FINAL – STORMWATER POLLUTION PREVENTION PLAN

August 2018

Arlington National Cemetery

1 Memorial Drive
Arlington, VA 22211

VPDES Permit Number: VAR040139
Permit Effective Date: November 1, 2018
Permit Expiration Date: October 31, 2023

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Authorized Program Signature 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 gathered and evaluated 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.

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List of Acronyms

ANC	Arlington National Cemetery
BMP	Best Management Practice
CFR	Code of Federal Regulations
CSA	Contractor Storage Area
IPMP	Integrated Pest Management Plan
MS4	Municipal Separate Storm Sewer System
MTD	Manufactured Treatment Device
NPS	National Park Service
NMP	Nutrient Management Plan
O&M	Operation and Maintenance
PMCS	Preventive Maintenance Check and Services
POL	Petroleum, Oils, and Lubricants
RP	Responsible Party
SPCC	Spill Prevention, Control, and Countermeasure
SOP	Standard Operating Procedure
SWPPP	Stormwater Pollution Prevention Plan
VAC	Virginia Administrative Code
VDEQ	Virginia Department of Environmental Quality
VDOT	Virginia Department of Transportation
VPDES	Virginia Pollutant Discharge Elimination System

1.0 BACKGROUND AND SITE DESCRIPTION

1.1 Background

Arlington National Cemetery (ANC) is a 620-acre active military cemetery in Arlington County, Virginia. ANC operates a Small Municipal Separate Storm Sewer System (MS4) under Virginia Pollutant Discharge Elimination System (VPDES) Permit Number VAR040139, effective December 23, 2013. This stormwater pollution prevention plan (SWPPP) complies with Part I E 6 c. of the General VPDES Permit for Discharges of Stormwater from Small MS4s (9 Virginia Administrative Code [VAC] 25-890-40) hereafter referred to as "the General Permit." The General Permit covers all stormwater runoff at ANC.

The National Park Service (NPS) owns land located within and adjacent to the ANC property. ANC does not manage or maintain the NPS-owned land; therefore, it is not included in ANC's SWPPP.

There are 12 discharge points from ANC's MS4. Eleven are classified as interconnections because they discharge directly to an adjacent MS4 via an engineered structure such as a pipe or channel. Receiving MS4s include the NPS, Arlington County, Pentagon, and Virginia Department of Transportation (VDOT). One outfall discharges directly to Boundary Channel, which flows to the Potomac River. **Table 1-1** lists ANC's outfalls and interconnections.

Table 1-1: Outfalls, Interconnections, and Receiving Waterbody or MS4

ID Number	Type	Receiving Waterbody or MS4
MS4 Outfalls		
OF8-SEC74	Underground pipe	Boundary Channel (pipe runs beneath VDOT and NPS property)
Interconnections to Adjacent MS4s		
IN1-SEC52	Culvert	VDOT
IN2-SEC36A	Underground pipe	NPS
IN3-SEC36	Underground pipe	NPS
IN4-SEC31	Underground pipe	NPS
IN5- Tram	Underground pipe	NPS
IN6-PG North	Underground pipe	VDOT
IN7-PG South	Underground pipe	VDOT
IN9-SEC69	Underground pipe	Pentagon Lagoon
IN10-B123	Underground pipe	VDOT
IN11-SEC8	Underground pipe	Arlington County
IN12-SEC29	Pipe daylights to ground surface	NPS

Stormwater flows onto the ANC property from Joint Base Myer-Henderson Hall, Arlington County, VDOT, and NPS MS4s.

The ANC storm sewer system includes open ditches and underground piping. Additionally, a natural stream runs through the northwestern portion of the cemetery. The stream receives water from the piped stormwater system and then flows back into the underground piping before discharging on the northeast side of the property.

1.2 Site Description

This SWPPP focuses on areas having the greatest threat of pollutants entering stormwater. The General Permit defines these areas as "high-priority." At ANC, these include the Operations Complex, Spoils Area, and Contractor Storage Area (CSA). This SWPPP also addresses high-priority activities conducted facility-wide causing pollutants to enter stormwater.

Appendix A contains a site map showing ANC's MS4 boundary; MS4 outfalls; interconnections to adjacent MS4s; locations of the Operations Complex, Spoils Area, and CSA; direction of stormwater flows; existing source controls; and receiving water bodies.

1.3 General Permit Requirements

Table 1-2 lists the high-priority activities as defined in the General Permit and areas where these activities occur at ANC.

Table 1-2: High-Priority Activities at ANC

High-Priority Activity	Applicable Area at ANC
Composting Facilities	N/A
Equipment Storage and Maintenance Facilities	Operations Complex, Spoils Area, CSA
Materials Storage Yards	Operations Complex, Spoils Area, CSA
Pesticide Storage Facilities	Operations Complex, CSA
Public Works Yards	Operations Complex, Spoils Area, CSA
Recycling Facilities	N/A
Salt Storage Facilities	Operations Complex
Solid Waste Handling and Transfer Facilities	Operations Complex, Spoils Area, CSA, facility-wide
Vehicle Storage and Maintenance Yards	Operations Complex, Spoils Area, CSA, facility-wide

Table 1-3 lists high-priority activities with a high potential of discharging pollutants, as defined in the General Permit and the applicability to ANC.

Table 1-3: High-Priority Activities with High Potential of Discharging Pollutants at ANC

High-Priority Activity with High Potential of Discharging Pollutants	Applicability to ANC
Areas where residuals from using, storing, or cleaning machinery or equipment remain and are exposed to stormwater	ANC stores and uses equipment outside at the Operations Complex, Spoils Area, and CSA in areas exposed to stormwater.
Materials or residuals on the ground or in stormwater inlets from spills or leaks	Materials and residuals may be present on the ground at the Operations Complex, Spoils Area, CSA, and facility-wide.
Material handling equipment	ANC stores material handling equipment outside at the Operations Complex, Spoils Area, and CSA. ANC operates material handling equipment at the Spoils Area, CSA, and facility-wide.
Materials or products that would be expected to be mobilized in stormwater runoff during loading/ unloading or transporting activities (e.g., rock, salt, fill dirt)	ANC conducts materials loading/unloading activities at the Operations Complex, Spoils Area, CSA, and facility-wide.

Table 1-3: High-Priority Activities with High Potential of Discharging Pollutants at ANC	
High-Priority Activity with High Potential of Discharging Pollutants	**Applicability to ANC**
Materials or products stored outdoors (except final products intended for outside use where exposure to stormwater does not result in the discharge of pollutants)	ANC stores bulk materials outdoors at the Spoils Area and CSA.
Materials or products expected to be mobilized in stormwater runoff contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers	ANC does not store materials or products in open, deteriorated, or leaking storage drums, barrels, tanks, and similar containers.
Waste material except waste in covered, non-leaking containers (e.g., dumpsters)	ANC stores green and landscape waste in uncovered, non-leaking dumpsters at the Spoils Area and CSA.
Application or disposal of process wastewater (unless otherwise permitted)	ANC does not apply or dispose of process wastewater.
Particulate matter or visible deposits of residuals from roof stacks, vents, or both not otherwise regulated (i.e., under an air quality control permit) and evident in the stormwater runoff.	ANC does not have air emission sources that result in particulate matter or visible deposits of residuals.

2.0 POTENTIAL POLLUTANTS AND POLLUTANT SOURCES

Table 2-1 provides a checklist of the potential pollutants present at high-priority activities with high potential of discharging to stormwater, the pollutant sources, and the source controls ANC uses to minimize the pollutant's potential to enter stormwater.

Table 2-1: Potential Pollutants		
Pollutant Source (Location)	**Potential Pollutants**	**Source Controls**
Operations Complex		
Fueling station	• Gasoline (4,000 gallons) • Diesel (6,000 gallons) • Used oil (500 gallons) • Used antifreeze (500 gallons) • Vehicle petroleum, oil, and lubricants (POLs)	• Double-walled tanks • Leak detection systems • Restricted access to dispensing units • Standard operating procedures (SOPs) • Spill kits at station and on fuel delivery trucks • Written Spill Prevention, Control, and Countermeasure (SPCC) plan
Vehicle and equipment washing	• Surfactants • POLs • Grease	• Wash bay located indoors • Closed-loop wastewater recycling system
Loading dock and hydraulic lift	• Hazardous materials • Hydraulic fluid • POLs	• Spill kit at dock and on trucks • Written SPCC plan
Pesticide storage	• Pesticide (includes herbicide, insecticide, fungicide, and rodenticide)	• Stored inside buildings and/or flammable storage cabinets • Spill kit near storage • Written Integrated Pesticide Management Plan (IPMP)

Table 2-1: Potential Pollutants		
Pollutant Source (Location)	**Potential Pollutants**	**Source Controls**
Hazardous materials storage	• Hazardous materials • POLs	• Stored indoors, outdoors under cover, and/or in flammable storage cabinets • Stored on secondary containment per SPCC Plan • For indoor storage areas with floor drains, discharges flow through oil/water separator (OWS) and oil recovery underground storage tank (UST) to sanitary sewer • Floor drains in central maintenance shop, paint shop, plumbing shop, and carpentry shop plugged • Spill kits near storage • Written Hazardous Materials Management Plan
Hazardous waste storage	• Hazardous waste	• Any discharges from building would flow into pretreatment device and stormwater chamber BMPs • Written Hazardous Waste Management Plan
Carpentry shop	• Sawdust	• Closed sawdust collection bag • Stormwater drains to pretreatment device and stormwater chamber BMPs
Field operations equipment – indoor storage	• POLs • Grease	• Equipment stored indoors to the extent practicable • Written Heavy Equipment Preventive Maintenance Check and Services (PMCS) plan • Spill kits near storage
Field operations equipment – outdoor storage	• POLs • Grease	• Stored, to the extent possible, inside bays with no floor drains • Trench drains in courtyard direct stormwater to pretreatment device and stormwater chamber BMPs • Written Heavy Equipment Preventive Maintenance Check and Services (PMCS) plan • Spill kits near storage
Sewer pump station owned by ANC with emergency generator (diesel belly tank) owned by Dominion	• Untreated sanitary waste water • POLs	• Pump station alarm for failures and overflows • Double-walled generator belly tank • Spill kit near pump station
Soil, sand, and salt storage bays	• Soil • Sand • Salt • POLs	• Stored in enclosed building with no floor drains • Bays swept, not washed • Bay floors sloped back to prevent pollutants from leaving building • Stormwater drains to StormFilter manufactured treatment device (MTD), pretreatment device, and stormwater chamber BMPs
Spoils Area		
Spoils storage	• Spoils • Unusable soils/green waste • Sifted dirt/sediment	• Vegetated berm surrounding entire area • Debris from sifted soils stored in roll-off dumpster

Table 2-1: Potential Pollutants		
Pollutant Source (Location)	**Potential Pollutants**	**Source Controls**
Heavy equipment	• POLs • Grease	• Vegetated berm surrounding entire area
Contractor Storage Area		
Contractor materials storage (conex boxes)	• Magnesium sulfate (ice melt) • Grass seed • Fertilizer	• Materials stored on pallets in conex boxes • Stormceptor BMP downstream
Pesticide mixing and application	• Pesticide • POLs	• Mixing conducted in secondary containment structure • Application tanks stored empty or on secondary containment • Written IPMP • Spill kits near storage and on equipment/vehicles • Stormceptor BMP downstream
Landscaping materials storage	• Topsoil • Tree/plant waste • Mulch • POLs • Grease	• Topsoil and mulch contained on three sides by jersey barriers and covered with tarp or plastic • Chipped tree waste stored in roll-off dumpster • Mulch contained on three sides by jersey barriers • Stormceptor BMP downstream
Contractor-owned heavy equipment storage	• POLs • Grease	• Drip plans placed beneath equipment during fueling • Stormceptor BMP downstream
Small equipment (e.g., lawn mowers, chipper, all-terrain vehicles)	• POLs • Grease • Sediment • Yard waste	• Stored in conex boxes or under cover • Drip plans placed beneath equipment during fueling • Stormceptor BMP downstream
Small POL containers	• POLs	• Stored in flammable storage cabinets and/or conex box • Stored on drip pans or secondary containment during daily shift use • Stormceptor BMP downstream
Mobile generator with diesel day tank	• POLs • Grease	• Drip pan placed under unit • Spill kit on generator trailer • Stormceptor BMP downstream
Facility-Wide		
Paved roads and parking lots	• POLs • Grease • Animal waste • Litter • Deicing chemicals/salt • Sediment	• Street sweeping conducted 5 days per week with vacuum truck • Trash bins with rain bonnets placed throughout site • Structural BMPs installed throughout site (listed in **Table 2-2**) • Horses followed by grounds crew to immediately remove animal waste from roads • Water sprayed for dust suppression
Unpaved access roads	• POLs • Grease • Sediment	• Gravel placed at entrances to minimize tracking and slow runoff • Structural BMPs installed throughout site (listed in **Table 2-2**)

Table 2-1: Potential Pollutants		
Pollutant Source (Location)	**Potential Pollutants**	**Source Controls**
High-traffic visitor areas	• Litter	• Trash bins with rain bonnets placed throughout site • Grounds crew collects litter during daily maintenance • Structural BMPs installed throughout site (listed in **Table 2-2**) • Water sprayed for dust suppression
Turf management and disturbed areas	• Sediment • Pesticide • Fertilizer • POLs • Grease	• Written Nutrient Management Plan (NMP) • Inlet protection placed on storm drains downstream of ground disturbance, removed after new grass mowed three times • Silt fence used if disturbed area is greater than 3:1 slope • Grass buffer maintained between disturbed area and roads • Reseeding conducted as soon as possible • Structural BMPs installed throughout site (listed in **Table 2-2**)
Headstone, monument, sidewalk, and building cleaning	• Surfactants • Sediment • POLs • Grease • Litter	• Cold water used in pressure washer • Water directed to areas where it can infiltrate, to the extent possible • Washing not conducted in areas with disturbed soil • Litter collected prior to washing • Structural BMPs installed throughout site (listed in **Table 2-2**) • Water sprayed for dust suppression
Active burial sites	• Sediment • POLs • Grease • Litter	• Disturbed area minimized • Grass buffers maintained between site and roads • Reseeding conducted as soon as possible • Grounds crew collects litter during daily maintenance • Structural BMPs installed throughout site (listed in **Table 2-2**)
Pesticide application	• Pesticide	• Encourage hand removal of invasive plants • Pesticide not applied near streams • Written IPMP • Licensed contractor used for all pesticide application • Structural BMPs installed throughout site (listed in **Table 2-2**)

Table 2-2 lists structural stormwater BMPs, corresponding ANC BMP number, type, location, and the potential pollutants treated by the BMP.

Table 2-2: Structural BMPs at ANC																
BMP #	BMP Type	Location	Potential Pollutants Treated by BMP													
			Fertilizer	Grease	Hazardous materials	Hazardous waste	Litter	Magnesium sulfate	Pesticide	POLs	Salt	Sand	Sawdust	Sediment	Soil	Surfactants	Untreated sanitary waste
PP-1	Permeable Pavement, no underdrain, with gravel	Sidewalk along Eisenhower Ave	•	•				•	•	•	•			•			
PP-2	Permeable Pavement, no underdrain, with gravel	Sidewalk near Chapel Gate	•	•				•	•	•	•			•			
PP-3	Porous Pavement	Millennium	•	•				•	•	•	•			•			
RG-1	Rain Garden 1, No underdrain	Bldg. 123		•				•		•	•			•			
RG-2	Rain Garden 2, No underdrain	Bldg. 123		•				•		•	•			•			
RG-3	Rain Garden 3, No underdrain	Bldg. 123		•				•		•	•			•			
RG-4	Raingarden 1	Millennium	•	•			•	•	•	•	•			•		•	
RG-5	Raingarden 2	Millennium	•	•			•	•	•	•	•			•		•	
RG-6	Raingarden 3	COL10	•	•			•	•	•	•	•			•		•	
RG-7	Raingarden 4	Millennium	•	•			•	•	•	•	•			•		•	
RG-8	Raingarden 5	Millennium	•	•			•	•	•	•	•			•		•	
RG-9	Raingarden 6	Millennium	•	•			•	•	•	•	•			•		•	
RG-10	Raingarden 7	Millennium	•	•			•	•	•	•	•			•		•	
RG-11	Bio-Retention 1	Admin South PL	•	•			•	•	•	•	•			•		•	
RG-12	Bio-Retention 2	Admin South PL	•	•			•	•	•	•	•			•		•	
RG-13	Bio-Retention 3	Admin North PL	•	•			•	•	•	•	•			•		•	
RG-14	Bio-Retention 4	East Employee Lot	•	•			•	•	•	•	•			•		•	
RG-15	Raingarden 8	Millennium	•	•			•	•	•	•	•			•		•	
STC-1	Stormceptor 1 (STC 1800)	Columbarium 7	•	•			•	•	•	•	•			•		•	
STC-2	Stormceptor 2 (STC 1800)	Columbarium 8	•	•			•	•	•	•	•			•		•	
STC-3	Stormceptor 3 (STC 900)	Columbarium 9 (North)	•	•			•	•	•	•	•			•		•	
STC-4	Stormceptor 4 (STC 900)	Columbarium 9 (South)	•	•			•	•	•	•	•			•		•	
STC-5	Stormceptor 5 (STC 2400)	North of McClellan Circle - (near Niche Wall)	•	•			•	•	•	•	•			•		•	
STC-6	Stormceptor 6 (STC 1800)	Southeast of McClellan Circle	•	•			•	•	•	•	•			•		•	
STC-7	Stormceptor 7 (STC 1200)	York Drive/Marshall Drive	•	•			•	•	•	•	•			•		•	
PT-UTD	Stormwater Pre-Treatment Chamber	Bldg. 123		•	•	•	•	•		•	•	•	•	•	•		•
UTD	Underground Stormwater Chamber	Bldg. 123		•	•	•	•	•		•	•	•	•	•	•		•
STF-1	ConTech StormFilter	Queuing PL	•	•			•	•	•	•	•			•		•	
STF-2	ConTech StormFilter	B129		•	•	•		•		•	•	•	•	•	•		•
SF-1	Storm Filter	Columbarium 6	•	•			•	•	•	•	•			•		•	
MTD-1	Chaffee PL MTD	Chaffee PL	•						•	•			•				
MTD-2	Millennium MTD	Millennium	•	•			•	•	•	•	•			•		•	

3.0 POTENTIAL NON-STORMWATER DISCHARGES

ANC does not have any non-stormwater discharges identified as significant contributors of pollutants.

Table 3-1 lists the non-stormwater discharges defined in the General Permit; a determination if the potential non-stormwater discharge's is present at ANC; and, if present, a significant contributor of pollutants.

Table 3-1: Non-Stormwater Discharges at ANC

Potential Non-Stormwater Discharge	Present at ANC	Source Controls	Is the Discharge a Significant Contributor of Pollutants?
Dechlorinated Water Line Flushing	No	N/A	N/A
Landscape Irrigation	Yes	• Controlled activity using potable water • Water infiltrates into the ground	No, source controls in place and effective
Diverted Stream Flows	No	N/A	N/A
Rising Ground Waters	Yes	• ANC tests water for chlorine to ensure it is naturally occurring • BMPs installed throughout site to control flow and remove pollutants	No, source controls in place and effective
Uncontaminated Ground Water Infiltration	No	N/A	N/A
Uncontaminated Pumped Ground Water	No	N/A	N/A
Discharges from Potable Water Sources (includes water line and hydrant flushing)	Yes	• Controlled activity using potable water • Water infiltrates into the ground • BMPs installed throughout site to control flow and remove pollutants • Leaks from potable water systems (including hydrants) repaired as soon as possible	No, source controls in place and effective
Foundation Drains	No	N/A	N/A
Air Conditioning Condensation	Yes	• Condensate is minimal due to small number of temperature-controlled buildings on site. • BMPs installed throughout site to control flow and remove pollutants	No, source controls in place and effective
Irrigation Water	Yes	• Controlled activity using potable water • Water infiltrates into the ground • BMPs installed throughout site to control flow and remove pollutants	No, source controls in place and effective
Springs	Yes	• ANC tests water for chlorine to ensure it is naturally occurring • BMPs installed throughout site to control flow and remove pollutants	No, source controls in place and effective
Water from Crawl Space Pumps	No	N/A	N/A
Footing Drains	No	N/A	N/A

Table 3-1: Non-Stormwater Discharges at ANC			
Potential Non-Stormwater Discharge	**Present at ANC**	**Source Controls**	**Is the Discharge a Significant Contributor of Pollutants?**
Lawn Watering	Yes	• Controlled activity using potable water • Water infiltrates into the ground • BMPs installed throughout site to control flow and remove pollutants	No, source controls in place and effective
Individual Residential Car Washing	No	N/A	N/A
Flows from Riparian Habitats and Wetlands	No	N/A	N/A
Dechlorinated Swimming Pool Discharges	No	N/A	N/A
Street Wash Water	Yes	• Controlled activity using potable water • Water sprayed for dust suppression only	No, source controls in place and effective
Discharges or Flows from Firefighting Activities	Yes	The immediate discharge of materials necessary to protect life and property as determined by fire department personnel or emergency management officials is excluded from permitting.	N/A
Other Activities Generating Discharges Identified by The Department as Not Requiring VPDES Authorization	No	N/A	N/A

4.0 WRITTEN PROCEDURES DESIGNED TO REDUCE AND PREVENT POLLUTANT DISCHARGES

Table 4-1 lists ANC's written procedures to reduce and prevent pollutant discharges.

Table 4-1: Written Procedures to Reduce and Prevent Pollution Discharges	
Written Procedure	**Components**
Spill Prevention, Control, and Countermeasure Plan	• Written spill response procedures • Transfer and fueling operations SOPs • Secondary containment required for POL containers 55 gallons or larger • Inspection and integrity testing schedule
Hazardous Materials and Hazardous Waste Management Plan	• Identifies common waste streams generated by ANC and how to manage them including inspection frequency, turn-in procedures, training, spill response, and hazardous waste minimization • Includes BMPs for hazardous waste storage areas
Integrated Pest Management Plan	• Strategies to manage pests including rodents, insects, and weeds • All contractors, subcontractors, and private partners must adhere to IPMP • Pesticide application restrictions • Pesticide spill cleanup, decontamination, disposal, and notification procedures

Table 4-1: Written Procedures to Reduce and Prevent Pollution Discharges	
Written Procedure	**Components**
Nutrient Management Plan	• Strategies for managing fertilizers to minimize nutrients in stormwater runoff • All contractors, subcontractors, and private partners must adhere to NMP • Fertilizer application restrictions
Flammable Storage Lockers SOPs	• Inspection procedures including general safety, electrical safety, fire prevention, means of egress, and hazardous/flammable materials
Heavy Equipment Preventive Maintenance Check and Services	• PMCS performed each day personnel operate the equipment and during scheduled maintenance • Operators only conduct minor repairs that do not require disassembling of assemblies and components • Significant repairs conducted off-site
Small spills SOPs	• Small oil spills cleaned using absorbent and collected in closed container • Disposal through the hazardous waste storage area as a non-regulated waste
Hazardous material and POL storage SOPs	• Gasoline and other flammables not stored in maintenance areas • Packaged POLs stored in the designated POL shed • Paint maintained in the Paint Shop

5.0 REQUIRED TRAINING

ANC provides training to its employees through training sessions, stormwater informational handouts, and materials published on its intranet site. Additional training and certifications may be provided by outside parties such as VDEQ. ANC does not provide training to contractors; however, requires compliance with all applicable stormwater regulations including training. It is the contractor's responsibility to ensure their staff is properly trained. **Table 5-1** outlines the training ANC uses, and requires contractor to use, to meet Part I E 6 m. of the General Permit.

Table 5-1: SWPPP Training at ANC		
Training Topic	**Attendees**	**Frequency**
Recognition and reporting of illicit discharges	Facility personnel	Annually and New Comers Training
Pollution prevention and good housekeeping associated with road, street, and parking lot maintenance	Employees performing road, street, and parking lot maintenance	Annually and New Comers Training
Pollution prevention and good housekeeping associated with maintenance, public works, or recreational facilities	Employees working in or around maintenance, public works, or recreational facilities	Annually and New Comers Training
Virginia Pesticide Control Act	Contractors hired by ANC who apply pesticides and herbicides	As required
Virginia Erosion and Sediment Control Law	Employees and contractors serving as plan reviewers, inspectors, program administrators, or construction site operators	As required
Virginia Stormwater Management Act	Employees implementing the stormwater program	As required
Spill response	Employees who could cause or respond to POL spills	Annually and New Comers Training

6.0 PROCEDURES TO CONDUCT AN ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION

ANC conducts a Comprehensive Site Compliance Evaluation by June 30 of each year. The evaluation includes an assessment of the entire facility to determine if ANC must add any new high-priority areas to the SWPPP, any changes to activities such that an area no longer classifies as high-priority, and SWPPP availability. The evaluation includes review of the following inspection reports to determine if ANC must update the SWPPP:

- Site-specific source controls inspection logs
- Stormwater maintenance (structural BMPs) inspection checklists
- Illicit discharge inspection and reporting documents
- Spills and leaks records

Appendix B contains a blank Comprehensive Site Compliance Evaluation form. ANC will also add completed forms to **Appendix B** as a record of SWPPP compliance.

7.0 INSPECTION AND MAINTENANCE SCHEDULE FOR SITE-SPECIFIC SOURCE CONTROLS

ANC inspects all site-specific source controls annually. **Section 8.0** describes how ANC conducts inspections of the site-specific source controls listed in **Table 2-1** and ANC's MS4 Program Plan describes inspections of the structural BMPs listed in **Table 2-2**. ANC reviews all inspection forms as part of the Comprehensive Site Compliance Evaluation and logs the inspection date(s), associated findings, and follow-up actions in this SWPPP using the Comprehensive Site Compliance Evaluation form. Maintenance of site-specific source controls is performed on an as-needed basis.

ANC conducts inspections randomly and following a release of the following as required by its SPCC plan:

- All POL containers 55 gallons or greater
- Secondary containment structures
- Spill kits

8.0 INSPECTION LOGS FOR SITE-SPECIFIC SOURCE CONTROLS

ANC created Site-Specific Source Controls Inspection Logs to conduct and record inspections. The inspection logs list the pollutant sources, potential pollutants, and source controls identified in **Section 2.0** and provide space to document observations and corrective action information such as required tasks, status, and completion date. **Appendix C** contains Site-Specific Source Controls Inspection Logs.

ANC personnel conduct quarterly inspections of site-specific source controls. Each quarterly inspection focuses on a separate part of the facility, resulting a complete facility inspection annually. ANC compiles and reviews the four completed inspection logs as part of the annual Comprehensive Site Compliance Evaluation. **Table 8-1** provides a breakdown of the areas inspected each quarter.

Table 8-1: Site-Specific Source Control Inspection Breakdown	
Quarter	**Inspection Areas**
1	• Operations Complex • Sections 4, 8, 8A 18, 20, 25, 34, 47, 64-70*
2	• Spoils Area • CSA • Visitor Center and parking* • Funeral Queuing* • Tram Plaza* • Sections 10, 12, 33, 54-63, 71-76*
3	• Sections 1, 2, 5, 26-32, 36, 36A, 38-43, 45, 49-53, 77-85*
4	• Sections 3, 6, 7, 7A, 9, 11, 13-19, 21-24, 35, 37, 44, 46, 48*

* Area included in Facility-Wide inspection log

9.0 DISCHARGE, RELEASE, OR SPILL INCIDENT LOGS

ANC conducts illicit discharge inspections during dry weather as required in its MS4 Program Plan. ANC reviews and records the results of illicit discharge inspections and corrective actions as part of the annual Comprehensive Site Compliance Evaluation.

ANC requires personnel to report all spills to its Environmental Division using the Spill Reporting Form in **Appendix D**. The Environmental Division determines if the spill is reportable[1]. ANC records spills on a Spill Incident Log including the date of incident; material; location; affected media; source; amount; responsible party (RP); corrective action; who the spill was reported to (verbal/written), if applicable; and date. An example of the log is provided in **Appendix E.**

ANC will review the contents of the SWPPP no later than 30 days after any unauthorized discharge, release, or reportable spill to determine if additional measures are necessary to prevent future releases. ANC will make any necessary SWPPP updates within 90 days of the discharge.

10.0 ANNUAL SWPPP REVIEW AND UPDATES

ANC conducts the Comprehensive Site Compliance Evaluation described in **Section 6.0** no later than June 30 of each year. As part of this evaluation, ANC assesses the entire facility to determine if any new high-priority areas with high potential to discharge pollutants must be added to the SWPPP. ANC will add any newly identified areas to the SWPPP by December 31st of the same year. If activities change at ANC such that the area no longer meets the criteria of a high-priority facility with a high potential to discharge pollutants, ANC may remove the facility, area, or activity from the SWPPP. ANC documents all annual SWPPP reviews and updates as part of the Comprehensive Site Compliance Evaluation.

11.0 SWPPP AVAILABILITY

Employees and contractors can access the SWPPP in electronic format on any computer or electronic device connected to ANC's intranet site. Additionally, ANC uses the SWPPP as part of its training.

[1] The General Permit defines a reportable spill as sewage, industrial waste, other wastes or any noxious or deleterious substance or a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR 110, 40 CFR 117, 40 CFR 302, or Code of Virginia 62.1-44.34:19 that occurs during a 24-hour period into or upon surface waters; or who discharges or causes or allows a discharge that may reasonably be expected to enter surface waters.

APPENDIX A
Site Map

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Arlington National Cemetery - MS4 Map

0 0.125 0.25 0.5 Miles

N W E S

Coordinate System: NAD 1983 StatePlane Virginia North FIPS 4501 Feet

Legend

- Stormwater_BMP
- MS4 Outfall / Interconnection
- StormwaterUtilitySegment
- High Priority Area
- Installation_Boundary

APPENDIX B
Comprehensive Site Compliance Evaluation

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Arlington National Cemetery Comprehensive Site Compliance Evaluation	
Name:	
Date:	**Reporting Period:**

Inspection Report	Results
Review of High-Priority Areas and SWPPP Availability	
Are there any new high-priority areas and/or activities that must be added to the SWPPP?	YES ☐ NO ☐
Any changes to activities such that an area is no longer classified as high-priority?	YES ☐ NO ☐
If YES, describe SWPPP modifications needed.	
SWPPP (hard-copy or electronic copy) available to employees at high-priority areas?	YES ☐ NO ☐
If NO, describe action required and expected date of completion.	
Are SWPPP updates required?	**YES ☐ NO ☐**
Site-Specific Source Controls Inspections	
Dates of inspections:	
Were all site-specific source control inspections completed?	YES ☐ NO ☐
Dates of inspections: Q1: _____ Q2: _____ Q3: _____ Q4: _____	
If NO, describe action required and expected date of completion.	
Were any corrective actions required?	YES ☐ NO ☐
If YES, were corrective actions completed?	YES ☐ NO ☐
If NO, describe action required and expected date of completion.	
Are all potential pollutants accurately described and included in the SWPPP?	YES ☐ NO ☐
If NO, describe.	
Are all source controls in place and effective for minimizing pollutants in stormwater?	YES ☐ NO ☐
If NO, describe.	
SWPPP updates required?	**YES ☐ NO ☐**

Inspection Report	Results
Stormwater Management Facilities (Structural BMPs) Inspections	
Inspection Date(s):	
Were any corrective actions required?	YES ☐ NO ☐
If YES, were corrective actions completed?	YES ☐ NO ☐
If NO, describe action required and expected date of completion.	
Are all stormwater management facilities in place and effective for minimizing pollutants in stormwater?	YES ☐ NO ☐
If NO, describe.	
SWPPP updates required?	**YES ☐ NO ☐**
Illicit Discharge Inspections	
Were any illicit discharged detected during the reporting period?	YES ☐ NO ☐
Was the source of the illicit discharge identified and eliminated?	YES ☐ NO ☐
If NO, describe.	
SWPPP updates required?	**YES ☐ NO ☐**
Spills and Leaks Reporting	
Did any reportable spills occur during the reporting period?	YES ☐ NO ☐
Were any corrective actions required?	YES ☐ NO ☐
If YES, were corrective actions completed?	YES ☐ NO ☐
If NO, describe action required and expected date of completion.	
SWPPP updates required?	**YES ☐ NO ☐**
SWPPP Compliance	
Is the SWPPP accurate and effective for the facility?	YES ☐ NO ☐
If NO, describe.	
Is the SWPPP compliant with the terms and conditions of the permit?	YES ☐ NO ☐
If NO, describe.	

Inspection Report	Results
Summary/Additional Comments	

APPENDIX C
Site-Specific Source Control Inspection Log

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Arlington National Cemetery Site-Specific Source Controls Inspection Log
Name:
Date:
Weather/site conditions:

Operations Complex					
Pollutant Source (Location)	**Potential Pollutants**	**Source Controls**	**Observations**	**Corrective Action Required?**	**Status**
Fueling station	• Gasoline (4,000 gallons) • Diesel (6,000 gallons) • Used oil (500 gallons) • Used antifreeze (500 gallons) • Vehicle petroleum, oil, and lubricants (POLs)	• Double-walled tanks • Leak detection systems • Restricted access to dispensing units • Standard operating procedures (SOPs) • Spill kits at station and on fuel delivery trucks • Written Spill Prevention, Control, and Countermeasure (SPCC) plan		☐ YES ☐ NO	Completion date:__ /__ / __
Vehicle and equipment washing	• Surfactants • POLs • Grease	• Wash bay located indoors • Closed-loop wastewater recycling system		☐ YES ☐ NO	Completion date:__ /__ / __
Loading dock and hydraulic lift	• Hazardous materials • Hydraulic fluid • POLs	• Spill kit at dock and on trucks • Written SPCC plan		☐ YES ☐ NO	Completion date:__ /__ / __
Pesticide storage	• Pesticide (includes herbicide, insecticide, fungicide, and rodenticide)	• Stored inside buildings and/or flammable storage cabinets • Spill kit near storage • Written Integrated Pesticide Management Plan (IPMP)		☐ YES ☐ NO	Completion date:__ /__ / __
Carpentry shop	• Sawdust	• Closed sawdust collection bag • Stormwater drains to pretreatment device and stormwater chamber BMPs		☐ YES ☐ NO	Completion date:__ /__ / __

Operations Complex					
Pollutant Source (Location)	**Potential Pollutants**	**Source Controls**	**Observations**	**Corrective Action Required?**	**Status**
Hazardous materials storage	• Hazardous materials • POLs	• Stored indoors, outdoors under cover, and/or in flammable storage cabinets • Stored on secondary containment per SPCC Plan • For indoor storage areas with floor drains, discharges flow through oil/water separator (OWS) and oil recovery underground storage tank (UST) to sanitary sewer • Floor drains in central maintenance shop, paint shop, plumbing shop, and carpentry shop plugged • Spill kits near storage • Written Hazardous Materials Management Plan		☐ YES ☐ NO	Completion date:__ /__ / __
Hazardous waste storage	• Hazardous waste	• Any discharges from building would flow into pretreatment device and stormwater chamber BMPs • Written Hazardous Waste Management Plan		☐ YES ☐ NO	Completion date:__ /__ / __
Field operation equipment – indoor storage	• POLs • Grease	• Equipment stored indoors to the extent practicable • Written Heavy Equipment Preventive Maintenance Check and Services (PMCS) plan • Spill kits near storage		☐ YES ☐ NO	Completion date:__ /__ / __

Operations Complex					
Pollutant Source (Location)	**Potential Pollutants**	**Source Controls**	**Observations**	**Corrective Action Required?**	**Status**
Field operation equipment – outdoor storage	• POLs • Grease	• Stored, to the extent possible, inside bays with no floor drains • Trench drains in courtyard direct stormwater to pretreatment device and stormwater chamber BMPs • Written Heavy Equipment Preventive Maintenance Check and Services (PMCS) plan • Spill kits near storage		☐ YES ☐ NO	Completion date:__ /__ / __
Sewer pump station owned by ANC with emergency generator (diesel belly tank) owned by Dominion	• Untreated sanitary waste water • POLs	• Pump station alarm for failures and overflows • Double-walled generator belly tank • Spill kit near pump station		☐ YES ☐ NO	Completion date:__ /__ / __
Soil, sand, and salt storage bays	• Soil • Sand • Salt • POLs	• Stored in enclosed building with no floor drains • Bays swept, not washed • Bay floors sloped back to prevent pollutants from leaving building • Stormwater drains to stormfilter manufactured treatment device (MTD), pretreatment device, and stormwater chamber BMPs		☐ YES ☐ NO	Completion date:__ /__ / __

Arlington National Cemetery Site-Specific Source Controls Inspection Log
Personnel:
Date:
Weather/site conditions:

Spoils Area					
Pollutant Source (Location)	**Potential Pollutants**	**Source Controls**	**Observations**	**Corrective Action Required?**	**Status**
Spoils storage	• Spoils • Unusable soils/green waste • Sifted dirt/sediment	• Vegetated berm surrounding entire area • Debris from sifted soils stored in roll-off dumpster		☐ YES ☐ NO	Completion date:__ /__ / __
Heavy equipment	• POLs • Grease	• Vegetated berm surrounding entire area		☐ YES ☐ NO	Completion date:__ /__ / __

Contractor Storage Area					
Pollutant Source (Location)	**Potential Pollutants**	**Source Controls**	**Observations**	**Corrective Action Required?**	**Status**
Contractor materials storage (conex boxes)	• Magnesium sulfate (ice melt) • Grass seed • Fertilizer	• Materials stored on pallets in conex boxes • Stormceptor BMP downstream		☐ YES ☐ NO	Completion date:__ /__ / __
Pesticide mixing and application	• Pesticide • POLs	• Mixing conducted in secondary containment structure • Application tanks stored empty or on secondary containment • Written IPMP • Spill kits near storage and on equipment/vehicles • Stormceptor BMP downstream		☐ YES ☐ NO	Completion date:__ /__ / __
Landscaping materials storage	• Topsoil • Tree/plant waste • Mulch • POLs • Grease	• Topsoil and mulch contained on three sides by jersey barriers and covered with tarp or plastic • Chipped tree waste stored in roll-off dumpster • Mulch contained on three sides by jersey barriers • Stormceptor BMP downstream		☐ YES ☐ NO	Completion date:__ /__ / __
Contractor-owned heavy equipment storage	• POLs • Grease	• Drip plans placed beneath equipment during fueling • Stormceptor BMP downstream		☐ YES ☐ NO	Completion date:__ /__ / __
Small equipment (e.g., lawn mowers, chipper, all-terrain vehicles)	• POLs • Grease • Sediment • Yard waste	• Stored in conex boxes or under cover • Drip plans placed beneath equipment during fueling • Stormceptor BMP downstream		☐ YES ☐ NO	Completion date:__ /__ / __

Contractor Storage Area					
Pollutant Source (Location)	**Potential Pollutants**	**Source Controls**	**Observations**	**Corrective Action Required?**	**Status**
Small POL containers	• POLs	• Stored in flammable storage cabinets and/or conex box • Stored on drip pans or secondary containment during daily shift use • Stormceptor BMP downstream		☐ YES ☐ NO	Completion date:__ /__ / __
Mobile generator with diesel day tank	• POLs • Grease	• Drip pan placed under unit • Spill kit on generator trailer • Stormceptor BMP downstream		☐ YES ☐ NO	Completion date:__ /__ / __

Arlington National Cemetery Site-Specific Source Controls Inspection Log
Personnel:
Date:
Weather/site conditions:

Areas Inspected:	☐ **Q1**	☐ **Q2**	☐ **Q3**	☐ **Q4**
	Operations Complex and Sections 4, 8, 8A 18, 20, 25, 34, 47, 64-70	**Spoils Area, CSA, Visitor Center and Parking, Funeral Queuing, Tram Plaza, and Sections 10, 12, 33, 54-63, 71-76**	**Sections 1, 2, 5, 26-32, 36, 36A, 38-43, 45, 49-53, 77-85**	**Sections 3, 6, 7, 7A, 9, 11, 13-19, 21-24, 35, 37, 44, 46, 48**

Facility-wide					
Pollutant Source (Location)	**Potential Pollutants**	**Source Controls**	**Observations**	**Corrective Action Required?**	**Status**
Paved roads and parking lots	• POLs • Grease • Animal waste • Litter • Deicing chemicals/salt • Sediment	• Street sweeping conducted 5 days per week with vacuum truck • Trash bins with rain bonnets placed throughout site • Structural BMPs installed throughout site • Horses followed by grounds crew to immediately remove animal waste from roads • Water sprayed for dust suppression		☐ YES ☐ NO	Completion date:__ /__ / __
Unpaved access roads	• POLs • Grease • Sediment	• Gravel placed at entrances to minimize tracking and slow runoff • Structural BMPs installed throughout site		☐ YES ☐ NO	Completion date:__ /__ / __
High-traffic visitor areas	• Litter	• Trash bins with rain bonnets placed throughout site • Grounds crew collects litter during daily maintenance • Structural BMPs installed throughout site • Water sprayed for dust suppression		☐ YES ☐ NO	Completion date:__ /__ / __

Facility-wide					
Pollutant Source (Location)	**Potential Pollutants**	**Source Controls**	**Observations**	**Corrective Action Required?**	**Status**
Turf management and disturbed areas	• Sediment • Pesticide • Fertilizer • POLs • Grease	• Written Nutrient Management Plan (NMP) • Inlet protection placed on storm drains downstream of ground disturbance, removed after new grass mowed three times • Silt fence used if disturbed area is greater than 3:1 slope • Grass buffer maintained between disturbed area and roads • Reseeding conducted as soon as possible • Structural BMPs installed throughout site		☐ YES ☐ NO	Completion date:__ /__ / __
Headstone, monument, sidewalk, and building cleaning	• Surfactants • Sediment • POLs • Grease • Litter	• Cold water used in pressure washer • Water directed to areas where it can infiltrate, to the extent possible • Washing not conducted in areas with disturbed soil • Litter collected prior to washing • Structural BMPs installed throughout site • Water sprayed for dust suppression		☐ YES ☐ NO	Completion date:__ /__ / __
Active burial sites	• Sediment • POLs • Grease • Litter	• Disturbed area minimized • Grass buffers maintained between site and roads • Reseeding conducted as soon as possible • Grounds crew collects litter during daily maintenance • Structural BMPs installed throughout site		☐ YES ☐ NO	Completion date:__ /__ / __
Pesticide application	• Pesticide	• Encourage hand removal of invasive plants • Pesticide not applied near streams • Written IPMP • Licensed contractor used for all pesticide application • Structural BMPs installed throughout site		☐ YES ☐ NO	Completion date:__ /__ / __

APPENDIX D
Spill Reporting Form

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Spill Reporting Form

Facility name and address:	Arlington National Cemetery, 1 Memorial Drive, Arlington, VA 22211	
Facility phone number:	703-614-0520	
Person reporting spill:	**Name:**	**Phone:**
Form completed:	**Date:**	**Time:**

Weather conditions:		
Spill location:		
Type of material spilled:		
Estimated total quantity spilled:		
Source of spill:		
Spill occurred or first observed:	**Date:**	**Time:**
Duration of spill:		
Cause of the spill (if known)		
Actions used to stop, remove, or mitigate the spill:		

Affected media:	Water (including onsite streams, swales, ditches, and storm drains)	☐ Yes ☐ No
	Soil	☐ Yes ☐ No
If yes, describe:		
Injured or fatalities		☐ Yes ☐ No
If yes, number and type:		
Any anticipated health risks anticipated from spill:		☐ Yes ☐ No
If yes, describe		
Is evacuation required:		☐ Yes ☐ No
If yes, describe		
Damages to property:		☐ Yes ☐ No
If yes, describe		

Names of individuals and/or organizations contacted			
Organization	**Phone number**	**Name of person contacted**	**Date and time of call**
ANC Environmental Division	703-614-0520		
Additional Notifications - TO BE COMPLETED BY ANC ENVIRONMENTAL DIVISION ONLY			

Comments

Corrective Actions Required	**Date Completed**

APPENDIX E
Example Spill Incident Log

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ARLINGTON NATIONAL CEMETERY

SPILL REPORTS: [insert reporting period]

Date	Material	Location	Affected Media	Source	Amount	RP	Corrective Action	Reportable* (Y/N)	Reported To (Verbal/Written)	Date Reported

* Did spill enter stormdrain?
* Did spill exceed 25 gallons of oil?