2009 VPDES Permit Annual Report

Fairfax County, Virginia

VPDES Permit No. 0088587

March 9, 2010

The following annual report is submitted to the Virginia Department of Conservation and Recreation (DCR) in compliance with Fairfax County's Virginia Pollutant Discharge Elimination System (VPDES) permit. The permit was issued January 24, 2002 and expired January 24, 2007. The county is currently operating under an administrative continuance of the existing permit in anticipation of permit renewal. This report covers the previous calendar year from January 1, 2009 to December 31, 2009 and describes all of the activities performed to satisfy the county's permit requirements.

Annual Report requirements as specified in Part I.C.4 of the permit are bold and underlined below and *the stormwater program requirements as specified in the permit, Part I sections B.1, C.1, C.2 and C.3 of the permit are in italics* under the applicable annual report section.

NOTE: Fairfax County's response to the annual report and permit requirements are indented.

a) Watershed Management Program Implementation

The Municipal Separate Storm Sewer System and any stormwater structural controls shall be operated in a manner that reduces the discharge of pollutants to the maximum extent practicable (B.1.a).

Watershed management plans are one component of the Virginia Pollutant Discharge Elimination System Permit requirements and are part of the Fairfax County Board of Supervisors' Environmental Agenda. The goals of the plans include protecting and restoring county streams by identifying strategies to prevent and remove pollution, to support Virginia's commitment under the Chesapeake Bay 2000 Agreement, to help restore the bay, and to replace the existing 1970s-era watershed master plans, while preserving property values. Completed watershed plans provide an assessment of watershed conditions, encourage public involvement, and prioritize recommendations for implementation of stormwater management projects.

The development of comprehensive watershed management plans began in 2003 with the Little Hunting Creek Watershed. To date, six watershed management plans have been completed and adopted by the Fairfax County Board of Supervisors (Attachment 1). Combined, these six plans cover more than 50 percent of the land area in the county. Qualifying projects from the plans are included in Fairfax County's pro rata share program through which funding is collected from the development community to help offset the costs of implementing stormwater controls necessitated by development and redevelopment.

In 2009, work on watershed management plans for the remaining 50 percent of the county continued. The watershed plans are anticipated to be completed in 2010.

a.1) Structural and Source Controls

The Municipal Separate Storm Sewer System and any storm water structural controls shall be operated in a manner that reduces the discharge of pollutants to the maximum extent practicable (B.1.a).

a.1 (a) Report all inspections performed on SWM facilities and BMP Ponds.

In 2009, the county inspected 926 county-maintained stormwater management (SWM) and best management practice (BMP) facilities at least once, which represents approximately 72 percent of the 1,284 existing facilities in the inventory at the start of 2009. This level of performance complies with the permit requirement to inspect all county-maintained facilities once during the term of the permit. The county inspected 570 of the 3,234 privately-maintained facilities in 2009 with the goal of inspecting all privately-maintained facilities at least once during the permit cycle as required by the permit.

a.1 (b) Report all maintenance performed on SWM facilities and BMP Ponds.

In 2009, the county cleaned and/or mowed 1,074 dam embankments, including 39 regional ponds which were maintained four times each over the calendar year. Cleaning involves removing trash, sediment, and debris from the trash rack, control structure, and all inflow channels leading to the control structure. At each stormwater management facility, deposited sediment is removed from the trickle ditch upstream from the control structure and disposed of offsite. The cleaning helps keep the facility functioning properly by conveying water and performing the BMP function as it was designed. The county completed 264 maintenance work orders to correct deficiencies in publicly maintained SWM/BMP facilities.

a.2) Areas of New Development and Significant Redevelopment

The permittee shall comply with and enforce all components of the County's Comprehensive Land Use Plan that are relevant to storm water discharges. The goals of such controls shall be to limit increases in the discharge of pollutants from storm water as a result of development and significant re-development (B.1.b).

The Environmental Quality Corridor (EQC) policy in the Policy Plan volume of the county's Comprehensive Plan does not directly address stormwater discharges, but it recommends the preservation and restoration of areas such as floodplains, steep slopes adjacent to streams or floodplains, wetlands connected to stream valleys, minimum stream buffers (variable in width depending on topography), and sensitive habitat areas. While there is no county regulation requiring EQC protection, the application of the EQC policy during the zoning process has been effective in protecting, and in some cases restoring, environmentally-sensitive areas.

The Comprehensive Plan, as amended in 2000, provides explicit support for better site design and low impact development (LID) measures, and opportunities to implement such measures are explored during the zoning process. This support helps staff to negotiate for measures such as reductions in proposed impervious cover and the provision of biofiltration facilities (rain gardens) to provide water quality control through infiltration.

The Department of Planning and Zoning (DPZ) provides a full range of environmental review, but does not track stormwater efforts independently from other environmental efforts. In coordination with other DPZ staff and staff from other county agencies, DPZ reviewed 82 rezonings and related applications (e.g., amendments), 74 special exceptions and amendments, and 179 special permits and amendments in fiscal year 2009 for environmental considerations.

a.3) Roadways

Public streets, roads, and highways maintained by the permittee shall be operated and maintained in a manner to minimize discharge of pollutants, including those pollutants related to deicing or sanding activities (B.1.c).

The county is responsible for maintaining approximately five miles of road segments and the parking lots of roughly 100 public facilities such as government centers, libraries, fire stations, police stations, health centers, bus transit facilities, park and ride lots, commuter rail stations, and staffed park locations. In an effort to limit the discharge of pollutants from parking lots into the county's streams, the county provides sand and chemical treatment only when dictated by safety. In compliance with the roadway maintenance requirements of the permit, the county sweeps material from each treated parking area once annually during the spring. In 2009, Stormwater Management removed approximately 185 cubic yards of material from 109 sites. The Park Authority cleaned treated areas and disposed of the material in a landfill or removed it to central storage areas for reuse. The amount of material removed by the Park Authority was not tracked.

a.4) Retrofit

Receiving water quality impacts shall be assessed for all storm water management facilities. When the permittee determines water quality impact, they shall continue to evaluate and implement retrofitting existing storm water management facilities and areas without stormwater controls (B.1.d).

In 2009, the county maintained compliance with retrofit requirements by completing projects to enhance stormwater management functionality. The projects included best management practice (BMP)/low impact development (LID) retrofits for water quality, detention pond retrofits, slope failure repairs, sediment removal, trash rack modifications, and outfall restoration as summarized below:

- six BMP/LID water quality retrofit treating greater than 25.4 acres
- six detention pond retrofits treating 315.6 treated acres
- five dam safety projects
- three outfall restoration or outfall stabilization projects
- nine major maintenance projects to enhance stormwater management functionality
- three renovations of existing adult-sized natural turf soccer fields into a synthetic turf fields which provide storage capacity, reduce peak flows during large storm events, have a conservative 15 percent phosphorous removal efficiency rate, and eliminates the need for fertilizers and pesticides
- one dam renovation project at Lake Accotink dam was started in 2009 in an effort to improve its strength and prolong the life of the dam. The dam renovation is scheduled to be completed in spring 2010.

Retrofit documentation is maintained by the Maintenance and Stormwater Management Division and the Watershed Projects Implementation Branch of DPWES as well as by the Fairfax County Park Authority.

a.5) Pesticides, Herbicide, and Fertilizer Application

The permittee will implement controls to reduce the discharge of pollutants related to the storage and application of pesticides, herbicides, and fertilizers applied to public right of ways, parks, and other municipal property. The permittee shall develop and implement a program within one year of the effective date of the permit to achieve the above goal (B.1.e).

As part of the continued collaboration among county agencies to implement nutrient and integrated pest management practices, the county has developed and distributed to agencies involved in the administration of public rights-of-way, parks and other municipal properties a document containing Fairfax County Nutrient and Integrated Pest Management Plans. The Nutrient Management Plan (NMP), the Site Specific Nutrient Management Plan Content document and the Integrated Pest Management (IPM) plan are intended to meet the pesticide, herbicide and fertilizer application permit requirements. These plans provide a basis for site specific NMP and pest specific IPM plans. These plans were developed using the previously developed "Guidelines for Nutrient Management" (2006) and "Guidelines for Integrated Pest Management" (2006) as well as a summary document entitled "Summary of Pesticide, Herbicide, and Fertilizer Use in Fairfax County and Recommendations for Alternatives" (2006).

County agencies currently have some form of nutrient and pest management plans and either implement the plans themselves or have contractors implement them. County personnel and private contractors follow the Virginia Department of Conservation and Recreation's nutrient management guidelines, the Virginia Department of Agriculture's guidelines, and the Virginia Pesticide Control Act, 2006. In addition, many agencies are also collecting information on the application rates and total annual usage of pesticides, herbicides and fertilizers (PHF).

Park Authority staff worked to reduce the amount of mowed turf areas at several park sites around the county to improve water and air quality and provide additional wildlife habitat. Mowing was discontinued on approximately 10 acres of parkland, and mowing frequency was significantly reduced on 32 more acres, which reduces runoff from the parks.

There are approximately 515 acres on golf courses under nutrient management plans. These site-specific plans were prepared under Virginia state guidelines by trained staff, but they were not prepared by a certified nutrient management planner. The vast majority of the remaining mowed turf areas do not receive any regular treatments of either fertilizers or pesticides.

a.6) Illicit Discharges and Improper Disposal

a.6 (a) Report all identified illicit dischargers. This shall include site inspections and a description of any follow-up activities associated with illicit dischargers (see No. 12 below for dry weather screening);

Non-storm water discharges to the Municipal Separate Storm Sewer System will be effectively prohibited (B.1.f).

The Fire and Rescue Department's (FRD) Fire and Hazardous Materials Investigative Services section aggressively enforces County Code Chapters 62, 105 and 106 in conjunction with the Department of Public Works and Environmental Services and the Department of Planning and Zoning, and issues criminal citations during investigations of hazardous materials incidents. Chapters 105 and 106 contain provisions that address illicit discharges to state waters and the county's storm drainage system. Procedural Memorandum No. 71-01, Illegal Dump Site Investigation, Response, and Cleanup, outlines the process of follow-up action for non-emergency incidents of illegal dumping; establishes action under County Code Chapter 46, Health or Safety Menaces; and provides referrals for action on complaints that are neither public health hazards nor regulated.

Programs that can help to prevent, detect and eliminate illicit discharge of sanitary wastes into the MS4 are implemented and documented in the Wastewater Management business area of DPWES. The Sanitary Sewer Infiltration Abatement Program conducts wastewater flow measurements and analysis to identify areas of the wastewater collection system with excessive inflow/infiltration

problems, and uses closed circuit television (CCTV) to inspect trunk sewer mains in an effort to specifically identify defective sewer lines for repair and rehabilitation. In 2009, 226.28 miles of old sewer lines and 7.74 miles of new sewer lines were inspected, resulting in the identification of sanitary sewer lines and manholes needing repair and rehabilitation. In 2009, 21.72 miles of sanitary sewer lines were rehabilitated, bringing the total length of sewer lines repaired over the past ten years to 261miles (1,377,010 feet).

The Sanitary Sewer Extension and Improvement Program addresses pollution abatement and public health considerations by providing sanitary sewer service to areas identified by the Department of Health as having non-repairable, malfunctioning septic systems. In 2009, two Extension and Improvement projects were completed consisting of 4,397 linear feet of eight inch sanitary sewer, five grinder pumps, and 630 linear feet of force main, and providing sanitary sewer connections to 50 existing homes.

a.7) Spill Prevention and Response

A program to prevent, contain, and respond to spills that may discharge into the Municipal Separate Storm Sewer System shall be implemented. The spill response program may include a combination of spill response actions by the permittee (and/or another public or private entity), and legal requirements for private entities within the permittees' jurisdiction (B.1.g).

The Fire and Rescue Department responds to all reported incidents of hazardous material releases, spills and discharges in the county (regardless of whether the material has potential to enter the county-operated MS4 or another system, such as VDOT's). The department's Fire and Hazardous Materials Investigative Services (FHIS) personnel receive regular training in pollution prevention and are equipped to initiate spill control measures to reduce the possibility of hazardous materials reaching the MS4. Resources available to personnel include personal protective equipment, technical tools and equipment for spill control, and absorbent products such as pads and booms for spill containment. The section also maintains a contract with a major commercial hazardous materials response company to provide additional containment and clean-up support for large-scale incidents.

In 2009, FHIS received 465 complaints. Approximately 292 of the complaints involved the actual release of various petroleum or chemical substances. Of the 292 releases, 174 involved the release of either diesel fuel (30), home heating fuel oil (49), gasoline (33), motor oil (17), or hydraulic oil (45). Other releases investigated involved antifreeze, paint, sewage, mineral oil, and mercury. Storm drains were involved in 52 of the releases.

In both emergency and non-emergency spills that reach the MS4, FHIS enforces appropriate codes and ordinances to ensure that responsible parties take appropriate spill control and cleanup actions to protect and restore the environment.

FHIS monitors, on a long-term basis, contaminated sites that have a potential for the contaminant coming in contact with surface waters or stormwater management facilities. As a part of the Oversight Program, FHIS, as an agent of the Director of DPWES, accepts, reviews and processes requests to discharge treated groundwater from remedial activities at contaminated sites into county storm sewers. FHIS then monitors the discharge for the duration of the agreement. In 2009, the Hazardous Materials Technical Support Branch of FHIS started the year with 41 oversight files. During the year, 36 new oversight files were opened, and 26 were closed. Most of these oversight files involve contaminated underground storage tank sites. Fifty-two oversight files will be carried into 2010.

Four Fairfax County Department of Transportation (DOT) bus garages (at Alban, Jermantown, Newington and West Ox) are covered by general industrial stormwater permits. As required by the permit, each facility has developed and is implementing stormwater water pollution prevention plans (SWPPPs), which include the spill prevention and response procedures to be implemented at each facility.

a.8) Industrial & High Risk Runoff
a.8 (a) Report on all inspections of any new or previously unidentified facilities.
a.8 (b) Report an updated list of all industrial storm water sources and VPDES permitted facilities that discharge into the MS4.
A program to identify and control pollutants in storm water discharges to the Municipal Separate Storm Sewer System (municipal landfills; other treatment, storage, or disposal facilities for municipal waste; hazardous waste treatment, storage, disposal and recovery facilities; facilities that are subject to EPCRA Title III, Section 313) and any other industrial or commercial discharge the permittee determine are contributing a substantial pollutant loading to the Municipal Separate Storm Sewer System shall be implemented under this program (B.1.h).

The county has not located any new or unidentified industrial facilities that discharge directly into the county's MS4.

Fairfax County's efforts regarding the permit requirements related to Industrial and High Risk Runoff are also presented in sections a.12.b and -c of this report, which contain a discussion of the county's Wet Weather and Industrial and High Risk Runoff Monitoring Program.

Fairfax County's Division of Solid Waste Disposal and Resource Recovery (DSWDRR) manages two landfills on county property that are covered under a VPDES General Permit: the I-95 Landfill located at 9850 Furnace Road in Lorton (registration number VAR051076) and the I-66 Transfer Station/Closed Landfill located at 4618 West Ox Road in Fairfax (registration number VAR051074). Each permit was reissued in 2009 with a new expiration date of June 30, 2014.

The 250-acre municipal solid waste (MSW) portion of the I-95 Landfill is now fully closed in accordance with Virginia Solid Waste Management Regulations for cover systems and covered by an engineered cap. Stormwater is managed more efficiently and infiltration is reduced significantly, in turn providing for less generation of leachate. The final cover system also minimizes the need for post-closure maintenance. Storm water is collected and retained in ten sediment basins prior to discharge into local waterways.

Phase IIIA of the I-95 Area Three Lined Landfill Project continues to accept ash from the Energy from Waste (EFW) Facility located at the I-95 Complex, a similar facility in Alexandria and the Noman Cole Pollution Control Plant. This phase consists of a 7-acre cell underlain with three different composite liner systems and a composite drainage network to transport leachate. It is covered with a rain cap laid over a protective soil layer (protecting the liner system). Approximately two acres of rain cap were removed to allow for placement of ash on a full time basis. Leachate from the new ash filling area is collected by drainage standpipes that tie directly into the leachate collection trench. Stormwater is separated from leachate by soil cover, soil berms and rain cap. Approximately one half acre is provided with intermediate cover.

Phase IIB is no longer accepting ash. Of the 7.5-acres of this cell, approximately one acre remained open for emergency use. This cell consists of a bottom lining system that includes two feet of low-permeability soil, a double synthetic liner (60-mil HDPE) system, and a leachate

collection and detection system. In 2009, intermediate protective cover was placed on all but one acre of the active area.

Significant storm water improvements at the I-66 Transfer Station were completed in 2009, most notably the completion of the Recycling and Disposal Center (RDC) and resurfacing of the tractor trailer parking area. Storm water coming into contact with disposal activity is being collected by numerous new stormwater inlets and a new drainage network built into the asphalt pad. Storm water associated with the transfer station activity, closed landfill and truck parking area are now completely collected and retained in three sediment basins prior to discharge into local waterways.

Training in pollution prevention is provided once per year for facility staff. Pollution Prevention Plans are maintained at each facility and are updated when conditions change. Plans for both sites were revised in 2009. Additionally, spill kits are readily available at each location.

Staff performs quarterly visual inspections of the stormwater outfalls located at the I-95 Landfill and the I-66 Transfer Station/Closed Landfill. Annual effluent limit and benchmark sampling is performed at each site during the monitoring year. Semi-annual TMDL sampling is performed at I-66 during the monitoring year. Water quality tests conducted to satisfy VPDES permit conditions have shown satisfactory results.

a.9) Construction Site Runoff

a.9 (a) Report all Erosion and Sediment Control Plans the permittee has approved for sites disturbing greater than 1 acre of land for that year.

A program to reduce the discharge of pollutants from construction sites (land disturbing activities equal to or greater than one acre) shall be implemented under this program (B.1.i).

In 2009, a total of 616 Erosion and Sediment Control (E&S) plans for projects that would disturb a land area of 2,500 square feet or more were submitted and approved. Written reports were provided to Virginia Department of Conservation and Recreation (DCR) informing them of these individual sites on a monthly basis.

Fairfax County's Alternative Inspection Program, established in cooperation with the DCR, resulted in 33,797 E&S inspections in 2009 on all sites under construction. This number represents 54 percent of the 62,546 total site inspections by Environmental and Facilities Inspections Division (EFID) personnel. Staff issued 909 "notices to comply with the approved plans" noting the deficiency found in each case and the respective corrective action required. There were 108 notices of violation given to developers who failed to take the required corrective action. In 2009, the county investigated 178 reports of illegal land disturbing and Resource Protection Area (RPA) violations resulting in 36 criminal proceedings to achieve compliance. The county's E&S program is fully approved by DCR.

The county sponsors an annual Land Conservation Awards program to recognize the developers, contractors, site superintendents, and site inspectors who demonstrated an exemplary effort in controlling erosion and sediment on construction projects during the past year. Awards are presented for outstanding single family residential, commercial, infill, linear, and special development projects, as well as for best protected environmentally sensitive area. These awards are valued by recipients in the construction industry and provide incentives to do excellent work. In 2009, 17 sites were nominated and 6 received awards (a tie was declared in one category). Two site superintendents, one contractor and two engineering firms were recognized for their work. The 2009 Land Conservation Awards program was held on January 22, 2010.

Residents may report complaints about erosion and sedimentation through a hotline established by DPWES (see web site below).

http://www.fairfaxcounty.gov/dpwes/publications/urbanfor.htm

a.10) Storm Sewer Infrastructure Management

A program to maintain and update the accuracy and inventory of the storm sewer system shall be implemented. The permittee shall submit to the Department of Environmental Quality, Northern Virginia Office a plan and schedule by which the entire storm sewer Infrastructure will be mapped. The plans and schedule shall be submitted within 180 days of the effective date of this permit (B.1.j).

A Storm Sewer Infrastructure Management Plan and Schedule was submitted to DEQ on July 24, 2002, in accordance with the permit, and has been updated with each annual report (Attachment 2). The requirements in the plan have been fulfilled and the infrastructure inventory will continue to be updated in accordance with the permit.

Fairfax County encompasses 399 square miles of land and water as identified on 436 tax map grids. Over a five-year period that ended in 2005, Fairfax County field-verified the location of the storm drainage conveyance system on each tax map grid, identified storm sewer pipes, outfalls and associated appurtenances, and created a GIS-based data layer. The GIS inventory is continually updated, and 350 as-built construction plans across 72 tax map grids were digitized in 2009. An additional 150 as-built plans are scheduled to be completed during the first half of 2010. The GIS database of stormwater related easements which was initiated during 2005 was completed in 2009, and routine maintenance will begin in early 2010.

The county implemented a pilot rehab program where 70 miles of the approximate 1,500 miles of storm pipe in the county's inventory and 4,600 storm structures were inspected with video and photo documentation. During 2009, more than 7,900 feet were replaced or rehabilitated through cured-in-place point repair, lining entire pipe segments using cured-in place lining methods, or by test and seal methods at segment joints.

Applying lessons learned from the pilot rehab program, the county initiated an infrastructure reinvestment program in 2009. More than 10.1 miles of pipe were videoed under the reinvestment program. More than 6,220 storm structures and 2,700 pipe segments were photographed with over 35,000 photos documenting existing structural and service conditions. The combined efforts under the pilot rehab program and the reinvestment program resulted in more than 80 miles of the storm drainage network being photographed or screened. The inventory continues to be assessed for ongoing repair of identified deficiencies. The county continues to refine the inventory to distinguish between MS4-regulated and non-regulated outfalls and other structures owned or maintained by neighboring jurisdictions.

Also during 2009, a GIS based asset management system was developed and implemented. The county's maintenance activity and inspections on each asset in the storm inventory will be recorded along with notations of asset condition assessments and rankings. This system will be utilized to target areas and assets where rehabilitation efforts will be most beneficial.

a.11) Public Education

A public education program shall be implemented (B.1.k).

Fairfax County's public education program is an essential component of stormwater management. The program raises awareness about stormwater issues facing the county, educates residents about watersheds and stormwater management, and offers opportunities for residents to become involved in efforts to restore and protect Fairfax County's waterways. Educational presentations help residents to recognize connections between water quality problems in local streams and impacts on the Occoquan Reservoir, the Potomac River and the Chesapeake Bay. County employees give presentations to various groups including homeowners' associations, Fairfax County Public Schools, civic associations, Fairfax Master Naturalist trainees, Board of Supervisor's town hall meetings, resource fairs and various environmental events. A summary of the education activities conducted in 2009 follows.

- The county sponsored Fall for Fairfax, an annual event with exhibits to raise awareness about environmental issues and encourage watershed-friendly behaviors.
- Pod cast messages were aired through the county's web site for a weekly audience of about 350 listeners on topics such as dam safety, picking up pet waste, and proper discharge of swimming pool water, among other topics.
- The county created educational television programs which include a six minute program on "What is in Your Water?"; a 13 minute program on how MSMD works for the environment; and a "pick up the dog waste" public service announcement. These programs air on channel 16 and are posted to You Tube.
- Educational fact sheets were created on urban stream restoration and stabilization; detention basin retrofits; stream health action steps; clean streams for Fairfax County; how to discourage resident geese; and picking up pet waste.
- A new series of web pages was created entitled "Fishes of Fairfax County" to help educate residents on the various species and distribution of species of fish throughout the county: http://www.fairfaxcounty.gov/dpwes/stormwater/fish/fishes_of_fx.htm
- The county created a coloring book depicting the journey of a raindrop from a cloud to a storm drainage system and ultimately to a local stream. The coloring book was intended to foster watershed awareness and deliver a straightforward anti-pollution message. More than 1,800 copies of the "Adventures of Stormy the Raindrop" activity book were distributed at various libraries, district offices and events.

Fairfax County continued to provide opportunities for public school students to learn about watersheds. Below are a few of the programs supported by Fairfax County's Stormwater Management staff in 2009:

- The county implemented a Sewer Science program for high school students. In 2009, 16 presentations were made to more than 450 students in four schools, with audiences ranging from freshman through seniors.
- The county is partnering with Fairfax County Public Schools to design stormwater and watershed educational materials suitable for use in public elementary schools. An activity book is under way that will incorporate 4th grade SOL requirements while providing information in a new and innovative way.
- The county responded to requests to speak at various events such as the summer Youth Scholar program for 4th and 5th graders and high school Science Fairs.

The Fairfax County Solid Waste Management Program (SWMP) plays an important role in protecting surface water resources through its outreach efforts to promote responsible waste management practices. The SWMP supports education of residents and businesses about how

they can reduce the volume of waste generated, dispose of it properly and recycle more of it. Education is conducted in a variety of forums as described below:

- The SWMP is responsible for the county's Household Hazardous Waste (HHW) Management Program where residents are provided the opportunity to properly dispose of hazardous waste (such as used motor oil, antifreeze and other automotive fluids) at no charge, instead of pouring it down a storm drain or placing it in the trash. The SWMP has two permanent HHW facilities open four days per week.
- The SWMP is constantly amending its practices to accommodate new types of wastes such as compact fluorescent lamps (CFLs) and other fluorescent lamp, which can be taken to the county's HHW facilities at no charge to county residents. The SWMP prepared an educational brochure about the lamps and made the publication available online. This is the most viewed document on the SWMP's portion of the county website.
- In 2009, the SWMP instituted a monthly electronics recycling program for county residents known as *Electric Sunday*. The SWMP dedicates one Sunday per month where residents can drop off used computers and televisions in order to have them recycled. Over 500,000 lbs of electronic waste, equating to about 35 tons of lead, were prevented from being introduced into the Fairfax County environment.
- The SWMP continues to work closely with the Northern Virginia Regional Commission on a regional public information program entitled *KnowToxics*, which educates business owners about their responsibility to comply with federal and state regulations that require proper disposal or recycling of spent fluorescent lamps, rechargeable batteries, computers, and related electronics.
- In 2009, the SWMP continued to collaborate with the industry-funded Rechargeable Battery Recycling Corporation Program on a rechargeable battery recycling program to make collection boxes available at offices of all members of the Fairfax County Board of Supervisors and at major county buildings. Rechargeable batteries are also accepted at the county's HHW facilities.

Additionally, Solid Waste Management provided financial and operational support for the annual Earth Day/Arbor Day event at Northern Virginia Community College, and staffed a booth at the event to educate attendees about recycling practices in the county.

As a member of the Northern Virginia Clean Water Partners (Partners), Fairfax County participates in the annual regional stormwater education campaign. Calendar year 2009 marked the fifth year of the campaign, with a new radio public service announcement "Switching Bathwater with Stormwater" airing 651 times on six radio stations including one Spanish language station, in May and June 2009. These advertisements reached approximately 355,446 unique individuals an average of 11 times.

In preparation for the airing of the advertisements, the Partners conducted pre-campaign market research with the assistance of Water Words that Work and Amplitude Research. The survey used an online panel format to discern the most effective messages for an advertising campaign to encourage individuals to take action to reduce pollution. Responses from the panel participants shaped the language used for the website and online advertisements to be placed in the summer. There were 500 Northern Virginians from the participating jurisdictions who completed a 15-minute online questionnaire, which involved listening to and rating two radio ads under consideration.

Between the initial airings of the radio ads on May 11, 2009 through the week of June 29, 2009, a total of 22 individuals subscribed to the email newsletter out of 832 visits to the onlyrain.org website. A comparison was made of the effectiveness of radio versus online advertising as shown in Table 1.

Table 1. Comparison of the number of people exposed to the radio or online advertisement (i.e. impressions) to the number of visits to the onlyrain.org website and the amount of money spent.

Advertising Medium	Weeks Airing	Impressions	Website Visits	Cost
Radio	5/11 – 6/15	355,446	676*	$80,000.00
Online	5/25 – 6/29	476,486	166	$ 167.66**

**All visits that do not directly originate from the online ads are attributed to the radio ads.*
***Based on the average observed cost per click of $1.01.*

By pooling outreach funds to reach a wider audience, Northern Virginia jurisdictions hope to change pollution-causing behavior of those who allow contaminants such as fertilizer and dog waste to be washed down storm drains. The total cost of the 2009 campaign was $120,000, which was funded by 13 local governments and sanitary and drinking water authorities. Fairfax County's contribution was $50,000. In addition to the local contributions, the Partners received approximately $150,000 in negotiated unpaid media from the participating radio stations.

In 2009, the Northern Virginia Soil and Water Conservation District continued its popular public education programs, including the Storm Drain Marking Program and the Rain Barrel Program:

- Fiscal year 2009 marked the fourth year of the county-wide storm drain marking initiative that is staffed by NVSWCD and funded by Fairfax County at approximately $12,000/year for plastic markers and glue. The objective of the initiative is to facilitate environmental stewardship among Fairfax County residents and educate the public about non-point source pollution prevention. During each storm drain marking project, volunteers engage in outreach among their peers such as distributing educational fliers door-to-door, then place the pre-printed labels with a "no dumping" message on their neighborhood storm drains. In calendar year 2009, the Storm Drain Marking Program coordinated 26 projects that placed markers on 2,235 storm drains and educated 16,457 households on ways they could take action to protect water quality. Each household received a flyer about the causes and prevention of nonpoint source pollution, and how to properly dispose of used motor oil, pet waste, paint, fertilizer, yard debris, and other pollutants. In 2009, 388 volunteers contributed 1,051 hours to the program. Since the program began, 2,376 volunteers have helped to complete 131 projects which resulted in outreach to 261,985 households and labeling of 13,487 storm drains.
- In 2009, NVSWCD coordinated a regional rain barrel initiative for Northern Virginia with neighboring jurisdictions. Seven "build-your-own" rain barrel workshops and two pre-made rain barrel sales were held in Northern Virginia. In 2009, the program held one free rain barrel workshop for teachers and one "train the trainer" event. Six of the 11 events were held within Fairfax County. Four hundred forty-one people participated in these programs. A total of 580 rain barrels were distributed, including 48 free barrels at training events, 312 barrels made at "build-your-own" workshops, and 220 barrels sold at other distribution events.
- NVSWCD sponsors a volunteer stream monitoring program, which complements the county's stream bioassessment program. Trained volunteers assess the ecological health of streams by using an enhanced biological monitoring protocol and habitat assessment. Approximately 75 volunteers collect data at 21 sites four times a year. In addition, 45 public stream monitoring workshops and field trips were held throughout the county, and

365 county residents attended. The program builds awareness of watershed issues among the participants.

In 2009, NVSWCD completed the following low impact development (LID) demonstration projects, which had a strong educational component, and introduced other educational programs:

- Technical assistance and a small start-up grant were given to six homeowners to allow them to install LID stormwater control practices on their own property. The technical assistance consisted of site visits and recommendations by NVSWCD staff.
- Two "build-your-own" rain garden workshops were presented by NVSWCD. The workshops covered rain garden function, design, location, costs, construction, maintenance, planting, and materials. The workshops were attended by 52 county residents.
- NVSWCD and the Park Authority created the manual, Rain Garden Design and Construction: A Northern Virginia Homeowner's Guide, with all the instructions and calculations needed for a homeowner to build a rain garden on his or her own property. The manual is available in hard copy and electronic formats.
- In the summer of 2009, NVSWCD, along with the Park Authority and Fairfax Master Naturalists, coordinated the Watershed Friendly Garden Tour to demonstrate environmentally-sensitive landscape practices such as green roofs, rain gardens, and rain barrels. The tour included 15 sites throughout the county.
- NVSWCD presented the Enviroscape® watershed model to 125 elementary school students and 250 girl scouts throughout the county. Four county teachers and day care instructors were also trained to use the model and demonstrated it to their own classes.

Several Resource Management sites are included in the county stream quality monitoring program directly, and are used to train and sponsor citizen volunteer monitors. Five nature centers and an imbedded naturalist at Cub Run RECenter provide water quality and environmental education to hundreds of thousands of park visitors each year. Through exhibits and numerous programs, staff at the Hidden Pond Nature Center reached over 50,000 people in 2009 by teaching the value of wetlands, the importance of water quality and by highlighting local connections to the Chesapeake Bay.

a.12) Monitoring Programs

a.12 (a) Report on the Dry Weather Screening Program; (1) Number of outfalls inspected and test results; (2) Follow-up activities to investigate problematic areas and illicit dischargers.

The permittee shall continue ongoing efforts to detect the presence of illicit connections and improper discharges to the Municipal Separate Storm Sewer System. Representative outfalls of the entire Municipal Separate Storm Sewer System must be screened at least once during the permit term. Screening methodology may be modified based on experience gained during actual field screening activities and need not conform to the protocol at 40 CFR 122.26(d)(1)(iv)(D). Sample collection and analysis need not conform to the requirements of 40 CFR Part 136 (B.1.l.1).

In 2009, the county selected 99 MS4 outfalls for dry weather screening in accordance with the protocol outlined in the Stormwater Management Program Plan (July 2006), and the county recorded physical parameters at each outfall. Water was found to be flowing at 45 of the outfalls, and was tested for a range of pollutants (ammonia, conductivity, surfactants, fluoride, pH, potassium, phenol, copper, and chlorine) using field test kits. Of the outfalls tested, 12 required follow-up investigations because they exceeded the allowable limit for at least one pollutant. Upon retesting these sites, 10 continued to exceed the screening criteria, and further testing was conducted in an attempt to track down the source. This track down procedure consisted of using a map of the county's storm drainage system to track the storm network upstream of sites,

recording observations of flowing water and land use, and testing the water where flow was found. This procedure was followed all the way up the network of storm sewer pipes until the source was found or there was no flowing water. Four of the sites no longer tested above exceedence criteria at the time of the trackdown and the source of the flow for one of the trackdowns could not be found. Two of the sites were determined to be water line leaks and the county is working with the Fairfax Water Authority (FCWA) to correct these issues. One site had high levels of copper, phenol and chlorine. This site has a large sediment pit that is draining directly into a storm inlet and it seems that the high levels of sediment are skewing the water quality results. Soil and water samples have been sent to the wastewater treatment facility for further analysis. The county and DEQ will work with this site to develop proper sediment storage techniques and develop an inspection schedule for future monitoring. Of the two remaining sites, the sources of copper were identified as I-95 and a railroad. Follow up will continue with FCWA and DEQ to resolve the two water breaks and the sediment pit possible pollution.

a.12 (b) Report on the Wet Weather Screening Program; (1) Number of outfalls inspected and test results; (2) Follow-up activities to investigate problematic areas and illicit dischargers.

The permittee shall investigate, and address known areas within their jurisdiction that are contributing excessive levels of pollutants to the Municipal Separate Storm Sewer System. The Permittee shall specify the sampling and nonsampling techniques to be used for initial screening and follow-up purposes. Sample collection and analysis need not conform to the requirements of 40 CFR Part 136 (B.1.l.2).

The final report on wet weather screening and industrial high risk monitoring conducted from 2006 through 2008 was written in 2009. Sampling was conducted as seven sites and consisted of automated sampling in a manhole, which enabled calculations for event mean concentrations of rain storms as well as for first flush sampling for oil and grease and chemical oxygen demand. Field screening for the seven sites yielded water chemistry data on pollutant concentrations in stormwater runoff that were generally typical of published data on industrial runoff characteristics. The data indicate that there was no significant source of pollution in the stormwater from six of the sites, according to the Center for Watershed Protection's Illicit Discharge Detection and Elimination Guidance Manual (October 2004) and the Virginia Water Quality Standards (August 2009). The seventh showed abnormally high oil and grease concentrations at the first flush for one event, suggesting that the site may require further investigation.

a.12 (c) Report on the Industrial and High Risk Runoff Monitoring Program

The permittee may include monitoring for pollutants in storm water discharges to the Municipal Separate Storm Sewer System which include: municipal landfills; other treatment, storage, or disposal facilities for municipal waste; hazardous waste treatment, storage, disposal and recovery facilities; facilities that are subject to EPCRA Title III, Section 313. Monitoring may also be required on other industrial or commercial discharges the permittee determines are contributing a substantial pollutant loading to the Municipal Separate Storm Sewer System. Permittee may require the industrial facility to conduct self-monitoring to satisfy this requirement (B.1.l.3).

This part of the permit is satisfied through the Wet Weather Screening Program described in the preceding section, a.12 (b).

a.12 (d) Report on the Watershed Monitoring Program; (1) Monitoring plan; (2) Summarize the implementation including, Storm Event Data, Station test results, Seasonal Loadings and Yearly Loadings.

The permittee shall develop a long-term monitoring plan and trend analysis to verify the effectiveness and adequacy of control measures in the County's Storm Water Management Plan and to identify water quality improvement or degradation. The permittee shall submit an approvable monitoring program to the Department of Environmental Quality no later than one year from the effective date of this permit. The program shall be implemented within two years of the effective date of the permit. Monitoring shall be conducted on representative stations to characterize the quality of storm water in at least two watersheds during the term of this permit (C.1).

In 2009, four storms were monitored at each of the two water quality monitoring sites in accordance with Fairfax County's Watershed Water Quality Monitoring Program submitted on January 24, 2003. Rainfall, flow and water quality data were collected. Samples were tested for concentrations of nine constituents of concern (see Table 2). Statistical analyses using the Mann-Whitney 2-sample test, Simple Test, were performed to determine if there were significant differences between constituent concentrations at the two stations, as well as seasonal and annual unit-area constituent loadings.

Tests found significant statistical differences for concentrations of six of the nine constituents measured at the two sites: Ammonia Nitrogen (NH3-N), Chemical Oxygen Demand (COD), Nitrate plus Nitrite Nitrogen (NO3+NO2-N), Total Kjeldahl Nitrogen (TKN), Total Phosphorous (TP) and Total Suspended Solids (TSS). The differences for the remaining constituents were not statistically significant. Results for the 2005, 2006, 2007 2008, and 2009 sampling years appear in Tables 2 and 3. Monitoring will continue in 2010, and the full data set will be used to determine if the observed high variance in constituent concentrations from the medium/high density residential site can be reduced sufficiently to allow detection of statistically significant differences for other constituents.

Table 2 - Results of statistical analysis to determine if there is a significant difference between observed constituent concentrations at Stations VNA and OQN.

	Station VNA			**Station OQN**			**Differences Statistically Significant?****
Constituent*	**Median**	**High**	**Low**	**Median**	**High**	**Low**	
NH_3-N	0.21	0.73	0.03	0.02	0.27	0	YES
COD	53	292	22	30	122	2.5	YES
E. Coli	901	200000	0	690	38000	27	NO
Fecal Strep	6500	129000	100	1089	51000	45	NO
NO_3+NO_2-N	0.83	1.64	0.16	0.4	0.73	0.1	YES
TDS	128	836	51	98	160	71	NO
TKN	1.73	11.3	0.48	0.57	2.41	0.06	YES
TP	0.3	1.61	0.06	0.06	0.8	0.01	YES
TSS	52.5	1207	4.9	19	485	1.4	YES

*All constituent units are mg/l, other than *E. coli* and Fecal Strep which are in Colonies per 100 ml.
* *Based on a Mann-Whitney 2-sample test at a 0.1 significance level.

Table 3 - Computed seasonal and annual unit-area constituent loadings at monitored locations.

	Unit-area loading *									
	Winter		Spring		Summer		Fall		Annual	
Constituent	**VNA**	**OQN**	**VNA**	**OQN**	**VNA**	**OQN**	**VNA**	**OQN**	**VNA**	**OQN**
NH_3-N	0.133	0.005	0.212	0.127	0.092	0.027	0.158	0.029	0.595	0.187
COD	30.528	7.572	73.412	72.996	29.124	9.819	123.189	35.018	256.3	125.4
E. Coli	0.295	0.292	3.617	11.431	83.948	10.377	10.862	7.562	98.722	29.663
Fecal Strep	0.599	1.329	12.673	13.441	62.009	30.530	34.657	7.359	109.939	52.658
NO_3+NO_2-N	0.356	0.132	0.836	0.451	0.411	0.194	0.630	0.352	2.233	1.129
TDS	95.910	37.078	153.063	91.297	47.244	52.699	131.474	90.203	427.7	271.3
TKN	0.788	0.109	3.627	1.693	0.923	0.380	1.262	0.538	6.600	2.720
TP	0.115	0.010	0.256	0.443	0.181	0.046	0.663	0.175	1.215	0.674
TSS	34.218	3.077	95.768	273.475	59.880	26.734	223.678	90.531	413.5	393.8

*All units are lb/ac, except for *E. coli* and Fecal Strep which are in billion colonies/ac. To compute total loads in lbs or billion colonies, multiply unit-area loading by drainage area of monitoring station in acres.

a.12 (e) Report on the Bioassessment Monitoring Program; (1) Monitoring plan; (2) Summarize test results.

The permitee can use and is encouraged to use a rapid bioassessment monitoring program to demonstrate the effectiveness of the stormwater management plan. The program will be implemented within one year of the effective date of the permit and an approvable program must be submitted within six months of the effective date of the permit (C.2).

A probability-based site selection sampling methodology was used to identify randomly-selected stream bioassessment locations throughout Fairfax County. These sites were stratified and proportionally distributed throughout the county based on Strahler stream order applied to all perennially flowing streams in Fairfax County. This methodology eliminates any site selection bias and is commonly used as a cost-effective way of obtaining a statistically defensible determination of stream conditions at a countywide scale. A total of 53 sites were sampled in 2009: 40 sites randomly selected within Fairfax County as part of the annual probabilistic monitoring program; 11 Piedmont reference locations in Prince William National Forest Park; and two Coastal Plain reference sites in the Kane Creek watershed of Fairfax County. Results from the 40 randomly selected sites suggest that approximately 78 percent of the county's waterways are in "Fair" to "Very Poor" condition based on a decrease in biological integrity of streams. The monitoring program is part of the framework to evaluate future changes and trends in watershed conditions.

a.12. (f) Report on the Floatables Monitoring Program

The permittee shall conduct surveys of floatables. The intent of the survey is to document the effectiveness of the litter control programs for the Municipal Separate Storm Sewer System. Surveys shall be done in accordance with the following procedures: c) The above may be accomplished through the "Adopt a Stream" program referenced in Part I.B.1.k.2 (C.3.c).

In 2009, Fairfax County fulfilled the floatables monitoring requirements of the VPDES permit by actively participating in a regional data-sharing partnership with numerous other local agencies. Efforts were made to align the various data collecting and recording strategies used by participating entities so that differences in stream cleanup data sets could be reconciled, and the

data integrated to yield a more comprehensive picture of the impacts of floatable trash and debris and the effectiveness of litter control programs in the region.

The county continued to work with and support the following organizations that coordinate large and small-scale volunteer cleanups:

- The Alice Ferguson Foundation (Potomac River Watershed Cleanup)
- The Virginia Department of Conservation and Recreation
- International Coastal Cleanup /Clean Virginia Waterways
- Clean Fairfax Council
- The Friends of the Occoquan

The county continued to provide support and staff for various stream and river cleanup events. In the spring of 2009, approximately 107 sites were established throughout the county for the Alice Ferguson Foundation's annual Potomac River Watershed Cleanup. Cleanups were conducted at numerous state, county and local parks (see below), and the county wastewater treatment plant. These cleanups were advertised in publications such as the Department of Solid Waste's ScrapBook and the Fairfax County Park Authority's ParkTakes Magazine, as well as on the internet. Staff from the Stormwater Planning Division, Division of Solid Waste, Wastewater Management Division, and the Northern Virginia Soil and Water Conservation District participated in these cleanups. More than 1,890 volunteers removed approximately 1,597 bags of trash and litter, 248 tires, 4,613 cigarette butts, and over 10,000 plastic shopping bags from Fairfax County streams. The Alice Ferguson Foundation also held two site leader trainings in Fairfax County with approximately 25 participants. These trainings were to prepare volunteers and site leaders for the Potomac cleanup as well as inform them on the workings of the Trash Free Potomac Initiative.

According to Clean Virginia Waterways, a total of 805 volunteers participated in the International Coastal Cleanup in Fairfax County during September and October 2009. More than 20 stream and shoreline miles were cleaned, and over 30,600 pounds of trash and marine debris were removed. Litter from recreational activities and fast food consumption (e.g. plates, forks etc.), beverage containers, and plastic bags were the most commonly collected trash items collected in the county.

The county continued to promote the "Adopt a Stream" program. The Stormwater Planning Division distributed copies of its Floatables Monitoring Program Brochure to various public offices and during educational activities and outreach events throughout the county. The brochure was also made available on the Floatables web page on the county web site. Stream cleanup event organizers were encouraged to record their cleanup information on the Floatables Data Reporting Form (available in the brochure or on the web) and return the completed form to the county. Cleanup data submitted to the county were entered in the Floatables database. During 2009, various "Friends of" citizen groups reported that over 88 bags of general trash, 323 plastic shopping bags, 318 pounds of bulk items, and 18 tires were removed from county streams by 86 adult, teen, and child volunteers.

In 2009, more than 61 stream cleanups were conducted on county parkland as part of the Alice Ferguson Foundation's Potomac Watershed Cleanup. These events provided an excellent learning opportunity for a reported 1,023 volunteers who removed a reported 46,612 pounds of trash from county streams and water bodies. In addition, the Park Authority continued to organize separate cleanup events in the spring, such as the Holmes Run cleanup at Roundtree Park, which attracted 50 volunteers and removed 28 large bags of trash, and two cleanups in Pohick Stream Valley Park which removed approximately 72 bags of trash.

b) Proposed Changes to the Stormwater Management Program

Storm Water Management Program Review and Update (B.4).

In 2009, Fairfax County and Fairfax County Public Schools proposed to the Department of Conservation and Recreation that the two jurisdictions become co-permittees under the county's Phase I MS4 permit. The arrangement would be contingent upon the two jurisdictions submitting formal documentation to DCR outlining the commitments of each jurisdiction. In 2009, the county and Public Schools drafted a memorandum of understanding outlining the roles and responsibilities of each jurisdiction that pertain to specific requirements of the MS4 permit. The memorandum is still in draft form, and it is anticipated that the respective signatory authorities for each jurisdiction will approve a memorandum in early 2010.

In 2009, the county continued to implement the existing MS4 program per its current Phase I permit. Likewise, Fairfax County Public Schools continued to implement its existing Phase II permit (VAR040104). Public Schools completed and submitted its Annual Report for 2009 (dated August 26, 2009) to DCR.

c) Assessments of controls and the fiscal analysis of the effectiveness of new controls established by the Stormwater Management Program

As the county approaches build-out conditions, it has become increasingly challenging to mitigate the impacts of impervious area and nonpoint source pollution on streams. Several efforts through the existing stormwater management program are helping to reduce or minimize water quality impacts. They include: the mandate of controls (BMPs) by the Chesapeake Bay Preservation Ordinance; development and implementation of Comprehensive Watershed Management Plans; development of a retrofitting program for existing developed areas; and ongoing changes to stormwater management codes, policies, ordinance, and guidelines.

d) Annual Expenditures for the Storm Water Management Program and Budget

Department of Public Works and Environmental Services

The county has not tracked expenditures to meet permit requirements separate from its overall stormwater program, nor has it separately tracked the resources other agencies expend on programs that contribute towards meeting MS4 permit conditions. The total expenditures in the Stormwater Management business unit for calendar year 2009 were $22,988,977.

Since FY 2006, the Board of Supervisors had dedicated the value of one penny of the real estate tax, or approximately $20 million annually to stormwater capital projects. In FY 2009, due to budget constraints, staff and operating costs were charged to the stormwater penny fund, resulting in reduced funding for capital project and maintenance support. As part of the FY 2010 Adopted Budget Plan, a new service district was created to support the stormwater management program, as authorized by Virginia Code Ann. Sections 15.2-2400. The service district levy of $0.010 (one cent) per $100 of assessed real estate value supports both staff operating requirements and stormwater capital projects. The proposed district will generate approximately $20 million per year and be dedicated to funding the entire stormwater management program. Based on projected real estate values, a levy of $0.010 will result in funding balances of approximately $18 million in FY11 for the stormwater management program.

e) Identification of water quality improvements or degradation.

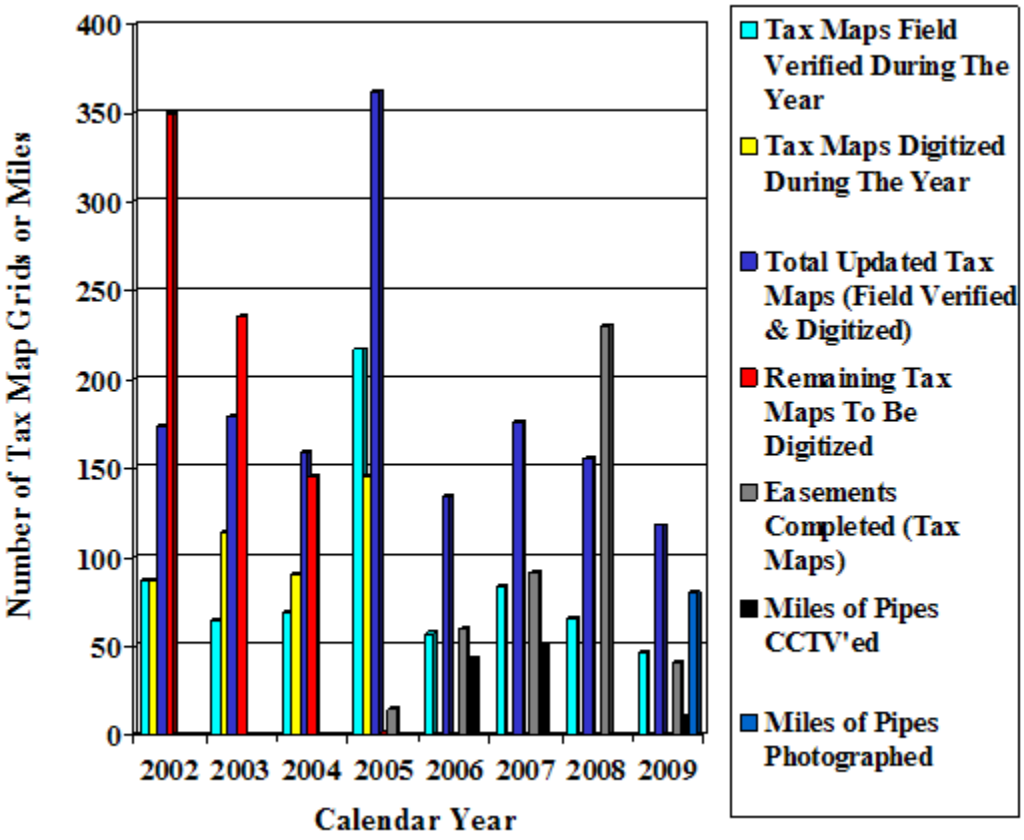
Overall, the stormwater control program has complied with the permit to date. As the county approaches build-out, the county will continue to implement best management practices to control stormwater pollutants, meet regulatory requirements, and achieve holistic watershed restoration and preservation. Efforts include enhanced infrastructure maintenance and inspections, development and implementation of watershed plans, an improved construction inspection program, and ongoing outreach efforts to increase public awareness. It is anticipated that these efforts will have a positive long-range impact on the future health of county watersheds, will help to satisfy stream water quality standards and support the goals of restoring the Chesapeake Bay.

Attachment 1

Status of Fairfax County watershed planning process

Watershed Planning Group	***Watershed Name***	***Total Area (sq. mi.)***	***Fairfax Co. Area (sq. mi.)***	***Plan Status***
Little Hunting Creek*	Little Hunting Creek	11.0	11.2	Adopted 02/2005
Popes Head Creek*	Popes Head Creek	18.9	18.2	Adopted 01/2006
Cub Run and Bull Run*	Bull Run	9.7	8.4	Adopted 02/2007
	Cub Run	55.3	39.1	
Difficult Run*	Difficult Run	57.7	55.3	Adopted 02/2007
Cameron Run*	Cameron Run	42.0	32.6	Adopted 08/2007
Middle Potomac Watersheds*	Bull Neck Run	2.3	2.3	Adopted 05/2008
	Dead Run	3.1	3.1	
	Pimmit Run	12.6	10.3	
	Scotts Run	6.0	6.0	
	Turkey Run	2.0	2.0	
Little Rocky Run and Johnny Moore Creek**	Johnny Moore Creek	5.3	5.3	Initiated 2007
	Little Rocky Run	7.4	7.4	
Accotink Creek**	Accotink Creek	51.1	37.8	Initiated 2007
Pohick Creek**	Pohick Creek	36.5	34.3	Initiated 2007
Sugarland Run and Horsepen Creek**	Horsepen Creek	23.5	8.8	Initiated 2007
	Sugarland Run	22.5	10.5	
Dogue Creek, Belle Haven and Four Mile Run	Dogue Creek	19.4	13.3	Initiated 2007
	Belle Haven	2.8	2.8	
	Four Mile Run	30.1	2.0	
Lower Occoquan Watersheds**	High Point	6.3	6.3	Initiated 2007
	Kane Creek	4.8	4.8	
	Mill Branch	8.8	8.8	
	Occoquan	3.4	3.4	
	Old Mill Branch	4.4	4.4	
	Ryans Dam	3.6	3.6	
	Sandy Run	8.2	8.2	
	Wolf Run	5.9	5.9	
Nichol Run and Pond Branch**	Nichol Run	7.7	7.7	Initiated 2007
	Pond Branch	8.4	8.4	

* Copies of final approved plans may be found on the specific watershed Web site at www.fairfaxcounty.gov/dpwes/watersheds
** The status of these plans may be found at the above Web site

Attachment 2

VPDES Permit No. VA0088587
Fairfax County Municipal Separate Storm Sewer System (MS4) Permit
(Updated Jan. 25, 2010)
<u>Storm Sewer Infrastructure Management Schedule</u>