National Arboretum	Anacostia	Sewage overflow due to inclement weather	Yes
100831	Anacostia Park Kenilworth Marsh	Anacostia	Pesticide released into the Anacostia	Yes
100902	600 Water Street, SW	Potomac	Oil Slick on the Potomac	Yes
100903	1100 Stevens Road, SE	Anacostia	Low water pressure in the resident due to using of fire hydrant	Yes

DISTRICT DEPARTMENT OF THE ENVIRONMENT

STATUS UPDATE
LETTER OF AGREEMENT MILESTONES
BEST MANAGEMENT PRACTICES ENHANCEMENT PACKAGE

ADMINISTRATIVE

- Update the existing MOU dated December 2000 to formally define roles and responsibilities of each District agency, including the District Department of the Environment (DDOE), D.C. Water and Sewer Authority (WASA), District Department of Transportation (DDOT), and Department of Public Works (DPW), by August 19, 2008.

  Status Update: Completed. The original MS4 task force agencies (DPW, WASA and DOH) signed the 2000 MOU with EPA, which contained a matrix of responsibilities for each of agency based on the 2000 MS4 Permit (Permit). Upon signing the Letter of Agreement with EPA, separate MOUs were developed between DDOE and the MS4 task force members to detail the new stormwater management responsibilities. These separate MOUs were needed due to administrative and fiscal requirements, and detailed the projects to be carried out by fiscal year and the cost associated with each activity. DDOE's Annual Report, submitted to EPA on August 19, 2008, included copies of the MOUs with DDOT, DPW and WASA. Copies of the most recent MOUs are included in Attachment A.

- Convene a Stormwater Management Task Force to make recommendations on the organization of the District's Stormwater Administration, and the District's stormwater funding mechanisms and fee structure, by March 28, 2008.

  Status Update: Completed. DDOE convened a Task Force to address stormwater management issues in the District and held monthly meetings from November 2007 through March 2008. This Task Force gathered representatives from District Government, the development sector, and environmental organizations to assess and make recommendations regarding the District's stormwater management priorities, organization of the District's stormwater administration and the adequacy of the District's funding mechanisms for stormwater management. The DC Council relied on the Task Force recommendations in developing and drafting the Comprehensive Stormwater Management Enhancement Amendment Act of 2008. The Act was signed by the Mayor in early 2009. The Act provides the District's stormwater administration with increased authority, integrate stormwater management considerations into other District agencies's operations, and improve coordination of stormwater management tasks and cooperation between District agencies.

- Implement recommendations for funding mechanisms and fee structure by December 31, 2008.

Status Update: Completed. Recommendations were made for a funding mechanism and a fee structure. Information about changes to the District's stormwater fee is available at http://ddoe.dc.gov/ddoe/cwp/view,a,1209,q,498382.asp.

TREE CANOPY

- 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.

  Status Update: In Progress. Prior to the development of a detailed strategy, the University of Vermont was contracted by UFA to estimate the District's current and possible tree canopy. The University of Vermont used 2006 spatial and GIS data for the analysis. The analysis revealed that the District's current tree canopy is 35%. With this analysis, the District and stakeholders set up a 40% tree canopy goal to be achieved by 2035. A copy of this analysis is included in Attachment B.

- Provide final detailed plan for achieving the optimal District tree canopy goal in the 2009 Implementation Plan, dated August 19, 2009.

  Status Update: In Progress. DDOE's Watershed Protection Division finalized the draft strategy for achieving the 40% goal in June 2010. WPD is awaiting comments from the stakeholders (UFA, Casey Trees and other environmental groups). A final copy will be included in the 2011 Annual Report.

- 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.

  Status Update: In Progress. The District continues to plant at least 4150 trees annually. The draft strategy includes a maintenance strategy to achieve optimal survival tree rate. DDOE's Stormwater Management Division (SWMD) purchased "City Green" (GIS based software) to calculate the stormwater volume that is removed from the MS4 for any given 2-year rainstorm. Stormwater captures will be reported in the FY 2011 Annual Report.

- 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.

Status Update: In progress. The District's timeframe for achieving its optimal tree canopy cover is 2035. The draft strategy addresses a schedule and the number of trees that need to be planted yearly to achieve the optimal tree canopy. The Mayor has committed to achieving an optimal tree canopy goal by 2035.

- Continue current tree planting at the rate of at least 4,150 annually.

  Status Update: On track. More than 6,000 trees were planted by UFA and environmental groups citywide in 2009. The District will continue to plant at least 4,150 trees annually.

LOW IMPACT DEVELOPMENT (LID) PRACTICES

- Complete a master LID implementation list by August 19, 2008. The master list will be a revision of Appendix C included in the 2005 Anacostia TMDL Implementation Plan.

  Status Update: Completed. A copy of the master LID list implementation plan was included in the SWMP dated February 2009. The master LID implementation plan is divided by subwatershed.

- Construct 17 LID projects by August 19, 2009.

  Status Update: Completed. The status of the 17 LID projects is shown in the table below:

Table 1: LID projects implemented as part of the Letter of Agreement

Project	Type of LID	Location	Year Built	Number of LIDs
Anacostia River Walk Trail #1	Street Tree buffer area	11th St. at M St. SE & N St. SE	2008	1
Anacostia River Walk Trail #2	Vegetated Swale	Water St. SE west of boat houses in wooded area	2008	1
Anacostia River Walk Trail #3	Bioretention Area	Water St. SE near boat houses	2008	1
Anacostia River Walk Trail #3a	Vegetated Swale	Water St. SE near boat houses	2008	1
Anacostia River Walk Trail #4	Bioretention Area	M St. SE & Water Street, SE intersection	2008	1
Anacostia River Walk Trail #5	Bioretention Area	Near RFK Stadium service road & Independence Ave connector	2008	1

Project	Type of LID	Location	Year Built	Number of LIDs
Anacostia River Walk Trail #6	Bioretention Area	Off Benning Rd., between Oklahoma Ave & RFK parking lot entrance	2008	1
East Beach Dr. NW.	Bioswales	1000 LF roadway runoff directed through curb cuts to roadside ROW w/ rip rap; western side	2008	2
Nebraska Avenue	Bioswales	Nebraska Avenue, north side at Stephenson; north side before Oregon Avenue, and at triangle	2009	3
Constitution Square	Bioretention planters	1st Street between M and N street, NE	2010	3
Metropolitan Branch Trail	Bioretention	Metropolitan Branch Trail	2010	1
Metropolitan Branch Trail	Infiltration Trenches	Metropolitan Branch Trail	2010	1
		Total		**17**

- Complete the "Low Impact Development (LID) Stormwater Control Structures Maintenance Manual" by April 30, 2009.

  Status Update: Completed. The LID maintenance manual was finalized in May 2009. A copy of the maintenance manual is included in Attachment C.

- To the extent feasible, DDOT will comply with all LID options in the Anacostia Waterfront Initiative Transportation Architecture Design Standards for all DDOT transportation infrastructure projects.

  Status Update: On-going.

- Appendix C to the 2005 Anacostia TMDL Implementation Plan shall be included in the next revision of the DC MS4 permit.

  Status Update: Completed. Appendix C to the 2005 Anacostia TMDL Implementation Plan refers to the Anacostia portion of the Master LID implementation list referred to previously.

- The City shall make best efforts to devise a LID plan and schedule to be completed no later than December 31, 2014, which shall include measures such as: conversion of paved or hardened areas throughout the District, such as traffic street medians, and large sidewalk areas, into green space in the form of "pocket parks" or "green streets." The plan will identify all locations throughout the District where such projects are technically feasible and commit to specific schedules for implementing these projects at specific locations throughout

the seven-year period, with highest priority given to projects that offer the greatest storm water capture potential.

Status Update: On track. The LID plan will be devised along with the development of the Anacostia, Rock Creek and Potomac watershed TMDL WLA implementation plans before December 31, 2014.

- Such plan and schedule should extend LID incentives to strategies, including rain barrels and downspout disconnections, to other areas than just pocket parks.

  Status Update: On track. The District's plan for LID implementation will include the River Smart Homes program, which includes rain barrels and downspout disconnection, and to the green roof incentives program. Information on these programs can be found at www.ddoe.dc.gov

RAIN GARDENS

- Install approximately 50 rain gardens and 125 rain barrels city-wide, and perform 200 downspout disconnections, by December 31, 2009[1]. (319*)

  Status Update: Completed. 14 rain gardens, 13 permeable pavement, 59 bayscaping and 400 rain barrel projects were installed city wide by December 31, 2009. Additional 39 rain gardens, 25 bayscaping and 3 permeable pavement projects were installed by June 2010. DDOE intended to have a downspout disconnection grant in place to perform the downspout disconnections but it took longer than anticipated. The grant is now in place and downspout disconnections will take place in the upcoming fiscal year. The locations for all the rain gardens, bayscaping and permeable projects are included in Attachment D.

GREEN ROOFS

- 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.

  Status Update: Completed. Rather than tax credits, DDOE established an incentive program for green roofs that is funded through a variety of sources (MS4, stimulus and 319). The program offers a subsidy of $5 per square foot for projects up to 4,000 square feet and

[1] Numbers reflect installation to be performed city wide. The rain gardens, rain barrels and downspouts projects to be installed in the MS4 areas only will be paid by MS4 funds and the projects installed in the CSO will be paid by (319*) funds.

$7 per square foot for projects over 4,000 square feet. More information on the green roof incentive program is available at http://ddoe.dc.gov/ddoe/cwp/view,a,1209,q,499460.asp.

- 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 by April 30, 2009.

  Status Update: Completed. The Department of Real Estate Services (DRES), formerly known as OPM, completed building assessments for all of the District properties they maintain, including assessments on various components (HVAC, plumbing, electrical, etc.) that do not have any direct impact on the feasibility for a potential green roof. Information that was deemed necessary for determining the feasibility of a green roof was queried from these building assessments and a list of potential District properties that can receive a green roof was developed.

- 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.

  Status Update: On-going.

- 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.

  Status Update: On-going. The schedule containing the list of potential District properties that could potentially receive green roof is included in Attachment E. The implementation of these green roof projects will be consistent with the implementation of the Master LID implementation plan discussed earlier.

- 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.

  Status Update: On-going. DDOE has made available over $500,000 for residential, commercial and District controlled properties since October 1, 2008.

- 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.

Status Update: Completed. DDOE has dedicated over $1,000,000 per year for green roof construction for the past two years. DDOE's WPD is currently assessing the effectiveness of the green roof incentive program.

- Annually document and report the square footage of green roof coverage for all buildings in the District.

  Status Update: Completed. DDOE has compiled a green roof database that includes projects that need approval from the Technical Services Division within DDOE and other green roof projects that are part of retrofit projects. The annual MS4 reports contain the square footage of those green roof projects that are approved by the Technical Services Division.

STREET SWEEPING

- Complete the street sweeping study and begin implementing the long-term enhanced street sweeping and fine particle removal schedule and program by December 30, 2007. Provide notice and opportunity for comment on plan by Friends of the Earth.

  Status Update: Completed. This commitment referred to two separate street sweeping studies. The first, called "Street Sweeping Study," was completed on September 28, 2007. The objective of this study was to estimate the amount of pollutants eliminated from the watershed by street sweeping and the efficiency of selected street sweepers in collecting pollutants. The second, called "Enhanced Street Sweeping and Fine Particle Removal Strategy" was completed in May 2008. Friends of the Earth was given the opportunity to comment on the final draft. The objective of this study was to maximize the current resources allocated to the street sweeping program (sweepers, manpower, routes, etc) in order to identify resources for an "environmental sweeping day" in "hot spots" determined by DDOE. The District Department of Public Works (DPW) is in the process of completing the final version of another study that utilizes elements from the findings of the first two studies. The goal of this study is to maximize the efficiency of the District's street sweeping program, and cut back on certain program elements in order to increase sweeping of "environmental hotspots" in the MS4 area. DDOE plans to release the findings of the final study to Friends of the Earth for comment. DDOE will also sign an MOU with DPW in FY 2010 to provide funding from the District's Stormwater Enterprise Fund to help with implementation of the findings of the final study.

- 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.

  Status Update: Completed. A street sweeping implementation schedule was incorporated into the District 2010 MS4 Permit and will be a major component of the Trash TMDL Implementation Plan.

- 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. The District will use the following measurable outputs to track progress: tons collected from mechanical sweeping; tons collected from commercial corridor litter removal; tons collected from litter cans; number of litter cans in service; miles of alleys swept[2].

Status Update: In progress. DPW continues to implement its sweeping program based on the recommendations from recent studies. Since FY 2009, DPW has started to track the tonnage collected its mechanical sweeping, alley cleaning, manual cleaning, litter cans and carts. The tonnage collected in FY 2009 and projections for subsequent years is included in the MS4 Annual Report.

- 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.

  Status Update: Completed. A plan and schedule was incorporated into the 2010 draft MS4 Permit.

COORDINATED CATCH BASIN CLEANING

- Install environmental catch basins or equivalent BMPs in new road reconstruction projects, starting April 2008. Submit implementation schedule in the upgraded Storm Water Management Plan.

  Status Update: On-going. All new road construction projects include water quality catch basins or equivalent BMPs. The schedule for new road construction was included in Appendix F of the SWMP dated February 19, 2009.

ESTIMATION OF POLLUTANT REDUCTIONS FROM STRUCTURAL AND NON-STRUCTURAL BEST MANAGEMENT PRACTICES (BMPS)

- 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.

  Status Update: Completed. A draft of the model for estimating pollutant reductions was developed in Microsoft Excel and was included in the 2008 Annual Report. The draft model was based on the EPA Watershed Treatment Model (WTM) and the Portland model. The

[2] Measurable output for trash collection added.

draft was not finalized because EPA revised the WTM model to include non structural BMPs and programmatic measures (i.e. pet waste ordinances, inspection of construction sites, etc.) as well as discount factors for efficiency of the non structural BMPs. The revised WTM is in the beta-testing phase. Once EPA finalizes the revised WTM model, the "input parameters" worksheet and a first "run" of the model will be included in the next annual report.

IMPLEMENTATION OF A PROGRAM TO CONTROL DISCHARGES FROM DISTRICT AND FEDERALLY OWNED FACILITIES

- 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.

  Status Update: Completed. The District's Stormwater Pollution Prevention Plan Guidance was completed in early 2009 and distributed to each District agency and WASA. DDOE works with each agency as they develop their individual plans for all of their facilities. DDOE provided its own training, and then provided 5 additional training classes (and webinars) from the Center for Watershed Protection throughout 2009 and into 2010. DDOE plans to hold routine customized trainings that will be repeated throughout the calendar year, such as: Bioretention, Stormwater Best Management Practices, A Watershed Treatment Model: A TMDL Model & Tracking Tool, and many more. The Pollution Prevention Coordinator is working to ensure that all agencies implement their SWPPPs, and keeps the facility managers and staff well informed of the latest spill and good housekeeping technology through the life of the permit and beyond.

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UPDATE STORMWATER REGULATIONS AND GUIDELINES, TO INCORPORATE ENHANCED MANAGEMENT METHODS

- 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.

  Status Update: In progress. On June 15 and July 1, 2009, DDOE held public outreach meetings to consider implementation strategies and seek stakeholder input in developing soil erosion and sedimentation control and stormwater management regulations. These stakeholder meetings provided the public with a chance to comment on DDOE's draft proposed stormwater regulations. DDOE has received some extremely useful and substantial comments and is in the process of reviewing and incorporating them as necessary.

- Promulgate new regulations that will require construction site managers to have erosion control training by June 30, 2008.

Status Update: In Progress. The requirement will be incorporated into the final stormwater management regulations when they are finalized.

- Revise and update the District of Columbia Storm Water Management Guidebook, by December 31, 2008. (319*)

  Status Update: In Progress. The Guidebook will be completed once the revised stormwater regulations are in effect.

REVIEW CONSTRUCTION PROJECTS

- Continue to review construction projects in the District for soil erosion, sedimentation control, and stormwater management. Once promulgated, the District will require compliance with the AWC standards where feasible.

  Status Update: On-going. The District continues to review projects for soil erosion, sedimentation control and stormwater management, and when promulgated will require compliance with Anacostia Waterfront Corporation (AWC) standards when feasible.

- Provide the number of LID projects installed in private properties annually.

  Status Update: Ongoing. The numbers of LID projects installed in private properties are reported in the MS4 annual reports.

TRASH REMOVAL PLAN

- 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.

  Status Update: On Track. DDOE continues to implement new activities and programs to increase removal of trash from previous year. Some of these activities are described below:

  - In partnership with the State of MD, DDOE completed development of a Total Maximum Daily Load (TMDL) for trash for the Anacostia River. DDOE is in the process of developing the TMDL implementation plan.
  - DC implemented the Anacostia River Clean-Up and Protection Act on January 1, 2010. The law required DC businesses to charge a five cent fee on all plastic and paper bags used to distribute consumer goods in the District. This law will hopefully help cut back on the number of bags used by area citizens, and subsequently cut back on the amount of litter bags from entering the Anacostia River.

- DDOE is working with DPW to increase the amount of time spent on sweeping environmental hotspots for trash in various parts of the MS4. These hotspots will be identified in accordance with the Anacostia Trash TMDL.
- DDOE has contracted with Washington Parks & People to implement a new program called "Dump Busters". The program will place surveillance cameras throughout the city to try and discourage littering.
- DDOE has awarded a grant to the Alice Ferguson Foundation to conduct a behavioral study regarding littering within the District. This study will be used in the development of a marketing campaign to discourage the District's citizens from littering.

- Require water quality catch basins for trash/sediment removal devices for new roadway reconstruction projects.

  Status Update: On-going. Water quality catch basins or equivalent BMPs are installed for every new roadway reconstruction project.

- 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. (319*)

  Status Update: Completed. The Anacostia Watershed Trash Reduction Plan was completed in December 2008. The plan included the results of a "trash survey" conducted in the portion of the Anacostia watershed located in the District of Columbia. A copy of the plan is included in Attachment F.

- 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.

  Status Update: On track. As part of the development of the Anacostia Watershed Trash TMDL, DDOE is conducting field surveys within the Anacostia watershed to determine the most suitable and effective type of trash control. An update will be provided in the 2010 MS4 Implementation Plan.

- 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.

  Status Update: Completed. In November 2008, DDOE selected Nash Run and Watts Branch to test the use of end of pipe trash collection technologies. End of pipe technologies used by DDOE include in-stream trash and floating litter traps. DDOE has contracts in place with the Anacostia Watershed Society (AWS) and the Earth Conservation Corps (ECC) to install, maintain and test the effectiveness of in-stream trash traps. AWS is using a low cost device consisting of fencing and posts to capture trash as it moves across a braided section of Nash Run. Nash Run is a small tributary that has very high levels of trash according to the Anacostia Watershed Trash Reduction Plan. From February of 2009 to May of 2010, the

Anacostia Watershed Society and various volunteer groups have used the trash trap to remove 1,309 lbs of trash. Watts Branch is also heavily impaired because of trash. At Watts Branch, ECC has deployed a more sophisticated technology called a Bandalong Litter Trap. Using this device, ECC has removed 2.78 tons of trash and debris (measured wet) from the trash trap and prevented that trash from entering the Anacostia River. Both in-stream trash traps are located on National Park Service (NPS) land. DDOE has obtained the necessary permits from NPS to continue with the implementation.

Hickey Run, which daylights in the US Arboretum, is one of the District's most trash-filled streams. DDOE estimates that 14,623 pounds of trash flow to the Anacostia River annually. To help address this problem, DDOE has partnered with the US Department of Agriculture (USDA) Agricultural Research Service, the US National Arboretum and the US Army Corps of Engineers to construct an end of pipe filtration device that will remove floatables, sediments and other debris from the MS4 before it discharges to Hickey Run. The total project will cost approximately $2 million. All of this funding is federal, including $500,000 managed directly by DDOE for the construction of an access road to service the device. DDOE is using the experience gained from this project to see if a similar approach can be used in other subwatersheds of the Anacostia River.

- Retrofit 50 catch basins to address trash control, in conjunction with enhancements to the District's street sweeping efforts, by February 19, 2009.

  Status Update: Completed. DDOE selected the Fort Dupont subwatershed as the area for this pilot study, and installed 50 catch basin inlet screens in 2009. After the severe winter of 2010, numerous screens were damaged. ECC has repaired those screens and is in the process of retrofitting additional catch basins. Eventually, 80 catch basins will be retrofitted within the Fort Dupont Subwatershed of the Anacostia River.

- 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.

  Status Update: On track. DDOE's WPD is currently developing the trash TMDL implementation plan.

RETROFIT CATCH BASINS

- 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.

  Status Update: Completed. DDOE has dedicated over $1,000,000 for retrofit projects.

PET WASTE

- 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.

  Status Update: Completed. The District's Pet Waste Strategy was developed in early 2009 and was included in the upgraded SWMP dated February 19, 2009. The Pet Waste Strategy included targeted enforcement and the creation of dog parks. DDOE is currently coordinating with the DC Department of Health and the Metropolitan Police Department for targeted enforcement and ticketing. DDOE coordinates with the Department of Parks and Recreation to conduct environmental site assessments for proposed dog parks. Following is the list of dog parks that are operating or under construction:

  - S and T Streets NW 2 triangle parks (operating)
  - Walter Pierce Park (under construction)
  - Newark and 49th Street NW (under construction)
  - Western Avenue NW (design phase)

  These dog park areas will receive strong focus for waste pick up and management outreach. In addition, each park will display prominent signage to tell residents that pet waste pickup is a DC Law, and must be practiced in all public spaces, especially dog parks and recreation facilities. DDOE's outreach campaign will ramp up throughout 2010.

ILLEGAL DUMPING

- 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.

  Status Update: Completed. The plans for the Watts Branch Restoration project have been completed. As part of the project, WASA has repaired two sewer crossings and will complete the remaining sewer line repair work in early 2011. The specific locations are detailed in the plans included in Attachment G.

- 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. (319*)

  Status Update: In Progress. The Watts Branch Restoration project has been initiated. Storm drain stenciling was started in the Watts Branch subwatershed in April 2008. Pre-solicitation notices have been issued by NRCS for bids on the stream restoration work. Awards will be made in the fall.

- Establish an Enforcement Office to advance and standardize enforcement procedures in DDOE.

Status Update: Completed. The Office of Enforcement and Environmental Justice was established within DDOE. The mission of DDOE's Office of Enforcement and Environmental Justice (OEEJ) is to conserve and protect the air, land, water, and natural resources of the District of Columbia and to ensure a safe and healthy environment by developing and implementing effective enforcement practices, supporting DDOE's environmental enforcement programs, implementing DDOE's Environmental Justice Program, and serving as the agency contact for enforcement matters involving U.S. EPA Region III.

- Continue to enhance the current DPW illegal dumping programs.

  Status Update: Completed. The Solid Waste Education and Enforcement Program (SWEEP) within DPW is responsible for sanitation education and enforcement. SWEEP inspectors patrol their assigned areas daily on the lookout for sanitation violations, such as illegal dumping. District residents can call the Mayor's Citywide Call Center (311) and provide information the following information:

  - The location (street, alley, vacant lot, etc. with an address, if possible) of the dumping.
  - Make, model and license tag number of the vehicle used to carry the item(s) to the site.
  - Time and date when the dumping occurred.
  - Type of materials that were dumped.

  A DPW SWEEP inspector will investigate the dumping and make arrangements for clean-up.

- Work with members of the Metropolitan Police Department to enhance illegal dumping enforcement.

  Status Update: In Progress. DPW, in partnership with the Metropolitan Police Department, offers a reward of up to $500 for information leading to the arrest and conviction of each illegal dumper.

- Work with DPW to install camera(s) to record illegal dumping activities and assist enforcement actions. The camera(s) will be installed in a rotating basis throughout the MS4 area. The installation will begin by August 19, 2009.

  Status Update: In Progress. The illegal dumping surveillance camera project was advertised through an RFA process in 2009. Washington Parks and People submitted a successful application and was selected as a grant partner. DDOE and Washington Parks and People are currently in the process of finalizing the Grant Agreement for the project. Work on the project is anticipated to begin later in 2010.

ILLICIT DISCHARGE PROGRAM

- Continue to enhance the District's illicit discharge program by targeting potential discharge sources (e.g. Laundromats, dry cleaners, auto repair shops).

Status Update: In Progress. An Illicit Discharge Detection and Elimination (IDDE) strategy for proactive inspection and enforcement program was developed in January 2008. A copy of the strategy was sent to the Office of NPDES Permits and Enforcement in 2008. The DDOE's WQD has been implementing the strategy since April 2007.

- By January 31, 2008, the City shall complete a strategy for proactive inspection and enforcement of illicit discharges of pollutants to storm sewers and drains. The program will target each item listed in the chart on p. 5 of the District's Sept. 24, 2007 proposal.

  Status Update: Completed. The IDDE enhanced strategy was completed and submitted to EPA on schedule. The IDDE strategy targets the following sources: sanitary wastewater, auto repair, car wash, laundromats, household hazardous waste, grass clippings, leaf litter, discharge of floatables and animal waste. A copy of the strategy is included in Attachment H.

- Annually target 20 percent of the MS4 area to achieve 100 percent coverage in the permitting cycle.

  Status Update: On-going. The District is meeting the 20% target to achieve 100% coverage in the permitting cycle.

INSTALL STORM DRAIN MARKERS

- Install 1,000 storm drain markers per year starting in April 2008. (319*)

  Status Update: On-going. At least 1,000 storm drain markers are installed yearly.

PROMOTE PROPER PET WASTE DISPOSAL

- Distribute "scoop your pet's poop" educational materials to all veterinarian clinics and pet shops in the District by March 2008. (319*)

  Status Update: Completed. Flyers were distributed to all veterinarian clinics and pet shops in the District, including the CSO area.

PUBLICIZE ILLICIT DISCHARGE PROGRAM ELEMENTS

- 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

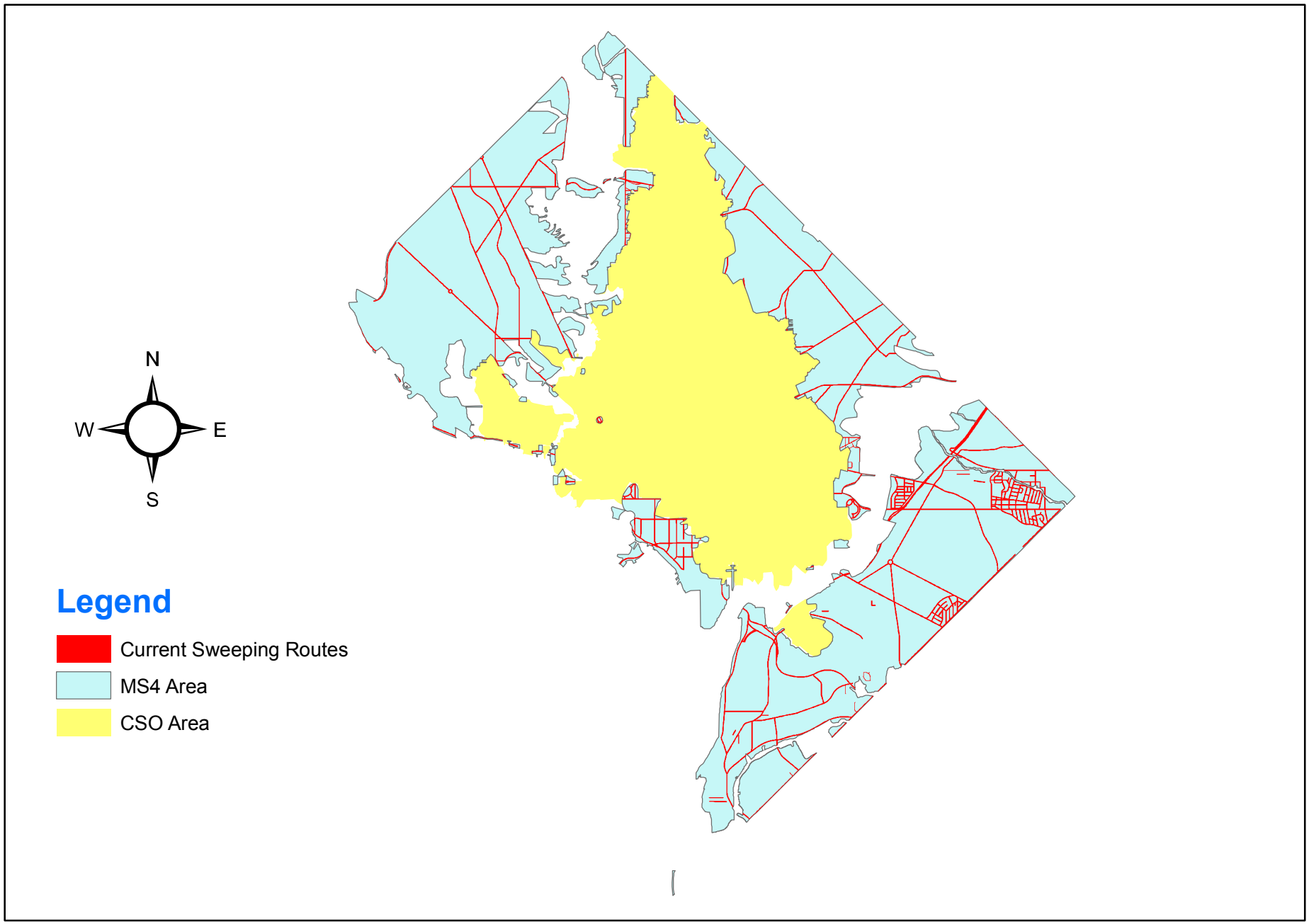
Status Update: Completed. The enhancements were identified in the SWMP dated February 19, 2009.

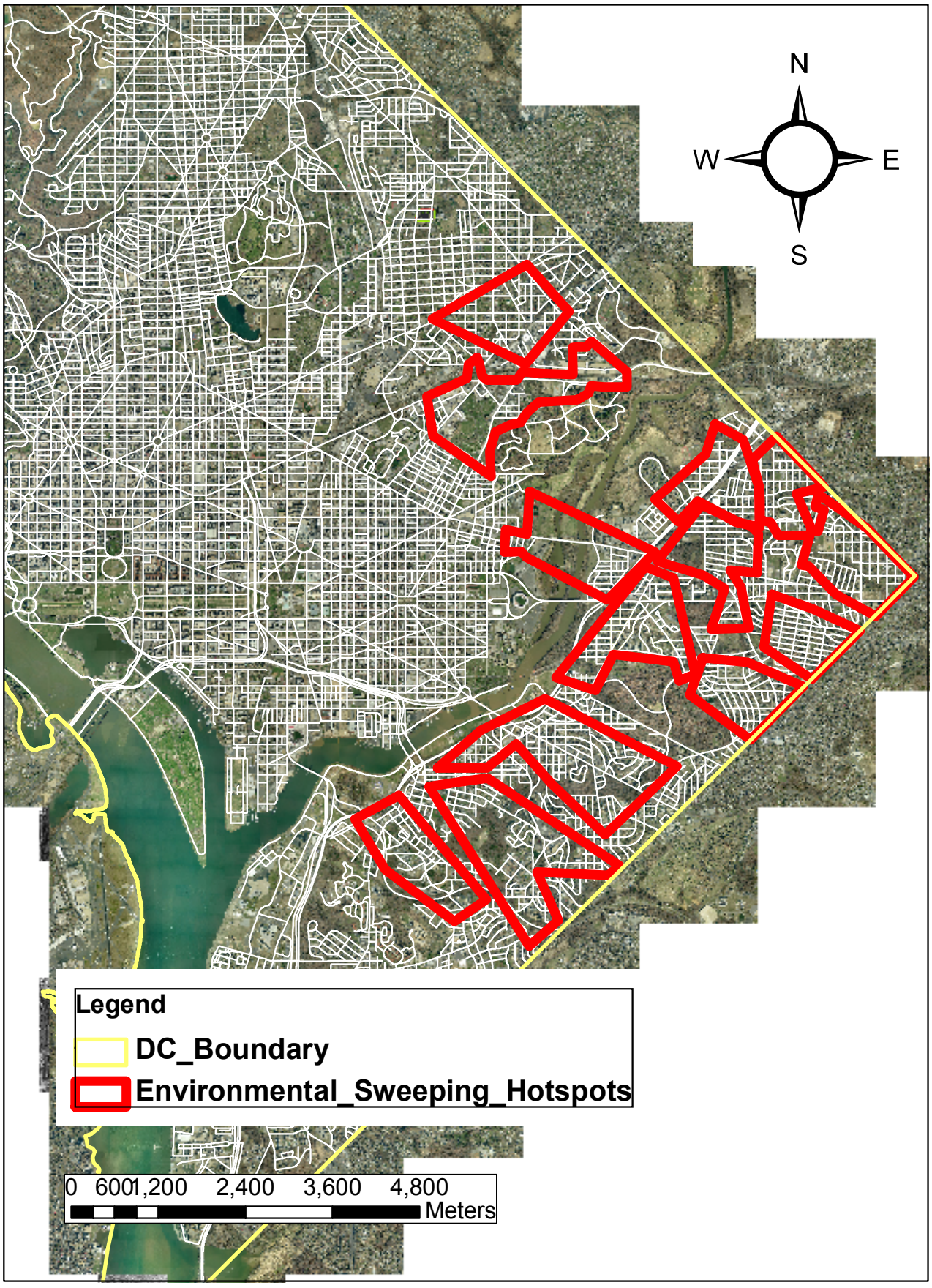
Appendix H

Street Sweeping and Environmental Hotspots identified by District Department of Public Works

in the MS4 Area

Current streets swept by District Department of Public Works in the MS4 area




N
W
E
S
Legend
DC_Boundary
Environmental_Sweeping_Hotspots
0 600 1,200 2,400 3,600 4,800
Meters