

(DCR 199-148) (07/08)

VSMP GENERAL PERMIT REGISTRATION STATEMENT FOR STORMWATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS [VAR04]

(Please Type or Print All Information)

(The applicable fee specified in Form DCR 199-145 must additionally be submitted to the address given in that form to obtain coverage)

1. Regulated Small MS4

Name: **George Washington Memorial Parkway**

Type: City County Incorporated Town Unincorporated Town College or University
 Local School Board Military Installation Transport System Federal or State Facility Other
 Location (County or City): **Fairfax County, Arlington County and City of Alexandria (Virginia Portion)**

2. Regulated Small MS4 Operator

Name: **George Washington Memorial Parkway, a unit of the National Park Service**

Address: **700 George Washington Memorial Parkway**

City: **McLean** State: **VA** Zip: **22101-1717**

3. Hydrologic Unit Code(s) as identified in the most recent version of Virginia's 6th Order National Watershed Boundary Dataset currently receiving discharges or that have potential to receive discharges from the regulated small MS4:

Little Hunting Creek - HUC#020700100307, Cameron Run - HUC#020700100302, Four Mile Run - HUC#20700100301, Pimmet Run - HUC#020700100103, Nichols Run-Scott Run - HUC3020700081005 and Difficult Run - HUC3020700081004

4. Attach a description of the estimated drainage area, in acres, served by the regulated small MS4 discharging to any impaired receiving surface waters listed in the most recent Virginia 305(b)/303(d) Water Quality Assessment Integrated Report, and a description of the land use of each such drainage area.

According to that dataset, GWMP has the following three impaired rivers and streams (Mine Run, Difficult Run and Pimmet Run) and three impaired estuaries (Four Mile Run, Hunting Creek/Potomac River/Belle Haven, and Little Hunting Creek) for a total of six impaired waters within the GWMP. The attached Map #2 shows the impaired waters within the GWMP, and Map #3 shows the impaired waters within the GWMP with a land use map behind it.

WATERBODY ASSESSMENT UNIT IMPAIRMENT

Mine Run VAN-A11R_MNR01A04 Escherichia coli: BIN ID: 457804

Segment begins at the confluence with an unnamed tributary to Mine Run, approximately 0.5 rivermile up stream from River Bend Road, and continues downstream until the confluence with the Potomac River.

Difficult Run VAN-A11R_DIF01A00

Heptachlor epoxide: CAS Registry Number: 1024-57-3
Polychlorinated Biphenyls (PCB) in tissue of edible fish
Benthic-Macroinvertebrate Bioassessments (Streams)
Escherichia coli. BIN ID: 457804

Segment begins at the confluence with Captain Hickory Run, approximately 0.6 rivermile upstream from Route 683, and continues downstream until the confluence with the Potomac River.

Pimmit Run VAN-A12R_PIM01A00

Chlordane: CAS Registry Number: 57-74-9.
Heptachlor epoxide: CAS Registry Number: 1024-57-3
Polychlorinated Biphenyls (PCB) in tissue of edible fish
Fecal Coliform: BIN ID: 761692

Segment begins at the confluence with Little Pimmit Run, approximately 0.1 rivermile downstream from Route 695, and continues downstream until the confluence with the Potomac River.

Four Mile Run (Estuary) VAN-A12R_FOU01A00

Polychlorinated Biphenyls (PCB) in tissue of edible fish
Aquatic Plants (Macrophytes): Plants visible to naked eye.
Escherichia coli. BIN ID: 457804
Fecal Coliform. BIN ID: 761692

Segment includes the tidal waters of Fourmile Run; from rivermile 1.46 downstream until the confluence with the Potomac River, at the state line. Portion of Chesapeake Bay Program (CBP) segment Potomac River – Tidal Fresh (POTTF).

**Hunting Creek/
Potomac River/
Belle Haven**

VAN-A13E_HUT01A02 Polychlorinated Biphenyls (PCB) in tissue of edible fish
Aquatic Plants (Macrophytes): Plants visible to naked eye.
Escherichia coli. BIN ID: 457804

(Estuary)

Segment includes all tidal waters of Hunting Creek; beginning at the Route 241 (Telegraph Road) bridge crossing and continuing downstream until the confluence with the Potomac River, to include the embayment. Portion of CBP segment POTTf.

Little Hunting Creek (Estuary) VAN-A14E_LIF01A00 Polychlorinated Biphenyls (PCB) in tissue of edible fish
Aquatic Plants (Macrophytes): Plants visible to naked eye.
Escherichia coli. BIN ID: 457804

Segment includes all tidal waters of Little Hunting Creek, extending from approximately rivermile 1.7 downstream until the confluence with the Potomac River. Portion of CBP segment POTTf.

DRAINAGE AREAS, in acres

The issue with determining the drainage area for these impaired streams was that at the Virginia HUC6 level, only three streams (Difficult Run, Four Mile Run, and Hunting Creek/Cameron Run) completely moved all their water supply through one point at the base of the watershed. For example, water in the Difficult Run HUC6 watershed will all flow into the Potomac via Difficult Run. However, water in the Pimmitt Run watershed can flow to the Potomac using Pimmitt Run, Gulf Branch, Donaldson Run, etc.

Thus, smaller watersheds for Mine Run, Pimmit Run and Little Hunting Creek were developed using an ESRI ArcView model and available GIS elevation data. The model was modified by the GWMP GIS Office from an example on the ESRI website, available at:

http://webhelp.esri.com/arcgisdesktop/9.3/index.cfm?topicname=gp_service_step-by-step:watershed

Impaired Water	Drainage Area
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Mine Run	1652.408 acres
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Mine Run watershed determined using ESRI ArcGIS software by GWMP GIS Office.

Difficult Run 37271.926 acres

Determined by using the acreage of the Virginia HUC6 Difficult Run watershed.

Pimmit Run 7843.883 acres

Pimmit Run watershed determined using ESRI ArcGIS software by GWMP GIS Office.

Four Mile Run 12673.297 acres

Determined by using the acreage of the Virginia HUC6 Four Mile Run watershed.

Hunting Creek (Cameron Run) 29305.729 acres

Determined by using the acreage of the Virginia HUC6 Cameron Run watershed.

Little Hunting Creek 6072.770 acres

Little Hunting Creek watershed determined using ESRI ArcGIS software by GWMP GIS Office.

DRAINAGE AREAS, land use

Impaired Watershed	2001 NCLD Name (Code number)	Approx. Percent of Area
Mine Run, 1652.408 acres		
	Open Water (11)	0.15 %
	Developed, Open Space (21)	7.03 %
	Developed, Low Intensity (22)	1.83 %
	Developed, Medium Intensity (23)	0.34 %
	Developed, High Intensity (24)	0.05 %
	Barren Land: Rock/Sand/Clay (31)	0.86 %
	Deciduous Forest (41)	35.76 %
	Evergreen Forest (42)	2.58 %
	Mixed Forest (43)	0.00 %
	Pasture/Hay (81)	38.88 %
	Cultivated Crops (82)	9.81 %
	Woody Wetlands (90)	1.57 %
	Emergent Herbaceous Wetlands (95)	1.13 %

Difficult Run, 37271.926 acres		
	Open Water (11)	0.32 %
	Developed, Open Space (21)	17.28 %
	Developed, Low Intensity (22)	10.85 %
	Developed, Medium Intensity (23)	5.97 %
	Developed, High Intensity (24)	1.44 %
	Barren Land: Rock/Sand/Clay (31)	0.71 %
	Deciduous Forest (41)	33.16 %
	Evergreen Forest (42)	4.58 %
	Mixed Forest (43)	0.02 %
	Pasture/Hay (81)	17.74 %
	Cultivated Crops (82)	6.50 %
	Woody Wetlands (90)	1.07 %
	Emergent Herbaceous Wetlands (95)	0.36 %
Pimmit Run, 7843.883 acres		
	Open Water (11)	0.01 %
	Developed, Open Space (21)	29.32 %
	Developed, Low Intensity (22)	26.65 %
	Developed, Medium Intensity (23)	7.40 %
	Developed, High Intensity (24)	1.31 %
	Barren Land: Rock/Sand/Clay (31)	0.65 %
	Deciduous Forest (41)	19.04 %
	Evergreen Forest (42)	6.32 %
	Mixed Forest (43)	0.07 %
	Pasture/Hay (81)	5.57 %
	Cultivated Crops (82)	2.72 %
	Woody Wetlands (90)	0.90 %
	Emergent Herbaceous Wetlands (95)	0.06 %
Four Mile Run (estuary), 12673.297 acres		
	Open Water (11)	0.42 %
	Developed, Open Space (21)	19.32 %
	Developed, Low Intensity (22)	34.09 %
	Developed, Medium Intensity (23)	25.25 %
	Developed, High Intensity (24)	8.84 %
	Barren Land: Rock/Sand/Clay (31)	0.21 %
	Deciduous Forest (41)	7.87 %
	Evergreen Forest (42)	2.21 %
	Mixed Forest (43)	0.05 %
	Pasture/Hay (81)	0.93 %
	Cultivated Crops (82)	0.43 %
	Woody Wetlands (90)	0.33 %
	Emergent Herbaceous Wetlands (95)	0.04 %

Hunting Creek/Potomac River/Belle Haven (Cameron Run) (estuary), 29305.729 acres		
	Open Water (11)	0.53 %
	Developed, Open Space (21)	22.20 %
	Developed, Low Intensity (22)	29.58 %
	Developed, Medium Intensity (23)	16.47 %
	Developed, High Intensity (24)	5.12 %
	Barren Land: Rock/Sand/Clay (31)	0.32 %
	Deciduous Forest (41)	15.92 %
	Evergreen Forest (42)	3.93 %
	Mixed Forest (43)	0.11 %
	Pasture/Hay (81)	3.40 %
	Cultivated Crops (82)	1.49 %
	Woody Wetlands (90)	0.54 %
	Emergent Herbaceous Wetlands (95)	0.40 %
Little Hunting Creek (estuary), 6072.770 acres		
	Open Water (11)	1.48 %
	Developed, Open Space (21)	26.54 %
	Developed, Low Intensity (22)	27.02 %
	Developed, Medium Intensity (23)	9.51 %
	Developed, High Intensity (24)	2.06 %
	Barren Land: Rock/Sand/Clay (31)	0.39 %
	Deciduous Forest (41)	20.16 %
	Evergreen Forest (42)	5.33 %
	Mixed Forest (43)	0.37 %
	Pasture/Hay (81)	3.96 %
	Cultivated Crops (82)	1.40 %
	Woody Wetlands (90)	1.49 %
	Emergent Herbaceous Wetlands (95)	0.30 %

5. Any TMDL waste loads allocated to the regulated small MS4 (this information may be found at <http://www.deq.state.va.us/tmdl/develop.html>):

Name	County	Waterbody ID	Basin	Impairment
Difficult Run	Fairfax	A11R	Potomac River & Shenandoah River Basins	General Standard (Benthic) - (1994) Fecal Coliform, e Coli (2004)
Four Mile Run	Alexandria, Arlington	A12E	Potomac River & Shenandoah River Basins	Fecal Coliform (1996) e Coli (2004) Fish Tissue - PCBs (2002)
Four Mile Run	Alexandria, Arlington, Falls Church, Fairfax	A12R	Potomac River & Shenandoah River Basins	Fecal Coliform (1994)
Pimmit Run	Arlington, Fairfax	A12R	Potomac River & Shenandoah River Basins	Fecal Coliform (2002)
Hunting Creek/ Cameron Run	Alexandria, Fairfax	A13E	Potomac River & Shenandoah River Basins	Fecal Coliform (1998) Fish Tissue - PCBs (2002)
VA Tidal Waters from Woodrow Wilson Bridge to Brent Point	Alexandria, Fairfax, Prince William, Stafford	A13E	Potomac River & Shenandoah River Basins	Fish Tissue - PCBs (2002)
Little Hunting Creek	Fairfax	A14E	Potomac River & Shenandoah River Basins	Fish Tissue - PCBs (2002) Fecal Coliform (2004)

6. The name(s) of any regulated physically interconnected MS4s to which the regulated small MS4 discharges.

None

7. A copy of the MS4 Program Plan that includes:

a. A list of BMPs that the operator proposes to implement for each of the stormwater minimum control measures and their associated measurable goals pursuant to 4VAC50-60-1240, Section II B; that includes:

i. A list of the existing policies, ordinances, schedules, inspection forms, written procedures, and other documents necessary for BMP implementation; and

ii. The individual, department, division, or unit responsible for implementing the BMP;

b. The objective and expected results of each BMP in meeting the measurable goals of the stormwater minimum control measures;

c. The implementation schedule including any interim milestones for the implementation of a proposed new BMP; and

d. The method that will be utilized to determine the effectiveness of each BMP and the program as a whole.

8. List all existing signed agreements between the operator and any applicable third parties where the operator has entered into an agreement in order to implement minimum control measures or portions of minimum control measures.

None

9. The name, address, telephone number and e-mail address of either the principal executive officer or ranking elected official as defined in 4VAC50-60-370.

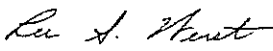
Jon James, Deputy Superintendent
George Washington Memorial Parkway
700 George Washington Memorial Parkway
McLean, VA 22101
703-289-2500
jon_james@nps.gov

10. The name, position title, address, telephone number and e-mail address of any duly authorized representative as defined in 4VAC50-60-370.

Lee Werst, Chief Ranger
George Washington Memorial Parkway
700 George Washington Memorial Parkway
McLean, VA 22101
703-289-2531
lee_werst@nps.gov

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

Print Name: **Lee Werst** Title: **Chief Ranger**

Signature:  Lee S. Werst
2013.03.28 16:34:32 -04'00' Date: 03/28/2013

For Department of Conservation and Recreation Use Only

Accepted/Not Accepted by: _____

Date: _____

Basin _____ Stream Class _____ Section _____ Special Standards _____

(DCR 199-148) (07/08)

INSTRUCTIONS for FORM DCR 199-148

**VSMP GENERAL PERMIT REGISTRATION STATEMENT FOR STORMWATER
DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS [VAR04]**

WHO MUST FILE THE REGISTRATION STATEMENT

This registration statement must be completed and submitted by any regulated small MS4 requesting coverage under the above general permit for stormwater discharges.

1. Operators are regulated if they operate a small MS4, including but not limited to systems operated by federal, state, and local governments, including the Virginia Department of Transportation;
and:

a. The small MS4 is located in an urbanized area as determined by the latest Decennial Census by the Census Bureau. If the small MS4 is not located entirely within an urbanized area, only the portion that is within the urbanized area is regulated;
or

b. The small MS4 is designated by the Board.

2. An MS4 may be the subject of a petition to the Board to require a VSMP permit for their discharge of stormwater. If the Board determines that an MS4 needs a permit, the owner may use this registration statement to apply for coverage under the above general permit.

WHERE TO FILE THE REGISTRATION STATEMENT

The completed registration statement (with all attachments), a copy of the fee form and a copy of your check should be sent to the DCR's Stormwater Permitting Section in the Division of Soil and Water Conservation. The original fee form, application fee (as specified by Form DCR 199-145), and a copy of the registration statement (without attachments) should be sent to the DCR's Division of Finance, Accounts Payable at the address given on the fee form.

COMPLETENESS

Complete all items except where indicated in order for your registration statement to be accepted. Attach separate sheets of paper for Item 4 (Impaired Waters Information) and Item 7 (MS4 Program Plan).

DEFINITIONS

"Best management practice (BMP)" means schedules of activities, prohibitions of practices, including both a structural or nonstructural practice, maintenance procedures, and other management practices to prevent or reduce the pollution of surface waters and groundwater systems from the impacts of land-disturbing activities. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. "Operator" means the owner or operator of any facility or activity subject to regulation under the VSMP program. "Small MS4" means all separate storm sewers that are: (1) Owned or operated by the United States, a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under subsection 208 of the CWA that discharges to surface waters; and (2) Not defined as "large" or "medium" municipal separate storm sewer systems, or designated under 4 VAC50-60-380 A 1. This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

LINE BY LINE INSTRUCTIONS

Item 1. Regulated Small MS4

Provide the name of the regulated small MS4.

Check the appropriate type of regulated small MS4

Provide the location (county name or city name) where the small MS4 is located.

Item 2. Regulated Small MS4 Operator

Provide the name of the operator of the regulated small MS4.

Provide the small MS4 operator's address.

Provide the small MS4 operator's city, state and zip code.

Item 3. Receiving Waters

Provide the Hydrologic Unit Codes as identified in the most recent version of Virginia's 6th Order National Watershed Boundary Dataset currently receiving discharges or that have potential to receive discharges from the regulated small MS4.

An interactive map is available on-line at http://www.dcr.virginia.gov/soil_&_water/hu.shtml

Item 4. Impaired Waters Information

Attach a description of the estimated drainage area, in acres, served by the regulated small MS4 discharging to any impaired receiving surface waters listed in the most recent Virginia 305(b)/303(d) Water Quality Assessment Integrated Report, and a description of the land use of each such drainage area.

Item 5. TMDL Waste Load Allocations

Provide any TMDL waste loads allocated to the regulated small MS4. This information may be found at:

<http://www.deq.state.va.us/tmdl/develop.html>.

Item 6. Discharges to Physically Interconnected MS4s

List the name(s) of any regulated physically interconnected MS4s to which the regulated small MS4 discharges.

Item 7. MS4 Program Plan

Attach a copy of the MS4 Program Plan that includes:

- a. A list of BMPs that the operator proposes to implement for each of the stormwater minimum control measures and their associated measurable goals pursuant to 4VAC50-60-124D, Section II B; that includes:
 - i. A list of the existing policies, ordinances, schedules, inspection forms, written procedures, and other documents necessary for BMP implementation; and
 - ii. The individual, department, division, or unit responsible for implementing the BMP;
- b. The objective and expected results of each BMP in meeting the measurable goals of the stormwater minimum control measures;
- c. The implementation schedule including any interim milestones for the implementation of a proposed new BMP; and
- d. The method that will be utilized to determine the effectiveness of each BMP and the program as a whole.

Item 8. Signed Third Party Agreements

List all existing signed agreements between the operator and any applicable third parties where the operator has entered into an agreement in order to implement minimum control measures or portions of minimum control measures.

Item 9. Principal Executive Officer or Ranking Elected Official

Provide the name, address, telephone number and e-mail address of either the principal executive officer or ranking elected official as defined in 4VAC50-60-370.

10. Duly Authorized Representative

Provide the name, position title, address, telephone number and email address of any duly authorized representative as defined in 4VAC50-60-370.

Item 11. Certification

State law provides for severe penalties for submitting false information on this Registration Statement. State regulations require this Registration Statement to be signed as follows:

(1) For a corporation: by a responsible corporate officer. For the purpose of this subsection, a responsible corporate officer means:

- (a) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or
- (b) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(3) For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official.

For purposes of this subsection, a principal executive officer of a public agency includes:

- (a) The chief executive officer of the agency, or
- (b) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

Minimum Control Measure No. 1: Public Education and Outreach

Proposed BMP	Program Description	Measurable Goal/ Expected Results	Status	Future Activities
Bridging the Watershed	<p>Make local middle and high school districts more aware of education programs such as 'Bridging the Watershed' (BTW). The GWMP participates in the BTW curriculum-based program which was designed to promote hands-on opportunities for students to examine local watersheds and study the impacts of people on these resources. The program is designed in five basic modules, including field studies that 1) analyze water chemistry and its relationship to pollution, 2) identify macroinvertebrates and their relationship to stream pollution, 3) teach about invasive plants, 4) expose students to sedimentation in a watershed, and 5) examine trash and its effects in the watershed.</p>	<p>Increased visitor satisfaction, enhanced visitor understanding, and promoted resource stewardship & protection</p>	<p>The Virginia District (VAPA) conducted Bridging the Watershed (BTW) modules during the previous year. VAPA also conducted non-BTW programs that focused on the importance of the Potomac River's watershed.</p>	<p>Continue current program, evaluate annually.</p>

George Washington Memorial Parkway
Permit Number VAR040111

Minimum Control Measure No. 1: Public Education and Outreach

Distribute literature on 'Sustainable Fishing'.	Distribute literature on 'Sustainable Fishing' at each visitor contact station within the Parkway.	Enhanced visitor understanding and promoted resource stewardship & protection	7,000 copies were distributed at Theodore Roosevelt Island and 3,000 copies were distributed at Turkey Run Park in 2008.	Due to regular vandalism of brochure/literature boxes, increasing the distribution was not possible and was discontinued.
Coordinate activities with neighboring municipalities.	Coordinate with Fairfax County, Arlington County and the City of Alexandria on related joint efforts.	Increased visitor satisfaction, enhanced visitor understanding, and promoted resource stewardship & protection	Completed the Mt Vernon Stream Restoration project in Fairfax County. Collaborated on an Environmental Assessment with Arlington County that will result in improvements to Roaches Run water quality due to the removal of invasives and restoring of wetland. Participated in the Virginia DEQ, DCR, and ICPRB Technical Advisory Committee which investigated sources of bacteria contamination in Four Mile Run. Parkway representation attended the rollout of the Four Mile Run Restoration Plan and submitted comments on the final draft.	Continue current program, evaluate annually.
Public awareness.	Install wayside exhibits within the Potomac Gorge to inform visitors on human impact to the local watershed.	Enhanced visitor understanding and promoted resource stewardship & protection	Waysides have been installed.	Continue current program, evaluate annually. Perform routine maintenance on waysides.
Internet awareness.	Create a website that discusses the impacts that polluted stormwater runoff discharges can have on the water quality of the Potomac and its	Enhanced visitor understanding	Water quality link created on GWMP Main page (see http://www.nps.gov/gwmp/supportyourpark/water-quality.htm) Links to information on water quality by Fairfax County - site with room by room tips on how you can conserve water at home.	Recent reorganization of NPs websites resulted in these links being deleted

Minimum Control Measure No. 1: Public Education and Outreach

	<p>tributaries. Include related website links to Fairfax County, Arlington County and the City of Alexandria.</p>		<p>Interstate Commission on the Potomac River Basin - Improving the health of the Potomac River. Potomac Conservancy - watershed maps & information on how to get involved, including water conservation and volunteering. City of Alexandria- tips on erosion, runoff, home water conservation. BayScapes - How lawn care impacts our drinking water. Reducing Stormwater Impacts - Arlington County website featuring ways to help control what goes into storm runoff.</p>	<p>from the GWMP page. Will re-establish and update in Fall 2012.</p>
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Minimum Control Measure No. 2: Public Involvement/Participation

Proposed BMP	Program Description	Measurable Goal/ Expected Results	Status	Future Activities
Volunteer Cleanups.	Advertise for, coordinate, and lead volunteer teams to cleanup stream, riverside and wetland areas throughout the Park. Current projects include the 'Watershed Cleanup and Weed War' at Belle Haven/Dyke Marsh, Annual Potomac Watershed Cleanup and International Coastal Cleanup, and the Stream Revitalization at Minnehaha Creek, which has involved 10 to 50 volunteers at any time.	Increased visitor satisfaction, enhanced visitor understanding, and promoted resource stewardship & protection	The George Washington Memorial Parkway conducts more than a dozen clean-ups annually in which thousands of trash bags and dozens of tires are collected. Sites that have been cleaned include, Belle Haven Park and Dyke Marsh Wildlife Preserve, Roaches Run, Riverside Park, sections of the Potomac Heritage Trail, sections of the Mount Vernon Trail, Daingerfield Island, and Theodore Roosevelt Island.	Continue current program, evaluate annually.
Public presentation of 'River-Friendly Living' by the Potomac Cons. and The Nature Cons. at various locations around the Potomac Gorge.	The focus is for the public to learn simple and inexpensive practices to adopt to ensure a healthier and more natural Potomac River, including fertilizing lawns in a river-friendly manner.	Increased visitor satisfaction, enhanced visitor understanding, and promoted resource stewardship & protection	Hosted 4 TNC/Potomac Conservancy workshops at Great Falls, Virginia and at Sibley Hospital in Maryland.	Discontinued after 2007 due to poor attendance.

George Washington Memorial Parkway
Permit Number VAR040111

Minimum Control Measure No. 2: Public Involvement/Participation

Representation by Parkway and NPS Regional Biologist on local agency stormwater management panels, such as the Fairfax County Little Hunting Creek Watershed Management Steering Committee.	Involved decision-making and strong partnership with local governments on common goals, and active participation by NPS representatives.	Increased visitor satisfaction, enhanced visitor understanding, and promoted resource stewardship & protection	The Little Hunting Creek Watershed Management Plan was completed with input from GWMP Natural Resource Manager. One of the first outcomes of these plan was to repair a badly eroded outfall near the southern terminus of the Mt. Vernon Trail.	Continue current program, evaluate annually.
Provide comments on local agency watershed management plans as requested, such as on Fairfax County plan for Difficult Run.	Involved decision-making and strong partnership with local governments on common goals.	Enhanced visitor understanding and promoted resource stewardship & protection	Information has been provided on this plan by GWMP Natural Resource Management concerning rare, threatened and endangered species found within the Difficult Run Watershed in Great Falls Park, Virginia.	Goal met.
Partner with local environmental groups/ attend watershed conferences.	Continue an active partnership with the Maryland/DC chapter of The Nature Conservancy and the Friends of Dyke Marsh.	Increased visitor satisfaction, enhanced visitor understanding,	Active involvement by park representative. 1 joint task or event/year.	Friends of Dyke Marsh agreement has been renewed annually. The MD/DC TNC Partnership had

George Washington Memorial Parkway
Permit Number VAR040111

Minimum Control Measure No. 2: Public Involvement/Participation

		and promoted resource stewardship & protection		been in place approximately 2 years, but is now expired.
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Minimum Control Measure No. 3: Illicit Discharge Detection and Elimination

Proposed BMP	Program Description	Measurable Goal/ Expected Results	Status	Future Activities
<p>Perform water quality monitoring through sampling tributary streams to the Potomac, and issue a water quality report that is made available to the public.</p>	<p>The monitored streams include Mine Run, Turkey Run, Dead Run, Gulf Brach, Pimmit Run, Donaldson Run and Spout Run. Sampling results will determine whether streams meet acceptable water quality standards through collecting and identifying benthic macroinvertebrates, sampling water chemistry and basic water quality parameters, and conducting habitat assessments following Virginia 'Save Our Streams' protocols. This is accomplished by testing for dissolved oxygen, conductivity, PH, nitrate, nitrite, air and water temperature, and turbidity (clarity). The results from the attached 2006 report will be used as the baseline data for this permit, where Mine Run received "acceptable" scores ranging 7-11, and all others received "unacceptable" scores at: Dead Run ranging 3-7, Turkey Run ranging 4-8, Pimmit Run ranging 3-8, Gulf Branch ranging 4-6, Donaldson Run ranging 3-6, and Spout Run scores ranging 3-5.</p>	<p>Promote resource stewardship & protection</p>	<p>Ongoing</p>	<p>Continue current program, evaluate annually.</p>
<p>Share results of GWMP stream monitoring with Arlington County and obtain any available water quality data from these jurisdictions to</p>	<p>Two SCA interns conduct water quality monitoring and then present their findings to GWMP management staff at the end of each field season. Digital copies of the final report are available upon request and provided to Arlington County.</p>	<p>Promoted resource stewardship & protection</p>	<p>Ongoing</p>	<p>Continue current program, evaluate annually.</p>

George Washington Memorial Parkway
 Permit Number VAR040111

Minimum Control Measure No. 3: Illicit Discharge Detection and Elimination

incorporate into a parkway-wide report.				
Share results of GWMP stream monitoring with Fairfax County and obtain any available water quality data from these jurisdictions to incorporate into a parkway-wide report.	Two SCA interns conduct water quality monitoring and then present their findings to GWMP management staff at the end of each field season. Digital copies of the final report are available upon request and provided to Fairfax County.	Promoted resource stewardship & protection	Ongoing	Continue current program, evaluate annually.
Website	Included in website above, display (or links to) a storm water system map and community information about hazards associated with illegal discharges and improper disposal of waste.	Increased visitor satisfaction, enhanced visitor understanding, and promoted resource stewardship & protection	50 website visits/year, increased knowledge in adjacent neighborhoods, and familiarity w/website.	Project completed 2010.
Monitoring and record-keeping	Perform monitoring and record-keeping at the parkway's Main Maintenance Complex, as noted in Stormwater Pollution Prevention Plan	Prevent any non-storm water contaminants from entering the storm water catchment basin system	No contamination of storm water systems as a result of spills of fuel, oil, antifreeze, salt, and hazardous chemicals.	Continue current program, evaluate annually.

Minimum Control Measure No. 4) Construction Site Runoff Control

Proposed BMP	Program Description	Measurable Goal/ Expected Results	Status	Future Activities
<p>All construction projects within park boundaries are directly managed and administered by the National Park Service, except for permitted utility work (which is never expected to disturb more than 1 acre)</p>	<p>Implement erosion and sediment control measures, in accordance with the Virginia Erosion and Sediment Control Handbook (VAESCH), through detailed plan review and regular site inspection of all construction projects within the park.</p>	<p>All projects undergo plan review and construction inspection for compliance with VAESCH standards</p>	<p>Implemented erosion control measures at construction sites. Periodically reviewing the extensive erosion control measures when needed.</p>	<p>Continue current program, evaluate annually.</p>
<p>Support Fairfax County, Arlington County and the City of Alexandria in the enforcement of their</p>	<p>Respond to requests for support within 5 days for a field review, and within 30 days for a written confirmation</p>	<p>Create strong partnership with local governments on common goals</p>	<p>Monitored and inspected outfall from Potomac Yards in City of Alexandria. Working with Fairfax County to improve drainage at the intersection of GWMP and Collingwood St. Working with Fairfax</p>	<p>As requested.</p>

George Washington Memorial Parkway
Permit Number VAR040111

Minimum Control Measure No. 4) Construction Site Runoff Control

erosion and sediment control program when adjacent construction activities adversely impact the parkway.			County construction of a repair of a failing sewer line at Pimmit Run	
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Minimum Control Measure No. 5: Post-Construction Runoff Control

Proposed BMP	Program Description	Measurable Goal/ Expected Results	Status	Future Activities
Vegetated buffer strip	Protect from development and preserve the 4237.5 acres of the parkway, which function as a vegetated buffer strip between the Potomac River and developing urban areas.	No urban development within the parkway	Managed actions to sustain an unimpaired character and quality of the Parkway.	Ongoing
Limit development within Parkway boundary	Any "development" within park boundaries is limited to minimal increases in impervious surfaces such as road widening, parking lot expansion, or a building addition, and is directly managed and administered by the National Park Service. Implement water quality requirements, in accordance with the Chesapeake Bay Protection Act, through design and construction of all projects within the park. Applicable controls include preventative actions such as protecting sensitive areas (e.g., wetlands) or BMP's in accordance with the Virginia Stormwater Management Handbook (VASM), such as the use of bio-retention, vegetated filter strips, or permeable surfaces.	All projects undergo incorporation of design elements as practical, according to VASM standards	No change in impervious footprint.	Ongoing as necessary
Local consultation	Consult Fairfax County, Arlington County and the City of Alexandria on recommendations to design of BMP's according to local standards for parkway projects within the respective jurisdiction.	Number of BMP's that incorporate local standards, which may meet or exceed state requirements	Consulted Fairfax County on Mt Vernon project. Worked with Fairfax County to improve drainage at the intersection of GWMP and Collingwood St. A property was bought at GWMP and Collinwood St. The existing pool area will be restored and the	Continue current program, evaluate annually.

Minimum Control Measure No. 5: Post-Construction Runoff Control

			existing storm stream will be allowed to flow once again.	
Post-construction runoff control.	Where possible, support projects within the parkway proposed by Fairfax County, Arlington County and the City of Alexandria that offer benefit to post-construction runoff control.	Increase or stability in health of streams, as evidenced by monitoring	Supported Fairfax County in their construction of the Mt Vernon Stream Restoration project on Parkway property. Mt Vernon Stream Restoration project on Parkway property completed. Outfall repairs incorporated into North Design rehab for north Parkway.	Ongoing as necessary

Minimum Control Measure No. 6: Pollution Prevention/Good Housekeeping

Proposed BMP	Program Description	Measurable Goal/ Expected Results	Status	Future Activities
No noticeable accumulation of debris	Continue current policy and practice of "no noticeable accumulation of debris at any time" throughout the Parkway	Improved park appearance	Increase or stability in health of streams, as evidenced by monitoring, and maintain visitor satisfaction by no increase in complaints	Ongoing as necessary during routine maintenance
Storm sewer blockages	Clean storm sewer blockages and monitor for sufficient flow during rain storms.	Minimal or no adverse impacts as a result of blockages	Active monitoring program for functionality of park roadway water control features during rain events. Multiple repairs made to water drainage discharge site on North Parkway.	After major storm events and as necessary
Sewer catch basins	Inspect storm sewer catch basins. Prevent significant accumulation of sediment and debris in catch basins	Increase or stability in health of streams, as evidenced by monitoring	Weekly inspection performed of park's roadway water control feature. Weekly motorize roadway sweeping activities performed.	Monthly, and as necessary
Rehabilitate outfalls	Rehabilitate outfalls regularly to incorporate effective erosion control measures, methods and practices, and conduct stream restoration.	No net decrease in health of streams in the Parkway as a result of severe outfall erosion	Active monitoring program for functionality of park roadway water control features	Annually when possible during routine maintenance activities and/or on Parkway projects

Minimum Control Measure No. 6: Pollution Prevention/Good Housekeeping

			during rain events. Multiple repairs made to water drainage discharge site on North Parkway.	
Use less salt	Continue minimizing the use of winter salting on the Parkway through regular oversight and supervision of maintenance personnel during operations to assure that only the necessary amount is used. Use less salt in parking lot areas and access roads.	Increase or stability in health of streams, as evidenced by monitoring	Seasonally during routine maintenance	Active monitoring program for park snow operations to evaluate and managed appropriate usage amounts of roadway salt treatment. Continued search for alternate product lines to replace or supplement park's salt treatment practices.
Pesticides	Continue current policy to minimize use of pesticides through 1) ensuring no pesticides are used near water sewer systems, 2) limiting the type of pesticide to water-diluted products such as "Round-up", 3) storing pesticides in a self-contaminate spill floor storage room, and 4) monitoring and safe guarding against run-offs, spills, and target drifts.	Increase or stability in health of streams, as evidenced by monitoring	Seasonally during routine maintenance	Completed annual pesticide training and continued to use less pesticides due to shortage of licensed pesticide applicators.
Compliance with the integrated resource protection program	Assure that maintenance program operations are in compliance with the integrated resource protection program, as monitored by natural resource managers and specialists, biologists, and park rangers.	Increase or stability in health of streams, as evidenced by monitoring	Ongoing	Compliance with the National Environmental Policy Act was completed for all projects with potential for environmental impacts.
Coordination of related	Coordinate with Fairfax County, Arlington County and the City of Alexandria on related training events	Strong partnership with local	Once/year, or when available	Coordinated with Fairfax County, Arlington County

Minimum Control Measure No. 6: Pollution Prevention/Good Housekeeping

training events		governments on common goals		and the City of Alexandria on related environmental reports; however, no training events were scheduled with the mentioned counties.
Training	Provide for formal relevant training to Maintenance Division staff, such as on the handling of hazardous materials and certification program, seminars on 'Professional Green Industry' and use of pesticides as regulated by Virginia, winter salting operations and importance for sensitivity near bridges, and one-time courses such as 'BMP Solutions for Watershed Protection and Stormwater Compliance', by Maryland Department of the Environment T2 Training Center.	Successful application of knowledge to routine maintenance operations	Annually	Annual HAZWOPER training performed. Monthly operations meeting / training performed.
Non-structural BMPs	Perform non-structural BMPs at the parkway's Main Maintenance Complex, including training	No contamination of storm water systems as a result of spills of fuel, oil, antifreeze, salt, and hazardous chemicals.	Ongoing as needed	Installed filters in catch basins at car washing area at Main Maintenance Complex. Initiated use of absorbent pans to catch occasional oil spills during vehicle and equipment maintenance. Conducted Storm Water meetings and site walk arounds.