

ARLINGTON NATIONAL CEMETERY

MS4 Permit Year 2016/2017

VAR040139

Annual Report and Program Plan Update

Reporting Period
July 1, 2016 through June 30, 2017
(Due: October 1, 2017)

Submitted to:
Virginia Department of Environmental Quality
Woodbridge, VA

Prepared by:
Arlington National Cemetery
Arlington, VA

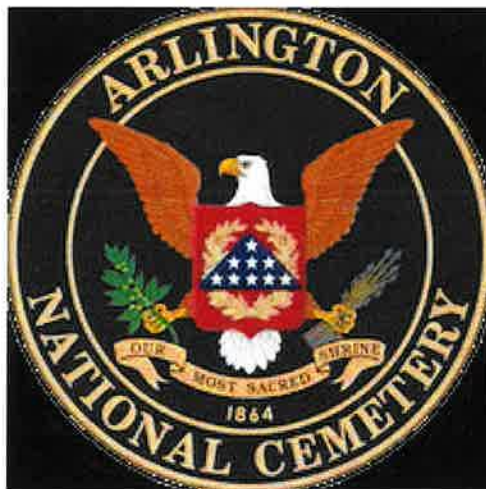


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Arlington National Cemetery Year (2016) MS4 Annual Report
Permit Number VAR040139
FACILITY INFORMATION

Name of Facility Arlington National Cemetery
Street Address 1 Memorial Drive
City Arlington **State** VA **Zip Code** 22211
County Arlington

SIGNATURE AND CERTIFICATION

Certification, as required by Virginia Administrative Code (9VAC25-890-40):

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.

Michael D. Peloquin, Colonel,
U.S. Army

Printed Name

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Signature 82

Chief, Engineering Division

Title

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Date

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1.0 INTRODUCTION

The following report has been prepared by Arlington National Cemetery (ANC) to comply with the requirements of the Virginia Stormwater Management Program (VSMP) General Permit for Discharges of Stormwater from Small Municipal Storm Sewer Systems (MS4). The Virginia Department of Environmental Quality (VDEQ) originally issued General Permit Number VAR040139 to ANC on December 11, 2014.

ANC submitted a MS4 Program Plan and associated plans to VDEQ in December 2015. The MS4 Program Plan is designed to implement six minimum control measures (MCMs) and to reduce the discharges of pollutants into the storm sewer system to the maximum extent practicable. The MCMs are:

- 1) Public Education and Outreach
- 2) Public Involvement and Participation
- 3) Illicit Discharge Detection and Elimination
- 4) Construction Site and Stormwater Runoff Control
- 5) Post-Construction Stormwater Management in New Development and Development on Prior Developed Lands
- 6) Pollution Prevention and Good Housekeeping for Municipal Operations

In accordance with Part II E 3 of the General Permit, ANC is submitting this annual report to DEQ to report the status of compliance with permit conditions, an assessment of the appropriateness of the identified best management practices (BMPs) and progress towards achieving the identified measurable goals for each of the MCMs in this reporting period.

1.1 Modifications to ANC's Roles and Responsibilities

No modifications to ANC's roles and responsibilities during this reporting year.

1.2 New MS4 Outfalls Added During this Permit Year

No new MS4 outfalls added during this reporting year.

2.0 PROGRESS ON MINIMUM CONTROL MEASURES

This section provides progress during this reporting period and planned activities for the next reporting period for each BMP within the six MCMs. These BMPs have been identified in the ANC's registration statement. ANC conducted an assessment of the appropriateness of the identified BMPs. The following table provides assessment comments in columns, Progress Goals, and Planned Activities.

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BMP ID #	BMP Description	Responsible Party	Measurable Goal(s)	Progress on Goal(s) Permit Year 2016/2017	Planned Activities
MCM 1 – Public Education and Outreach on Stormwater Impacts					
1.a	Information plaques at BMPs	Environmental / Facilities Maintenance	Installation of information plaques at BMPs. At least 20% of the target audience will be reached.	Removed	N/A
1.b	Storm drain inlet markings	Environmental / Facilities Maintenance	Installation of storm drain inlet markings. At least 20% of the target audience will be reached.	While ANC continues to install stormdrains marked with "Dump No Waste Drains to Chesapeake Bay" to alert visitors and ANC personnel of discharge location, ANC does not have a way to measure this goal.	Continue to install stormdrains marked with "Dump No Waste Drains to Chesapeake Bay".
1.c	Display printed materials at the Welcome Center and distribute information via email, websites, and social media	Environmental / Public Affairs Office	Development of outreach materials focusing on minimizing stormwater pollution and procedures implemented at ANC for reducing stormwater pollution. At least 20% of the target audience will be reached.	ANC employees received training during Town Hall event held in May 2017. Provide environmental brochures regarding stormwater management. Publish brochures on ANC SharePoint site. Estimate 155 employees of 200 (78% of target audience) reached through the Town Hall events and ANC SharePoint site. This component addresses illicit discharge minimization, Chesapeake Bay nutrients, and sediment and stormwater run-off as a high priority water quality issues. The Stormwater handout and Illicit Discharge handout are posted on ANC's internal Sharepoint and provided to ANC personnel during training events.	Continue to provide training during one quarterly Town Hall event and post handouts on Sharepoint.
1.d	Develop training plans and training materials	Environmental / Operations	The training plans and materials increase employee knowledge on reducing stormwater pollution and other high priority water quality issues. At least 20% of the target audience will be reached.	ANC employees received training during Town Hall event held in May 2017. Provide environmental brochures regarding stormwater management. Publish brochures on ANC SharePoint site. Estimate 155 employees of 200 (78% of target audience) reached through the Town Hall events and ANC SharePoint site. This component addresses illicit discharge minimization, Chesapeake Bay nutrients, and sediment and stormwater run-off as a high priority water quality issues. The Stormwater handout and Illicit Discharge handout are posted on ANC's internal Sharepoint and provided to ANC personnel during training events. This component addresses illicit discharge minimization, Chesapeake Bay nutrients, and sediment and stormwater run-off as a high priority water quality issues.	Continue to provide training during one quarterly Town Hall event, post brochures and training presentations on Sharepoint. Revise training presentation to fit allotted time.

October 2017: ANC is working with NAVFAC and Bluestone Environmental Group/CH2MHILL to develop a new MS4 program plan, training plan, and TMDL plan.

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BMP ID #	BMP Description	Responsible Party	Measurable Goal(s)	Progress on Goal(s) Permit Year 2016/2017	Planned Activities
MCM 2 – Public Involvement and Participation					
2.a	Maintain an updated MS4 Program Plan	Environmental	Evaluate the effectiveness of the MCMs documented in the MS4 Program Plan and revise/add new MCMs as appropriate. Any required updates to the MS4 Program Plan will be completed annually in conjunction with the annual report.	Plan submitted in December 2015.	Annual review of the MS4 Program Plan conducted. ANC with NAVFAC support is working Bluestone Environmental Group Inc./ CH2M Hill to revise MS4 Program Plan. ANC anticipates plan completion within 12 months.
2.b	Promote availability of the MS4 Program Plan and any annual modifications for public review and comment	Environmental / Public Affairs Office (PAO) / Office of the Chief Information Officer (OCIO)	Post copies of the MS4 Program Plan on the ANC webpage at a minimum of once a year and no later than 30 days following submittal of the annual report to DEQ.	Plan submitted in December 2015.	Post MS4 Program Plan on the ANC internal Sharepoint page.
2.c	Provide public access to the annual report in compliance with Freedom of Information Act	Environmental / PAO / OCIO	Provide the annual report to the public via the ANC SharePoint no later than 30 days following submittal to DEQ and retain copies of annual reports online for the duration of the Small MS4 General Permit.	The 2016/2017 annual report will be posted on the ANC internal SharePoint page no later than 30 days following the submittal of the annual report to DEQ.	Post annual reports on SharePoint and retain copies of annual reports for the duration of the Small MS4 General Permit.
2.d	Promotion of Local Activities	Horticulture / Environmental / PAO	Sponsor and host a minimum of four special guided tours of the facility with a focus on stormwater related topics at ANC. These guided tours will be open to the public and be promoted on the ANC webpage.	10/16/16 and 11/6/16: Memorial Arboretum Walking Tour 10/21/16: ANC Gardens: Summer Survivors Walking Tour 04/14/17: Early Bloomers, Spring flowering plants 04/28/17: Arbor Day Memorial Arboretum Walking Tour and Tree Dedication 05/12/17: Memorial Arboretum Native Plant Tour 05/19/17: Memorial Arboretum Walking Tour	Host special guided tours of the facility with a focus on environmental related topics at ANC. Promote tours on ANC social media.

October 2017: ANC is working with NAVFAC and Bluestone Environmental Group/CH2MHILL to develop a new MS4 program plan, training plan, and TMDL plan.

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BMP ID #	BMP Description	Responsible Party	Measurable Goal(s)	Progress on Goal(s) Permit Year 2016/2017	Planned Activities
MCM 3 – Illicit Discharge Detection and Elimination					
3.a	Conduct a Storm Sewer Delineation Pilot to result in a storm sewer system map and outfall information table.	Environmental / OCIO	Create and update the Geographic Information Systems (GIS) mapping files for ANC to ensure storm sewer infrastructure is documented. Develop a storm sewer system map and an associated outfall information table consistent with the Small MS4 General Permit.	Completed 2014/2015.	N/A
3.b	Maintain an updated storm sewer system map and outfall information table	Engineering / OCIO	Update the GIS mapping files and the outfall information table as new data become available. Maintain a copy of the current storm sewer system map and outfall information table for review upon request by the public or by DEQ.	Maintain and update storm sewer system map and outfall information table as needed.	Maintain and update storm sewer system map and outfall information table as needed.
3.c	Coordinate with adjacent MS4s on physically interconnected discharge locations	Environmental	Notify in writing physically interconnected MS4s to promote continued awareness of ANC's points of stormwater discharge.	Completed 2014/2015 and 2016/2017.	N/A
3.d	Develop and implement procedures to detect and address non-stormwater discharges, including illegal dumping, to ANC.	Environmental / Facilities Maintenance	Document when illicit discharge detection and elimination program is developed. Document regular implementation of program following program development.	Completed 2014/2015.	Continue to provide training.
3.e	Track the illicit discharges identified.	Facilities Maintenance / Environmental	Develop a tracking database to record illicit discharges identified from dry weather monitoring.	Track releases of pollutants using a spreadsheet.	Continue to document releases and track illicit discharges when identified.
3.f	Incorporate standard nonstormwater compliance language into all contracts.	Contract Support Command/ Engineering	Develop standard language and document that the standard language is incorporated into contracts during the review process.	Completed 2014/2015.	N/A
3.g	Encourage public to notify ANC of possible illicit discharges	Environmental	Promote and facilitate employee reporting of illicit discharges observed at ANC or along ANC boundary.	ANC employees received training during Town Hall event held in May 2017. Provide environmental brochures regarding stormwater management. Publish brochures on ANC SharePoint site. Estimate 155 employees of 200 (78% of target audience) reached through the Town Hall events and ANC SharePoint site. This component addresses illicit discharge minimization, Chesapeake Bay nutrients, and sediment and stormwater run-off as a high priority water quality issues. The Stormwater handout and Illicit Discharge handout are posted on ANC's internal Sharepoint and provided to ANC personnel during training events. This component addresses illicit discharge minimization, Chesapeake Bay nutrients, and sediment and stormwater run-off as a high priority water quality issues.	Continue to provide training and distribute illicit discharge pamphlet to ANC personnel.

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BMP ID #	BMP Description	Responsible Party	Measurable Goal(s)	Progress on Goal(s) Permit Year 2016/2017	Planned Activities
MCM 4 – Construction Site and Stormwater Runoff Control					
4.a	Comply with Virginia laws and regulations governing construction site runoff control.	Engineering	Identify the appropriate regulations, check for updates to the regulations, and inform appropriate contractors, reviewers, and inspectors of the regulations.	Language incorporated into contracts as allowed by contracting action.	Monitor changes to laws and regulations and modify contract language as appropriate.
4.b	Incorporate standard stormwater compliance language into all construction designs and contracts	Contract Support Command/ Engineering	Develop standard language and ensure such language is incorporated into construction designs and contracts to address discharges entering the MS4 from land-disturbing activities	Language incorporated into contracts as allowed by contracting action.	Monitor changes to laws and regulations and modify contract language as appropriate.
4.c	Plan approval and permit authorizations obtained prior to commencement of the land disturbing activity	Engineering	Require that land disturbance not begin until: 1) an erosion and sediment control plan is approved by a VESCP authority in accordance with the Erosion and Sediment Control Act, and 2) that construction activities secure necessary state permit authorizations from DEQ to discharge stormwater.	1. VDEQ approved erosion and sediment control plan and issued permit, VAR10H891, to Environmental Design and Construction LLC for the Funeral Procession Queuing at Arlington National Cemetery on March 9, 2016. Regulated land disturbing activity, 4.95 acres. 2. VDEQ approved erosion and sediment control plan and issued permit, VAR10C624, to Forrester Construction Company for the Millennium Project at Arlington National Cemetery (Ord and Weitzel Dr) on July 25, 2014. Regulated land disturbing activity, 26 acres.	Ensure plan approvals and permits issued for land disturbing activities occur prior to land disturbance.
4.d	Conduct construction site compliance inspections by ANC personnel	Engineering	Inspect land-disturbing activities for compliance with an approved erosion and sediment control plan. Conduct inspections based on implementation schedule.	ANC personnel (certified Combined Administrator) conducts periodic inspections (June 2017, Apr 2017, Nov 2016, Jul 2016) of Millennium and Funeral Queuing construction sites to ensure compliance with regulations. ANC issued inspection reports and contractors addressed deficiencies. At the Millennium site and Funeral Queuing site, contract personnel (Responsible Land Disturbers) conducted routine and rain event inspections in accordance with construction general permits and erosion and sediment control plans. RLDs conducted 50 routine and 32 rain event inspections at the Millennium site. RLDs conducted 19 routine and 15 rain event inspections at the Funeral Queuing site.	ANC personnel conduct periodic inspections and contractor personnel conduct inspections in accordance with construction general permit and erosion and sediment control plan.
4.e	Ensure that plan reviewers, inspectors, and program administrators obtain the appropriate certifications as required under the Virginia Erosion and Sedimentation Law	Environmental	Document the types of certificates required under the Erosion and Sedimentation laws and regulations. Document required training and certification frequency. Ensure appropriate personnel have such certificates.	Stacey Rosenquist, ESC Combined Administrator Certification, #6164, expires 11/30/2018. Completed training required for certification renewal in 2018. Verified contractors have certified Responsible Land Disturbers.	Track personnel training and certification requirements through VDEQ Knowledge and Certification and Accreditation Tracking System (CATS).

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BMP ID #	BMP Description	Responsible Party	Measurable Goal(s)	Progress on Goal(s) Permit Year 2016/2017	Planned Activities
MCM 5 - Post-Construction Stormwater Management in New Development and Development on Prior Developed Lands					
5.a	Encourage the use of low impact development (LID)	Engineering/ Contract Support Command	Encourage implementation of LID (as appropriate to local and regional conditions) in standardized contract language for addressing post-construction stormwater runoff that enters the MS4 from all applicable land-disturbing activities.	Incorporate low impact development best management practices in construction projects IAW Energy Independence and Security Act (EISA) of 2007, Section 438, the Army's Sustainable Design and Development Policy. Provide MS4 program guidance to contracting personnel during design and contracting process.	ANC follows EISA 438 and ANC's MS4 permit to comply with this MCM.
5.b	Incorporate required design criteria for stormwater runoff controls into standard stormwater compliance language for all construction designs and contracts	Contract Support Command/ Engineering	Coordinate MS4 program requirements with contracting center (US Army Corps of Engineers) during design and contracting process.	ANC participates in the design process by reviewing designs, plans, and specifications.	ANC participates in the design process by reviewing designs, plans, and specifications.
5.c	Implement an inspection and maintenance program for structural BMPs at ANC	Engineering	Implement regular inspection and long-term operation and maintenance of ANC's stormwater management facilities	Inspected existing BMPs: permeable pavement, stormceptors, sandfilter, and bioretention units. ANC continues design and development of a facility-wide inspection and maintenance tracking system, BUILDER.	Conduct inspections of existing stormwater management facilities. Where maintenance is deemed necessary according to the inspection, work with personnel for maintenance actions.
5.d	Electronic database of all known stormwater management facilities at ANC	Environmental	Maintain an updated electronic database of all known ANC-owned stormwater management facilities that discharge into the MS4.	May 2017 - ANC accepted CONTECH Stormfilter outside B129.	Update table as new BMPs are accepted.

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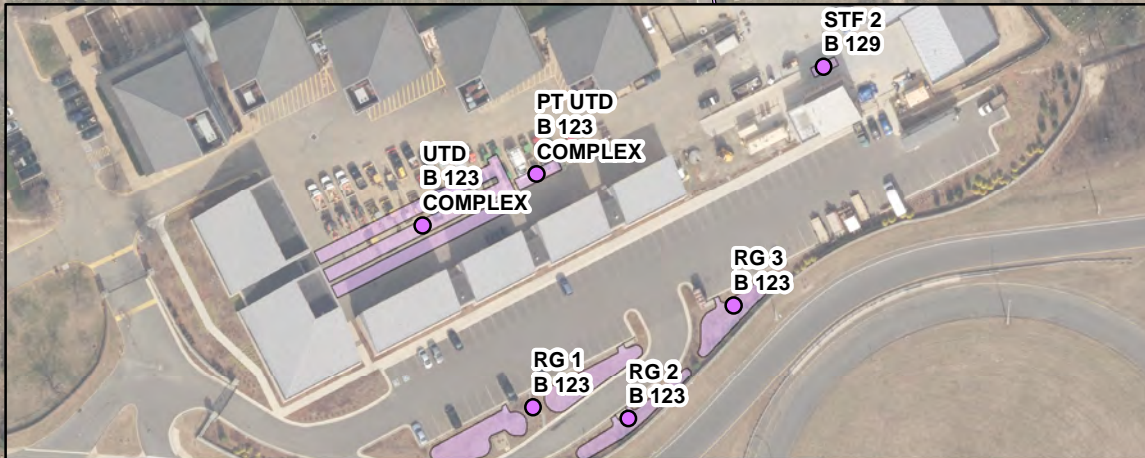
BMP ID #	BMP Description	Responsible Party	Measurable Goal(s)	Progress on Goal(s) Permit Year 2016/2017	Planned Activities
MCM 6 – Pollution Prevention and Good Housekeeping for Municipal Operations					
6.a	Minimize or prevent pollutant discharge from daily operations such as road, street, and parking lot maintenance	Field Operation Officer/Deputy Superintendent	Implement written protocols included in the MS4 Program Plan for minimizing or preventing pollutant discharge from daily operations. Document BMPs in SWPPPs for high-priority areas.	Completed and submitted with MS4 plan in December 2015.	Conduct inspections.
6.b	Minimize or prevent pollutant discharge from equipment and vehicle maintenance activities	Field Operation Officer/Deputy Superintendent	Implement written protocols included in the MS4 Program Plan for minimizing or preventing pollutant discharge from equipment and vehicle maintenance. Document BMPs in SWPPPs for high-priority areas.	Completed and submitted with MS4 plan in December 2015.	Conduct and document inspections.
6.c	Minimize or prevent pollutant discharge from the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers	Horticulture	Refer to written protocols included in the ANC Integrated Pest Management Plan for minimizing or preventing pollutant discharge from the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers.	Pesticides and herbicides are managed in accordance with the ANC Integrated Pest Management Plan. Fertilizers are managed in accordance with Nutrient Management Plan (6.g).	Usage reports maintained by Horticulture.
6.d	Identify SWPPP sites at ANC	Environmental	Identify high-priority facilities at the installation that have a high potential of discharging pollutants	Completed and submitted with MS4 plan in December 2015.	N/A
6.e	Develop and implement facility-specific SWPPPs for all applicable sites at ANC	Environmental	Develop and implement SWPPPs for all high-priority facilities that have a high potential of discharging pollutants to the stormwater system	Completed and submitted with MS4 plan in December 2015.	N/A
6.f	Update the ANC SWPPPs on an annual basis following SWPPP development	Environmental	Conduct Comprehensive Site Compliance Evaluations (CSCEs) annually to compare current conditions at high-priority facilities to SWPPPs	Conducted annual inspection at B123 and Spoils Yard.	Conduct annual inspections.
6.g	Develop a Turf and Landscape Nutrient Management Plan	Horticulture	Develop Nutrient Management Plan in accordance with appropriate regulations.	Completed and submitted with MS4 plan in December 2015. Nutrient Management Plan effective 2014-2016 requires revision.	Horticulture personnel revising the plan in Fall 2017.
6.h	Conduct appropriate training for all applicable employees in compliance with the small MS4 General Permit	Environmental	Develop a Training Plan (MCM 1.d) to determine and document required training and provide training frequency	ANC employees received training during Town Hall event held in May 2017. Provide environmental brochures regarding stormwater management. Publish brochures on ANC SharePoint site. Estimate 155 employees (77% of target audience) reached through the Town Hall events and ANC SharePoint site. This component addresses illicit discharge minimization, Chesapeake Bay nutrients, and sediment and stormwater run-off as a high priority water quality issues. During this year, ANC provided additional training to landscape and turf contractors, USACE personnel, and construction contractors.	Continue to provide training.

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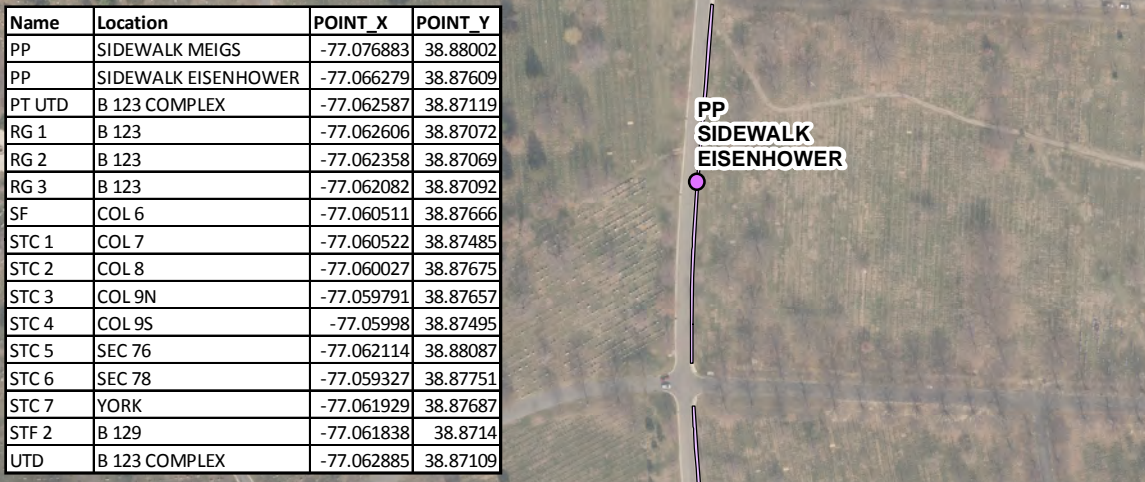
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ID#	Existing BMP Type	Year Installed	Location	LAT/LONG
	Vacuum-type sweeper used on all roads, not parking lots, once or twice a week. Contents dumped in solid waste dumpster	2014	Roadways throughout ANC	
STC-3	Stormceptor 3 (STC 900)	2013	Columbarium 9 (North)	38.87657/-77.059791
STC-4	Stormceptor 4 (STC 900)	2013	Columbarium 9 (South)	38.87495/-77.05998
PP-1	Permeable Pavement, no underdrain, with gravel	2012	Sidewalk along Eisenhower Ave	38.87609/-77.066279
RG-1	Rain Garden 1, No underdrain	2012	Bldg. 123	38.87072/-77.062606
RG-2	Rain Garden 2, No underdrain	2012	Bldg. 123	38.87069/-77.062358
RG-3	Rain Garden 3, No underdrain	2012	Bldg. 123	38.87092/-77.062082
STC-5	Stormceptor 5 (STC 2400)	2006	Section 76	38.88087/-77.062114
STC-6	Stormceptor 6 (STC 1800)	2006	Section 78	38.87751/-77.059327
STC-1	Stormceptor 1 (STC 1800)	2002-2003	Columbarium 7	38.87485/-77.060522
STC-2	Stormceptor 2 (STC 1800)	2002-2003	Columbarium 8	38.87675/-77.060027
SF	Sand Filter	1998	COL 6/8	38.87666/-77.060511
PT UTD	Stormwater Pre-Treatment Chamber	1996	Bldg. 123	38.87119/-77.062587
UTD	Underground Stormwater Chamber	1996	Bldg. 123	38.87109/-77.062885
PP-2	Permeable Pavement, no underdrain, with gravel	2014	Sidewalk near Chapel Gate	38.88002/-77.076883
STC-7	Stormceptor 7 (STC 1200)	1998	York Drive/Marshall Drive	38.87687/-77.061929
STF-2	ConTech StormFilter	2017	B129	38.8714/-77.061838

Stormwater BMP Control Measures



Name	Location	POINT_X	POINT_Y
PP	SIDEWALK MEIGS	-77.076883	38.88002
PP	SIDEWALK EISENHOWER	-77.066279	38.87609
PT UTD	B 123 COMPLEX	-77.062587	38.87119
RG 1	B 123	-77.062606	38.87072
RG 2	B 123	-77.062358	38.87069
RG 3	B 123	-77.062082	38.87092
SF	COL 6	-77.060511	38.87666
STC 1	COL 7	-77.060522	38.87485
STC 2	COL 8	-77.060027	38.87675
STC 3	COL 9N	-77.059791	38.87657
STC 4	COL 9S	-77.05998	38.87495
STC 5	SEC 76	-77.062114	38.88087
STC 6	SEC 78	-77.059327	38.87751
STC 7	YORK	-77.061929	38.87687
STF 2	B 129	-77.061838	38.8714
UTD	B 123 COMPLEX	-77.062885	38.87109



Sample Maintenance Inspection Checklist: Bioretention Practices

Inspection Date May 24, 2017 rain: 05/24-0.26" 05/22-0.34" 05/13-0.51" 05/12-0.31" 05/11-1.04." 05/05-1.75" 05/04-0.13"
 Project Bio-Retention 1, 2, 3 Site Plan/Permit Number VAR040139
 Location B123 Date BMP Placed in Service 2012
 Date of Last Inspection May 2016 Inspector Stacey Rosenquist
 Owner/Owner's Representative _____
 As-Built Plans available: Y / N

Facility Type: Level 1 X no underdrain Level 2 _____

Facility Location:

- ☒ Surface
☐ Underground

Hydraulic Configuration:

- ☐ On-line facility
☐ Off-line facility

Filtration Media:

- ☐ No filtration (e.g., dry well, permeable pavement, infiltration facility, etc.)
☐ Sand
☒ Bioretention Soil
☐ Peat
☐ Other: _____

Type of Pre-Treatment Facility:

- ☐ Sediment forebay (above ground)
☐ Sedimentation chamber
☐ Plunge pool
☐ Stone diaphragm
☐ Grass filter strip
☐ Grass channel
☐ Other: None

Ideally, Bioretention facilities should be inspected and cleaned up annually, preferably during the spring. During the first 6 months following construction of a bioretention facility, the site should be inspected at least twice after storm events that exceed 1/2-inch of rainfall. Watering is needed once a week during the first 2 months following installation, and then as needed during the first growing season (April-October), depending upon rainfall. If vegetation needs to be replaced, one-time spot fertilization may be needed, preferably using an organic rather than a chemical fertilizer. Each facility should have a customized routine maintenance schedule addressing issues such as the following: grass mowing, weeding, trash removal, mulch raking and maintenance, erosion repair, reinforcement plantings, tree and shrub pruning, and sediment removal.

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to fix problem	Who Will Address Problem	Comments
Contributing Drainage Area	Adequate vegetation	N			Supplement as necessary	Owner or professional	
	There is excessive trash and debris	N			Remove immediately	Owner or professional	
	There is evidence of erosion and / or bare or exposed soil	Y			Stabilize immediately	Owner or professional	Notify Horticulture
	There are excessive landscape waste or yard clippings	N			Remove immediately and recycle or compost	Owner or professional	
	Oil, grease or other unauthorized substances are entering the facility	N			Identify and control the source of this pollution. It may be necessary to erect fences, signs, etc	Owner or professional	
Pre-Treatment	There is adequate access to the pre-treatment facility	N/A			Establish adequate access	Professional and, perhaps, the locality	

Sample Maintenance Inspection Checklist: Bioretention Practices

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to fix problem	Who Will Address Problem	Comments
Pre-Treatment (continued)	Excessive trash, debris, or sediment.	N/A			Remove immediately	Owner or professional	
Pre-Treatment (continued)	There is evidence of clogging (standing water, noticeable odors, water stains, algae or floating aquatic vegetation, or oil/grease)	N/A			Identify and eliminate the source of the problem. If necessary, remove and clean or replace the clogged material.	Professional	
	There is evidence of erosion and / or exposed soil	N/A			Stabilize immediately	Owner or professional	
	There is dead vegetation or exposed soil in the grass filter	N/A			Restabilize and revegetate as necessary	Owner or professional	
Inlets	Check for sediment build-up at curb cuts, gravel diaphragms or pavement edges that prevent flow from getting into the bed, and check for bypassing.	N			Remove sediment and correct any other problems that block inflow.	Owner or professional	
	There is excessive trash, debris, or sediment.	N			Remove immediately	Owner or professional	
	There is evidence of erosion at or around the inlet	N			Repair erosion damage and reseed or otherwise restabilize with vegetation	Owner or professional	
	Inflow is hindered by trees and/or shrubs.	N			Remove woody vegetation from points of inflow and directly above underdrains. (Trees and shrubs may be located closer to the perimeter.)	Owner or professional	
Side Slopes <i>(Annually, after major storms)</i>	There is evidence of rill or gully erosion or bare soil	N			Identify the source of erosion damage and prevent it from recurring. Repair erosion damage and reseed or otherwise restabilize with vegetation	Owner or professional	
	There is excess sediment accumulation	N			Remove immediately	Owner or professional	
	Side slopes support nuisance animals.	N			Animal burrows must be backfilled and compacted. Burrowing animals should be humanely removed from the area.	Professional	
Vegetation <i>(monthly)</i>	Plant composition is consistent with the approved plans and any stakes or wires are in good condition.	N			Determine if existing plant materials are at least consistent with general Bioretention design criteria and replace inconsistent species.	Professional	
	There should be 75-90% cover (mulch plus vegetation), and the mulch cover should be 2-3 inches deep.	Y			Supplement vegetation and mulch as needed.		Landscaper maintains mulch cover. Beds require mulch.

Sample Maintenance Inspection Checklist: Bioretention Practices

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to fix problem	Who Will Address Problem	Comments
Vegetation (monthly) (continued)	There is evidence of hydrocarbons or other deleterious materials, resulting in unsatisfactory plant growth or mortality,	N			Replace contaminated mulch. If problem persists, test soils for hydrocarbons and other toxic substances. If excess levels are found, the soils, plants and mulch may all need to be replaced in accordance with the approved construction plans.	Professional	
	Invasive species or weeds make up at least 10% of the facility's vegetation	N			Remove invasive species and excessive weeds immediately and replace vegetation as needed.	Owner or professional	
	The grass is too high	N			Mow within a week. Grass species should be selected that have dense cover, are relatively slow growing, and require the least mowing and chemical inputs. Grass should be from 6-10 inches high.	Owner or professional	
	Vegetation is diseased, dying or dead	N			Remove and replace. Increase watering, but avoid using chemical fertilizers, unless absolutely necessary.	Professional	
	Winter-killed or salt-killed vegetation is present.	N			Replace with hardier species.	Owner or professional	
Filter Media (Annually)	The filter media is too low, too compacted, or the composition is inconsistent with design specifications	N			Raise the level, loosen and amend or replace the media, as needed, to be consistent with the state design criteria for Bioretention (85-88% sand 8-12% soil fines 3-5% organic matter in form of leaf compost). Other remediation options are described in the maintenance section of the state design criteria for Bioretention	Professional	
	The mulch is older than 3 years or is otherwise in poor condition	N			The mulch must be replaced every 2-3 years	Professional	
	There is evidence that chemicals, fertilizers, and/or oil/grease are present	N			Remove undesirable chemicals from media and facility immediately, and replace mulch or media as needed	Professional	
	There is excessive trash, debris, or sediment.	N			Remove trash and debris immediately. Check plant health and, without damaging plants, manually remove the sediment, especially if the depth exceeds 20% of the facility's design depth.	Owner or professional	
	There is evidence of concentrated flows, erosion or exposed soil	N			Identify the source of erosion damage and prevent it from recurring. Repair the erosion damage and reseed or otherwise restabilize with vegetation.	Professional	

Sample Maintenance Inspection Checklist: Bioretention Practices

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to fix problem	Who Will Address Problem	Comments
Filter Media (Annually) (continued)	The filter bed is clogged and/or filled inappropriately	N			Redistribute the soil substrate and remove sediment within 2 weeks.	Professional	
	The topsoil is in poor condition (e.g., the pH level is not 6-7, the composition is inappropriate, etc.)	N			Ensure a 3-inch surface depth of topsoil consistent with the state design criteria for Bioretention (loamy sand or sandy loam texture, with less than 5% clay content, and organic matter content of at least 2%). If the pH is less than 6.5, spread limestone.	Professional	
Underdrain/ Proper Drainage	The perforated pipe is not conveying water as designed	N/A			Determine if the pipe is clogged with debris or if woody roots have pierced the pipe. Immediately clean out or replace the pipe, as necessary.	Professional	
	The underlying soil interface is clogged (there is evidence on the surface of soil crusting, standing water, the facility does not dewater between storms, or water ponds on the surface of basin for more than 48 hours after an event).	N/A			Measure the draw-down rate of the observation well for three days following a storm event in excess of 1/2 inches in depth. After three days, if there is standing water on top but not in the underdrain, this indicates a clogged soil layer. If standing water is both on the surface and in the underdrain, then the underdrain is probably clogged. This should be promptly investigated and remediated to restore proper filtration. Grading changes may be needed or underdrain repairs made. The filter media may need to be raked, excavated and cleaned or replaced to correct the problem. Holes that are not consistent with the design and allow water to flow directly through a planter to the ground must be plugged.	Professional	
Planters	The planter is unable to receive or detain stormwater prior to infiltration. Water does not drain from the reservoir within 3-4 hours of after a storm event.	N			Identify and correct sources of clogging. Topsoil and sand/peat layer may need to be amended with sand or replaced all together.	Owner or professional	
	The planter has structural deficiencies, including rot, cracks, and failure, or the planter is unable to contain the filter media or vegetation	N			Make needed repairs immediately.	Owner or professional	
Outlet/ Overflow Spillway	Outlets are obstructed or erosion and soil exposure is evident below the outlet.	N			Remove obstructions and stabilize eroded or exposed areas.	Owner or Professional	
	There is excessive trash, debris, or sediment at the outlet	N			Remove immediately, and keep the contributing area free of trash and debris.	Owner or professional	

Sample Maintenance Inspection Checklist: Bioretention Practices

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to fix problem	Who Will Address Problem	Comments
Outlet/ Overflow Spillway (continued)	Any grates present are in good condition	N			Repair or replace as necessary	Owner or professional	
Observation Well	Is the observation well still capped?	N/A			Repair, as necessary.	Professional	
Overall	Access to the Infiltration facility or its components is adequate	N			Establish adequate access. Remove woody vegetation and debris that may block access. Ensure that hardware can be opened and operated.	Professional and, perhaps, the locality	
	There is evidence of standing water	N			Fill in low spots and stabilize; correct flow problems causing ponding.	Owner or professional	
	Mosquito proliferation	N			Eliminate stagnant pools and establish vegetation; treat for mosquitoes as needed. If sprays are considered, then a mosquito larvicide, such as Bacillus thurendensis or Altoside formulations can be applied <i>only if absolutely necessary</i> .	Owner or professional	
	Complaints from local residents	N			Correct real problems	Owner or professional	
	Encroachment on the bioretention area or easement by buildings or other structures	N			Inform involved property owners of BMPs status ; clearly mark the boundaries of the receiving pervious area, as needed	Owner or professional (and perhaps the locality)	

Sample Maintenance Inspection Checklist: Permeable Pavement

Inspection Date May 22, 2017
 Project _____ Site Plan/Permit Number ANC/VAR040139
 Location Eisenhower Drive Date BMP Placed in Service _____
 Date of Last Inspection April 2016 Inspector S. Rosenquist
 Owner/Owner's Representative _____
 As-Built Plans available: Y / N X

Facility Type: Level 1 no underdrain Level 2 _____

Ideally, each permeable pavement installation should be inspected in the Spring of each year, especially at large-scale installations.

Element of BMP	Potential Problems	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to fix problem	Who Will Address Problem	Comments
Contributing Drainage Area	There is excessive trash and debris	N			Remove immediately.	Owner or professional	Landscapers routinely clean areas.
	There is evidence of erosion and/or bare or exposed soil	N			Stabilize immediately.	Owner or professional	Landscapers perform routine turf maintenance.
	There is excessive landscape waste and yard clippings	N			Remove immediately.	Owner or professional	Landscapers clean areas after mowing.
Adjacent Vegetation	Trees and shrubs are within 5 feet of the pavement surface	Y			Check that tree roots have not penetrated the pavement and leaf residue has not clogged the pavement. Vegetation that limits access or interferes with the permeable pavement operation must be pruned or removed.	Owner or Professional	Landscapers routinely clean areas.
Inlets, Pre-Treatment Cells and Flow Diversion Structures	There is excessive trash, debris or sediment accumulation	N/A			Remove immediately	Owner or Professional	
	There is evidence of erosion and / or exposed soil	N/A			Stabilize immediately	Owner or professional	
	Evidence of clogging	N/A			Clean out sediment or debris. Remove and wash or replace stone, as needed	Professional	

Sample Maintenance Inspection Checklist: Permeable Pavement

Element of BMP	Potential Problems	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to fix problem	Who Will Address Problem	Comments
Pavement Surface	Mosquito proliferation	N			Eliminate standing water and establish vegetation; treat for mosquitoes as needed. If sprays are considered, then use a licensed pest controller to apply an approved mosquito larvicide (<i>only if absolutely necessary</i>).	Owner or professional	
	There is evidence of erosion and / or bare or exposed soil in grid paver areas	N			Stabilize immediately. Mow, irrigate and apply organic (not chemical) fertilizer, as needed to keep grass healthy and dense enough to provide filtering while protecting the underlying soil. Remove any grass clippings.	Owner or professional	
	There is loose material (e.g., bark, sand, etc.) stored on the pavement surface	N			Remove immediately and vacuum sweep the area to prevent clogging the pavement pores.	Professional	
	Pavement is stained and/or clogged or water is ponding, indicating the pavement is not draining properly. Measure the drawdown rate in the observation well for three (3) days following a storm event that exceeds 1/2-inch of rain. If standing water is still observed in the well after three days, this is a clear sign that the pavement is clogged. There are significant amounts of sediment have accumulated between the pavers.	N			The surface must be kept clean and free of leaves, debris, and sediment by vacuum sweeping (without brooms or water spray) immediately and, otherwise, at a frequency consistent with the use and loadings encountered (at a minimum, annual dry-weather sweeping in the Spring). Where paving blocks are installed, the sweeper must be calibrated so it does <i>not</i> pick up the stones between the paver blocks. Following the vacuum sweeping, test pavement sections by pouring water from 5 gallon buckets, to ensure proper drainage.	Professional	
Structural Integrity	There is evidence of surface deterioration, such as slumping, cracking, spalling or broken pavers.	Y	Y	Y	Repair or replace affected areas, as necessary.	Professional	Missing pavement. Notified leadership of required repair.
Observation Wells	Is each observation well still capped?	N/A			Repair, as necessary.	Professional	
Outlet	Outlets are obstructed or erosion and soil exposure is evident below the outlet.	N/A			Remove obstructions and stabilize eroded or exposed areas.	Owner or Professional	

Eisenhower Permeable Pavement
May 2017



Sample Maintenance Inspection Checklist: Permeable Pavement

Inspection Date May 22, 2017
 Project _____ Site Plan/Permit Number ANC / VAR040139
 Location Meigs Drive Date BMP Placed in Service 2014
 Date of Last Inspection April 2016 Inspector S. Rosenquist
 Owner/Owner's Representative _____
 As-Built Plans available: Y / N X

Facility Type: Level 1 no underdrain Level 2 _____

Ideally, each permeable pavement installation should be inspected in the Spring of each year, especially at large-scale installations.

Element of BMP	Potential Problems	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to fix problem	Who Will Address Problem	Comments
Contributing Drainage Area	There is excessive trash and debris	N			Remove immediately.	Owner or professional	
	There is evidence of erosion and/or bare or exposed soil	N			Stabilize immediately.	Owner or professional	
	There is excessive landscape waste and yard clippings	N			Remove immediately.	Owner or professional	
Adjacent Vegetation	Trees and shrubs are within 5 feet of the pavement surface	Y	N	N	Check that tree roots have not penetrated the pavement and leaf residue has not clogged the pavement. Vegetation that limits access or interferes with the permeable pavement operation must be pruned or removed.	Owner or Professional	Tree existed prior to sidewalk.
Inlets, Pre-Treatment Cells and Flow Diversion Structures	There is excessive trash, debris or sediment accumulation	N/A			Remove immediately	Owner or Professional	
	There is evidence of erosion and / or exposed soil	N/A			Stabilize immediately	Owner or professional	
	Evidence of clogging	N/A			Clean out sediment or debris. Remove and wash or replace stone, as needed	Professional	

Sample Maintenance Inspection Checklist: Permeable Pavement

Element of BMP	Potential Problems	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to fix problem	Who Will Address Problem	Comments
Pavement Surface	Mosquito proliferation	N			Eliminate standing water and establish vegetation; treat for mosquitoes as needed. If sprays are considered, then use a licensed pest controller to apply an approved mosquito larvicide (<i>only if absolutely necessary</i>).	Owner or professional	
	There is evidence of erosion and / or bare or exposed soil in grid paver areas	N			Stabilize immediately. Mow, irrigate and apply organic (not chemical) fertilizer, as needed to keep grass healthy and dense enough to provide filtering while protecting the underlying soil. Remove any grass clippings.	Owner or professional	
	There is loose material (e.g., bark, sand, etc.) stored on the pavement surface	N			Remove immediately and vacuum sweep the area to prevent clogging the pavement pores.	Professional	
	Pavement is stained and/or clogged or water is ponding, indicating the pavement is not draining properly. Measure the drawdown rate in the observation well for three (3) days following a storm event that exceeds 1/2-inch of rain. If standing water is still observed in the well after three days, this is a clear sign that the pavement is clogged. There are significant amounts of sediment have accumulated between the pavers.	N			The surface must be kept clean and free of leaves, debris, and sediment by vacuum sweeping (without brooms or water spray) immediately and, otherwise, at a frequency consistent with the use and loadings encountered (at a minimum, annual dry-weather sweeping in the Spring). Where paving blocks are installed, the sweeper must be calibrated so it does <i>not</i> pick up the stones between the paver blocks. Following the vacuum sweeping, test pavement sections by pouring water from 5 gallon buckets, to ensure proper drainage.	Professional	
Structural Integrity	There is evidence of surface deterioration, such as slumping, cracking, spalling or broken pavers.	N			Repair or replace affected areas, as necessary.	Professional	
Observation Wells	Is each observation well still capped?	N/A			Repair, as necessary.	Professional	
Outlet	Outlets are obstructed or erosion and soil exposure is evident below the outlet.	N/A			Remove obstructions and stabilize eroded or exposed areas.	Owner or Professional	

Sample Maintenance Inspection Checklist: Filtering Practices

Inspection Date May 22, 2017
 Project _____ Site Plan/Permit Number ANC/VAR040139
 Location Sand Filter COL6 Date BMP Placed in Service 1998
 Date of Last Inspection N/A Inspector S. Rosenquist
 Owner/Owner's Representative _____
 As-Built Plans available: Y / N X

Facility Type: Level 1 N/A Level 2 N/A

Facility Location:

- ☐ Surface
☒ Underground

Hydraulic Configuration:

- ☐ On-line facility
☐ Off-line facility

Filtration Media:

- ☐ No filtration (e.g., dry well, permeable pavement, infiltration facility, etc.)
☒ Sand
☐ Bioretention Soil
☐ Peat
☐ Other: _____

Type of Pre-Treatment Facility:

- ☐ Sediment forebay (above ground)
☐ Sedimentation chamber
☐ Plunge pool
☐ Stone diaphragm
☒ Grass filter strip
☒ Grass channel
☐ Other: _____

An inspection and clean-up should be scheduled annually to remove trash and floatables that accumulate in the pre-treatment cells and filter bed. Frequent sediment cleanouts in the dry and wet sedimentation chambers are recommended every 2-3 years to maintain the function and performance of the filter. If the filter treats runoff from a hotspot, crews may need to test the filter bed media before disposing of the media and trapped pollutants. If the filter does not treat runoff from a hotspot, the media can be safely disposed by either land application or land filling, without prior testing.

Warning: If the filtering facility has a watertight cover; be careful regarding the possibility of flammable gases within the facility. Care should be taken lighting a match or smoking while inspecting facilities that are not vented. If the filtering facility is in a completely enclosed vault, the **OSHA Confined Space Entry** procedures must be followed.

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to Fix Problem	Who Will Address Problem	Comments
Contributing Drainage Area and Side Slopes	Adequate vegetation	N			Supplement as necessary	Owner	
	There is excessive trash and debris	N			Remove immediately	Owner or professional	
	There is evidence of erosion and / or bare or exposed soil	N			Stabilize immediately	Owner or professional	
	There are excessive landscape waste or yard clippings	N			Remove immediately and recycle or compost	Owner or professional	
Pre-Treatment	There is adequate access to the pre-treatment facility	N			Establish adequate access	Professional and, perhaps, the locality	

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to Fix Problem	Who Will Address Problem	Comments
Pre-Treatment (continued)	Excessive trash, debris, or sediment.	N			Remove immediately	Owner or professional	
Pre-Treatment (continued)	There is evidence of erosion and / or exposed soil	N			Stabilize immediately	Owner or professional	
	There is dead vegetation.	N			Replace dead vegetation as necessary	Professional	
	Perimeter turf (or a grass filter strip) is too high.	N			Mow at least 4 times a year to keep the grass at a height of 4" to 9". Remove grass clippings after mowing.	Owner or professional	
	There is evidence of oil, grease, clogging (standing water, noticeable odors, water stains, algae)	N			Identify and eliminate the source of the problem. If necessary, remove and clean or replace the clogged material.	Professional	
Inlets	The inlet provides a stable conveyance into the swale	N/A			Stabilize immediately, as needed, and clear blockages.	Owner or professional	
	There is excessive trash, debris, or sediment.	N/A			Remove immediately	Owner or professional	
	There is evidence of erosion at or around the inlet	N/A			Repair erosion damage and reseed	Owner or professional	
Sedimentation Chambers	Sediment or debris accumulations are excessive	N			Clean out the wet and dry sedimentation chambers	Professional	
Filter Media	If facility takes longer than 48 hours to drain or filter media is discolored, the media is probably clogged	N			Replace the top sand layer of an enclosed filter (typically done every 5 years). Till or aerate the surface to improve infiltration and grass cover of an open filter (also typically done every 5 years).		
Oil and Grease	Evidence of filter surface clogging	N			Clean or replace filter media, as necessary.	Professional	
Underdrain	The underdrain is not conveying water as designed	N/A			To determine if the pipe is clogged, measure the draw-down rate of the observation well for three days following a storm event in excess of 1/2 inches in depth. After three days, if there is standing water on top but not in the underdrain, this indicates a clogged sand layer that must be replaced. If standing water is both on the surface and in the underdrain, then the underdrain is probably clogged. Immediately clean out the pipe manually or, if needed, use a high-pressure hose. Replace the underdrain if it is structurally damaged.	Professional	
Observation Well (every 2 years)	Is the observation well still capped?	N/A			Repair, as necessary.	Professional	

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to Fix Problem	Who Will Address Problem	Comments
Outlet	The outlet provides stable conveyance	unknown			Remove blockages and stabilize, as needed.	Professional	
	Evidence of flow bypassing facility	unknown			Repair immediately	Professional	
	Outlets are obstructed or erosion and soil exposure is evident below the outlet.	unknown			Remove obstructions and stabilize eroded or exposed areas.	Owner or Professional	
Structural Components	Evidence of structural deterioration	N			Repair as necessary	Professional	
	Evidence of spalling or cracking of structural components	N			Repair or replace, as necessary	Professional	
	Grates are in good condition	N			Repair or replace, as necessary	Owner or professional	
Pump (where applicable)	Catalog cuts and wiring diagram for pump available	N/A			If missing, obtain replacements	Owner	
	Waterproof conduits for wiring appear to be intact	N/A			Repair as necessary	Professional	
	Panel box is well marked	N/A			If not, mark it correctly	Professional	
	No evidence of pump failure (excess water in pump well, etc.)	N/A			Repair as necessary	Professional	
Overall	Access to the facility or its components is adequate.	N			Establish adequate access. Remove woody vegetation and debris that may block access. Ensure that hardware can be opened and operated.	Professional and, perhaps, the locality	
	Condition of hydraulic control components	N/A			Repair, as necessary.	Professional	
	Complaints from local residents	N/A			Correct real problems.	Owner or professional	
	Noticeable odors outside facility	N			Determine source and eliminate it.	Professional	
	Mosquito proliferation	N			Eliminate stagnant pools if feasible, and treat for mosquitoes as needed. If sprays are considered, then a mosquito larvicide, such as Bacillus thurensensis or Altoside formulations can be applied <i>only if absolutely necessary</i> .	Owner or professional	
	Encroachment on the filter or easement by buildings or other structures	N			Inform involved property owners of BMPs status ; clearly mark the boundaries of the receiving pervious area, as needed	Owner or professional (and perhaps the locality)	



Sample Maintenance Inspection Checklist: Filtering Practices

Inspection Date May 24, 2017
 Project _____ Site Plan/Permit Number ANC/VAR040139
 Location Underground Stormwater Chamber (B123) Date BMP Placed in Service 1996
 Date of Last Inspection April 2016 Inspector S. Rosenquist
 Owner/Owner's Representative _____
 As-Built Plans available: Y / N X

Facility Type: Level 1 N/A Level 2 N/A

Facility Location:

- ☐ Surface
☒ Underground

Hydraulic Configuration:

- ☐ On-line facility
☐ Off-line facility

Filtration Media:

- ☐ No filtration (e.g., dry well, permeable pavement, infiltration facility, etc.)
☐ Sand
☐ Bioretention Soil
☐ Peat
☒ Other: _____

Type of Pre-Treatment Facility:

- ☐ Sediment forebay (above ground)
☒ Sedimentation chamber
☐ Plunge pool
☐ Stone diaphragm
☐ Grass filter strip
☐ Grass channel
☒ Other: Underground Pretreatment Chamber

An inspection and clean-up should be scheduled annually to remove trash and floatables that accumulate in the pre-treatment cells and filter bed. Frequent sediment cleanouts in the dry and wet sedimentation chambers are recommended every 2-3 years to maintain the function and performance of the filter. If the filter treats runoff from a hotspot, crews may need to test the filter bed media before disposing of the media and trapped pollutants. If the filter does not treat runoff from a hotspot, the media can be safely disposed by either land application or land filling, without prior testing.

Warning: If the filtering facility has a watertight cover, be careful regarding the possibility of flammable gases within the facility. Care should be taken lighting a match or smoking while inspecting facilities that are not vented. If the filtering facility is in a completely enclosed vault, the **OSHA Confined Space Entry** procedures must be followed.

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to Fix Problem	Who Will Address Problem	Comments
Contributing Drainage Area and Side Slopes	Adequate vegetation	N/A			Supplement as necessary	Owner	
	There is excessive trash and debris	N/A			Remove immediately	Owner or professional	
	There is evidence of erosion and / or bare or exposed soil	N/A			Stabilize immediately	Owner or professional	
	There are excessive landscape waste or yard clippings	N/A			Remove immediately and recycle or compost	Owner or professional	
Pre-Treatment	There is adequate access to the pre-treatment facility	N			Establish adequate access	Professional and, perhaps, the locality	

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to Fix Problem	Who Will Address Problem	Comments
Pre-Treatment (continued)	Excessive trash, debris, or sediment.	N			Remove immediately	Owner or professional	
Pre-Treatment (continued)	There is evidence of erosion and / or exposed soil	N/A			Stabilize immediately	Owner or professional	
	There is dead vegetation.	N/A			Replace dead vegetation as necessary	Professional	
	Perimeter turf (or a grass filter strip) is too high.	N/A			Mow at least 4 times a year to keep the grass at a height of 4" to 9". Remove grass clippings after mowing.	Owner or professional	
	There is evidence of oil, grease, clogging (standing water, noticeable odors, water stains, algae)	N/A			Identify and eliminate the source of the problem. If necessary, remove and clean or replace the clogged material.	Professional	
Inlets	The inlet provides a stable conveyance into the swale	N/A			Stabilize immediately, as needed, and clear blockages.	Owner or professional	
	There is excessive trash, debris, or sediment.	N/A			Remove immediately	Owner or professional	
	There is evidence of erosion at or around the inlet	N/A			Repair erosion damage and reseed	Owner or professional	
Sedimentation Chambers	Sediment or debris accumulations are excessive	N			Clean out the wet and dry sedimentation chambers	Professional	
Filter Media	If facility takes longer than 48 hours to drain or filter media is discolored, the media is probably clogged	N			Replace the top sand layer of an enclosed filter (typically done every 5 years). Till or aerate the surface to improve infiltration and grass cover of an open filter (also typically done every 5 years).		
Oil and Grease	Evidence of filter surface clogging	N			Clean or replace filter media, as necessary.	Professional	
Underdrain	The underdrain is not conveying water as designed	N/A			To determine if the pipe is clogged, measure the draw-down rate of the observation well for three days following a storm event in excess of 1/2 inches in depth. After three days, if there is standing water on top but not in the underdrain, this indicates a clogged sand layer that must be replaced. If standing water is both on the surface and in the underdrain, then the underdrain is probably clogged. Immediately clean out the pipe manually or, if needed, use a high-pressure hose. Replace the underdrain if it is structurally damaged.	Professional	
Observation Well (every 2 years)	Is the observation well still capped?	N/A			Repair, as necessary.	Professional	

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to Fix Problem	Who Will Address Problem	Comments
Outlet	The outlet provides stable conveyance	unknown			Remove blockages and stabilize, as needed.	Professional	
	Evidence of flow bypassing facility	unknown			Repair immediately	Professional	
	Outlets are obstructed or erosion and soil exposure is evident below the outlet.	unknown			Remove obstructions and stabilize eroded or exposed areas.	Owner or Professional	
Structural Components	Evidence of structural deterioration	N			Repair as necessary	Professional	
	Evidence of spalling or cracking of structural components	N			Repair or replace, as necessary	Professional	
	Grates are in good condition	N			Repair or replace, as necessary	Owner or professional	
Pump (where applicable)	Catalog cuts and wiring diagram for pump available	N/A			If missing, obtain replacements	Owner	
	Waterproof conduits for wiring appear to be intact	N/A			Repair as necessary	Professional	
	Panel box is well marked	N/A			If not, mark it correctly	Professional	
	No evidence of pump failure (excess water in pump well, etc.)	N/A			Repair as necessary	Professional	
Overall	Access to the facility or its components is adequate.	N			Establish adequate access. Remove woody vegetation and debris that may block access. Ensure that hardware can be opened and operated.	Professional and perhaps, the locality	
	Condition of hydraulic control components	N/A			Repair, as necessary.	Professional	
	Complaints from local residents	N/A			Correct real problems.	Owner or professional	
	Noticeable odors outside facility	N			Determine source and eliminate it.	Professional	
	Mosquito proliferation	N			Eliminate stagnant pools if feasible, and treat for mosquitoes as needed. If sprays are considered, then a mosquito larvicide, such as Bacillus thurendensis or Altoside formulations can be applied <i>only if absolutely necessary</i> .	Owner or professional	
	Encroachment on the filter or easement by buildings or other structures	N			Inform involved property owners of BMPs status ; clearly mark the boundaries of the receiving pervious area, as needed	Owner or professional (and perhaps the locality)	

Trash, dirt, and debris in parking lot. Soil left on equipment and in tonnies and gators. Trash cans have holes and no lids.

Discussed concerns and findings with Cemetery Operations Leadership, Mr.Brion Moore, and provided recommendations.

07/10/17: Operations has replaced trash cans.





Sample Maintenance Inspection Checklist: Stormceptor

Inspection Date May 22, 2017 & June 6, 2017

Project _____

Site Plan/Permit Number ANC/VAR040139Location Stormceptor 1 COL7Date BMP Placed in Service 2002-2003Date of Last Inspection April 2016Inspector S. Rosenquist

Owner/Owner's Representative _____

As-Built Plans available: Y / N X

Compensatory device type (include if the pervious area flow path is less than the required minimum length): **(NOTE: See the separate plan review checklist for the compensatory device)**

Dry Well

French Drain

Rain Garden

Other: _____

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to Fix Problem	Who Will Address Problem	Comments
Storage	Sediment and debris accumulation depth > 15% of total storage	Y			Correct the source of sediment and debris; remove and dispose according to environmental regulations	Owner or Professional	device requires service
	Oil and fuel accumulation	unknown			Remove and dispose of accumulated oil/fuel waste according to environmental regulations	Owner or professional	
Inflow and outflow pipes	Blockage at inflow & outflow pipes	N			Remove blockage debris	Owner or professional	
	Breaks & cracks at pipe joint connections	unknown			Repair joints according to type of joint connections in-place	Professional	
Structural components	Concrete spalling or deterioration	unknown			Replace and repair damaged components in accordance with approved specifications	Professional	
	Cracks wider than ½ inch and any evidence of soil particles entering the structure through the cracks	unknown				Professional	
	Access grates and covers - cracked or damaged – unable to open	N			Replace grate/cover; remove grate / cover and clean frame or lubricate as needed	Owner	
Upstream oil, fuel or chemical spills	Oil, fuel or chemical spills that could be washed into the Stormceptor	N			Clean-up spill fluid according to spill prevention plan; remove spill fluid from Stormceptor according to manufacturer's specifications	Owner or professional	



STC1 COL7
JUNE 2017



Sample Maintenance Inspection Checklist: Stormceptor

Inspection Date May 22, 2017 and June 6, 2017
 Project _____ Site Plan/Permit Number ANC/VAR040139
 Location Stormceptor 2 COL8 Date BMP Placed in Service 2002-2003
 Date of Last Inspection April 2016 Inspector S. Rosenquist
 Owner/Owner's Representative _____
 As-Built Plans available: Y / N X

Compensatory device type (include if the pervious area flow path is less than the required minimum length): **(NOTE: See the separate plan review checklist for the compensatory device)**

Dry Well French Drain Rain Garden

Other: _____

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to Fix Problem	Who Will Address Problem	Comments
Storage	Sediment and debris accumulation depth > 15% of total storage	Y			Correct the source of sediment and debris; remove and dispose according to environmental regulations	Owner or Professional	Maintenance required.
	Oil and fuel accumulation	unknown			Remove and dispose of accumulated oil/fuel waste according to environmental regulations	Owner or professional	
Inflow and outflow pipes	Blockage at inflow & outflow pipes	N			Remove blockage debris	Owner or professional	
	Breaks & cracks at pipe joint connections	unknown			Repair joints according to type of joint connections in-place	Professional	
Structural components	Concrete spalling or deterioration	unknown			Replace and repair damaged components in accordance with approved specifications	Professional	
	Cracks wider than ½ inch and any evidence of soil particles entering the structure through the cracks	unknown				Professional	
	Access grates and covers - cracked or damaged – unable to open	N			Replace grate/cover; remove grate / cover and clean frame or lubricate as needed	Owner	
Upstream oil, fuel or chemical spills	Oil, fuel or chemical spills that could be washed into the Stormceptor	N			Clean-up spill fluid according to spill prevention plan; remove spill fluid from Stormceptor according to manufacturer's specifications	Owner or professional	





Sample Maintenance Inspection Checklist: Stormceptor

Inspection Date May 22, 2017 and June 6, 2017

Project _____

Site Plan/Permit Number ANC/VAR040139Location Stormceptor 3 COL9 NorthDate BMP Placed in Service 2013Date of Last Inspection April 2016Inspector S. Rosenquist

Owner/Owner's Representative _____

As-Built Plans available: Y / N X

Compensatory device type (include if the pervious area flow path is less than the required minimum length): **(NOTE: See the separate plan review checklist for the compensatory device)**

Dry Well

French Drain

Rain Garden

Other: _____

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to Fix Problem	Who Will Address Problem	Comments
Storage	Sediment and debris accumulation depth > 15% of total storage	Y			Correct the source of sediment and debris; remove and dispose according to environmental regulations	Owner or Professional	Maintenance required.
	Oil and fuel accumulation	unknown			Remove and dispose of accumulated oil/fuel waste according to environmental regulations	Owner or professional	
Inflow and outflow pipes	Blockage at inflow & outflow pipes	N			Remove blockage debris	Owner or professional	
	Breaks & cracks at pipe joint connections	unknown			Repair joints according to type of joint connections in-place	Professional	
Structural components	Concrete spalling or deterioration	unknown				Professional	
	Cracks wider than ½ inch and any evidence of soil particles entering the structure through the cracks	unknown			Replace and repair damaged components in accordance with approved specifications	Professional	
	Access grates and covers - cracked or damaged – unable to open	N			Replace grate/cover; remove grate / cover and clean frame or lubricate as needed	Owner	
Upstream oil, fuel or chemical spills	Oil, fuel or chemical spills that could be washed into the Stormceptor	N			Clean-up spill fluid according to spill prevention plan; remove spill fluid from Stormceptor according to manufacturer's specifications	Owner or professional	



STC3 COL9N
JUNE 2017



STC3 COL9N
JUNE 2017



Sample Maintenance Inspection Checklist: Stormceptor

Inspection Date May 22, 2017 and June 6, 2017
 Project _____ Site Plan/Permit Number ANC / VAR040139
 Location Stormceptor 4 COL9 South Date BMP Placed in Service 2013
 Date of Last Inspection April 2016 Inspector S. Rosenquist
 Owner/Owner's Representative _____
 As-Built Plans available: Y / N X

Compensatory device type (include if the pervious area flow path is less than the required minimum length): **(NOTE: See the separate plan review checklist for the compensatory device)**

Dry Well

French Drain

Rain Garden

Other: _____

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to Fix Problem	Who Will Address Problem	Comments
Storage	Sediment and debris accumulation depth > 15% of total storage	Y			Correct the source of sediment and debris; remove and dispose according to environmental regulations	Owner or Professional	Maintenance required.
	Oil and fuel accumulation	unknown			Remove and dispose of accumulated oil/fuel waste according to environmental regulations	Owner or professional	
Inflow and outflow pipes	Blockage at inflow & outflow pipes	N			Remove blockage debris	Owner or professional	
	Breaks & cracks at pipe joint connections	unknown			Repair joints according to type of joint connections in-place	Professional	
Structural components	Concrete spalling or deterioration	unknown				Professional	
	Cracks wider than ½ inch and any evidence of soil particles entering the structure through the cracks	unknown			Replace and repair damaged components in accordance with approved specifications	Professional	
	Access grates and covers - cracked or damaged – unable to open	N			Replace grate/cover; remove grate / cover and clean frame or lubricate as needed	Owner	
Upstream oil, fuel or chemical spills	Oil, fuel or chemical spills that could be washed into the Stormceptor	N			Clean-up spill fluid according to spill prevention plan; remove spill fluid from Stormceptor according to manufacturer's specifications	Owner or professional	



STC4 COL9S
JUNE 2017



Sample Maintenance Inspection Checklist: Stormceptor

Inspection Date May 22, 2017 and June 6, 2017
 Project _____ Site Plan/Permit Number ANC/VAR040139
 Location Stormceptor 5 SEC76 Date BMP Placed in Service 2006
 Date of Last Inspection April 2016 Inspector S. Rosenquist
 Owner/Owner's Representative _____
 As-Built Plans available: Y / N X

Compensatory device type (include if the pervious area flow path is less than the required minimum length): **(NOTE: See the separate plan review checklist for the compensatory device)**

Dry Well

French Drain

Rain Garden

Other: _____

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to Fix Problem	Who Will Address Problem	Comments
Storage	Sediment and debris accumulation depth > 15% of total storage	Y			Correct the source of sediment and debris; remove and dispose according to environmental regulations	Owner or Professional	Maintenance required.
	Oil and fuel accumulation	unknown			Remove and dispose of accumulated oil/fuel waste according to environmental regulations	Owner or professional	
Inflow and outflow pipes	Blockage at inflow & outflow pipes	N			Remove blockage debris	Owner or professional	
	Breaks & cracks at pipe joint connections	unknown			Repair joints according to type of joint connections in-place	Professional	
Structural components	Concrete spalling or deterioration	unknown				Professional	
	Cracks wider than ½ inch and any evidence of soil particles entering the structure through the cracks	unknown			Replace and repair damaged components in accordance with approved specifications	Professional	
	Access grates and covers - cracked or damaged – unable to open	N			Replace grate/cover; remove grate / cover and clean frame or lubricate as needed	Owner	
Upstream oil, fuel or chemical spills	Oil, fuel or chemical spills that could be washed into the Stormceptor	N			Clean-up spill fluid according to spill prevention plan; remove spill fluid from Stormceptor according to manufacturer's specifications	Owner or professional	



STC5 SEC76
JUNE 2017



Sample Maintenance Inspection Checklist: Stormceptor

Inspection Date May 22, 2017 and June 6, 2017
 Project _____ Site Plan/Permit Number ANC/VAR040139
 Location Stormceptor 6 SEC78 Date BMP Placed in Service 2006
 Date of Last Inspection April 2016 Inspector S. Rosenquist
 Owner/Owner's Representative _____
 As-Built Plans available: Y / N X

Compensatory device type (include if the pervious area flow path is less than the required minimum length): **(NOTE: See the separate plan review checklist for the compensatory device)**

Dry Well

French Drain

Rain Garden

Other: _____

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to Fix Problem	Who Will Address Problem	Comments
Storage	Sediment and debris accumulation depth > 15% of total storage	Y			Correct the source of sediment and debris; remove and dispose according to environmental regulations	Owner or Professional	Maintenance required
	Oil and fuel accumulation	unknown			Remove and dispose of accumulated oil/fuel waste according to environmental regulations	Owner or professional	
Inflow and outflow pipes	Blockage at inflow & outflow pipes	N			Remove blockage debris	Owner or professional	
	Breaks & cracks at pipe joint connections	unknown			Repair joints according to type of joint connections in-place	Professional	
Structural components	Concrete spalling or deterioration	unknown				Professional	
	Cracks wider than ½ inch and any evidence of soil particles entering the structure through the cracks	unknown			Replace and repair damaged components in accordance with approved specifications	Professional	
	Access grates and covers - cracked or damaged – unable to open	N			Replace grate/cover; remove grate / cover and clean frame or lubricate as needed	Owner	
Upstream oil, fuel or chemical spills	Oil, fuel or chemical spills that could be washed into the Stormceptor	N			Clean-up spill fluid according to spill prevention plan; remove spill fluid from Stormceptor according to manufacturer's specifications	Owner or professional	



STC6 SEC78
JUNE 2017



Sample Maintenance Inspection Checklist: Stormceptor

Inspection Date May 22, 2017 and June 6, 2017
 Project _____ Site Plan/Permit Number ANC/VAR040139
 Location Stormceptor 7 YORK Date BMP Placed in Service 1992
 Date of Last Inspection Unknown Inspector S. Rosenquist
 Owner/Owner's Representative _____
 As-Built Plans available: Y / N X

Compensatory device type (include if the pervious area flow path is less than the required minimum length): **(NOTE: See the separate plan review checklist for the compensatory device)**

Dry Well French Drain Rain Garden

Other: _____

Element of BMP	Potential Problem	Problem? Y / N	Investigate? Y / N	Repaired? Y / N	How to Fix Problem	Who Will Address Problem	Comments
Storage	Sediment and debris accumulation depth > 15% of total storage	Y			Correct the source of sediment and debris; remove and dispose according to environmental regulations	Owner or Professional	Maintenance required.
	Oil and fuel accumulation	unknown			Remove and dispose of accumulated oil/fuel waste according to environmental regulations	Owner or professional	
Inflow and outflow pipes	Blockage at inflow & outflow pipes	N			Remove blockage debris	Owner or professional	
	Breaks & cracks at pipe joint connections	unknown			Repair joints according to type of joint connections in-place	Professional	
Structural components	Concrete spalling or deterioration	unknown				Professional	
	Cracks wider than ½ inch and any evidence of soil particles entering the structure through the cracks	unknown			Replace and repair damaged components in accordance with approved specifications	Professional	
	Access grates and covers - cracked or damaged – unable to open	N			Replace grate/cover; remove grate / cover and clean frame or lubricate as needed	Owner	
Upstream oil, fuel or chemical spills	Oil, fuel or chemical spills that could be washed into the Stormceptor	N			Clean-up spill fluid according to spill prevention plan; remove spill fluid from Stormceptor according to manufacturer's specifications	Owner or professional	

STC7 YORK



STC7 YORK
JUNE 2017



**COMPREHENSIVE SITE COMPLIANCE EVALUATION FORM
SWPPP B123 COMPLEX**

Inspector: S. Rosenquist May 23, 2017

Reporting Period: July 1, 2016 – June 30, 2017

How many routine facility inspections were performed during the reporting period? 1

How many corrective actions were needed to remove the original violation? **Document these actions according to corrective action deadlines.**

Date	Deficiencies	Corrected (Y or N)	Date Corrected
N/A			

What must be completed to correct the deficiencies that remain uncorrected?

N/A

Were all BMPs indicated in the SWPPP, including good housekeeping practices, being implemented at the time of the CSCE?

Yes X No _____

If one or more BMPs were not being implemented, were corrective actions taken after the FIRST inspection to find the problem?

Yes _____ No _____ All BMPs were being implemented X

Was/were the same failure(s) to implement a BMP deficiency(ies) noted in more than one inspection?

Yes _____ No X No deficiencies noted in any inspection _____

Did any routine facility inspections find that one or more BMPs were not effective in controlling the pollutant source for which it was designed?

Yes _____ No _____ All BMPs were effective X

If one or more BMPs are ineffective, have they all been replaced with an alternative or modified BMP?

Yes _____ No _____ All BMPs were effective X

Are additional BMPs needed to address any conditions requiring corrective action?

Yes X No _____ Revise SWPPP (B123 Complex) thru contract action to incorporate additional BMPs (soil).

**COMPREHENSIVE SITE COMPLIANCE EVALUATION FORM
SWPPP B123 COMPLEX**

At any time during the reporting period, were any previously unidentified illicit discharges or previously unidentified pollutants in the existing discharges discovered?

Yes _____ No X

Have all illicit discharges (including any discovered in previous years) been eliminated or permitted?

Yes _____ No _____ Permit applied for _____ No known illicit discharges X

Have any significant spills or leaks occurred during the reporting period?

Yes _____ No X

If any significant spills or leaks occurred, did they result in either a dry weather discharge or an actual discharge of the spilled or leaked material commingled with stormwater (as opposed to the spilled material being washed away by stormwater?)

Yes _____ No X

If any significant spills or leaks occurred, did they result in more than the minimum amounts of material being discharged in stormwater?

Yes _____ No _____ No spills or leaks occurred X

Have all known spills or leaks been cleaned up or otherwise prevented from contaminating stormwater that would be discharged under the authority of this permit?

Yes _____ No _____ No spills or leaks occurred X

How many times were stormwater discharges visually monitored at all of the facility outfalls during the reporting year? **Document the condition of and around the outfalls, including flow dissipation measures to prevent scouring.**

Yes _____ No _____ Number of Visual Monitorings 1

Would the results of the visual monitoring indicate that there are pollutants in the stormwater discharges that are not adequately controlled by the current BMPs?

Yes _____ No X

If the results of visual monitoring indicated a potential problem, was it due to one or more of the following?

1. New pollutant source (including exposure of previously unexposed material).
2. Failure to implement or maintain an existing BMP.
3. Less than expected performance from a BMP.
4. No BMP was selected to deal with that problem.
5. N/A (No problems identified)

**COMPREHENSIVE SITE COMPLIANCE EVALUATION FORM
SWPPP B123 COMPLEX**

If visual monitoring indicated a potential problem, what corrective action needs to be implemented?

1. Eliminated exposure or pollutant source.
2. Modified existing BMPs.
3. Added a new BMP.
4. Plan to address problem by end of current reporting year.
5. Nothing planned.

6. N/A (No problems identified).

Did any analysis of any element tested during any previous discharge monitoring period exceed the numeric limitation value?

Yes _____ No _____ N/A X

If the answer to the previous question was "Yes", please name the element and the test results.

Element	Test Results	Element	Test Results

Are any revisions to the SWPPP required resulting from the inspection?

Yes X No _____

No problems identified with current BMPs. Nonetheless, thru contract action revise SWPPP (B123 Complex) in preparation for next general permit cycle starting in 2018. Revision may include updated list of BMPs, Pollutant Sources, inspection frequency, inspection responsibility, and inspection checklist.

Current BMPs: Spill Prevention Control, and Countermeasure Plan, Hazardous Material Storage, Hazardous Waste Management, Integrated Pest Management Plan, Standard Operating Procedures (Flammable Lockers and Preventative Maintenance Check and Services).

COMPREHENSIVE SITE COMPLIANCE EVALUATION FORM
SWPPP B123 COMPLEX



COMPREHENSIVE SITE COMPLIANCE EVALUATION FORM
SWPPP B123 COMPLEX



**COMPREHENSIVE SITE COMPLIANCE EVALUATION FORM
SWPPP SPOILS YARD/CONTRACTOR STAGING AREA**

Inspector: S. Rosenquist May 23, 2017

Reporting Period: July 1, 2016 – June 30, 2017

How many routine facility inspections were performed during the reporting period? 1

How many corrective actions were needed to remove the original violation? **Document these actions according to corrective action deadlines.**

Date	Deficiencies	Corrected (Y or N)	Date Corrected
N/A			

What must be completed to correct the deficiencies that remain uncorrected?

N/A

Were all BMPs indicated in the SWPPP, including good housekeeping practices, being implemented at the time of the CSCE?

Yes X No _____

If one or more BMPs were not being implemented, were corrective actions taken after the FIRST inspection to find the problem?

Yes _____ No _____ All BMPs were being implemented X

Was/were the same failure(s) to implement a BMP deficiency(ies) noted in more than one inspection?

Yes _____ No X No deficiencies noted in any inspection _____

Did any routine facility inspections find that one or more BMPs were not effective in controlling the pollutant source for which it was designed?

Yes _____ No _____ All BMPs were effective X

If one or more BMPs are ineffective, have they all been replaced with an alternative or modified BMP?

Yes _____ No _____ All BMPs were effective X

Are additional BMPs needed to address any conditions requiring corrective action?

Yes X No _____ Revise SWPPP (B123 Complex) thru contract action to incorporate additional BMPs (soil).

**COMPREHENSIVE SITE COMPLIANCE EVALUATION FORM
SWPPP SPOILS YARD/CONTRACTOR STAGING AREA**

At any time during the reporting period, were any previously unidentified illicit discharges or previously unidentified pollutants in the existing discharges discovered?

Yes _____ No X

Have all illicit discharges (including any discovered in previous years) been eliminated or permitted?

Yes _____ No _____ Permit applied for _____ No known illicit discharges X

Have any significant spills or leaks occurred during the reporting period?

Yes _____ No X

If any significant spills or leaks occurred, did they result in either a dry weather discharge or an actual discharge of the spilled or leaked material commingled with stormwater (as opposed to the spilled material being washed away by stormwater?)

Yes _____ No X

If any significant spills or leaks occurred, did they result in more than the minimum amounts of material being discharged in stormwater?

Yes _____ No _____ No spills or leaks occurred X

Have all known spills or leaks been cleaned up or otherwise prevented from contaminating stormwater that would be discharged under the authority of this permit?

Yes _____ No _____ No spills or leaks occurred X

How many times were stormwater discharges visually monitored at all of the facility outfalls during the reporting year? **Document the condition of and around the outfalls, including flow dissipation measures to prevent scouring.**

Yes _____ No _____ Number of Visual Monitorings 1

Would the results of the visual monitoring indicate that there are pollutants in the stormwater discharges that are not adequately controlled by the current BMPs?

Yes _____ No X

If the results of visual monitoring indicated a potential problem, was it due to one or more of the following?

1. New pollutant source (including exposure of previously unexposed material).
2. Failure to implement or maintain an existing BMP.
3. Less than expected performance from a BMP.
4. No BMP was selected to deal with that problem.
5. N/A (No problems identified)

**COMPREHENSIVE SITE COMPLIANCE EVALUATION FORM
SWPPP SPOILS YARD/CONTRACTOR STAGING AREA**

If visual monitoring indicated a potential problem, what corrective action needs to be implemented?

1. Eliminated exposure or pollutant source.
2. Modified existing BMPs.
3. Added a new BMP.
4. Plan to address problem by end of current reporting year.
5. Nothing planned.

6. N/A (No problems identified).

Did any analysis of any element tested during any previous discharge monitoring period exceed the numeric limitation value?

Yes _____ No _____ N/A X

If the answer to the previous question was "Yes", please name the element and the test results.

Element	Test Results	Element	Test Results

Are any revisions to the SWPPP required resulting from the inspection?

Yes X No _____

No problems identified with current BMPs. Nonetheless, thru contract action revise SWPPP (Spoils Yard/Contractor Yard) in preparation for next general permit cycle starting in 2018. Revision may include updated list of BMPs, Pollutant Sources, inspection frequency, inspection responsibility, and inspection checklist.

Current BMPs: Hazardous Material Storage, Hazardous Waste Management, Integrated Pest Management Plan, Standard Operating Procedures (Flammable Lockers).

COMPREHENSIVE SITE COMPLIANCE EVALUATION FORM
SWPPP SPOILS YARD/CONTRACTOR STAGING AREA



COMPREHENSIVE SITE COMPLIANCE EVALUATION FORM
SWPPP SPOILS YARD/CONTRACTOR STAGING AREA



COMPREHENSIVE SITE COMPLIANCE EVALUATION FORM
SWPPP SPOILS YARD/CONTRACTOR STAGING AREA



COMPREHENSIVE SITE COMPLIANCE EVALUATION FORM
SWPPP SPOILS YARD/CONTRACTOR STAGING AREA



ARLINGTON NATIONAL CEMETERY

INTERCONNECTION ILLICIT DISCHARGE INSPECTIONS 2016 and 2017

Assessment ID	Interconnection ID	Date	Time	Inspector	Flow	Chlorine	Condition	Photos	SEC#
00001	I001	7/11/2016	8:30	Fenn	TRUE	FALSE	Large pipe draining into open ditch. Flow present, no chlorine detected. Concrete ditch is deteriorating, very overgrown. Sediment deposits and uneven patches in concrete at bottom of trapezoidal ditch.	3	
00002	I002	7/11/2016	16:45	Fenn	FALSE	FALSE	Three curb storm drains with square metal grates in front, along road. All in good condition, with mild corrosion of grates. No flow present at each. Unsure which is outflow; two directly across from each other, one closer to Memorial Ave.	3	
00003	I003	7/11/2016	16:40	Fenn	FALSE	FALSE	Square metal grate in grass off of stairs/pedestrian path. Overgrown, partially covered with grass. Mild corrosion of grate, small debris present in drain. No flow present at time of inspection.	2	
00004	I004	7/11/2016	16:30	Fenn	FALSE	FALSE	Large metal curb drain with manhole on sidewalk at far right end when faced from road. No flow present, substantial debris and sediment/dirt present in drain. Metal at curb has light wear, and manhole cover has light corrosion.	4	
00005	I005	7/11/2016	16:55	Fenn	FALSE	FALSE	Storm drain at edge of parking lot, with concrete slab and manhole cover on top. Storm drain is bent/bowing at center and metal is worn, missing paint, and presents mild corrosion. No flow is audible, but visually inaccessible.	2	
00006	I006	7/11/2016	17:00	Fenn	FALSE	FALSE	Small domed metal grate set in grass adjacent to parking lot. Grate is significantly covered by dirt and grass, and has mild corrosion. No flow present, but substantially overgrown and dirt spilling over into drain.	2	
00007	I007	7/12/2016	12:35	Fenn	FALSE	FALSE	Round metal grate with rungs beneath leading down into drain. Too deep to determine flow or ascertain much about condition of drain. Metal grate has mild deterioration and corrosion, and slight overgrowth of grass.	2	
00008	I008	7/12/2016	12:50	Fenn	FALSE	FALSE	Manhole in concrete slab with asphalt-filled storm drain at front (curb), at perimeter of parking lot. Low points in curb appear to allow drainage of water into plantings beyond via gravel fill. Flow indeterminate, inaccessible.	3	
00009	I009	7/13/2016	12:52	Fenn	FALSE	FALSE	Metal curb drain with metal grate in front. No flow, dirt and debris present in drain. Grate is worn and corroded, and is missing a small piece at front left corner. Road is cracking around grate.	4	
00010	I010	7/13/2016	13:00	Fenn	FALSE	FALSE	Manhole in center of road, in good condition. Two possible manholes located, both photographed. Flow inaccessible, indeterminate.	6	
00011	I011	7/12/2016	13:15	Fenn	TRUE	FALSE	Large concrete slab resting on brick base covered in concrete. 18" square metal grate at center of slab. Small, vertical metal grate cut into west face of base to allow flow of water at ground level. Active flow, but unreachable. Grate has deteriorated paint and corrosion.	3	
00013	I012	7/13/2016	13:00	Fenn	FALSE	FALSE	Small metal curb drain on exterior (to ANC) road side of wall, with square concrete slab resting on top. Road slopes down toward/around drain. Brick on cemetery side of wall shows arch, evidence of historic drain, now perhaps covered by ground. No flow immediately apparent, but difficult to see into drain.	6	
00014	I013	7/12/2016	13:30	Fenn	FALSE	FALSE	Small rectangular concrete slab with manhole cover, resting on brick. Four wooden posts driven into ground just beyond corners of slab. Flow inaccessible, indeterminate. Slab, manhole cover, and brick all show mild deterioration.	2	Wrong Images

ARLINGTON NATIONAL CEMETERY

INTERCONNECTION ILLICIT DISCHARGE INSPECTIONS 2016 and 2017

Assessment ID	Interconnection ID	Date	Time	Inspector	Flow	Chlorine	Condition	Photos	SEC#
00015	I014	7/12/2016	13:45	Fenn	FALSE	FALSE	Small ditch in ground draining through pipe in wall, with stone/concrete surrounding. Trench is entirely filled with sediment/debris, pipe is barely visible, mostly filled/buried. No flow present.	3	
00016	I015	7/8/2016	11:45	Fenn	FALSE	FALSE	Rectangular metal grate set in concrete along ANC wall. No flow present. Concrete around grate is cracked, grate is broken at corner, and sediment/dirt has entered drain.	2	
00017	I016	7/8/2016	11:30	Fenn	FALSE	FALSE	Curved square metal grate in grass away from wall by appx. 30 feet. No flow, mild corrosion of grate, missing paint. Sediment and lawn clipping within drain.	2	
00018	I017	7/8/2016	11:25	Fenn	FALSE	FALSE	Drain covered by large circular concrete slab. Mostly inaccessible, but slab is broken along edge, enough to see there is no flow. Debris and sediment present in drain.	1	
00019	I018	7/8/2016	11:05	Fenn	FALSE	FALSE	Partially covered by square concrete slab, which is broken at edges/corners. Pipe visible, no flow present. Sediment and debris (leaves/stones) present in drain.	3	
00020	I019	7/12/2016	10:45	Fenn	FALSE	FALSE	Inaccessible, flow indeterminate. Covered by small square concrete slab, which has been partially buried/sunken, perhaps when gate road was paved (seemingly overtop).	3	
00021	I020	7/12/2016	10:45	Fenn	FALSE	FALSE	Inaccessible, flow indeterminate. Covered by concrete slab, unknown condition.	3	
00022	I021	7/12/2016	14:00	Fenn	FALSE	FALSE	Small quire concrete slab covering brick base. One brick removed on eastern side, presumably for drainage. Flow inaccessible, indeterminate, although grate near road shows no evidence of flow.	3	
00023	I030	7/11/2016	10:20	Fenn	TRUE	FALSE	Gate at wall, no flow present. Gate in good condition. Substantial flow audible from circular grate across road from gate, but inaccessible, so unable to test for chlorine. Vegetation overgrown at base of gate.	2	
00024	I031	7/11/2016	10:10	Fenn	FALSE	FALSE	Concrete slab with manhole cover atop/adjacent to curb storm drain. Good condition, no problems evident. Minimal flow: not moving, barely wet, likely from watering of grass (nearby). Inaccessible, so unable to test for chlorine.	2	
00025	I032	7/11/2016	10:00	Fenn	TRUE	FALSE	Gate, ditch, and drain all deteriorating. Brick ditch leading to larger ditch crumbling, small bio growth (moss, lichen) evident. Gate out of plumb, flow appears to be emerging from beneath concrete slab at base of gate. Large debris (branches, twigs) in ditch, bricks and concrete show evidence of mineral deposits.	2	
00026	I033	7/11/2016	10:35	Fenn	TRUE	FALSE	Concrete slab with manhole atop ANC wall, with small ditch/curb drain beyond wall, for flow entering off of road. Flow audible, but could not test, all points inaccessible. Manhole shows deterioration of paint, and bio growth/sediment present in drain away from road.	4	
00027	I034	7/11/2016	9:40	Fenn	TRUE	FALSE	Large metal grate at base of wall inside ANC. Flow present, but inaccessible for chlorine testing. Mild corrosion of grate, grass surrounding is slightly overgrown, and small amount of debris visible in drain.	2	
00028	I035	7/11/2016	10:48	Fenn	FALSE	FALSE	Manhole just outside of gate, set in concrete next to gate driveway. Flow inaccessible, indeterminate; no visible problems.	2	
00029	I036	7/11/2016	13:20	Fenn	FALSE	FALSE	Storm drain at side of road, with square metal grate in front. No flow. Grate has mildly deteriorated paint and mild corrosion. Sediment and small debris visible in drain.	2	
00030	I037	7/11/2016	13:22	Fenn	FALSE	FALSE	Storm drain at side of road, with square metal grate in front. Paint on grate s deteriorated, grate is mildly corroded. No flow. Sediment and small debris visible in drain.	2	

ARLINGTON NATIONAL CEMETERY
INTERCONNECTION ILLICIT DISCHARGE INSPECTIONS 2016 and 2017

Assessment ID	Interconnection ID	Date	Time	Inspector	Flow	Chlorine	Condition	Photos	SEC#
00031	I038	7/11/2016	13:15	Fenn	FALSE	FALSE	Metal storm drain at side of road, partially broken/missing, with square metal grate in front, partially corroded. No flow, but broken portion of storm drain has significant corrosion. Small debris and mild sediment present in drain.	2	
00032	I039	7/11/2016	13:10	Fenn	FALSE	FALSE	Square metal grate set in concrete pad, in grass just off of walkway. Partially covered by lawn clippings, scratched from lawn equipment, with light corrosion of grate and deterioration of concrete. No flow present. Substantial lawn clippings and debris partially covering grate and present within drain.	3	
00033	I040	7/11/2016	13:05	Fenn	FALSE	FALSE	Square concrete slab resting atop outflow, flow inaccessible, indeterminate. Concrete slab shows mild staining/deterioration.	2	
00035	I001	8/1/2017	12:00	Grady	TRUE	FALSE	Steady water flow. Concrete drain in good condition (minor cracks). Eastside of gate overgrown with foliage.	0	52
00038	I003	8/1/2017	12:00	Grady	FALSE	FALSE	Earth encroaching grate. Inlet good condition. Border NPS property. No flow.	0	31
00039	I004	8/1/2017	12:00	Grady	FALSE	FALSE	Metal grate. Inlet good condition. No flow. NPS property.	0	33
00040	I021	7/31/2017	12:00	Grady	FALSE	FALSE	Square concrete cover over round concrete on brick base. Damage to inlet and drainage area. No flow.	0	15
00041	I005	8/2/2017	12:00	Grady	FALSE	FALSE	Metal Great. Good condition. Standing water observed. No flow.	0	Parking Lot
00042	I006	8/1/2017	12:00	Grady	FALSE	FALSE	Circular grate. Earth encroachment. Debris over the area. Standing water observed. No flow.	0	Parking Lot
00043	I007	7/31/2017	12:00	Grady	FALSE	FALSE	Metal grate. Inlet good condition. No flow.	0	69
00044	I008	7/31/2017	12:00	Grady	FALSE	FALSE	Minor damage to concrete. Inlet good condition. No flow.	0	Employee Parking Lot 123
00045	I009	7/31/2017	12:00	Grady	FALSE	FALSE	Concrete cover deteriorated. Earth encroaching inlet. No flow.	0	8
00046	I011	8/2/2017	12:00	Grady	TRUE	FALSE	Moderate water flow. No Chlorine. Inlet in good condition.	0	8
00047	I012	8/1/2017	12:00	Grady	FALSE	FALSE	No flow. Brick base is deteriorated. No visible point of water inflow.	0	8
00048	I013	8/2/2017	12:00	Grady	FALSE	FALSE	Brick base deteriorated. No flow.	0	8
00049	I014	8/1/2017	12:00	Grady	FALSE	FALSE	Filled with debris. No visible inflow entry. No flow.	0	18
00050	I015	7/31/2017	12:00	Grady	FALSE	FALSE	Grate broken. Concrete has cracks. Drain is dry. Fair condition. No flow.	0	18
00051	I016	7/31/2017	12:00	Grady	FALSE	FALSE	No flow. Mortar damage. Debris build up. Good condition.	0	17
00052	I017	8/31/2017	12:00	Grady	FALSE	FALSE	Circular condition cover broken. Broken cover allows stormwater to enter drain. Standing water. No flow.	0	17
00053	I018	7/31/2017	12:00	Grady	FALSE	FALSE	Mortar cracks around inlet. Plant growth and debris impact inlet/drain. Good condition.	0	17
00054	I019	7/31/2017	12:00	Grady	FALSE	FALSE	No flow. Square concrete cover broken/chipped. Brick base sunken. Standing water.	0	15
00055	I020	7/31/2017	12:00	Grady	FALSE	FALSE	Square concrete slab covers circular brick base. Moderate damage. No flow.	0	15
00056	I030	8/2/2017	12:00	Grady	TRUE	FALSE	Flow. No chlorine. Debris and vegetation overgrowth at gate in wall. Damage to wall surrounding gate. Stormwater diverted under gate. Flow identified in downstream inlet.	0	50
00057	I031	8/2/2017	12:00	Grady	TRUE	FALSE	Very low flow. No Chlorine. Good condition.	0	50
00058	I032	7/31/2017	12:00	Grady	TRUE	FALSE	No chlorine. Overgrown vegetation at gate. Wall surrounding gate in fair condition. Drain in fair condition.	0	27
00059	I035	8/1/2017	12:00	Grady	FALSE	FALSE	No flow. Metal grate and concrete in good condition. Inlet on Marshall Road. NPS property.	0	27
00060	I033	8/2/2017	12:00	Grady	TRUE	FALSE	No chlorine. Drain at wall is in good condition. Middle drain has considerable debris buildup and vegetation encroachment.	0	27

ARLINGTON NATIONAL CEMETERY
INTERCONNECTION ILLICIT DISCHARGE INSPECTIONS 2016 and 2017

Assessment ID	Interconnection ID	Date	Time	Inspector	Flow	Chlorine	Condition	Photos	SEC#
00061	I034	8/2/2017	12:00	Grady	TRUE	FALSE	No chlorine. Drain at wall is in good condition. Middle drain has considerable debris buildup and vegetation encroachment.	0	27
00062	I036	8/1/2017	12:00	Grady	FALSE	FALSE	No flow. Clear of debris. Good condition. 2 inlets.	1	Arlington House Sherman Drive
00063	I037	8/2/2017	12:00	Grady	FALSE	FALSE	No flow. Minor debris in grates. 2 inlets. Good condition. Standing water.	1	Arlington House Sherman Drive
00064	I038	8/2/2017	12:00	Grady	FALSE	FALSE	No flow. Minor debris in grates. 2 inlets. Good condition. Standing water. Metal cover of westside drain droken/damaged.	0	Arlington House Sherman Drive
00065	I039	8/1/2017	12:00	Grady	FALSE	FALSE	Standing water. Good condition. No flow.	1	1
00066	I040	8/1/2017	12:00	Grady	FALSE	FALSE	Standing water. Good condition. No flow.	1	1
00067	I023	8/2/2017	12:00	Grady	FALSE	FALSE	Millennium Project has established new inlets and redirected stormwater flow. This inlet no longer exists.	0	Millennium Project
00068	I024	8/2/2017	12:00	Grady	FALSE	FALSE	Millennium Project has established new inlets and redirected stormwater flow. This inlet no longer exists.	0	Millennium Project
00069	I025	8/2/2017	12:00	Grady	FALSE	FALSE	Millennium Project has established new inlets and redirected stormwater flow. This inlet no longer exists.	0	Millennium Project
00070	I026	8/2/2017	12:00	Grady	FALSE	FALSE	Millennium Project has established new inlets and redirected stormwater flow. This inlet no longer exists.	0	Millennium Project
00071	I027	8/2/2017	12:00	Grady	FALSE	FALSE	Millennium Project has established new inlets and redirected stormwater flow. This inlet no longer exists.	0	Millennium Project
00072	I028	8/2/2017	12:00	Grady	FALSE	FALSE	Millennium Project has established new inlets and redirected stormwater flow. This inlet no longer exists.	0	Millennium Project
00073	I002	8/1/2017	12:00	Grady	FALSE	FALSE	No flow. Square grate overgrown with vegetation. Good condition.	0	30
00074	I010	8/1/2017	12:00	Grady	FALSE	FALSE	No flow. Good condition.	0	8
00075	I022	8/2/2017	12:00	Grady	FALSE	FALSE	Millennium Project has established new inlets and redirected stormwater flow. This inlet no longer exists.	0	Millennium Project

ARLINGTON NATIONAL CEMETERY

OUTFALL ILLICIT DISCHARGE INSPECTIONS 2016 and 2017

Assessment ID	Outfall ID	Date	Time	Inspector	Flow	Chlorine	Condition	Photos	SEC#
00001	R001	7/12/2016	16:40	Fenn	TRUE	FALSE	22" drain (concrete in concrete wall) to open ditch, with larger drain (from other source) adjoining. Little flow, mostly sediment, close to opaque, gray. No chlorine when tested. Outfall appears in good condition besides flow line and sediment.	4	
00002	R005	7/12/2016	10:00	Fenn	TRUE	FALSE	12" drain to stream (concrete pipe protruding from earth). Little flow, with slight sulfurous smell, and barely visible oil sheen on surface of flow. Orange-brown in color, and very cloudy, likely from sediment, which is visible all throughout stream. Outfall appears in good condition, but multiple problematic indicators.	2	
00003	R006	7/12/2016	15:00	Fenn	FALSE	FALSE	22" concrete drain (from concrete wall in side of hill) to open ditch, composed of concrete and stone. No flow present, but slight flow line visible in pipe.	4	
00006	R001	8/1/2017	12:00	Grady	TRUE	FALSE	Water flow. No chlorine. Outfall on NPS property. Concrete pipe discharging to a natural stream bed. Land use in Drainage Area is institutional. Closed concrete pipe discharges top open ditch. Flow is clear with no odor. Staining evident along flow line. No sample sent to offsite lab.	0	Adjacent 36A
00007	R006	8/2/2017	12:00	Grady	FALSE	FALSE	Stormwater BMP (MTD). Closed pipe to open drainage system down hillside to Millennium Stream. No flow.	3	Chaffee Parking Lot
00008	R003	8/2/2017	12:00	Grady	FALSE	FALSE	Millennium Project has redirected stormwater and created new outfalls into Millennium stream. All ANC property.	0	Millennium Stream
00009	R004	8/2/2017	12:00	Grady	FALSE	FALSE	Millennium Project has redirected stormwater and created new outfalls into Millennium stream. All ANC property.	0	Millennium Stream
00010	R005	8/2/2017	12:00	Grady	FALSE	FALSE	Millennium Project has redirected stormwater and created new outfalls into Millennium stream. All ANC property.	0	Millennium Stream

ARLINGTON NATIONAL CEMETERY

SPILL REPORTS July 1, 2016 - June 30, 2017

Date	Material	Location	Affected Media	Source	Amount	RP	Corrective Action	Reportable* (Y/N)	Reported To (Verbal/ Written)	Date Reported
02/15/2017	hydraulic fluid	Spoils Yard - Halsey Drive	soil	John Deer Payloader	5 gallons	Cemetery Operations	clean up contaminated soil and repair equipment	N	N/A	N/A
08/30/2016	potable water	grassy area along King Drive	soil, grass, trees	water line break	1000 gallons	USACE and KTR	turn off water main and repair broken section	N	N/A	N/A
12/21/2016	sewage	SEC10/SEC12	soil	sewage line break	<20 gallons	Facility Operations and ENG	Close restrooms, order port-a-potties, repair line	N	N/A	N/A
09/01/2016	hydraulic fluid	SEC63/COL6	granite panel, bluestone markers	Skid Steer	<1 gallon	USACE and KTR	remove equipment, clean granite and stone	N	N/A	N/A
03/03/2017	gas/oil mix	Memorial Avenue	pavement	portable generator	3 ounces	DASG	clean up spill, remove equipment	N	N/A	N/A

* Did spill enter stormdrain?

* Did spill exceed 25 gallons of oil?

Report Illicit Discharges and Storm Drain Threats

Contact ANC Environmental
(703) 614-0520

Report observations,
exact location, date, and time

Citation: Illicit Discharge Detection and Elimination Guidance Manual
by the Center for Watershed Protection, October 2004

Illicit Discharge Detection and Storm Drain Protection at
ARLINGTON NATIONAL CEMETERY

Stormwater Contamination

What to Look For and
How to Report Issues





Illicit Discharge Detection and Storm Drain Protection are the responsibility of every employee

- An Illicit Discharge is a measureable flow in a storm drain, when it is not raining, that contains pollutants or pathogens
- **Illicit Discharge Detection** starts with "noticing" when there is flow in a storm drain when it is not raining
- **Storm Drain Protection** starts with:
 - "Noticing" when flow during or after a rainfall is not clean and clear
 - "Noticing" a potential for stormwater contamination (any materials on the ground that could contribute to stormwater pollution)
- **Illicit Discharge and Storm Drain Protection Reporting** means immediately contacting the Environmental Division
- The Environmental Division will follow up on reports, and if needed, will locate sources and work to stop contaminants from entering the storm sewer system

Why is this important?

- Storm drains provide a direct route to public waterways; contaminants entering storm sewers are not treated before reaching our streams and rivers. Untreated pollutants and pathogens are detrimental to the surrounding streams, river, and wildlife and may impact human health
- ANC's storm sewer is permitted and requires Illicit Discharge Detection and Elimination and Storm Drain Protection

What should you look for?

- **Possible Illicit Discharge:** Water, chemicals, or other fluids flowing to or from a storm drain when it is not raining
- **Possible Stormwater Contamination:** Any stormwater flow that appears cloudy, contains trash, grass clippings, or sediment, or has a sheen, color, odor, or other sign of contaminants; this may be within a storm drain, or simply stormwater flow enroute to a storm drain
- **Potential for Stormwater Contamination:** Any material (such as loose trash, debris, sediment, fuels and oils, paints, other chemicals) that could possibly be transported by stormwater; breached or fallen silt fence around a construction area

What to do if you suspect an Illicit Discharge or Contaminated Stormwater Flow



Take a photograph of the flow if possible



If possible, note any nearby activities or conditions that might cause the flow or stormwater contamination*



Note exact location, date and time, weather conditions, and any observations about the flow (color, appearance, amount of flow)



Contact the ANC Environmental Division at (703) 614-0520



Note the source if it is obvious



Follow up to ensure your message was received

* Examples: Construction activity, vehicle/equipment maintenance or washing, irrigation, water line leaks/flushing, flooding/sump flows, spills, water/other liquid disposal, unsecured debris, etc.





COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

TDD (804) 698-4021

www.deq.virginia.gov

Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4020
1-800-592-5482

11/25/2013

Arlington National Cemetery
1 Memorial Drive
Arlington, VA 22211

RE: Construction General Permit Coverage #VAR10C624, Arlington National Cemetery Millennium Project - Commercial - Arlington

Dear Don Free:

DEQ has received your registration statement for the proposed land-disturbing project under the General Permit for Discharges of Stormwater from Construction Activities (VAR10). The project's date of coverage is either the date of this letter or fifteen business days after the postmark date of the project's complete registration packet submittal to DEQ.

By submission of the registration statement, you acknowledge that the proposed project is eligible for coverage under the General Permit and you have agreed to the conditions in the General Permit including any applicable conditions regarding Total Maximum Daily Loads and impaired waters. Please be aware that §62.1-44.15:35 of the Code of Virginia and the General Permit contain additional requirements if nonpoint nutrient offsets are chosen to meet the post-development nonpoint nutrient runoff compliance requirements. Section §62.1-44.15:35 requires that the permit issuing authority require that nonpoint nutrient offsets or other off-site options achieve the necessary nutrient reductions **PRIOR TO THE COMMENCEMENT OF THE PERMITTEE'S LAND DISTURBING ACTIVITY.**

A copy of the General Permit is available on the DEQ web page at <http://www.deq.virginia.gov/Portals/0/DEQ/Water/Publications/CGPvar10.pdf>. Print the VAR10 permit and read it carefully as you are responsible for meeting all the permit conditions. The General Permit will expire on June 30, 2014.

Your project specific permit registration number is **VAR10C624**. A copy of this permit coverage letter, registration statement, copy of the VAR10 permit, and the project's Stormwater Pollution Prevention Plan (SWPPP) must be at the construction site from the date of commencement of the construction activity to final stabilization. In addition, DEQ staff conduct periodic site inspections for compliance with the permit.

Additional information is available on the DEQ webpage at:

<http://www.deq.virginia.gov/programs/water/stormwatermanagement/vsmppermits/constructiongeneralpermit.aspx>. For questions, contact the Permit Processor at (804) 698-4039.

Sincerely,

Frederick K. Cunningham, Director
Office of Water Permits



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

March 09, 2016

Environmental Design and Construction LLC
1108 Good Hope Rd SE
Washington, DC 20020
pleclair@envdes.com

RE: Coverage under the VPDES Construction General Permit (VAR10)
General Permit No. VAR10H891
Arlington National Cemetery - Funeral Procession Queuing
Commercial - Parking Lot Demolition
Arlington

Dear Permittee:

DEQ has reviewed your Registration Statement received on February 25, 2016 and determined that the proposed land-disturbing activity is covered under the General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR10). The effective date of your coverage under this general permit is July 1, 2014 or the date of this letter, whichever is later.

A copy of the general permit can be obtained from DEQ's webpage at the following location:

<http://www.deq.virginia.gov/Portals/0/DEQ/Water/Publications/CGP2014.pdf>.

The general permit contains the applicable Stormwater Pollution Prevention Plan (SWPPP) requirements and other conditions of coverage. Please print the general permit and read it carefully as you will be responsible for compliance with all permit conditions.

DEQ staff has determined that the proposed land-disturbing activity will discharge to a surface water identified as impaired or for which a TMDL wasteload allocation has been established and approved prior to the term of the general permit for (i) sediment or a sediment-related parameter or (ii) nutrients. Therefore, the following general permit (Part I.B.4) and SWPPP requirements (Part II.A.5) must be implemented for the land-disturbing activity:

- Permanent or temporary soil stabilization shall be applied to denuded areas within seven (7) days after final grade is reached on any portion of the site;
- Nutrients (e.g., fertilizers) shall be applied in accordance with manufacturer's recommendations or an approved nutrient management plan and shall not be applied during rainfall events;
- Inspections shall be conducted at a frequency of (i) at least once every four (4) business days or (ii) at least once every (5) business days and no later than 48 hours following a measurable storm event. In the event that a measurable storm event occurs when there are more than 48 hours between business days, the inspection shall be conducted on the next business day; and
- Representative inspections used by utility line installation, pipeline construction, or other similar linear construction activities shall inspect all outfalls.

The general permit will expire on June 30, 2019. The conditions of the general permit require that you submit a new registration statement at least 90 days prior to that date if you wish to continue coverage under the general

permit, unless permission for a later date has been granted by the Board. Permission cannot be granted to submit the registration statement after the expiration date of the general permit.

If you have any questions about this permit, please contact the DEQ Office of Stormwater Management at ConstructionGP@deq.virginia.gov.

Sincerely,

A handwritten signature in black ink, reading "Frederick K. Cunningham". The signature is written in a cursive style with a large, stylized "F" and "C".

Frederick K. Cunningham, Director
Office of Water Permits