

ANNUAL REPORT UPDATE

**Reporting Period
July 1, 2019 to June 30, 2020 (Due October 1, 2020)**

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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General Information

Permittee: Arlington National Cemetery
System Name: Arlington National Cemetery
Permit Number: VPDES Permit VAR040139
Reporting Period: July 1, 2019 to June 30, 2020

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.

Name: _____ Date: _____

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1.0 INTRODUCTION

Arlington National Cemetery (ANC) is submitting this Annual Report in accordance with the General Virginia Pollutant Discharge Elimination System (VPDES) Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4s) (9 Virginia Administrative Code [VAC] 25-890-1, et seq.) Part I D. The Annual Report contains an evaluation of ANC's MS4 program implementation, a review of each minimum control measure, and the status of its Total Maximum Daily Load (TMDL) Action Plan.

The effectiveness of ANC's MS4 program and a discussion of whether or not ANC must update its MS4 Program Plan are described in each section below.

2.0 MINIMUM CONTROL MEASURE REPORTING AND EVALUATION

2.1 Public Education and Outreach

(1) ANC addressed the following high-priority stormwater issues in the public education and outreach program:
Illicit Discharge Detection and Elimination; Good Housekeeping; Minimizing Potential Pollutants

(2) ANC used the following strategies to communicate each high-priority stormwater issue:		
Strategies	Strategies used by ANC (check all used during permit year)	Issue addressed
Traditional written materials	<input checked="" type="checkbox"/> Informational brochures and flyers (English and Spanish)	ANC distributed brochures to facility personnel, contractors, and USACE personnel. Each brochure contains spill response and IDDE information including who to contact to report spills and good housekeeping and pollution prevention information.
	<input checked="" type="checkbox"/> Flyers posted in employee common areas (e.g., break rooms, restrooms, information bulletin boards)	
	<input type="checkbox"/> Facility-wide emails or newsletters	
Alternative materials	<input type="checkbox"/> Printed water bottles for employees	N/A
	<input type="checkbox"/> Stickers or magnets distributed at employee training events and/or tours for the visiting public	
Signage	<input checked="" type="checkbox"/> Mark storm drains with "Dump No Waste Drains to Chesapeake Bay"	ANC completed two projects containing storm drains marked with "Dump No Waste Drains to Chesapeake Bay." <ul style="list-style-type: none"> • Ord-Weitzel Road Project • Pershing Road Project
	<input type="checkbox"/> Signs posted in employee common areas (e.g., break rooms, restrooms, information bulletin boards)	
	<input type="checkbox"/> Temporary signs at construction sites highlighting new stormwater management facilities or strategies	
Media materials	<input checked="" type="checkbox"/> Information disseminated through electronic media, radio, televisions, movie theater, or newspaper	ANC posted informational articles on its public website about Turf Management, Sustainable Practices, Native Plants, and Rain Gardens. Link: https://www.arlingtoncemetery.mil/Explore/Memorial-Arboretum-and-Horticulture/Sustainable-Practices In August 2019, ANC created and posted a video on Facebook regarding ANC's sustainability practices. https://m.youtube.com/watch?v=Z4I4Zdr6cC8 In June 2020, ANC posted images of on its many raingardens on Facebook and Instagram. Appendix A contains supporting documents.

Strategies	Strategies used by ANC (check all used during permit year)	Issue addressed
Speaking engagements	<input checked="" type="checkbox"/> Host educational arboretum and rain garden tours and events for the visiting public and distribute brochures to attendees	ANC hosted three tours (October 25, 2019, November 1, 2019, and November 6, 2019) for approximately 60 people where they discussed minimizing potential pollutants, the importance of trees and sustainability practices for improving stormwater quality, and carbon sequestration. ANC presented its stream restoration success story at the 2019 DoD Chesapeake Bay Commanders' Conference. Appendix A contains supporting documents.
Curriculum materials	<input type="checkbox"/> Host educational arboretum and rain garden tours and events geared toward visiting children and school groups	N/A
Training materials	<input checked="" type="checkbox"/> Employee training presentations focused on stormwater management, spill response, recognition and reporting of illicit discharges, good housekeeping, and pollution prevention	ANC maintains a stormwater training presentation and brochure. No update to training materials required during this reporting period. Brochures are provided to ANC employee and contractors.

MCM 1 Review and Evaluation Public Education and Outreach			
BMP	Measurable Goal	Evaluation results	If not effective, provide discussion of MS4 Program Plan changes required
Informational cards and brochures	Number of brochures and cards distributed.	<input checked="" type="checkbox"/> Effective <input type="checkbox"/> Not Effective	N/A
Information disseminated through electronic media	Number of times link clicked or viewed	<input checked="" type="checkbox"/> Effective <input type="checkbox"/> Not Effective	N/A
Educational arboretum and rain garden tours	Number of tours and attendees	<input checked="" type="checkbox"/> Effective <input type="checkbox"/> Not Effective	N/A
SWPPP implementation, distribution, and training	Number of training sessions and attendees	<input checked="" type="checkbox"/> Effective <input type="checkbox"/> Not Effective	N/A

2.2 Public Involvement and Participation

(1) Summary of public input on ANC's MS4 program			
Public Input Comment			ANC's Response
Any public input or comments on MS4 program via email, phone or in-person?			None
(2) Webpage link to the ANC's MS4 program and stormwater website:			
ANC MS4 Program documents are available to the public in on its website: https://www.arlingtoncemetery.mil/About/Policies-and-Public-Notices/Public-Notices			
(3) Public involvement activity implemented	(4) Metric to determine if beneficial to water quality	(4) Evaluation of metric as to whether or not the activity is beneficial to improving water quality	(5) Other MS4 permittees who participated with ANC in public involvement opportunities
Memorial Arboretum Tours	Number of attendees and brochures distributed	ANC hosted three tours (October 25, 2019, November 1, 2019, and November 6, 2019) for approximately 60 people where they discussed minimizing potential pollutants, the importance of trees and sustainability practices for improving stormwater quality, and carbon sequestration.	N/A
Spring Rain Garden Tour	Number of attendees and brochures distributed	Cancelled – COVID-19 Cemetery closed to visitors from March 2020 to September 2020.	N/A
Street Sweeping	Road miles swept	ANC performs street sweeping weekly and swept approximately 450 miles of roadway during this reporting period.	N/A

MCM 2 Review and Evaluation Public Involvement and Participation			
BMP	Measurable Goal	Evaluation results	If not effective, provide discussion of MS4 Program Plan changes required
Educational events and tours	<ul style="list-style-type: none"> • Reduction in illicit discharge and spill reports • Number of attendees • Number of brochures distributed 	<input checked="" type="checkbox"/> Effective <input type="checkbox"/> Not Effective	N/A
Street sweeping	<ul style="list-style-type: none"> • Number of road miles swept 	<input checked="" type="checkbox"/> Effective <input type="checkbox"/> Not Effective	N/A

2.3 Illicit Discharge Detection and Elimination

<p>(1) ANC confirms that the MS4 map and information table are up-to-date as of June 30 of this reporting year.</p>	<p><input type="checkbox"/> Confirm <input checked="" type="checkbox"/> Not Confirmed</p> <p>With ongoing road and stormdrain projects and transfer of Memorial Avenue from NPS to ANC in December 2019, ANC anticipates updating the MS4 map during this permit period.</p>
<p>(2) ANC performed dry weather screening of outfalls during the reporting period, as part of the dry weather screening program.</p>	<p>Total Outfalls Screened <u>1</u> *</p> <p>Total Interconnections Screened <u>11</u> *</p> <p>Appendix A contains supporting documents.</p>
<p>(3) List of illicit discharges to ANC's MS4 including spills reaching ANC's MS4</p> <p>No illicit discharges were found during dry weather screening.</p> <p>Appendix A includes a list of spills.</p> <p>*Outfall and interconnection screening were based on mapping from 2018 MS4 Program Plan.</p>	

MCM 3 Review and Evaluation Illicit Discharge Detection and Elimination			
BMP	Measurable Goal	Evaluation results	If not effective, provide discussion of MS4 Program Plan changes required
Perform dry weather screening of MS4 outfalls	Number of dry-weather inspections	<input checked="" type="checkbox"/> Effective <input type="checkbox"/> Not Effective	N/A
Implement IDDE written procedures when illicit discharges or spills are reported	Number of illicit discharges reported, investigated, and corrected, if needed	<input checked="" type="checkbox"/> Effective <input type="checkbox"/> Not Effective	N/A

2.4 Construction Site Stormwater Runoff Control

(1) ANC requires contractors to implement a construction site stormwater runoff program in accordance with General Permit Part I E 4 a (3). All land disturbing projects at ANC occurring during the reporting period have been conducted in accordance with the current department approved standards and specifications for erosions and sediment control.	<input type="checkbox"/> NA, ANC did not conduct land disturbing activities during the reporting period <input checked="" type="checkbox"/> Confirmed <input type="checkbox"/> Not Confirmed (see below)	
	Appendix A contains copies of ANC's Construction General Permits and Notices of Termination	
If one or more of ANC's land disturbing projects were not conducted with the department approved standards and specifications. Explain why the project(s) did not conform to the approved standards and specifications: N/A		
(2) Total number of construction site inspections conducted during the reporting period at ANC:	97	
(3) Total number of enforcement actions:	ANC: 0 DEQ: 0	
Number	Enforcement Action(s) Implemented	Type of Enforcement Action(s)
N/A	N/A	N/A

MCM 4 Review and Evaluation Construction Site Stormwater Runoff Control			
BMP	Measurable Goal	Evaluation results	If not effective, provide discussion of MS4 Program Plan changes required
Perform ESC Inspections	Number of ESC inspections performed	<input checked="" type="checkbox"/> Effective <input type="checkbox"/> Not Effective	N/A
Correct compliance issues when found or reported	Number of issues found and corrected	<input checked="" type="checkbox"/> Effective <input type="checkbox"/> Not Effective	N/A

2.5 Post-Construction Stormwater Management for New Development and Development on Prior-Developed Lands

(1) ANC has not developed their own standards and specifications in accordance with the Virginia Stormwater Management Act (§ 62.1-44.15:24 et seq. of the Code of Virginia) and Virginia Stormwater Management Regulations (9VAC25-870). ANC addresses post-construction stormwater runoff control by requiring compliance with 9VAC25-870.	
(2) Total number of stormwater management facility inspections conducted on stormwater management facilities owned or operated by ANC.	31
(3) Description of the significant activities performed on ANC's stormwater management facilities to ensure they continue to perform as designed. (This does not include activities such as grass mowing or trash collection.)	
<ul style="list-style-type: none"> • Microbioretention (MBR-1 and MBR-2): ANC continues to replace turf and vegetation for microbioretention facilities which do not receive sufficient stormwater flow for vegetation to thrive. Through a contract, ANC requested contractor review the design and construction of the MBRs and provide ways to improve its function as a raingarden. • Raingarden (RG-4): ANC continues to replace turf and add vegetation. • Raingarden (RG-8): Through a contract, ANC requested contractor review the design and construction of the MBRs and provide ways to improve its function as a raingarden. • Stormceptor (STC-7): Contractor removed sediment, trash and debris. • Stormfilter (STF-2): Contractor removed sediment and replaced filters. • Stormfilter (STF-1): Contractor removed sediment, trash and debris. • StormCapture (STCP-1): During cleanout in June 2020, KTR identified a pretreatment device stormceptor (STC-8). Added device to BMP list (Table 2). • Underground Treatment Device (PTUTD and UTD): Contractor removed sediment, trash and debris. <p>Appendix A contains supporting documents.</p>	
(4) Confirmation Statements (confirm one)	
<input checked="" type="checkbox"/> **	ANC submitted stormwater management facility information through the Virginia Construction Stormwater General Permit database for those land disturbing activities for which ANC was required to obtain coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities in accordance with Part I E 5 f.
<input type="checkbox"/>	ANC did not complete any projects requiring coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities.
(5) ANC electronically reported BMPs using the DEQ BMP Warehouse in accordance with Part I E 5 g.	<input checked="" type="checkbox"/> Yes, Date submitted: ** <input type="checkbox"/> NA
**In fall of 2019, ANC worked with VDEQ POC to submit stormwater management facility information in the BMP Warehouse.	

MCM 5 Review and Evaluation			
Post-Construction Stormwater Management for New Development and Development on Prior-Developed Lands			
BMP	Measurable Goal	Evaluation results	If not effective, provide discussion of MS4 Program Plan changes required
Inspect stormwater management facilities	Number of stormwater management facility inspections performed	<input checked="" type="checkbox"/> Effective <input type="checkbox"/> Not Effective	N/A
Submit stormwater facility database updates to VDEQ	Submit stormwater facility database updates to VDEQ when facilities are added or retrofitted	<input checked="" type="checkbox"/> Effective <input type="checkbox"/> Not Effective	N/A

2.6 Pollution Prevention and Good Housekeeping for Facilities Owned or Operated by ANC

(1) Summary of any daily operational procedures developed or modified in accordance with Part I E 6 a during this reporting period:		
ANC maintains and implements a variety of written pollution prevention and good housekeeping procedures for activities such as road, street, and parking lot maintenance; equipment maintenance; and application, storage, disposal of pesticides, herbicides, and fertilizers. <u>Anti-icing Operations:</u> Solar Ice (Sodium Chloride) <u>De-icing Operations:</u> Halite/Rock Salt (Sodium Chloride), Ice Melt/Traction Aid (Sodium Chloride, Limestone Potassium Chloride, Magnesium Chloride), MAG Ice Melting Pellets (Magnesium Chloride Hexahydrate), Complete Ice and Dust Control (Magnesium Chloride)		
(2) Summary of any new SWPPPs developed in accordance Part I E 6 c during this reporting period:		
The SWPPP covers the entire site and property. ANC performed Comprehensive Site Compliance Evaluations for its high-priority areas, B123 Complex, KTRS Yard, and Spoils Yard on May 20, 2020. Appendix A contains the completed inspection forms.		
(3) Summary of any SWPPPs modified in accordance with Part I E 6 f during the reporting period:		
No modifications completed during this reporting period.		
(4) Summary of any new turf and landscape nutrient management plans developed:		
Location of each land area in nutrient management plan	Total Acreage of land area	Date of plan approval
N/A	N/A	N/A

(5) Training events conducted in accordance with Part I E 6 m	(a) Date of training event	(b) Number of attendees	(c) Objective of the training event
Quarterly Town Hall Annual Stormwater Training Cancelled COVID-19	May 2020	0	ANC provided training to all staff; objectives covered included: <ul style="list-style-type: none"> • Recognition and reporting of illicit discharges • Pollution prevention and good housekeeping associated with road, street, and parking lot maintenance. • Pollution prevention and good housekeeping associated with maintenance, public works, or recreational facilities • General stormwater topics, and • Spill response.

(5) Training events conducted in accordance with Part I E 6 m	(a) Date of training event	(b) Number of attendees	(c) Objective of the training event
Newcomers Training	August 2019	Approximately 10 people	New employee environmental training included: <ul style="list-style-type: none"> • Recognition and reporting of illicit discharges • Pollution prevention and good housekeeping associated with road, street, and parking lot maintenance. • Pollution prevention and good housekeeping associated with maintenance, public works, or recreational facilities • General stormwater topics, and • Spill response.
	November 2019	Approximately 10 people	
	February 2020	Approximately 8 people	
	May 2020	Cancelled COVID-19	
USACE	November 2019 / December 2019	Approximately 10 people	ANC provided environmental training documents to USACE personnel who work in areas and with materials with the potential to contaminate stormwater. The training focused on ANC specific stormwater and waste management operations and protocols.
Custodial Contractor	February 2020	9 people	ANC provided environmental training to custodial personnel. The training focused on ANC specific stormwater and waste management operations and protocols.
Environmental Program Support Contractor	April 2020	6 people	ANC provided environmental training to contractor personnel. The training focused on ANC specific stormwater and waste management operations and protocols.

MCM 6 Review and Evaluation Pollution Prevention and Good Housekeeping for Facilities Owned or Operated by ANC			
BMP	Measurable Goal	Evaluation results	If not effective, provide discussion of MS4 Program Plan changes required
NMP Plan implementation	NMP effectiveness	<input checked="" type="checkbox"/> Effective <input type="checkbox"/> Not Effective	N/A
SWPPP implementation	SWPPP effectiveness at preventing illicit discharges and promoting good housekeeping	<input checked="" type="checkbox"/> Effective <input type="checkbox"/> Not Effective	N/A
Training program events	Number of attendees at training program events	<input checked="" type="checkbox"/> Effective <input type="checkbox"/> Not Effective	N/A

3.0 TMDL ACTION PLAN STATUS REPORT

a. BMPs implemented at ANC during the reporting period but not reported to the DEQ BMP Warehouse in accordance with Part I E 5 g																												
BMP Type	Location	Total Load Reductions (lbs/yr)																										
		Nitrogen	Phosphorus	Total Suspended Solids																								
<p>All BMPs used for TMDL compliance are included in the TMDL Action Plan drafted November 2018. ANC meets and exceeds the reduction requirements for this permit cycle.</p> <p>Comprehensive Stormwater Plan: Ord Weitzel Drive-Road Project (VAR10K463) ANC installed 2 devices to meet water quality reductions required under IIB for redevelopment.</p> <p>Appendix A contains the Comprehensive Stormwater Plan dated May 2020.</p>	<p>STC-9 Sec 52 INF-1 Sec 52</p>	N/A	<p>8.15 13.04</p>	N/A																								
<p>b. ANC will meet all required reductions during each reporting period of the permit as shown in its TMDL Action Plan dated November 11, 2018 and will not acquire credits. ANC does not meet the criteria required in the General Permit for preparing a PCB TMDL. ANC submitted their TMDL Action Plan in March 2019.</p>																												
<p>c. ANC meets and exceeds the reductions for total nitrogen, total phosphorus, and total suspended solids required during this permit term as demonstrated in its TMDL Action Plan. The table below summarizes ANC's pollutant reduction achievements.</p> <table border="1" data-bbox="224 1155 1395 1394"> <thead> <tr> <th rowspan="2">Pollutant</th> <th colspan="2">First Permit Cycle</th> <th colspan="2">Second Permit Cycle</th> </tr> <tr> <th>Reduction Required in 1st Permit Cycle (lbs/yr)</th> <th>Total Reduction Achieved with BMPs (lbs/yr)</th> <th>Reduction Required in 2nd Permit Cycle (lbs/yr) [8x or 40% of L2 Scoping Run Reductions]</th> <th>Total Reduction Achieved with BMPs (lbs/yr)</th> </tr> </thead> <tbody> <tr> <td>Nitrogen</td> <td>22</td> <td>612.73</td> <td>173</td> <td>212.20</td> </tr> <tr> <td>Phosphorus</td> <td>1.74</td> <td>315.25</td> <td>14</td> <td>143.37</td> </tr> <tr> <td>TSS</td> <td>1,271</td> <td>142,876.37</td> <td>10,169</td> <td>105,884.20</td> </tr> </tbody> </table>					Pollutant	First Permit Cycle		Second Permit Cycle		Reduction Required in 1st Permit Cycle (lbs/yr)	Total Reduction Achieved with BMPs (lbs/yr)	Reduction Required in 2 nd Permit Cycle (lbs/yr) [8x or 40% of L2 Scoping Run Reductions]	Total Reduction Achieved with BMPs (lbs/yr)	Nitrogen	22	612.73	173	212.20	Phosphorus	1.74	315.25	14	143.37	TSS	1,271	142,876.37	10,169	105,884.20
Pollutant	First Permit Cycle		Second Permit Cycle																									
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<p>d. BMPs ANC plans to implement during the next reporting period.</p> <table border="1" data-bbox="188 1451 1427 1545"> <thead> <tr> <th>BMP Type</th> <th>Location</th> </tr> </thead> <tbody> <tr> <td>NA</td> <td></td> </tr> </tbody> </table>					BMP Type	Location	NA																					
BMP Type	Location																											
NA																												

4.0 SUMMARY

ANC's MS4 program is effective based on BMPs implemented and measures of effectiveness used.