



# **MS4 PERMIT YEAR 2019 ANNUAL REPORT**

## **JULY 1, 2018 TO JUNE 30, 2019**

**FOR URBANIZED AREAS OF VIRGINIA**

**Virginia Department of Transportation Small Municipal Separate Storm Sewer  
System (MS4)**



**Registration # VA0092975**


**Coverage from July 1, 2017 to June 30, 2022**

**October 1, 2019**

Virginia Department of Transportation  
1401 East Broad Street  
Richmond, Virginia 23219

**CERTIFICATION**

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

Signature   
Name Stephen C. Brich, P.E.  
Title Commonwealth Transportation Commissioner  
Date 9/24/2019

**TABLE OF CONTENTS**

VDOT MS4 PROGRAM PLAN REVISION SUMMARY & ANNUAL REPORT BACKGROUND ..... 1

ANNUAL REPORT ORGANIZATION ..... 2

MCM#1: PUBLIC EDUCATION AND OUTREACH ON STORMWATER IMPACTS..... 4

    BMP 1(A) – Maintain and Update Stormwater Webpage ..... 5

    BMP 1(B) – Signage at Rest Areas and Welcome Centers ..... 6

    BMP 1(C) – Annual Reporting and Effectiveness Review ..... 8

MCM#2: PUBLIC INVOLVEMENT/PARTICIPATION ..... 11

    BMP 2(A) – BMPs for Public Involvement Activities: Adopt a Highway ..... 12

    BMP 2(B) – BMPs for Public Involvement Activities: Storm Drain Stenciling ..... 13

    BMP 2(C) – Participation with Other Stakeholders..... 14

    BMP 2(D) – BMPs for Public Involvement Activities: Stream Cleanups..... 15

    BMP 2(E) – Annual Reporting and Effectiveness Review ..... 16

MCM#3: ILLICIT DISCHARGE DETECTION AND ELIMINATION..... 19

    BMP 3(A) – Storm Sewer Map ..... 20

    BMP 3(B)1 - Prohibition of Non-Stormwater Discharge ..... 22

    BMP 3(B)2 - Prohibition of Non-Stormwater Discharge ..... 23

    BMP 3(B)3 – Prohibition of Non-Stormwater Discharge ..... 24

    BMP 3(C) – Illicit Discharge Detection and Elimination Program ..... 25

    BMP 3(D) – Annual Reporting and Effectiveness Review ..... 32

MCM#4: CONSTRUCTION SITE STORMWATER RUNOFF CONTROL..... 34

    BMP 4(A) – Annual Standards and Specifications..... 35

    BMP 4(B) – Annual Reporting and Effectiveness Review ..... 36

MCM#5: POST-CONSTRUCTION STORMWATER MANAGEMENT ..... 40

    BMP 5(A) – Standards and Specifications ..... 41

    BMP 5(B) – Long-Term Care and Maintenance of SWM Facilities..... 43

    BMP 5(C) – Annual Reporting and Effectiveness Review ..... 44

MCM#6: POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR VDOT OPERATIONS..... 46

    BMP 6(A)1 – Procedures for Operation and Maintenance Activities ..... 47

    BMP 6(A)2 – Procedures for Operation and Maintenance Activities ..... 48

    BMP 6(B) – Turf and Landscape Management ..... 51

    BMP 6(C)1 – Training of VDOT Forces..... 52

    BMP 6(C)2 – Training of VDOT Forces..... 54

    BMP 6(C)3 – Training of VDOT Forces..... 56

    BMP 6(C)4 – Training of VDOT Forces..... 57

    BMP 6(D) – Oversight of VDOT Maintenance Contractors ..... 58

    BMP 6(E) – Annual Reporting and Effectiveness Review..... 59

MCM#7: Infrastructure Coordination ..... 60

    BMP 7(A) – Infrastructure Coordination..... 61

SC#1: SPECIAL CONDITIONS FOR CHESAPEAKE BAY TMDL..... 62

    Special Condition #1 – Chesapeake BayTMDL ..... 63

SC#2: SPECIAL CONDITIONS FOR APPROVED LOCAL TMDLS ..... 64

    Special Condition #2 – Local TMDL ..... 65

PROGRAM EVALUATION, MODIFICATION, AND REPORTING ..... 66

**APPENDICES**

- Appendix A List of TMDL Committees, Meetings & Activities
- Appendix B New Stormwater Management Facilities Brought Online During the Reporting Year
- Appendix C BMP Inspections Performed during the Reporting Year
- Appendix D VDOT Employee Training Summary
- Appendix E MCM 7 Infrastructure Coordination Meetings
- Appendix F Chesapeake Bay TMDL Action Plan Implementation and Credits Achieved To-Date
- Appendix G Local TMDL Action Plan Implementation Summary

## ACRONYMS

AASHTO	American Association of State Highway and Transportation Officials
BMP	Best Management Practice
CGP	Construction General Permit
CRCIF	Construction Runoff Control Inspection Form
CWA	Clean Water Act
DCR	Virginia Department of Conservation and Recreation
DEQ	Virginia Department of Environmental Quality
DOD	Department of Defense
EPA	Environmental Protection Agency
ERAC	Environmental Research Advisory Committee
ESC	Erosion and Sediment Control
ESCCC	Erosion and Sediment Control Contractor Certification
FY	Fiscal Year
HUC	Hydrologic Unit Code
IDDE	Illicit Discharge Detection and Elimination
IP	Implementation Plan
L&D	Location & Design
LDA	Land-Disturbing Activity
LUP	Land Use Permit
MCM	Minimum Control Measure
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
NMP	Nutrient Management Plan
O&M	Operations & Maintenance
ORI	Outfall Reconnaissance and Inventory
P2	Pollution Prevention
POD	Point of Discharge
PSA	Public Service Announcement
PY	Permit Year
RLD	Responsible Land Disturber
RLDA	Regulated Land Disturbance Activity
SWM	Stormwater Management
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load
TRB	Transportation Research Board
VAC	Virginia Administrative Code
VDOT	Virginia Department of Transportation
VESCLR	Virginia Erosion and Sediment Control Law and Regulations
VSMP	Virginia Stormwater Management Program
VPDES	Virginia Pollutant Discharge Elimination System
WIP	Watershed Implementation Plan
WLA	Wasteload Allocation

## VDOT MS4 PROGRAM PLAN REVISION SUMMARY & ANNUAL REPORT BACKGROUND

The Virginia Department of Transportation (VDOT) is authorized to discharge stormwater from its municipal separate storm sewer system (MS4) by coverage under the Virginia Pollutant Discharge Elimination System (VPDES) *Individual Permit for the VDOT Municipal Separate Storm Sewer System (MS4)* (the Permit) within the urbanized areas of Virginia. As part of the original permit authorization (originally under a general permit), VDOT developed and implemented an MS4 Program Plan (the Plan) with best management practices (BMPs) to address the six minimum control measures (MCMs) and the special conditions for applicable total maximum daily loads (TMDLs) outlined in the Permit. The program plan has been refined and updated throughout the life of the program and permit(s).

In accordance with VDOT’s coverage under the new 2017 Individual Permit, VDOT has updated its MS4 Program Plan to address new permit requirements (including the addition of MCM7 – Infrastructure Coordination) as well as enhance BMPs through the adaptive management process. This updated Program Plan was submitted to the Virginia Department of Environmental Quality (DEQ) on June 29, 2018. Implementation of these BMPs is consistent with the provisions of an iterative MS4 Program. Consistent with EPA interpretation, the DEQ has determined that implementation of the MS4 Program Plan, provided that the plan meets the requirements of the Permit, will reduce the discharge of pollutants to the Maximum Extent Practicable (MEP). No other revisions to the Plan have been made since the June submittal.

BMPs that are included in the Plan follow a prescribed alpha-numeric nomenclature that is based on the respective MCMs, the numbers of BMPs for each MCM, and the responsible Division. For example, BMP 3(B)(2) refers to the following:

BMP 3	MCM 3: Illicit Discharge Detection and Elimination
(B)	The second BMP to address the requirements of MCM 3

*Note: BMPs associated with the special conditions for approved TMDLs are assigned a BMP of SC1 (Chesapeake Bay TMDL) or SC2 (Local TMDLs), as appropriate.*

The area regulated by the MS4 Permit (herein referred to as the regulated area) covers areas discharging to an MS4 that is owned and/or operated by VDOT and located within one of the urbanized areas of Virginia. Urbanized areas as identified by the 2010 Decennial Census are listed below.

- Blacksburg
- Bristol
- Charlottesville
- Fredericksburg
- Harrisonburg
- Kingsport
- Lynchburg
- Richmond
- Roanoke
- Virginia Beach
- Washington, DC
- Winchester
- Staunton-Waynesboro
- Williamsburg

**ANNUAL REPORT ORGANIZATION**

This Annual Report utilizes an outline similar to that of the Program Plan for organizational reporting purposes. The annual reporting elements referenced within the respective IP MCMs are identified in the MS4 Individual Permit Cross Reference table below and noted as *Annual Report requirements*. Each is addressed in the third column of each BMP as noted in the table and as appropriate. Notably, each Plan MCM component contains a BMP titled *Annual Report and Effectiveness*.

Permit Reference	Permit Description	MS4 Program Plan BMP
<b>MCM1</b>		
Section I.C.1.a.i-iv	Maintain a webpage	BMP 1(A)
Section I.C.1.b.i	Maintain a webpage	BMP 1(A)
Section I.C.1.b.ii	Program for illicit discharges, trash, debris and litter	BMP 1(A,B)
Section I.C.1.b.iii	Signage for pet waste, etc.	BMP 1(B)
Section I.C.1.c	Allowance for regional partnering	N/A
Section I.C.1.d	Include written procedures for Implementation	BMP 1(A-C)
Section I.C.1.e	Annual Report requirements	BMP 1 (C) *
<b>MCM2</b>		
Section I.C.2.a.i	Adopt-A Highway	BMP 2(A)
Section I.C.2.a.ii	Stenciling Program	BMP 2(B)
Section I.C.2.a.iii	Development of local TMDLs	BMP 2(C)
Section I.C.2.a.iv	Promote four stream cleanups	BMP 2(D)
Section I.C.2.b	Include written procedures	BMP 2(A-D)
Section I.C.2.c	Annual Report requirements	BMP 2(E) *
<b>MCM3</b>		
Section I.C.3.a	Prohibit non-stormwater discharges	BMP 3(B), 6(E)
Section I.C.3.b	Maintain IDDE manual	BMP 3(C)
Section I.C.3.c	Training program	BMP 3(C)
Section I.C.3.d	Spills	BMP 3(B)2
Section I.C.3.e	GIS System Map	BMP 3(A)
Section I.C.3.f.i	Program Plan requirements	MCM2 (footnote)
Section I.C.3.f.ii	Program Plan requirements	BMP 3(C)
Section I.C.3.f.iii	Program Plan requirements	MCM2 (footnote), 3(B)2
Section I.C.3.f.iv	Program Plan requirements	BMP 3(A)
Section I.C.3.g	Annual Report requirements	BMP 3(D)*
<b>MCM4</b>		
Section I.C.4.a	Standards and Specs	BMP 4(A)
Section I.C.4.b	Procedures for Compliance Inspections	BMP 4(B)
Section I.C.4.c	Track compliance	BMP 4(B)
Section I.C.4.d	Program Plan requirements	BMP 4(A), 4(B)
Section I.C.4.e	Annual Report requirements	BMP 4(B)*

Permit Reference	Permit Description	MS4 Program Plan BMP
<b>MCM5</b>		
Section I.C.5.a	Standards and Specs	BMP 5(A)
Section I.C.5.b	Standards and Specs	BMP 5(A)
Section I.C.5.c	Inspection BMPs	BMP 5(B)
Section I.C.5.d	Documentation of BMPs	BMP 5(B)
Section I.C.5.e	Definition of Maintenance	N/A
Section I.C.5.f	Database of BMPs	BMP 5(A)
Section I.C.5.g	Report installation for post construction	BMP 5(A)
Section I.C.5.h	Report installation not reported in 5.g	BMP 5(B)
Section I.C.5.i	Annual Report Requirements	BMP 5(C)*
<b>MCM6</b>		
Section I.C.6.a.i-v	Written maintenance procedures	BMP 6(A)1, 6(A)2
Section I.C.6.b	Dumping yard waste	BMP 6(A)
Section I.C.6.c	Management of leaked fluids	BMP 6(B)
Section I.C.6.d	Vehicle wash pad	BMP 6(A)
Section I.C.6.e	HPF SWPPPs	BMP 6(A)
Section I.C.6.f	Management of roadways and parking lots.	BMP 6(A)
Section I.C.6.g	Turf and Pesticide Management	BMP 6(A), 6(B)
Section I.C.6.h	Training	BMP 6(C)
Section I.C.6.i	Program Plan Requirements	N/A
Section I.C.6.j	Annual Report Requirements	BMP 6(E)*
<b>MCM7</b>		
Section I.C.7.a	Annual coordination meeting	BMP 7(A)
Section I.C.6.b	Mapping	BMP 7(A)
Section I.C.6.c	Chesapeake Bay TMDL Action Plans	BMP 7(A)
Section I.C.6.d	Other TMDL Action Plans	BMP 7(A)
Section I.C.6.e	Credit for TMDL Implementation	BMP 7(A)
Section I.C.6.f	IDDE	BMP 7(A)
Section I.C.6.g	Small MS4 Coordination	BMP 7(A)
Section I.C.6.h	Annual Report requirements	BMP 7(A)*
<b>TMDL SC Requirements Affecting other MCMs</b>		
Section I.E.3b	Septic Requirements	BMP 6(A)2
Section I.E.4.b	Excessive sediment loading	Annual S&S
Section I.E.4.c	Excessive sediment loading	BMP 3(C)
Section I.E.5.b	PCB reporting	BMP 3(C)

\* NOTE – Each MCM in the Program Plan includes a BMP to address Annual Reporting requirements as highlighted in the Permit Cross Reference table above. While this BMP serves to summarize annual reporting requirements as specified in the IP, more detailed information is included within the “Annual Report Information” column of other BMPs as appropriate and referenced to provide supporting documentation.



## **MCM#1: PUBLIC EDUCATION AND OUTREACH ON STORMWATER IMPACTS<sup>1</sup>**

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<sup>1</sup> VDOT's Permit does not define the term "public". However, VDOT is required to provide outreach to the public including its employees and contractors regarding proper disposal of pet waste and trash and identification and reporting of illicit discharges. VDOT is also required to implement the use of signage at its safety/rest areas to promote proper trash disposal. Therefore, the public, for the purposes of this permit condition, is considered to be VDOT's employees, hired contractors, and travelers using VDOT's fixed facilities such as rest areas. VDOT does not consider travelers along the roadway system as part of the "public" for the purpose of developing targeted public outreach strategies. However, VDOT has developed education material that may incidentally reach these travelers, which will have a positive benefit outside of VDOT's right-of-way.

**BMP 1(A) – Maintain and Update Stormwater Webpage**

<b>Description and Measurable Goal:</b>	Maintain and update a webpage dedicated to MS4 and stormwater, as it pertains to roads, highways, and permittee owned or operated facilities on the VDOT website (referred to herein as the “VDOT Stormwater Webpage”).
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<b>Efforts and Expected Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Maintain and update VDOT Stormwater Webpage to communicate MS4 program elements.	Webpage was previously developed. VDOT will continue to update webpage with necessary information as discussed in other parts of this Program Plan.	VDOT has maintained its stormwater webpage with educational information including copies of the MS4 Program Plan and copies of the annual reports. VDOT will continue to maintain the website throughout the next permit year.  ( <a href="http://www.virginiadot.org//stormwater">http://www.virginiadot.org//stormwater</a> )  This webpage includes the MS4 Program Plan, annual reports, other program documents, contact information, announcements, and other useful resources.
Provide instructions for the public on how to report illicit discharges, improper disposal, or spills to the MS4 or other potential stormwater pollution concerns	Webpage was previously developed. VDOT will update webpage with necessary information as discussed in other parts of this Program Plan.	VDOT has maintained its link for the public to report illicit discharges, improper disposal.

**BMP 1(B) – Signage at Rest Areas and Welcome Centers**

<b>Description and Measurable Goal:</b>	Provide informational signage at rest areas identified in permit.
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<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Continue to install and maintain informational signage for disposal of pet waste, litter, debris and trash at rest areas and welcome centers within urbanized areas*.	Message signs were previously developed and reported to DEQ. Facility signage was installed during first six months of permit term. VDOT will continue to maintain signage.	<p>a. The pet waste stations maintenance and restocking is part of VDOT’s Monthly Quality Assessment Review/Safety Rest Area Inspection. This inspection reviews the Pet Stations for functionality and to assure they are being maintained and stocked. The pet waste stations are stocked with disposal bags as part of the normal maintenance operation. As part of the daily good housekeeping procedures for trash and debris removal, any pet waste discovered is picked up and placed in the appropriate trash receptacle. The number of pet stations remains the same as previously reported. No new Safety Rest Areas were established and no major rebuilds were completed this last year. During the last year deteriorated or damaged pet stations were replaced as needed. Notably, 35,200,900 people visited VDOT Rest Areas and Welcome Centers during 2016, the last year that VDOT surveyed Rest Area visitation, and they were exposed to our Pet Waste messaging and facilities. That visitation number obviously varies from year to year based a number of variables, but it is safe to say that visitation is still up around that number.</p> <p>b. Information signage for disposal of litter, debris, and trash at rest areas and welcome centers within urbanized areas* were installed prior to January 1, 2018. The following is a summary of installations:</p> <p>VDOT has installed 16 Litter control signs at 11 Rest Safety Areas/Welcome Centers, including:</p> <ol style="list-style-type: none"> <li>1) Dale City;</li> <li>2) Fredericksburg;</li> <li>3) New Kent*;</li> <li>4) Manassas;</li> <li>5) Bristol;</li> </ol>

		<p>6) Abingdon; 7) Troutville*; and 8) Winchester.</p> <p><i>Those rest areas above denoted with an "*" are not physically located within a CUA; therefore, the municipal stormwater discharges from these rest areas are not regulated by the permit.</i></p> <p>In 2016, the last year VDOT surveyed Rest Area visitation, 12,012,200 people visited the 11 Rest Areas/Welcome Centers where VDOT had litter control signs posted and were exposed to that messaging. Similarly, the annual visitation varies, but the numbers exposed to litter control messaging should be similar from year to year.</p>
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**BMP 1(C) – Annual Reporting and Effectiveness Review**

<b>Description and Measurable Goal:</b>	Provide annual reports and assess effectiveness of outreach efforts.	
<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Continue to post Program Plans and Annual Reports.	The Program Plan will be posted on the VDOT webpage within 30 days after submittal to DEQ. Within 30 days of any modification to the Program Plan, the latest version will be posted. Annual reports will be posted on the web page within 30 days of submittal to DEQ, or by November 1 <sup>st</sup> of each year.	<p>VDOT has continued to post its MS4 Program Plan and Annual Reports on its stormwater webpage located at:</p> <p><a href="http://www.virginiadot.org//stormwater">http://www.virginiadot.org//stormwater</a></p> <p>This past year represents the second year that VDOT operated under the IP. The current version of the Program Plan is dated June 29<sup>th</sup>, 2018, and a copy was posted to the website within 30 days after that date. No further updates to the Program Plan were made during PY19.</p> <p>This Annual Report is also the second to be submitted under the IP period of coverage versus the General Permit (GP) previously. It was revised in PY18 to reflect the updated IP and PP elements.</p> <p>This Annual Report will be posted within 30 days of final submittal to DEQ.</p>
Assessment of the effectiveness of the outreach program	Annually	<p>VDOT has evaluated each of the practices and we believe that the BMPs are appropriate and effective. Per Section I.C.1.e of the IP and in regards to Educational and Outreach Programs:</p> <p>1.) <u>Illicit discharge</u> identification and public reporting and/or improper disposal of materials into the MS4. VDOT has a dedicated IDDE email and point of contact for the public to report illicit discharges as advertised on its dedicated stormwater site. VDOT delivers training to appropriate staff, maintenance operators and contractors in how to identify and report illicit discharges. See MCM 3 in this Annual Report for more specific information. The estimated number of individuals reached through these activities is 592. This estimate was calculated by tallying the number staff trained during SWPPP and Good Housekeeping and Pollution Prevention for Contractors MS4 training modules.</p>

		<p>2.) Proper disposal of trash, debris, and litter. VDOT estimates that approximately 12,000,000 people visited the 11 Rest Areas/Welcome Centers where VDOT installed and had litter control signs posted and were exposed to that messaging. VDOT uses continuous vehicular monitoring equipment at some of its Rest Areas/Welcome Centers, and occasionally utilizes temporary counters at others, to provide a total count estimate of vehicular visits per day. The latest information for these areas is 2016, which was used by the Maintenance Division as the basis for approximating and estimating total visits by the public.</p> <p>3.) Informational Signage for proper disposal of litter, debris and trash was installed at 11 Rest Areas/Welcome Centers as noted previously. VDOT estimates approximately 12,000,000 people visited these sites. For pet waste, VDOT estimates that approximately 35,000,000 people visited all Rest Area and Welcome Centers during the past year where pet waste messaging and facilities were installed. VDOT uses continuous vehicular monitoring equipment at some of its Rest Areas/Welcome Centers, and occasionally utilizes temporary counters at others, to provide a total count estimate of vehicular visits per day. The latest information for these areas is 2016, which was used by the Maintenance Division as the basis for approximating and estimating total visits by the public.</p> <p>4.) Other Educational and Outreach Programs</p> <ul style="list-style-type: none"> <li>a.) Watershed Signs – During PY19, two (2) watershed signs were installed in the MS4 area. To date, VDOT has installed approximately 142 watershed signs within the MS4 service area and plans to continue to maintain them.</li> <li>b.) Through annual coordination meetings, VDOT met with eleven Phase 1 MS4s to discuss and coordinate illicit discharge reporting procedures, Chesapeake Bay TMDL Action Plans and Implementation, points of contact, and other related topics to assist with achievement of this MCM.</li> </ul>
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		<p>c.) VDOT L&amp;D and Maintenance Divisions have begun coordination with Fairfax County on the County’s Litter Removal Program initiative, specifically as it relates to VDOT Park and Ride facilities in the County.</p> <p>The Public Education and Outreach component has been successful, however VDOT anticipates enhancing an aspect of this MCM in subsequent permit years. VDOT plans on communicating some of these program elements through a more user friendly centrally located web-based type platform. This may include, for example, the use of georeferenced events and interactive mapping to share with the public and staff activities that are underway or planned, and would allow for access to more information and the opportunity for more individuals, including the public, to increase their awareness of certain program elements (e.g. Pet Waste Stations at Rest Areas, etc).</p>
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## **MCM#2: PUBLIC INVOLVEMENT/PARTICIPATION**



**BMP 2(A) – BMPs for Public Involvement Activities: Adopt a Highway**

<b>Description and Measurable Goal:</b>	Promote, support, and maintain public involvement activities that encourage public awareness of stormwater pollution
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<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Continue to promote the Adopt-A-Highway program.	Annually promote Adopt-A-Highway through use of VDOT’s stormwater webpage*.	<p>VDOT estimates at this time that as of June 30, 2019, the Adopt-a-Highway (AAH) program has:</p> <ul style="list-style-type: none"> <li>- A total of almost 8,604 miles of roadway adopted, including Interstate highways and interchanges, primary roads and secondary roads;</li> <li>- Currently 351 adoptee groups involving a total of 3,679 individuals;</li> <li>- Achieved 3,138 pickups during the most recent permit year.</li> </ul> <p>This is a new reporting requirement for VDOT beginning in PY18. The above information is VDOT’s current best estimate based on the available reported information and existing AAH Access database that is currently in use at this time. However, VDOT is aiming to collect this data in the future using a new geo-referenced GIS database, updated guidance, and associated interactive mapping tool, which VDOT believes will improve accuracy and reporting during subsequent permit years. In addition, VDOT anticipates this will facilitate future assessments including an analysis of whether public participation has increased or decreased in the previous 5 years, but that information is not available at this time. See BMP 2(E) of this Annual Report for more information.</p>

**BMP 2(B) – BMPs for Public Involvement Activities: Storm Drain Stenciling**

<b>Description and Measurable Goal:</b>	Promote, support, and maintain public involvement activities that encourage public awareness of stormwater pollution
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<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Promote and support a public storm drain stenciling program through the Land Use Permit Program to promote public awareness of stormwater pollution	Annually promote storm sewer stenciling through use of VDOT's stormwater webpage.	<p>VDOT issued three (3) storm drain stenciling permits during the PY.</p> <p>While few permits were issued, VDOT has determined this BMP is still appropriate to the program. During the updates to the stormwater webpage, VDOT included a link to the Land Use Permit program should individuals desire additional information. These include:</p> <ul style="list-style-type: none"> <li>- LUP-A: Land Use Permit Application for Storm Sewer Stenciling</li> <li>- LUP-SPG Permittee Agreement for Storm Sewer Stenciling</li> </ul>

**BMP 2(C) – Participation with Other Stakeholders**

<b>Description and Measurable Goal:</b>	Track activities in which VDOT participated related to development of Local TMDLs.	
<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Continue to participate in the development of local TMDLs in watersheds located within the CUA and in which the VDOT MS4 discharges.	Annually participate on local TMDL technical advisory committees, when applicable.	VDOT participated on 3 TMDL technical advisory committee meetings during the reporting year. A list of these committee meetings is provided in Appendix A.
Continue to participate in the development of local TMDLs in watersheds located within the CUA and in which the VDOT MS4 discharges.	Annually participate in local TMDL and watershed implementation plans, when applicable.	VDOT participated in 53 local TMDL and watershed implementation plan meetings. A list of these meetings is provided in Appendix A.
Continue to participate in activities with goals to reduce stormwater pollutant loads; improving water quality, & supporting local water quality restoration.	Annually participate in activities, when applicable and appropriate.	VDOT participated in approximately 64 activities. VDOT will participate in similar activities in subsequent permit years, when applicable and appropriate. A list of these meetings is provided in Appendix A.

**BMP 2(D) – BMPs for Public Involvement Activities: Stream Cleanups**

<b>Description and Measurable Goal:</b>	Promote, support, and maintain public involvement activities that encourage public awareness of stormwater pollution
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<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Promote four local area stream clean-ups sponsored by VDOT or other organizations.	Annually promote Local Stream Clean-Ups through use of VDOT’s stormwater webpage.	<p>VDOT promoted several Stream Cleanup Events during the reporting year including:</p> <ol style="list-style-type: none"> <li>1. Nansemond River Cleanup Event, Keep Suffolk Beautiful, 10/27/2018;</li> <li>2. Clean Valley Day, Roanoke County, 04/06/2019</li> <li>3. Friends of the Rappahannock SpringStream Clean-Up Event, 04/14/2019</li> <li>4. Potomac River Watershed Annual Cleanup Event, 04/13/2019</li> <li>5. Clean the Bay Day, 31<sup>st</sup> Annual Event throughout Virginia; CBF 06/01/2019</li> <li>6. Clean the Bay Day, 3<sup>rd</sup> Compound Clean-up in Suffolk, NAVY &amp; VDOT, 05/31/2019</li> <li>7. Multiple Events: “Join Events with Friends of the Rappahannock (FOR)” website promoted which lists multiple events.</li> </ol>

**BMP 2(E) – Annual Reporting and Effectiveness Review**

<b>Description and Measurable Goal:</b>	Report efforts and results of Public Involvement/Participation BMPs in the Annual Report and Monitor Effectiveness	
<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Summarize Activities in BMP 2A-2D as required by permit.	Annually.	The information to demonstrate compliance with each control measure practice for this MCM are itemized in BMPs 2A-2D above.
Summarize other public involvement activities.	Annually.	<p>The following is a summary of other activities (other than those listed under BMP 2A-2D) in which VDOT participated or was the sponsor with the goal of improving water quality; and supporting local water quality restoration include:</p> <ol style="list-style-type: none"> <li>1.) VDOT participated in meetings, workshops, or conferences with environmental organizations during the reporting year: A list of these meetings is provided in Appendix A.</li> <li>2.) VDOT participated in 8 coordination meetings with 11 other Localities to discuss MS4 and infrastructure coordination during the reporting year. A list of these meetings is provided under Annual Report Information in MCM 7.</li> <li>3.) Other Public Involvement Activities: <ul style="list-style-type: none"> <li>- Shiver in the River, Trash Clean-up and 5k Event, Keep Virginia Beautiful and Adopt A Highway, 02/23/2019</li> <li>- Trash Clean-up Event, with Future Farmers of America Augusta County, 04/22/2019;</li> <li>- VDOT 2019 Spring Cleanup by VDOT Employees, June 2019;</li> <li>- Trash Cleanup and Adopt A Highway, Botetourt County and VDOT promotion, May 14, 2019;</li> </ul> </li> </ol> <p>Activities conducted and/or promoted in the list above may continue, however the specific events may vary and increase or decrease as the opportunities arise and as appropriate.</p>
Evaluate and describe effectiveness of each strategy and practice.	Annually.	VDOT has evaluated each of the practices and we believe that the BMPs are appropriate and effective. Notable achievements and potential future activities leading to increased effectiveness are described below.

		<p>VDOT made a number of advancements and achievements over past reporting year including:</p> <ul style="list-style-type: none"> <li>- VDOT has been active with public participation and involvement over the past year through a variety of venues including workshops, conferences, TMDL meetings, public events, MS4 coordination meetings, and others.</li> </ul> <p>Stream cleanup events represent a new IP element for PY18. VDOT L&amp;D Division coordinated effectively with its Communications Division at both the Central Office and Districts to communicate through existing channels on social media.</p> <ul style="list-style-type: none"> <li>- Adopt-a-Highway Program represents a new IP element as of PY18. The agency began the process of updating the tracking and reporting database associated with this program in PY18. VDOT is still in the process of creating a new, geo-referenced database, guidance, and associated map for its use. Completion has been delayed by key staff departures and workload transition. We expect to be able to report much more thoroughly and precisely in our next (2020) MS4 Program Annual Report.</li> </ul> <p>The following are program elements that VDOT anticipates undertaking over the permit cycle including in part or in whole during the upcoming PY:</p> <ul style="list-style-type: none"> <li>- Adopt-a-Highway (AAH) Program – The legacy AAH database is an Access based system. VDOT is in the process of updating and converting this system to a new map based geo-referenced database available to the public, and anticipates that we should be able to better track and report information in the future. This includes conducting an analysis of whether there has been an increase or decrease in public participation over time.</li> <li>- Pet Waste, Litter and Watershed Signage Mapping – It is anticipated that the georeferenced locations of VDOT signage, which is currently available in the form of a list, will be mapped and become available to the public through a map on VDOT’s website</li> </ul>
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		and/or in an ESRI ArcGIS Suite Storymap format.
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## **MCM#3: ILLICIT DISCHARGE DETECTION AND ELIMINATION<sup>2</sup>**

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<sup>2</sup> BMP 3(C) – Illicit Discharge Detection and Elimination Program Note: VDOT has developed an Illicit Discharge Detection and Elimination (IDDE) Program to address illicit discharges that originate within VDOT’s property and right-of-way as well those that originate outside of VDOT’s right-of-way, but enter VDOT’s MS4. VDOT actively screens, investigates, and eliminates illicit discharges that originate within its right-of-way to the MEP. VDOT actively screens and investigates illicit discharges that enter its MS4 from an external source. However, VDOT does not have direct legal authority to prohibit or eliminate these sources, as VDOT has limited enforcement authority outside its right of way or property boundaries. As such, VDOT refers discovered illicit dischargers to the regulatory agencies and other MS4s as described in VDOT’s IDDE manual.

In addition to any regulatory requirements, VDOT, DEQ, and VDEM have established guidelines regarding coordination of transportation-related pollution incidents. The guidelines were outlined in the April 5, 2005 version of the DEQ Pollution Response Manual and provide a framework whereby DEQ, VDEM, and VDOT work with first responders (e.g. local fire departments, state and local police) to ensure these incidents are handled appropriately and in an efficient manner. The spill response program may include a combination of response actions by the permittee, and/or another public or private entity. For purposes of this permit:

- Fluids from vehicular accidents are not handled through the IDDE program;
- For Section I.C.3.g.ii-“Significant spills” is defined as those that require formal regulatory reporting or pose an imminent threat to human health or the environment.



**BMP 3(A) – Storm Sewer Map**

<p><b>Description and Measurable Goal:</b></p>	<p>Develop and maintain a storm sewer map that supports a successful Illicit Discharge Detection and Elimination (IDDE) Program. The map, at a minimum, will include:</p> <ul style="list-style-type: none"> <li>• The permittee’s MS4 service area based on the CUA as determined by the U.S. Census Bureau’s 2010 census;</li> <li>• Location of all outfalls owned or operated by the permittee discharging to state waters;</li> <li>• Known points of discharge to downstream, directly adjacent MS4s;</li> <li>• A unique identifier for each outfall and point of discharge;</li> <li>• Names of receiving waters to which the outfalls discharge; and</li> <li>• Stormwater management facilities owned or operated by the permittee.</li> </ul>
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<p><b>Expected Efforts and Results in Meeting Measurable Goal</b></p>	<p><b>Implementation Schedule</b></p>	<p><b>Annual Report Information</b></p>
<p>Complete storm sewer system map.</p>	<p>Storm sewer map was previously developed. VDOT will update with necessary information as needed.</p>	<p>VDOT has developed and updated over time a storm sewer map which includes as described herein a compilation of VDOT’s MS4 service area, outfalls discharging to state waters and known points of discharge with unique identifies, and stormwater management facilities owned or operated by VDOT. Outfalls and known points of discharge, each with unique identifies, are hosted in an ArcGIS Online mapping database. Over the PY18 reporting period, VDOT generated a statewide Up-to-date Service Area GIS map based on its 2017 Linear Referencing System (LRS) road centerline layer release and 2010 CUA for areas inside and outside the Chesapeake Bay in accordance with written procedures that were developed for documentation purposes.</p> <p>Over the PY17 and PY18 reporting periods, VDOT worked to consolidate more than nine separate District Access databases that stored stormwater management facility BMP Inventory and Inspection information into one uniform centralized cloud based database solution on ArcGIS Online. These facilities are kept up to date in accordance with written procedures and by trained staff in each of the nine (9) VDOT Districts through the inventorying of BMPs as they come online through project delivery and inspection/acceptance procedures throughout the year. VDOT’s storm sewer mapping GIS components are continually</p>

		reviewed by VDOT and improved over time to maintain the mapping database.
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**BMP 3(B)1 - Prohibition of Non-Stormwater Discharge**

<b>Description and Measurable Goal:</b>	Prohibit non-stormwater discharges into the storm sewer system through updated manuals of practice.
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<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Continue to develop and refine appropriate practices in the Maintenance Best Practices Manuals to prohibit non-stormwater discharges from VDOT operations.	This BMP is currently implemented and is continuously updated. An opportunity to update this Manual has been identified. A revision to this Manual is expected by 12/2019.	The VDOT Maintenance Best Practices Manual continues to be implemented, in order to ensure that discharges of pollutants from roads, streets and parking lot maintenance are being prevented or minimized. Maintenance Division anticipates providing some updates to existing sections and adding a new "Environmental" chapter during PY20 with the estimated completion date December 31, 2019.

**BMP 3(B)2 - Prohibition of Non-Stormwater Discharge**

<b>Description and Measurable Goal:</b>	Prohibit non-stormwater discharges into the storm sewer system
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<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Continue to develop and refine appropriate practices in the Waste Management & Pollution Prevention Guides to prohibit non-stormwater discharges from VDOT operations.	This aspect of the BMP is currently implemented and is an ongoing effort. The WM/PP Guide will be reviewed each year.	The Facility Waste Management and Pollution Prevention Guide was updated in June 2019. MS4 requirements for inspection and documentation were added to applicable guide sections. Also new guide sections were added on the proper operation and maintenance of portable toilets, septic tanks and vegetation waste management.
Continue to support VDOT's role consistent with the guidelines detailed in the DEQ, VDOT, and VDEM Coordination of Transportation-Related Incidents, or subsequent agreement, in response to spills that may discharge into the MS4 via roadside ditches.	This aspect of the BMP is currently implemented and is an ongoing effort.	VDOT continues to support its role in multi-agency coordination of transportation related incidents.

**BMP 3(B)3 – Prohibition of Non-Stormwater Discharge**

<b>Description and Measurable Goal:</b>	Review of legal authorities to continue providing adequate legal authority.
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<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Review and update legal authorities, if necessary, such as permits, orders, contracts, and inter-jurisdictional agreements.	24 months from permit effective date (6/30/2019).	The MS4 Program has completed its review of VDOT’s legal authorities, such as permits, orders, contracts, and inter-jurisdictional agreements. Upon completion of this effort, we have concluded the Department has adequate legal authority to control or support control of discharges to and from the VDOT MS4.

**BMP 3(C) – Illicit Discharge Detection and Elimination Program**

<b>Description and Measurable Goal:</b>	Utilize written procedures to detect, identify, and address unauthorized non-stormwater discharges, including illegal dumping, to VDOT’s MS4.
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<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Ensure that proper notifications are made if certain pollutants are identified as entering VDOT’s system from non-VDOT sources.	Incorporate notification provisions into VDOT Program IDDE Manual no later than 01/2019.	Language has been incorporated into the latest version of the updated IDDE Field Guide which was published in PY19 to address the newer notification requirements.
Maintain, modify and update the IDDE Program Manual and Field Guide, as warranted.	This aspect of the BMP is currently implemented and is an ongoing effort.	<p>The IDDE Field Guide underwent major revision in Permit Year 2018-2019. The guide was streamlined and converted to a more handheld format for maintenance and field crews. The revised guide includes contact information for quick reporting of illicit discharges, as well as color photos and diagrams outlining the investigation and reporting process.</p> <p>The IDDE Program Manual will undergo revision in Permit Year 2019-2020 to include updated procedures for reporting. Copies of the IDDE Field Guide and Program Manual may be requested from the Environmental Compliance Group in the Central Office Environmental Division.</p>
Develop, update, offer and deliver IDDE Training Materials for appropriate VDOT staff, maintenance operators, and contractors in how to identify and report illicit discharges.	This aspect of the BMP is currently implemented and is an ongoing effort. Appropriate VDOT maintenance operators and contractors will be offered IDDE training once every five years.	<p>Currently, VDOT's SWPPP training module includes a segment dedicated to IDDE. Thus, individuals receiving SWPPP training also receive training in IDDE. VDOT’s Environmental Division is developing a stand-alone IDDE module (to be made available PY20), that will be deployed on multiple platforms for access by both VDOT employees and contractors.</p> <p>A total of 592 staff were trained in IDDE related information through VDOT Environmental Division’s SWPPP and Good Housekeeping and Pollution Prevention for Contractors MS4 Training modules.</p> <p>A new IDDE internal reporting application has been developed for use by VDOT employees on telephones and other mobile devices.</p>

<p>Continue to perform investigations associated with potential illicit discharges as appropriate using VDOT’s IDDE Program Manual procedures. Effort is to be coordinated with Maintenance Division and other VDOT Divisions, as appropriate.</p>	<p>This aspect of the BMP is currently implemented and is an ongoing effort – follow-up investigations will be performed in accordance with the VDOT IDDE Program Manual.</p>	<p>Twenty-eight (28) potential illicit discharges were reported during VDOT’s IDDE program in Permit Year 2018-2019. Based on follow-up investigation, 12 reported discharges were determined not to be illicit discharges and the reports were closed. VDOT’s effort to resolve the 15 confirmed discharges are discussed below. VDOT or VDOT contractors were the responsible party in two verified illicit discharges within MS4 areas, and one reported discharge outside of an MS4 Area.</p> <table border="1" data-bbox="862 621 1463 1026"> <thead> <tr> <th>District</th> <th>Reported</th> <th>Confirmed</th> </tr> </thead> <tbody> <tr> <td>Bristol</td> <td>0</td> <td>0</td> </tr> <tr> <td>Culpeper</td> <td>0</td> <td>0</td> </tr> <tr> <td>Fredericksburg</td> <td>1</td> <td>0</td> </tr> <tr> <td>Hampton Roads</td> <td>4</td> <td>1</td> </tr> <tr> <td>Lynchburg</td> <td>1</td> <td>0</td> </tr> <tr> <td>Northern Virginia</td> <td>11</td> <td>8</td> </tr> <tr> <td>Richmond</td> <td>10</td> <td>5</td> </tr> <tr> <td>Salem</td> <td>1</td> <td>1</td> </tr> <tr> <td>Staunton</td> <td>0</td> <td>0</td> </tr> <tr> <td><b>TOTAL</b></td> <td><b>28</b></td> <td><b>15</b></td> </tr> </tbody> </table> <p><b>Summary of IDDE’s verified:</b></p> <p><b>Hampton Roads District</b></p> <p>1. During a sign replacement operation, VDOT maintenance personnel compromised a sewer line in the median near the Route 60/199 intersection in James City County, resulting in a discharge. James City County Sanitation Authority immediately responded and commenced cleanup work. The discharge was contained within the median ditch and one culvert. All material was cleaned up with no threat to a regulated water, and the discharge report was closed.</p> <p><b>Northern Virginia (NOVA) District</b></p> <p>2. Fairfax County notified VDOT of a coin-operated car wash at a gas station in Lincolnia off Little River Turnpike. The wash water discharged to VDOT’s MS4. After further investigation by Fairfax County personnel into the non-coverage of the operation under the DEQ General Permit, the operator of the gas station pre-emptively</p>	District	Reported	Confirmed	Bristol	0	0	Culpeper	0	0	Fredericksburg	1	0	Hampton Roads	4	1	Lynchburg	1	0	Northern Virginia	11	8	Richmond	10	5	Salem	1	1	Staunton	0	0	<b>TOTAL</b>	<b>28</b>	<b>15</b>
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		<p>removed the car wash infrastructure, thus ceasing intermittent discharges to the VDOT MS4. Thus, the discharge report was closed.</p> <p>3. A VDOT Operations Manager reported a potential oil spill in a roadside ditch off Electronic Drive. The Northern Virginia District Environmental Manager referred the report to the Illicit Discharge Team, instructed that a VDOT Maintenance Work Order be filed, and VDOT’s Regional Hazardous Materials Manager was notified and asked to investigate. As the discharge contained free product, VDOT informed the NOVA DEQ PREP Coordinator of the spill and requested a PREP contractor be deployed to clean up the spill. DEQ deployed the PREP contractor (Apex) for cleanup of the spill and the discharge report was closed.</p> <p>4. Fairfax County stormwater personnel reported witnessing a construction contractor (Casper Construction) washing concrete and other materials down a VDOT MS4 curb-inlet. Fairfax County personnel advised the contractor that the discharge was not allowed, and the contractor immediately ceased the discharge. Fairfax County indicated their belief that the contractor worked for VDOT, but Residency personnel were unable to locate a contract for work to be performed by Casper Construction in the area of the observed discharge. As the discharge ceased immediately upon notification, the discharge report was closed.</p> <p>5. Arlington County received a report of white material in the roadway on S. Joyce Street along the I-395 underpass. Following confirmation, the discharge was referred to the VDOT NOVA NPDES Coordinator. A NPDES inspector visited the site for a field investigation, and determined that the discharge was the result of improper hydrodemolition controls on the I-395 Bridge. The contractor (Lane Construction) had already cleaned up the discharge and debris before the field investigation, and implemented measures to ensure proper communication and controls would be in place during future hydrodemolition work. As the discharged was cleaned up, and</p>
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		<p>proper controls in place, the discharge report was closed.</p> <p>6. A VDOT NOVA NPDES Specialist reported a discharge of concrete washout dumped down a drop inlet along the Route 27/Route 111 Bridge Rehabilitation Project. Project staff believed the discharge was a result of the nearby I-395 project, but could not confirm a Responsible Party. All concrete washout/waste was contained within the drop inlet box and gutter sock. Project staff cleaned the storm drain and noted that the discharge did not extend further into the storm sewer system. Thus, the discharge report was closed.</p> <p>7. Arlington County reported a greenish-white discharge (suspected to be concrete) entering Four Mile Run near S. Quincy Street and Arlington Mill Drive. This discharged from an Arlington County MS4 outfall, but the upstream MS4 system was interconnected with VDOT's. The source of the discharge was suspected to be either crushed stormwater pipe underneath a roadway, or from the nearby I-395 Project. Both Arlington County and VDOT contractors were videoing pipes in the area but were unable to determine the source of the discharge. Arlington County fire officials also investigated and spoke with the VDOT Construction Manager of the I-395 project. No conclusive source could be determined. However, VDOT contractors cleaned up the inlet and vacuumed all substance remaining in the pipe. The discharge was not observed again so the discharge report was closed.</p> <p>8. Arlington County informed the VDOT NOVA NPDES Coordinator of a concrete slurry discharge in Arlington's MS4 along Old Dominion Boulevard between N Wakefield Street and Lorcum Lane. After contacting the VDOT NOVA Land Use Permit Section, it was determined the discharge stemmed from a utility contractor performing work in the VDOT Right-of-Way. Arlington County issued a Notice-of-Violation, and VDOT contacted the contractor, who cleaned up the discharge off the roadway, and</p>
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		<p>vacuumed out the effected drop inlet. After cleanup was completed, the report was closed.</p> <p>9. Fairfax County notified VDOT’s Central Office IDDE Team of a discharge of sediment/mulch from the Remington Mulch company on to Old Lee Highway, affecting both Fairfax and VDOT MS4s. Fairfax County enforced cleanup on the roadway and requested permission from VDOT for Remington Mulch to remove the covers and clean up the affected drop inlets. Permission was granted by the Fairfax Residency and the mulch/sediment was removed by Remington Mulch under the supervision of Fairfax County. Thus, the discharge report was closed.</p> <p><b>Richmond District</b></p> <p>10. Chesterfield County notified VDOT and DEQ of an active discharge of cooking oil grease from a blocked sewer line and grease trap behind the Burger King at 2420 W. Hundred Road in Chester. The overflowing grease traveled across the parking lot and into a VDOT MS4 inlet. Chesterfield Department of Public Utilities informed the Burger King Management that the blockage was their responsibility. DEQ’s Piedmont PREP Coordinator was asked to step in and help moderate the situation. Following a site visit two days later by VDOT Richmond District NPDES Coordinator and the DEQ PREP Coordinator, it was determined the discharged contained both sewage and oil/grease. Burger King Management agreed to contact a contractor to have the grease trap pumped every three days until a permanent fix was put in place. Three weeks later the PREP Coordinator informed VDOT and Chesterfield County that repairs had been made, the discharge had ceased, and the discharge report was closed.</p> <p>11. Chesterfield County forwarded a report originally generated from the VDOT Bon Air Area Headquarters of a landscaping company dumping leaves down a drop inlet. Chesterfield County contacted the Responsible Party (Legacy Industrial Landscaping, Inc.) and issued a Notice-of-Violation letter. The RP followed up on the</p>
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		<p>letter by cleaning up the leaves and promising to educate staff on proper leaf disposal processes and the report was closed.</p> <p>12. The local Virginia Department of Health (VDH) office notified Chesterfield County of a septic system straight-piped to a roadside ditch (which was in VDOT’s MS4) that then discharged into the county’s MS4 system. Ultimately the discharge led to state waters at 143330 Ranger Road. Chesterfield County forwarded the report to VDOT, as well as filed a 24-hour notice of sewage discharge as required in both the County and VDOT MS4 Permits by DEQ in cases of illicit sewer connections. As both the VDH and DEQ had been made properly notified of the discharge, and a resolution by the enforcement agency (in this case, VDH) was underway, the discharge report was closed.</p> <p>13. A sanitary sewer overflow was discovered by Chesterfield County at 14512 Sailview Court. The overflow entered a roadside ditch (VDOT MS4) before flowing into a rain garden BMP (Chesterfield County MS4) at 3225 Sailview Drive. Chesterfield County Utilities estimated that approximately 150 gallons of sewage had discharged from the overflow, with some unknown portion making it into nearby Swift Creek Reservoir due to significant rainfall. Chesterfield County filed a 24-hour notification to DEQ and informed the local VDH office for further enforcement and cleanup. As both VDH as the enforcement agency, and DEQ as the MS4 Permit issuers had been properly notified, the discharge report was closed.</p> <p>14. Chesterfield County forwarded a report from the local VDH office of an illicit septic connection that discharged to a VDOT-owned concrete-lined roadside ditch at 101 Courthouse Road. VDH indicated that a notice-of-violation would be sent to the homeowner, and that follow-up action to remove the illicit connection would be taken. As the proper enforcement agency (VDH) was aware of the connection and had begun processes to ensure and follow-up on cleanup, the discharge report was closed.</p>
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		<p><b>Salem District</b></p> <p>1. Salem NPDES Coordinator reported to the Central Office IDDE Team a discharge of sediment coming off a private development into the VDOT MS4 along Forest Road, across from Ashwood Drive, in Forest, VA. Regional DEQ staff were made aware of the discharge, and referred the report to Bedford County as the local Virginia Erosion and Sediment Control Program (VESCP) and Virginia Stormwater Management Program (VSMP) Authority who had issued the permit for development. The property owner met on-site with Bedford County and agreed to install several preventative measures within a week in order to eliminate the discharge. Bedford County and VDOT Residency followed-up on the successful installation of those measures, and the report was closed.</p>
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**BMP 3(D) – Annual Reporting and Effectiveness Review**

<b>Description and Measurable Goal:</b>	Report efforts and results of IDDE Efforts in the Annual Report and Monitor Effectiveness
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<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Annual Report containing permit required elements.	Annually.	The information to demonstrate compliance with each control measure practice for this MCM are itemized in BMPs 3A-3C above.
Evaluate and describe effectiveness of each strategy and practice.	Annually.	<p>VDOT has evaluated each of the practices and we believe that the BMPs are appropriate and effective. Notable achievements and potential future activities leading to increased effectiveness are described below.</p> <p>VDOT has made a number of advancements and achievements over the past reporting year including:</p> <ul style="list-style-type: none"> <li>- This MCM requires extensive collaboration among several VDOT Divisions as well as other partners and the public. VDOT believes this has been a positive and effective effort.</li> <li>- A major revision was made to the VDOT IDDE Field Guide in PY19 by the Environmental Division. The guide has been streamlined and converted to a handheld format for maintenance and field crews. The guide was published as described in the VDOT MS4 IP Fact Sheet.</li> <li>- The Facility Waste Management and Pollution Prevention Guide was updated in PY19 by the Environmental Division. The last version released prior to this was in January of 2015.</li> <li>- In PY18, a new IDDE ArcGIS Online application was developed to facilitate the entry, tracking and reporting of potential illicit discharges. This app was utilized and refined as appropriate over PY19.</li> <li>- A new governance document IIM-258 that was created in PY18 to address certain responsibilities of partners on projects where VDOT is not the CGP permittee, such as Locally Administered Projects (LAP)</li> </ul>

		<p>was updated in PY19. Through this process, VDOT incorporated an outfall inventory form and procedures to enable LAP to inventory new outfalls coming into the system as projects are delivered.</p> <p>The following are program elements that VDOT anticipates undertaking over the permit cycle including in part or in whole during the upcoming PY:</p> <ul style="list-style-type: none"> <li>- The Maintenance Division anticipates providing some updates to existing sections of the Maintenance Best Practices Manual, as well as adding a new "Environmental" chapter during PY20 with an estimated completion date December 31, 2019.</li> <li>-</li> <li>- The IDDE Program Manual is anticipated to undergo revision by the Environmental Division in Permit Year 2019-2020 to include updated procedures for reporting.</li> <li>- The L&amp;D Division anticipates continuing to coordinate with the Local Assistance Division (LAD), Land Use Permit (LUP), SSAR, and SSR to incorporate outfall and stormwater BMP inventorying procedures and processes into part of the project delivery process, including updating of respective program manuals, etc.</li> <li>- The L&amp;D Division anticipates enhancing its Outfall and Storm Sewer Mapping systems through use of the ESRI ArcGIS Suite over the upcoming PY and beyond. This may include, for example, increased public education and outreach through the use of Storymaps, and leveraging data within VDOT Microstation project files and partners existing datasets.</li> </ul>
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**MCM#4:  
CONSTRUCTION SITE STORMWATER RUNOFF  
CONTROL**

**BMP 4(A) – Annual Standards and Specifications**

<b>Description and Measurable Goal:</b>	VDOT will utilize its annual ESC and SWM Standards & Specifications to address discharges entering the MS4 from VDOT land-disturbing activities regulated by the VPDES and VSMP.
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<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Continue to obtain annual approval of VDOT’s ESC and SWM Standards & Specifications from DEQ.	Update components of the Standards & Specifications as regulations and operations warrant.	<p>The Annual Standards and Specifications for ESC and SWM covering FY1920 were approved by DEQ on June 27, 2018. The annual update was submitted to DEQ on June 26, 2019.</p> <p>VDOT has made continual modifications, revisions, and updates to VDOT Road and Bridge Specifications, Special Provisions, and Standards and updated Instructional and Informational Memorandums (IIMs) to address discharges entering the MS4 from land disturbing activities regulated by the VPDES and VSMP during the reporting year to maintain compliance with applicable regulatory and permit requirements. VDOT also updated SWPPP General Information Sheets and supporting forms/documents for new construction projects to reflect the 2019-2024 Construction General Permit (CGP). VDOT has continued coordination with DEQ during the reporting year to facilitate the approval process and to address comments and update various components.</p>
Continue to require the ESC plan to be developed in accordance with VDOT’s annual ESC Standards & Specifications prior to commencing land disturbing activities.	This aspect of the BMP is currently implemented and is an ongoing annual effort.	All ESC Plans for RLDA’s were developed in accordance with VDOT’s Annual Standards and Specifications for ESC.
Continue to require applicable RLDA to secure the necessary state permit authorizations from DEQ to discharge stormwater from construction sites.	This aspect of the BMP is currently implemented and is an ongoing annual effort.	<p>VDOT has continued to require applicable RLDA to secure the necessary state permit authorizations from DEQ to discharge stormwater from construction sites. During the reporting year from July 1, 2018 to June 30, 2019, within the MS4 urbanized area there were:</p> <p>(1) Total number of regulated land-disturbing activities that required CGP coverage = 94; and(2) Total number of acres disturbed that required CGP coverage = 4,340.74 acres.</p>



**BMP 4(B) – Annual Reporting and Effectiveness Review**

<b>Description and Measurable Goal:</b>	Inspect and enforce compliance with the VPDES Construction General Permit and attending regulations on applicable projects.
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<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Perform ESC construction oversight inspections for compliance with Annual ESC and SWM Standards & Specifications.	This aspect of the BMP is currently implemented and is an ongoing effort – VDOT will inspect regulated land-disturbing activities in accordance with the Annual ESC and SWM Standards & Specifications.	<p>The construction inspection schedule of every five business days and within 48 hours after any measurable storm event (or once every four business days) has been applied statewide regardless of whether or not Impaired, TMDL, or Exceptional water is present.</p> <p>In addition, ESC Construction oversight compliance inspections have been conducted by District NPDES Coordinators in accordance with VDOT’s Annual Standards and Specifications for Erosion and Sediment Control.</p>
Require compliance with SWPPP plans including the ESC Plan, and require changes/ modifications to SWPPPs, as necessary, to maintain compliance with applicable regulations. Also, utilize enforcement authority if necessary.	This aspect of the BMP is currently implemented and is an ongoing effort.	<p>VDOT estimates a total of 537 ESC construction periodic oversight inspections within the MS4 service area that were conducted and reported by District NPDES Coordinators and Designees. These inspections represent a portion of all inspections performed within the urbanized area and are conducted for oversight purposes in accordance with VDOT’s ESC AS&amp;S. Of these, approx. 3,500 erosion and sediment control and Construction Stormwater General Permit deficiencies were noted; and 2,843 corrective actions were executed. A summary of the most frequent types of deficiencies and associated corrective actions reported by NPDES Coordinators were:</p> <ul style="list-style-type: none"> <li>- Temporary Stabilization</li> <li>- Maintenance of ESC Controls</li> <li>- Channel/Ditch erosion and lining</li> <li>- Inlet Prot. Installation &amp; Maintenance</li> <li>- ESC Controls not installed per plan/specs</li> </ul> <p>VDOT utilized enforcement measures, including stop work orders in certain cases, to address insufficient ESC measures and to correct deficiencies.</p>

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
Develop procedures to perform periodic compliance inspections.	This aspect of the BMP is currently implemented and is an ongoing effort. Periodic compliance inspections are conducted quarterly.	VDOT developed procedures in PY18 for periodic construction oversight inspections with the new Instructional & Informational Memorandum (IIM) 256 policy. This IIM outlines roles and responsibilities for the L&D Division and District NPDES Coordinators. It includes a color classification system for project status and level of engagement by Management, formalizing the process. The draft IIM was included in VDOT’s Annual Standards and Specifications for PY19. This IIM was updated based on feedback from Coordinators and DEQ to improve processes in PY19 and included with the recent PY20 Annual Standards and Specifications submittal.
Develop a mechanism to track ESC construction oversight inspections and associated deficiencies.	No later than June 30, 2019, VDOT must develop a mechanism for tracking of compliance inspections, deficiencies noted, corrective actions and nature of corrective actions.	VDOT has developed an ArcGIS Online cloud based database and mapping mechanism that allows for the tracking of construction ESC periodic compliance oversight inspections. The system includes information on the number of compliance inspections, deficiencies that were discovered, corrective actions required and nature of corrective actions, and a project color coding system to correspond with IIM-256. The system was rolled out to District NPDES Coordinators in PY18, and VDOT has continued to work on its functionality over PY19-20 to improve issues and address the reliability and capabilities of the new system, including print report features.
Evaluate and describe effectiveness of each strategy and practice.	Annually.	<p>VDOT has evaluated each of the practices and we believe that the BMPs are appropriate and effective. Notable achievements and potential future activities leading to increased effectiveness are described below.</p> <p>VDOT made a number of advancements and achievements over past reporting year:</p> <ul style="list-style-type: none"> <li>- Completed &amp; delivered annual submittal of VDOT’s Annual Standards and Specifications for ESC.</li> </ul>

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
		<ul style="list-style-type: none"> <li>- Re-submission of all active VDOT regulated land disturbing activity (RLDA) projects that needed continued CGP coverage and reissuance under the new 2019-2024 permit.</li> <li>- Updating of SWPPP General Information Sheets to reflect new 2019-2024 CGP and outreach to various VDOT Divisions, Districts, and programs.</li> <li>- Advancing ESC aspects within the VDOT Drainage Manual edits, Chapter 10.</li> <li>- Additional resourcing for District NPDES Coordinators to support ESC construction oversight inspections to facilitate compliance.</li> <li>- Continued adaptations made to construction ESC oversight inspection program and IIM-256 policy to address feedback following initial roll out.</li> <li>- Held Face to face meetings bringing together District NPDES Coordinators and Central Office staff to discuss program implementation, share best practices, and to improve effectiveness.</li> <li>- Development of new geospatial cloud-based RLDA tracking software to track active/terminated VDOT projects and to generate Site Maps to be included with Registration Statement.</li> <li>- Further improvements to the new ArcGIS online cloud based Construction ESC Inspection tracking system that was first developed in PY18; system is used in the field with mobile tablets by Inspectors during construction inspections, or following site visits on a desktop computer. Training of staff in the use of forms and the tracking system.</li> <li>- Review and updating of VDOT’s Road and Bridge Standards associated with EC and associated Approved Product List (APL), and Special Products Evaluation List (SPEL), as well as to reflect new 2019-2024 CGP.</li> <li>-</li> </ul>

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
		<p>The following are program elements that VDOT anticipates undertaking over the permit cycle including in part or in whole during the upcoming PY:</p> <ul style="list-style-type: none"> <li>- VDOT anticipates continuing to enhance the tracking mechanism for NPDES Construction ESC Inspections to improve functionality and reliability. This would include addressing current issues such as generation of standard reports and full functionality. It would also include a greater ability to support annual reporting to more readily summarize the type of deficiencies, number of corrective actions completed and trends.</li> </ul>

**MCM#5:  
POST-CONSTRUCTION STORMWATER  
MANAGEMENT**

**BMP 5(A) – Standards and Specifications**

<b>Description and Measurable Goal:</b>	VDOT will utilize its annual ESC and SWM Standards & Specifications to address post-construction stormwater runoff that enters the MS4 from regulated land-disturbing activities.
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<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Continue to obtain annual approval of VDOT’s ESC and SWM Standards & Specifications.	<p>Update components of the Standards &amp; Specifications as regulations and operations warrant.</p> <p>Incorporate most current DEQ approved standards and specifications for post-construction SWM.</p> <p>Update the approval dates for standards and specifications within the program plan within 30 days of DEQ approval for any changes.</p>	<p>The Annual Standards and Specifications for ESC and SWM covering FY19 were approved by DEQ on June 27, 2018. The annual update was submitted to DEQ on June 26, 2019.</p> <p>VDOT has made continual modifications, revisions, and updates to VDOT Road and Bridge Specifications, Special Provisions, and Standards and updated Instructional and Informational Memorandums (IIMs) to address discharges entering the MS4 from land disturbing activities regulated by the VPDES and VSMP during the reporting year to maintain compliance with applicable regulatory and permit requirements. VDOT has continued coordination with DEQ during the reporting year to facilitate the approval process and to address comments and update various components.</p>
Continue to specify design criteria for post-construction stormwater runoff controls.	This aspect of the BMP is currently implemented and is an ongoing annual effort.	VDOT continues to require SWM Plans to incorporate design criteria for post-construction stormwater runoff controls in accordance with the VDOT Annual ESC and SWM Standards & Specifications.
Continue to develop stormwater management plans that are in accordance with VDOT’s annual ESC and SWM Standards & Specifications	This aspect of the BMP is currently implemented and is an ongoing annual effort.	All SWM Plans for RLDAs were developed in accordance with VDOT’s Annual Standards and Specifications for ESC and SWM.

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
Continue to inventory post-construction SWM facilities and related hydraulic and design information.	VDOT has previously implemented this requirement and will continue to inventory new BMPs as they are brought online.	A summary table of new stormwater BMP facilities brought online during the PY18 period within the urbanized area is provided in Appendix B. Note that these BMPs do not include those water quality BMPs already reported to DEQ through VDOT’s monthly CGP permit termination process, or those where the project and CGP permit was administered by others such as a Locality (e.g. Locally Administered Project) in accordance with Part I.C.5.f-h. Those outside the urbanized area are not included.
Land Disturbing Projects and SWM facilities follow appropriate requirements and are reported properly to DEQ.	VDOT will adjust queries and reports from current databases to develop such that BMPs can be reported in the next reporting period in a format compatible with the Virginia Construction Stormwater Database.	VDOT has submitted information for SWM water quality BMP facilities implemented in accordance with the Standards and Specifications for the control of post construction stormwater runoff from areas of new development and development on prior developed lands to the DEQ through VDOT’s regular monthly permit termination process, in accordance with Part I.C.5.g.

**BMP 5(B) – Long-Term Care and Maintenance of SWM Facilities**

<b>Description and Measurable Goal:</b>	Provide adequate long-term operation and maintenance of its SWM facilities in accordance with the VDOT BMP Inspection and Maintenance Manuals.
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<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Continue to annually inspect VDOT post-construction SWM facilities in accordance with VDOT BMP Inspection Manual, and record inspections in SWM facility database.	This aspect of the BMP is currently implemented and is an ongoing effort.	The stormwater facility BMPs within the urbanized area were inspected during the reporting year in accordance with VDOT’s BMP Inspection Manual. Record inspections are located in VDOT’s SWM BMP Inspection database. A summary of the total number of BMPs inspected and the number of inspections performed by each of the nine (9) Districts is provided in Appendix C.
Continue maintenance on its post-construction SWM facilities in accordance with the VDOT BMP Maintenance Manual	This aspect of the BMP is currently implemented and is an ongoing effort.	<p>VDOT’s permanent SWM BMPs/facilities continue to be maintained in accordance with the VDOT BMP Maintenance Manual.</p> <p>VDOT’s current BMP database is housed within the ArcGIS Online (AGOL) cloud based system. It cannot currently produce a list of maintenance activities that were necessary to address structural deficiencies or other significant maintenance tasks at this time without some very time-consuming, BMP by BMP research into the annual inspection files to see what structural/significant maintenance was needed. VDOT is in the process of updating this system and plans to incorporate this capability in the future. See Section BMP 5(C) for additional information. While this limitation is a function of the current software application database and reporting inefficiencies, the physical stormwater BMP/facilities do continue to be inspected annually as noted in this section and Appendix C, and routine and corrective maintenance/repairs are made to VDOT BMP/facilities by District Maintenance staff and contractors over time.</p>
Report BMP Data in a format acceptable to DEQ	VDOT will modify database reports and queries as needed to adapt to reporting format required by DEQ for the next reporting period.	VDOT has reported to DEQ through its monthly CGP project termination process stormwater quality BMP facilities that were brought online during the reporting period. In addition, a summary table of other stormwater BMP facilities brought online during the PY19 reporting period within the urbanized area, not reported through this monthly permit termination process, is provided in Appendix B, in accordance with Part I.C.5.f-h .



**BMP 5(C) – Annual Reporting and Effectiveness Review**

<b>Description and Measurable Goal:</b>	Report efforts and results of Post-Construction Stormwater BMPs in the Annual Report and Monitor Effectiveness
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<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Summarize Activities in BMP 5A-5B as required by permit.	Annually.	The information to demonstrate compliance with each control measure practice for this MCM are itemized in BMPs 5A-5B above.
Evaluate and describe effectiveness of each strategy and practice.	Annually.	<p>VDOT has evaluated each of the practices and we believe that the BMPs are appropriate and effective. Notable achievements and potential future activities leading to increased effectiveness are described below.</p> <p>VDOT has made a number of advancements and achievements over past reporting year:</p> <ul style="list-style-type: none"> <li>• Completed and delivered annual submittal of VDOT’s Annual Standards and Specifications for SWM.</li> <li>• Updating of BMP inventory and inspection electronic forms to be used on mobile tablets in the field in process;</li> <li>• Significant industry research on inspections and associated maintenance activities for each individual stormwater BMP type, in order to inform the planned update to both the electronic inspection &amp; maintenance form that will populate the BMP database, and the update to the Maintenance Division’s BMP Inspection and Maintenance Manual, which is currently underway.</li> <li>• VTRC research and publications, including Lorton Road ongoing monitoring of post-construction BMPs, continuing research into off-site trading and use of nutrient credits</li> <li>• Updates and edits to VDM Chapter 11</li> <li>• Partnering meeting with DEQ periodically throughout the reporting year</li> </ul> <p>The following are program elements that VDOT anticipates undertaking over the permit cycle</p>

		<p>including in part or in whole during the upcoming PY:</p> <ul style="list-style-type: none"> <li>- Revamping and finalization of stormwater BMP Construction checklists, as well as wider rollout of stormwater BMP Standard Special Provisions through coordination with VDOT L&amp;D and Construction Divisions.</li> <li>- Finalize updates to the stormwater BMP Inventory and Inspection &amp; Maintenance Forms that will be used to populate the VDOT stormwater BMP database. These updates will incorporate significant research undertaken in PY19.</li> <li>- Update Maintenance Division’s stormwater BMP Maintenance Manual to consolidate the Inspection and Maintenance Manuals into one, to update content informed by research undertaken in PY19, and to coordinate certain content to the updated BMP database content &amp; forms.</li> <li>- Improve reporting capabilities of the ESRI ArcGIS Suite BMP database, both for annual reporting, as well as for District staff to facilitate Inspectors with their work. This includes             <ol style="list-style-type: none"> <li>1.) Ability to generate automated report of structural deficiencies for annual reporting.</li> <li>2.) Ability to generate reports useful to Districts such as pulling requests for remaining BMPs that need to be inspected for the PY.</li> <li>3.) Ability to link appropriate maintenance/repairs to identified inspection needs with semi-automated reports from the BMP Inspection database.</li> <li>4.) Incorporation of workflow processes to send work orders to maintenance crews and feedback confirmation on when that work has been executed.</li> </ol> </li> </ul>
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**MCM#6:  
POLLUTION PREVENTION/GOOD HOUSEKEEPING  
FOR VDOT OPERATIONS**

**BMP 6(A)1 – Procedures for Operation and Maintenance Activities**

<b>Description and Measurable Goal:</b>	Develop and refine written procedures designed to minimize or prevent pollutant discharge from support facilities, daily operations, equipment maintenance, and the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers.
<b>Lead Division:</b>	Maintenance

<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Continue to develop and refine applicable sections of the Maintenance Best Practices Manual for MS4 regulated activities	This BMP is currently implemented and is continuously updated. An opportunity to update this Manual has been identified. A revision to this Manual is anticipated by 12/2019. In addition, this BMP in the Program Plan is expected to be updated in PY20.	The VDOT Maintenance Best Practices Manual continues to be implemented, in order to ensure that discharges of pollutants from roads, streets and parking lot maintenance are being prevented or minimized. Maintenance Division will be providing some updates to existing sections and adding a new "Environmental" chapter during PY20 with an expected completion date December 31, 2019.
Prohibit the dumping of yard waste and grass clippings into the MS4.	This aspect of the BMP is currently implemented through the Road and Bridge Specifications (2016).	Guidance provided in the VDOT Maintenance Best Practices Manual and the Roadside Development Specifications (Division VI of the VDOT Road and Bridge Specifications, 2016) continue to be implemented correctly.

**BMP 6(A)2 – Procedures for Operation and Maintenance Activities**

<b>Description and Measurable Goal:</b>	Develop and refine, as appropriate, written procedures designed to minimize or prevent pollutant discharge from high-priority support facilities, daily operations, equipment maintenance, and the application, storage, and disposal of pesticides, herbicides, and fertilizers.
<b>Lead Division:</b>	Environmental

<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Continue to develop and refine applicable sections of Waste Management and Pollution Prevention Guide that apply to MS4 regulated activities	This aspect of the BMP is currently implemented and is an ongoing effort. The WM/PP Guide will be reviewed each year.	The Facility Waste Management and Pollution Prevention Guide was updated in June 2019. MS4 requirements for inspection and documentation were added to applicable guide sections. Also new guide sections were added on the proper operation and maintenance of portable toilets, septic tanks and vegetation waste management.
Prohibit vehicle washing except on approved wash pads.	This aspect of the BMP is currently implemented and is an ongoing effort.	VDOT’s Waste Management and Pollution Prevention Guide, Guide 3.23 addresses vehicle and equipment washing at VDOT facilities. The Guide establishes approved areas for washing, as well as detailed un-approved washing activities. Compliance with the washing requirements is periodically evaluated through environmental compliance assessments.
Identify High Priority Facilities as defined by the Individual Permit	The effort has been completed. The list will be annually evaluated to determine if additional facilities are determined to be high priority.	VDOT maintains a list of high-priority facilities. Currently, there are 69 facilities that are identified as high-priority facilities, and require SWPPP development and implementation. These SWPPPs were developed during previous reporting periods (initial SWPPPs developed May 2015 – February 2017). There are no new high priority facilities owned or operated by VDOT that were identified or for which SWPPPs were developed during the current reporting period.

<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Continue to develop and refine SWPPPs for High Priority Facilities	This aspect of the BMP is currently implemented and is an ongoing effort. Each SWPPP is reviewed annually.	<p>VDOT has developed SWPPPs for all high-priority facilities in the VDOT MS4 regulated area. Each SWPPP is to be reviewed at least annually by the SWPPP Facility Stormwater Coordinator. Minor SWPPP revisions are edited by SWPPP Facility Stormwater Coordinators whereas significant potential refinements/edits are managed by Central Office. One such significant improvement in development is a new SWPPP Monthly Inspection Checklist. The improved checklist is part of VDOT’s update to our environmental database referred to as the Comprehensive Environmental Data and Reporting (CEDAR) system that will include a Facility Module. The new CEDAR Facility Module will enable monthly SWPPP inspections to be performed electronically with corrective actions automatically uploaded to the CEDAR system for better tracking and program management. The module and new monthly checklist is expected to be partially deployed in the fall of 2019.</p> <p>VDOT will continue to implement the SWPPPs, and will revise and modify SWPPPP as identified appropriate.</p>
Continue to perform annual MS4 compliance assessments at VDOT High Priority Facilities within the MS4 Areas	This aspect of the BMP is currently implemented and is an ongoing effort.	<p>VDOT performed annual MS4 compliance assessments for all high-priority facilities within the MS4 areas. One aspect of the assessments is to evaluate compliance with Department procedures to 1) minimize and prevent the discharge of potential pollutants to the MS4, 2) evaluate the proper management and disposal of wastes and 3) minimize the discharge of pollutants from bulk storage areas associated with facility activities.</p> <p>Additionally, VDOT is updating our environmental database referred to as the Comprehensive Environmental Data and Reporting (CEDAR) system to also include a Facility Module. The new CEDAR Facility Module will enable annual MS4 compliance assessments to be performed electronically with corrective actions automatically uploaded to the CEDAR system for better tracking and program management. The module is expected to be partially deployed in the fall of 2019.</p>

<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
<p>Develop a list of facilities with onsite septic in local watersheds with a bacteria TMDL that allocates a WLA to VDOT's MS4.</p>	<p>Maintain list and guidance and communicate requirements to District Maintenance and/or Facilities to inspect and/or pump out septic tanks once every 5 years.</p>	<p>There are three VDOT Facilities with on-site septic systems in local watersheds with a bacteria TMDL and VDOT WLA.</p> <p>Chester Area Headquarters' septic tank was pumped in May 2018.</p> <p>Merrifield Area Headquarters' septic tank was pumped in 2017.</p> <p>Winchester Residency Complex's septic tank was pumped in 2016.</p>

**BMP 6(B) – Turf and Landscape Management**

<b>Description and Measurable Goal:</b>	Develop and refine turf and landscape nutrient management plans (NMPs) that have been developed by a certified turf and landscape nutrient management planner to minimize or prevent pollutant discharge from turf and landscape management
<b>Lead Division:</b>	Maintenance

<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Identify all applicable lands where nutrients are applied to a contiguous area of more than one acre.	This effort has been completed. The list will be evaluated annually to determine if updates are required.	There are no longer any VDOT facilities (and no new lands exceeding one acre) where nutrients are applied; therefore, no new individual Nutrient Management Plans are needed.
Continue to develop and refine NMPs on all lands where nutrients are applied to a contiguous area of more than one acre.	This aspect of the BMP is currently implemented and is an ongoing effort.	VDOT cannot discretely estimate the acreage upon which nutrients are applied subject to VDOT's two DCR-approved Nutrient Management Plans: (1) one plan applicable to all new construction; (2) the other plan applicable to all roadside management activities
Continue to develop and refine Nutrient Management Standards & Specifications as approved by DCR for roadside development during construction and maintenance activities.	This aspect of the BMP is currently implemented with approved district specific NMPs and is an ongoing effort.	VDOT personnel continue to implement provisions of two DCR-approved Nutrient Management Plans: (1) " <i>Nutrient Management Plan for Turf Establishment on Construction Projects</i> "; and (2) " <i>Nutrient Management Plan for Turf Establishment on Roadside Projects</i> ".
Continue to specify criteria for managing yard waste and grass clippings in VDOT's Roadside Development Standards and Specifications.	This aspect of the BMP is currently implemented through the Road and Bridge Specifications (2016).	VDOT's Maintenance Best Practices Manual, Waste Management, Pollution Prevention Guide, and Roadside Development Specifications do not currently include standards and specifications for handling yard waste and grass clippings. The Manual does address tree trimming and brush disposal. However, Maintenance Division is embarking on an update of the Maintenance Best Practices Manual, to be completed by December 31, 2019. This update will include a new "Environmental" chapter and will include guidance for handling yard waste and grass clippings.



**BMP 6(C)1 – Training of VDOT Forces**

<b>Description and Measurable Goal:</b>	Continue to implement VDOT’s efforts to prevent and reduce stormwater pollution from VDOT-related activities through development, deployment, and delivery of training courses and events.
<b>Lead Division:</b>	Environmental (for division specific elements of VDOT’s Employee Training Program for MS4 and Stormwater)

<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Deliver a training plan to include, but not limited to, training on the IDDE program, Good Housekeeping/Pollution Prevention, SWPPP and appropriate spill prevention and responses.	This aspect of the BMP is currently implemented and is an ongoing effort.	<p>The following is a summary of training provided by the Environmental Division for the reporting year. There were 1661 attendees of MS4-related training during the reporting year, an approximately <b>37% increase</b> from the previous reporting year.</p> <p><i>Spill Prevention Control and Countermeasure (SPCC)</i> training is delivered at facilities that operate under an SPCC plan. Training can be taken through the VDOT Virtual Campus and accessed on Electronic Bulletin Boards (EBBs) found at every VDOT facility. It includes aspects of proper and improper disposal of materials in addition to Good Housekeeping and Pollution Prevention (GHPP).</p> <p><i>Facility Storm Water Pollution Prevention Plan (SWPPP)</i> training is delivered across the state at MS4 high priority facilities that are issued SWPPPs, and includes elements of VDOT’s Illicit Discharge Detection and Elimination (IDDE) Program and GHPP. The <i>Facility SWPPP</i> training module is distributed via the VDOT Virtual Campus and posted on EBBs. Additionally, in-person training is provided at the large District Complexes that have SWPPPs, as well as one-on-one training for new Facility SWPPP Coordinators.</p> <p><i>DOT Hazardous Materials Awareness</i> training is delivered to VDOT staff that are involved in the shipment and signing of manifests for hazardous materials and includes elements of GHPP.</p> <p>The VDOT <i>Salt Infrastructure and Facility Leak and Spill Prevention</i> training modules were developed and released through the VDOT Virtual Campus and EBBs the previous permit year. These were developed based on particular aspects of GHPP</p>

		<p>VDOT Environmental staff identified as requiring special focus and are deployed at facilities with site-specific concerns.</p> <p>In Permit Year (PY) 2018-2019, two additional focused modules were developed. The <i>Good Housekeeping and Pollution Prevention for Contractors</i> training is available on the EBBs as well as a new-to-VDOT YouTube based training. It is targeted towards VDOT maintenance contractors, and provides a general overview of GHPP procedures that contractors are expected to adhere to while working on/at a VDOT maintenance facility.</p> <p>A <i>Facility Erodibles Stockpile Management</i> training was also completed in May and deployed to the EBBs and VDOT’s Virtual Campus. Similar to the <i>Salt Infrastructure and Facility Leak and Spill Prevention</i> training modules, the <i>Erodibles Management</i> training was developed with focus on one aspect of GHPP and will be deployed at facilities with site-specific issues.</p> <p>VDOT also had a booth at the Statewide Rodeo in August 2018, and provided general awareness of pollution prevention/good housekeeping practices, and illicit discharges. Over 700 people attended this event.</p> <p>See Appendix D for a summary of the VDOT Employee Training Summary.</p>
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**BMP 6(C)2 – Training of VDOT Forces**

<b>Description and Measurable Goal:</b>	Continue to develop and refine VDOT’s efforts to prevent and reduce stormwater pollution from VDOT-related activities.
<b>Lead Division:</b>	Maintenance (for division specific elements of VDOT’s Employee Training Program for MS4 and Stormwater)

<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Ensure that VDOT employees and contractors who apply pesticides and herbicides are properly trained or certified in accordance with the Virginia Pesticide Control Act.	This aspect of the BMP is currently implemented and is an ongoing effort.	<p>VDOT has a partnership with Virginia Cooperative Extension (VCE) where by VCE agents provided 20 hours of Registered Technician (RT) classroom training. Topics included: Pesticide Use in Virginia, Principles of Pest Control, Pesticide Labeling, Pesticide Formulations, Pesticides in the Environment, Harmful Effects and Emergency Response, Personal Protective Equipment, Pesticide Handling Decisions, Application Equipment (Calibration and Methods), Calculating the Correct Amount to Apply, Transportation, Storage, Containment, Disposal and Spill Management. VDOT also has a partnership with Virginia Tech Weed Science Department to administer 20 hours of hands on RT Training. The hands on RT training reiterates the classroom material and provides practical training using a backpack sprayer. In addition, it provides a weed identification laboratory exercise. The overall objective of the RT training is to train VDOT employees to become Registered Technician pesticide applicators per VDACS requirements. VDOT currently has 164 certified RT pesticide applicators. Classroom training was conducted on March 25-28, 2019 for 34 VDOT employees.</p> <p>VDOT continues to control the discharge of pollutants related to storage and application of pesticides, herbicides, and fertilizers applied to our rights of way and support facilities by those individual that are certified as Registered Technicians.</p>
Ensure that VDOT employees and contractors are trained in good housekeeping and pollution prevention	This aspect of the BMP is currently implemented and is an ongoing effort	Currently, various kinds of MS4 related training are provided independently by VDOT Districts and Divisions. What tracking occurs, it is managed and monitored by VDOT's Workforce Development/VDOT University staff. However, that

<p>practices and the IDDE Program.</p>		<p>probably does not capture all relevant participation at this time. VDOT has an inter-Divisional project underway with our Workforce Development/Training staff to update the agency's MS4/Maintenance Training Plan. We are identifying more specifically who needs to have which kinds of training and ways to more accurately monitor and track that to ensure the proper staff actually receive the training at recurring intervals stipulated in our MS4 permit. This process is anticipated for completion in PY20. The following training was supplied this permit year:</p>																		
		<table border="1"> <thead> <tr> <th data-bbox="857 695 1268 764">Type of Training</th> <th data-bbox="1268 695 1463 764"># Employees Trained</th> </tr> </thead> <tbody> <tr> <td data-bbox="857 764 1268 835">Environmental Compliance for Maintenance Activities</td> <td data-bbox="1268 764 1463 835">23</td> </tr> <tr> <td data-bbox="857 835 1268 907">Environmental, MS4 and Materials Training for AHQ's</td> <td data-bbox="1268 835 1463 907">22</td> </tr> <tr> <td data-bbox="857 907 1268 978">MS4 Compliance for VDOT Facilities</td> <td data-bbox="1268 907 1463 978">18</td> </tr> <tr> <td data-bbox="857 978 1268 1092">Infrastructure: Good Housekeeping &amp; Pollution Prevention</td> <td data-bbox="1268 978 1463 1092">64</td> </tr> <tr> <td data-bbox="857 1092 1268 1163">Facility Stormwater Pollution Prevention Plan (SWPPP)</td> <td data-bbox="1268 1092 1463 1163">189</td> </tr> <tr> <td data-bbox="857 1163 1268 1234">DEQ Inspector for Stormwater Management</td> <td data-bbox="1268 1163 1463 1234">102</td> </tr> <tr> <td data-bbox="857 1234 1268 1306">DEQ Inspector for Erosion &amp; Sediment Control</td> <td data-bbox="1268 1234 1463 1306">150</td> </tr> <tr> <td data-bbox="857 1306 1268 1346"><b>TOTAL</b></td> <td data-bbox="1268 1306 1463 1346"><b>568</b></td> </tr> </tbody> </table>	Type of Training	# Employees Trained	Environmental Compliance for Maintenance Activities	23	Environmental, MS4 and Materials Training for AHQ's	22	MS4 Compliance for VDOT Facilities	18	Infrastructure: Good Housekeeping & Pollution Prevention	64	Facility Stormwater Pollution Prevention Plan (SWPPP)	189	DEQ Inspector for Stormwater Management	102	DEQ Inspector for Erosion & Sediment Control	150	<b>TOTAL</b>	<b>568</b>
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**BMP 6(C)3 – Training of VDOT Forces**

<b>Description and Measurable Goal:</b>	Continue to train VDOT forces to prevent and reduce stormwater pollution from VDOT-related activities.
<b>Lead Division:</b>	Construction (for division specific elements of VDOT’s Employee Training Program for MS4 and Stormwater)

<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>																																							
Ensure applicable construction personnel receive training on the IDDE program and appropriate spill responses.	Starting in the second year of permit coverage, provide training to applicable field personnel.	<p>A total of 1,146 VDOT individuals are certified through the DEQ ESC and/or SWM Certification Program, of which illicit discharge and spill response is a subject element. The following list identifies the total number of VDOT individuals certified or re-certified this reporting period:</p> <table border="1"> <thead> <tr> <th><u>DEQ ESC/SWM Certifications</u></th> <th><u>Certified</u></th> <th><u>Recertified</u></th> </tr> </thead> <tbody> <tr> <td>SWM Program Administrator</td> <td>2</td> <td>0</td> </tr> <tr> <td>SWM Inspector</td> <td>35</td> <td>8</td> </tr> <tr> <td>SWM Plan Reviewer</td> <td>14</td> <td>6</td> </tr> <tr> <td>SWM Combined Administrator</td> <td>10</td> <td>6</td> </tr> <tr> <td>ESC Program Administrators</td> <td>4</td> <td>1</td> </tr> <tr> <td>ESC Inspector</td> <td>466</td> <td>108</td> </tr> <tr> <td>ESC Plan Reviewer</td> <td>17</td> <td>2</td> </tr> <tr> <td>ESC Combined Administrators</td> <td>49</td> <td>21</td> </tr> <tr> <td>Responsible Land Disturber</td> <td>306</td> <td>60</td> </tr> <tr> <td>Dual Combined Administrator</td> <td>30</td> <td>14</td> </tr> <tr> <td>Dual Inspector</td> <td>207</td> <td>100</td> </tr> <tr> <td>Dual Plan Reviewer</td> <td>6</td> <td>3</td> </tr> </tbody> </table> <p>This relates only to the certifications awarded by DEQ.</p>	<u>DEQ ESC/SWM Certifications</u>	<u>Certified</u>	<u>Recertified</u>	SWM Program Administrator	2	0	SWM Inspector	35	8	SWM Plan Reviewer	14	6	SWM Combined Administrator	10	6	ESC Program Administrators	4	1	ESC Inspector	466	108	ESC Plan Reviewer	17	2	ESC Combined Administrators	49	21	Responsible Land Disturber	306	60	Dual Combined Administrator	30	14	Dual Inspector	207	100	Dual Plan Reviewer	6	3
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**BMP 6(C)4 – Training of VDOT Forces**

<b>Description and Measurable Goal:</b>	Continue to implement VDOT’s efforts to prevent and reduce stormwater pollution from VDOT-related activities.
<b>Lead Division:</b>	Workforce Development (for division specific elements of VDOT’s Employee Training Program for MS4 and Stormwater)

<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>																																										
Ensure that VDOT employees and consultants serving as plan reviewers and inspectors obtain the appropriate certifications as specified in VDOT’s annual ESC and SWM standards and specifications.	This aspect of the BMP is currently implemented and is an ongoing effort.	<p>A total of 1,146 VDOT individuals are certified through the DEQ ESC and/or SWM Certification Program, of which illicit discharge and spill response is a subject element. The following list identifies the total number of VDOT individuals certified or re-certified this reporting period:</p> <table border="1"> <thead> <tr> <th><u>DEQ ESC/SWM Certifications</u></th> <th><u>Certified</u></th> <th><u>Recertified</u></th> </tr> </thead> <tbody> <tr> <td>SWM Program Administrator</td> <td>2</td> <td>0</td> </tr> <tr> <td>SWM Inspector</td> <td>35</td> <td>8</td> </tr> <tr> <td>SWM Plan Reviewer</td> <td>14</td> <td>6</td> </tr> <tr> <td>SWM Combined Administrator</td> <td>10</td> <td>6</td> </tr> <tr> <td>ESC Program Administrators</td> <td>4</td> <td>1</td> </tr> <tr> <td>ESC Inspector</td> <td>466</td> <td>108</td> </tr> <tr> <td>ESC Plan Reviewer</td> <td>17</td> <td>2</td> </tr> <tr> <td>ESC Combined Administrators</td> <td>49</td> <td>21</td> </tr> <tr> <td>Responsible Land Disturber</td> <td>306</td> <td>60</td> </tr> <tr> <td>Dual Combined Administrator</td> <td>30</td> <td>14</td> </tr> <tr> <td>Dual Inspector</td> <td>207</td> <td></td> </tr> <tr> <td>100</td> <td></td> <td></td> </tr> <tr> <td>Dual Plan Reviewer</td> <td>6</td> <td>3</td> </tr> </tbody> </table> <p>This relates only to the certifications awarded by DEQ.</p>	<u>DEQ ESC/SWM Certifications</u>	<u>Certified</u>	<u>Recertified</u>	SWM Program Administrator	2	0	SWM Inspector	35	8	SWM Plan Reviewer	14	6	SWM Combined Administrator	10	6	ESC Program Administrators	4	1	ESC Inspector	466	108	ESC Plan Reviewer	17	2	ESC Combined Administrators	49	21	Responsible Land Disturber	306	60	Dual Combined Administrator	30	14	Dual Inspector	207		100			Dual Plan Reviewer	6	3
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Provide training opportunities through the Erosion and Sediment Control Contractor Certification (ESCCC) Program.	This aspect of the BMP is currently implemented and is an ongoing effort.	The VDOT ESCCC Program provides an integral service to VDOT contractors, maintenance forces, and land-use permittees. The course topics include: the VESCLR, the erosion process, ESC control measures, and the VDOT contract enforcement process. The training is provided by four outside vendors who schedule classes through the year. There were 426 individuals trained during this reporting year.																																										

**BMP 6(D) – Oversight of VDOT Maintenance Contractors**

<b>Description and Measurable Goal:</b>	Contractual oversight procedures for VDOT contractors for maintenance of roadway or operation and use of VDOT facilities.
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<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Continue to require that contractors use appropriate control measures and procedures for stormwater discharges to the VDOT's MS4 System.	This aspect of the BMP is currently implemented and is an ongoing effort	VDOT continues to require that contractors comply with contract language, VDOT's Annual Standards and Specifications, and all other relevant documentation providing stipulations regarding use of appropriate control measures for stormwater discharges and prevention of non-stormwater discharges from the VDOT MS4 system.

**BMP 6(E) – Annual Reporting and Effectiveness Review**

<b>Description and Measurable Goal:</b>	Report efforts and results of Pollution Prevention/Good Housekeeping BMPs in the Annual Report and Monitor Effectiveness
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<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Summarize Activities in BMP 6A-6D as required by permit.	Annually.	The information to demonstrate compliance with specific control measure practices for this MCM are itemized in BMPs 6A-6D above. Other reporting items are listed below.
Assure that protocols are followed	Annually.	<p>VDOT maintains design criteria for infrastructure related to the storage of deicing materials. The infrastructure and guidance detailed in the waste management and pollution prevention guide are designed to control and minimize pollutant discharge. Compliance with the guidance are periodically assessed during facility compliance assessments.</p> <p>As part of the Department’s New Product Review process for chemicals proposed to be used within the Department or applied to Department Right of Way, no deicing chemicals containing urea or other forms of nitrogen or phosphorus were reviewed for use by VDOT during the reporting year.</p> <p>These written procedures together with the <i>Procedures for Operation and Maintenance Activities</i> outlined in BMP 6(A)2 Environmental, and the <i>Annual Standards and Specifications for ESC</i> outlined in BMP 4(A) reduce the discharge of pollutants associated with VDOT owned or operated facilities and road, street, and parking lot maintenance per Part I.C.6.f.</p> <p>The Procedures for Operation and Maintenance Activities outlined in BMP 6(A)1 Maintenance, and the Turf and Landscape Management practices outlined in BMP 6(B) that cover pesticide, herbicide, and fertilizer application were followed as discussed in the reporting of those BMPs and per Part I.C.6.g.</p>
Evaluate and describe effectiveness of each strategy and practice.	Annually.	VDOT has evaluated each of the practices and we believe that the BMPs are appropriate and effective. Notable achievements and potential future activities leading to increased effectiveness are described inline through the above BMP responses, as appropriate.



## **MCM#7: INFRASTRUCTURE COORDINATION**

**BMP 7(A) – Infrastructure Coordination**

<b>Description and Measurable Goal:</b>	Coordinate with other large MS4s regarding physical interconnection of systems.
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<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>																								
Meet* annually with each Phase 1 MS4 permittee for the purpose of coordination on priority issues for the Program Plan and TMDL Action Planning relevant to interconnectivity.	This aspect of the BMP is currently being implemented and is an ongoing effort.	<p>VDOT coordinated and met with the following Phase 1 MS4 localities during the reporting year.</p> <table border="1"> <thead> <tr> <th><b>Locality</b></th> <th><b>Date</b></th> </tr> </thead> <tbody> <tr> <td>Prince William County</td> <td>07/26/18</td> </tr> <tr> <td>Arlington County</td> <td>7/26/18, 4/30/19</td> </tr> <tr> <td>Chesterfield County</td> <td>11/20/18</td> </tr> <tr> <td>Henrico County</td> <td>11/20/18</td> </tr> <tr> <td>Chesapeake</td> <td>04/04/19</td> </tr> <tr> <td>Hampton</td> <td>04/04/19</td> </tr> <tr> <td>Newport News</td> <td>04/04/19</td> </tr> <tr> <td>Norfolk</td> <td>1/25/19, 2/21/19, 4/4/19</td> </tr> <tr> <td>Virginia Beach</td> <td>01/25/19, 02/21/19, 04/04/19</td> </tr> <tr> <td>Portsmouth</td> <td>04/04/19</td> </tr> <tr> <td>Fairfax County</td> <td>01/10/19, 06/11/19</td> </tr> </tbody> </table> <p>*In person or via a conference call meeting</p> <p>The primary issues discussed during the meetings with each Phase 1 permittee included:</p> <ul style="list-style-type: none"> <li>- Priority issues and updates;</li> <li>- SWM implementation on new construction projects including Design Builds;</li> <li>- Status of Mapping program;</li> <li>- Chesapeake Bay TMDL Action Plans - means, methods and schedule;</li> <li>- Other TMDL Action Plans;</li> <li>- Credit for TMDL Implementation – BMPs and strategies to meet reduction requirements, and potential partnering and collaboration opportunities;</li> <li>- IDDE – Coordination on high risk industrial facilities, contact information and process;</li> </ul>	<b>Locality</b>	<b>Date</b>	Prince William County	07/26/18	Arlington County	7/26/18, 4/30/19	Chesterfield County	11/20/18	Henrico County	11/20/18	Chesapeake	04/04/19	Hampton	04/04/19	Newport News	04/04/19	Norfolk	1/25/19, 2/21/19, 4/4/19	Virginia Beach	01/25/19, 02/21/19, 04/04/19	Portsmouth	04/04/19	Fairfax County	01/10/19, 06/11/19
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Participate in coordination efforts initiated by Phase 1 MS4 and Small MS4 operators when the VDOT MS4 is physically-interconnected.	Engage and participate with Phase 1 and Small MS4s as requested.	VDOT does not have any additional MS4 Infrastructure coordination meetings with small MS4s to report over the past permit year.																								

*Note: \* Meetings may be conducted individually with permittees or in a group meeting and face to face meetings, conference calls, or using electronic meeting technology may constitute a meeting.*

# SC#1: SPECIAL CONDITIONS FOR CHESAPEAKE BAY TMDL<sup>3</sup>

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<sup>3</sup> *Special condition for the Chesapeake Bay TMDL. The Commonwealth in its Phase I and Phase II Chesapeake Bay TMDL Watershed Implementation Plans (WIP) committed to a phased approach for MS4s, affording MS4 operators up to three full five-year permit cycles to implement necessary reductions. This permit is consistent with the Chesapeake Bay TMDL and the Virginia Phase I and II WIPs to meet the Level 2 (L2) scoping run for existing developed lands as it represents an implementation of a cumulative 36.0% of L2 as specified in the 2010 Phase I WIP. Conditions of future permits will be consistent with the TMDL or WIP conditions in place at the time of permit issuance.*

- (1) *In accordance with Part I, Section D.3 of the permit, the operator shall develop and submit to the DEQ for its review an amended Chesapeake Bay TMDL Action Plan that addresses a cumulative reduction of at least 36% of the total Level 2 Scoping Run reductions.*

**Special Condition #1 – Chesapeake BayTMDL**

<b>Description and Measurable Goal:</b>	Develop and implement TMDL Action Plan for the Chesapeake Bay Watershed TMDL
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<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>																												
A list of BMPs and/or strategies implemented during the reporting period and the estimated reduction of pollutant(s) achieved by each reported in pounds per year.	Report annually	See Appendix F for details on BMP implementation, credits achieved to-date and the Urban BMP Reporting Spreadsheet.																												
The progress toward meeting the required cumulative reductions for total nitrogen, total phosphorus, and total suspended solids	Report annually	<table border="1"> <thead> <tr> <th></th> <th colspan="3">Parameter</th> </tr> <tr> <th></th> <th>TN (lb/yr)</th> <th>TP (lb/yr)</th> <th>TSS (lb/yr)</th> </tr> </thead> <tbody> <tr> <td>James</td> <td>11,208.72</td> <td>4,302.91</td> <td>1,047,482.19</td> </tr> <tr> <td>Potomac</td> <td>13,432.42</td> <td>4,546.62</td> <td>1,383,182.70</td> </tr> <tr> <td>Rappahannock</td> <td>659.79</td> <td>124.92</td> <td>176,658.17</td> </tr> <tr> <td>York</td> <td>625.18</td> <td>204.97</td> <td>61,143.32</td> </tr> <tr> <td colspan="4"><b>Total Reductions Reported to Date (all basins): 25,926.11 9,179.24 2,668,466.38</b></td> </tr> </tbody> </table>		Parameter				TN (lb/yr)	TP (lb/yr)	TSS (lb/yr)	James	11,208.72	4,302.91	1,047,482.19	Potomac	13,432.42	4,546.62	1,383,182.70	Rappahannock	659.79	124.92	176,658.17	York	625.18	204.97	61,143.32	<b>Total Reductions Reported to Date (all basins): 25,926.11 9,179.24 2,668,466.38</b>			
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A list of control measures that are planned to be implemented during the next reporting period	Report annually	See Appendix F for details on the proposed PY20 implementation schedule.																												

Note: \* A copy of the Chesapeake Bay TMDL Action Plan is available at Environmental Division's Central Office location.

## **SC#2: SPECIAL CONDITIONS FOR APPROVED LOCAL TMDLS<sup>4</sup>**

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<sup>4</sup> *Special conditions for approved total maximum daily loads (TMDL) other than the Chesapeake Bay TMDL. An approved TMDL may allocate an applicable wasteload to a small MS4 that identifies a pollutant or pollutants for which additional stormwater controls are necessary for the surface waters to meet water quality standards. The permittee shall develop and implement a local TMDL action plan for each pollutant for which wasteloads have been allocated to the permittee's MS4 in TMDLs approved by the Environmental Protection Agency (EPA) and listed in Attachment A of the permit as described below:*

*a. For TMDLs approved by the EPA prior to July 1, 2013, the permittee shall update the previously approved local TMDL action plans in order to meet the conditions of Part I.E.2, 3, 4, and 5, as applicable, no later than 12 months after the permit effective date.*

*b. For TMDLs approved by EPA on or after July 1, 2013 and prior to April 1, 2017, the permittee shall develop and initiate implementation of action plans for each pollutant for which wasteloads have been allocated to the permittee's MS4 in order to meet the conditions of Part I.E.2, 3, 4, and 5, as applicable no later than 24 months after the permit effective date.*

**Special Condition #2 – Local TMDL**

<b>Description and Measurable Goal:</b>	Develop and implement applicable TMDL Action Plans for approved TMDLs that have assigned VDOT’s MS4 a wasteload allocation.
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<b>Expected Efforts and Results in Meeting Measurable Goal</b>	<b>Implementation Schedule</b>	<b>Annual Report Information</b>
Summary of actions conducted to Implement Local TMDL Action Plans.	In accordance with schedule identified in each Local TMDL Action Plan.	Summary of actions to implement the Action Plans is reported in Appendix G.

*Note: \* Copies of the Local TMDL Action Plans for Bacteria, PCBs and Sediment are available at Environmental Division’s Central Office location.*

### **PROGRAM EVALUATION, MODIFICATION, AND REPORTING**

Through the MS4 Steering Committee meetings, VDOT will annually evaluate the effectiveness of each strategy or practice. VDOT routinely evaluates specific standards and specifications, schedules, manuals, checklists, and other documents. Revisions to the MS4 Program Plan are expected throughout the life of this permit as part of the iterative process to reduce pollutant loading and protect water quality. As such, revisions made in accordance with this permit as a result of the iterative process do not require modification of this permit. VDOT will document revisions to the MS4 Program Plan as part of the Annual Report, including an explanation as to why a specific BMP was replaced or eliminated. No modifications have been made to the Program Plan since the most recent submittal in June 2018.

Documents, policies, and procedures listed in the Program Plan are updated internally at VDOT as needed (to comport with changes to laws, regulations, implementation approach or other factors not related to MS4/Stormwater).

# **Appendix A**

## **List of TMDL Committees, Meetings & Activities**



**Local TMDL Technical Advisory Committee Meetings**

Meeting Name/Venue	Date
Mattaponi River TMDL River Watershed	7/24/2018
Blacks Run and Cooks Creek TAC Meeting	2/27/2019
SAMS Stakeholder Advisory Committee Meeting	5/29/2019

**Local TMDL & Watershed Implementation Plan Meetings**

Meeting Name/Venue	Date
Rappahannock Rapidan Regional Commission WIP III	7/13/2018
Central Shenandoah Planning District Commission WIP III	7/23/2018
Mattaponi River TMDL River Watershed	7/31/2018
Central Shenandoah Planning District Commission WIP III	7/31/2018
Hampton Roads Planning District WIP III	8/2/2018
Crater Planning District Commission WIP III	8/8/2018
Roanoke-Alleghany Regional Commission WIP III	8/9/2018
George Washington Regional Commission WIP III	8/16/2018
Northern Virginia Regional Commission WIP III	8/17/2018
Rappahannock Rapidan Regional Commission WIP III	8/17/2018
Central Shenandoah Planning District Commission WIP III	8/22/2018
Middle Peninsula Planning District Commission WIP III	8/22/2018
Accomack-Northampton Planning District Commission WIP III	8/23/2018
Northern Shenandoah Regional Commission WIP III	8/23/2018
Region 2000 Local Government Council WIP III	8/23/2018
Crater Planning District Commission WIP III	8/27/2018
Commonwealth Regional Council WIP III	8/30/2018
Northern Neck PDC WIP III	8/30/2018
Hampton Roads PDC WIP III	9/6/2018
SAMS Traditional BMPs Workgroup	9/13/2018
Central Shenandoah Planning District Commission WIP III	9/20/2018
George Washington Regional Commission WIP III	9/20/2018
Middle Peninsula PDC WIP III	9/20/2018
Accomack-Northampton PDC WIP III	9/21/2018
Northern Virginia Regional Commission WIP III	9/21/2018
Crater Planning District Commission WIP III	9/24/2018
Richmond Regional Commission WIP III	9/24/2018
Northern Shenandoah Regional Commission WIP III	9/26/2018
Region 2000 Local Government Council WIP III	9/27/2018
Thomas Jefferson PDC WIP III	10/4/2018
Hampton Road PDC WIP III	10/10/2018
Thomas Jefferson PDC WIP III	10/17/2018
Region 2000 Local Government Council WIP III	10/22/2018
Commonwealth Regional Council WIP III	10/22/2018
Crater Planning District Commission WIP III	10/29/2018
Middle Peninsula PDC WIP III	11/8/2018
George Washington Regional Commission WIP III	11/9/2018

VDOT MS4 Annual Report – PY2019

VPDES #: VA0092975

Northern Virginia Regional Commission WIP III	11/19/2018
Area I WIP III	11/26/2018
Blacks Run and Cooks Creek Public Meeting	11/28/2018
Area III WIP III	11/28/2018
Accomack-PDC WIP III	11/29/2018
Area VI (SWCD & PDC) WIP III	11/29/2018
SAMS Government Coordination Workgroup	12/3/2018
Hampton Roads PDC WIP III	12/6/2018
Commonwealth Regional Council WIP III	12/11/2018
Northern Neck PDC WIP III	12/13/2018
Blacks Run and Cooks Creek TAC Meeting	2/27/2019
Mattaponi Watershed	3/27/2019
North Fork Rivanna River Watershed	4/17/2019
SAMS Stakeholder Advisory Committee Meeting	5/29/2019
SAMS Coordination Meeting with DEQ	6/24/2019
CVPDC Area WIP meeting	6/26/2019

ActivitiesMeeting Name/Venue	Date
Bay TMDL BMP Collaboration Meeting with USACE	7/17/2018
TRB Webinar, Structural Design of Porous Pavements	7/17/2018
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	7/24/2018
Virginia Nutrient Trading Workshop for the Rappahannock River Basin	7/26/2018
StormQC Stormwater Management software beta testing	7/27/2018
Grant Proposal Discussions with Virginia Environmental Endowment	7/30/2018
Shoreline BMP Collaboration Meeting with DCR, FOR & NNPDC	8/9/2018
National Hydraulic Engineering Conference (NHEC), Standing Committee on Stormwater	8/27-30/2018
Proprietary BMP Discussion with OPTI	9/7/2018
WaterJam 2018	09/11-12/2018
CB Outfall Restoration Expert Panel Meeting	9/18/2018
Locally Administered Projects (LAP) Conference	9/19/2018
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	9/25/2018
Stream Mechanics Class – Natural Channel Design Review Checklist Workshop	09/30-10/5/19
WEFTEC	10/1-4/18
Chesapeake Bay TMDL Phase III WIP Workshop	10/9/2018
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	10/16/2018
CSN Webinar, Behavior Change & Outreach Campaigns - Litter Reduction	10/25/2018
CB Outfall Restoration Expert Panel Meeting	11/1/2018
CSN Webinar, Bringing Green Stormwater Research to Practice	11/8/2018
Virginia Coastal Partners Workshop	11/14/2018
VAWP Fall Meeting	11/15/2018
Urban Stormwater Work Group	11/20/2018
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	11/27/2018
VTRC Environmental Research Advisory Council (ERAC) Committee, Fall Meeting	11/28/2018
Combined SWCD/PDC WIP III Meeting – Remington, VA	12/6/2018
Shoreline BMP Meeting with VIMS	12/11/2018

October 2019

VDOT MS4 Annual Report – PY2019

VPDES #: VA0092975

Shoreline BMP Project Meeting with DCR	12/13/2018
CSN Webinar, Roadside Ditch Management Guidance - Part 2	12/13/2018
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	12/18/2018
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	1/22/2019
CSN Webinar, Lessons in Green Infrastructure	1/24/2019
CSN Webinar, Runoff Reduction Method Update	1/31/2019
CB Outfall Restoration Expert Panel Meeting	2/13/2019
Stream Restoration BMP Collaboration Meeting with NWSY	2/19/2019
SWIFT Credit Collaboration Meeting with HRSD	2/19/2019
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	2/19/2019
Information Share with PennDOT	2/21/2019
CSN Webinar, PAHs in Stormwater	2/28/2019
VLWA Conference	03/4-5/19
Water Research Foundation Webinar, Lifecycle Analysis of Stormwater Costs	3/7/2019
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	3/7/2019
CB Outfall Restoration Expert Panel Meeting	3/11/2019
USWG Meeting	3/19/2019
Environment Virginia Symposium	03/26-28/19
Living Shorelines Collaboration with FHWA	3/29/2019
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	4/9/2019
USWG Conference Call	4/16/2019
VWEA Stormwater Conference	4/25/2019
Enhanced Coagulant Treatment for Non-point Sources Lunch&Learn	5/1/2019
VIMS Tidal Wetlands Workshop	5/2/2019
Stream/Shoreline Restoration Collaboration Meeting with York Co.	5/3/2019
AASHTO Communities of Practice Webinar “TMDLs and Watershed Approaches”	5/10/2019
District Maintenance Engineers Meeting Presentation on CB TMDL BMPs	5/14/2019
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	5/14/2019
VTRC Environmental Research Advisory Council (ERAC) Committee, Spring Meeting	5/14/2019
Association of State Floodplain Managers (ASFPM) National Conference	5/19-23/2019
Applied Fluvial Geomorphology (Rosgen 1)	06/3-7/19
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	6/20/2019
Tree Planting BMP Collaboration with American Battlefield Trust	6/26/2019
NCHRP 24-40 Workshop at MD SHA, Design Hydrology for Stream Restoration	6/26-27/2019
Urban Stormwater Workgroup (USWG)	Monthly
BMP Clearinghouse Meetings	Multiple, Varies
DEQ SWM & ESC Consolidation RAP	Multiple, Varies

**Appendix B**  
**New Stormwater Management Facilities Brought  
Online During the Reporting Year**

MS4 Reporting Year FY18 (July 1, 2017 through June 30, 2018) New SWM Facilities brought online within Census Urban Areas. MCM #5; BMP 5(B)*								
Facility Type	Latitude	Longitude	Total Acres Controlled / Treated (Acres)	Pervious Acres Controlled/ Treated (Acres)	Impervious Acres Controlled/ Treated (Acres)	Date brought Online	6th Order HUC	Date Last Inspected
Extended Detention - IIC	38.8768	-77.0577	5.6	3.9	1.7	01/29/19	PL24	01/29/19

\* Stormwater BMP facilities in this table represent those within the urbanized area brought online during the PY19 period and that are maintained by VDOT. Excluded here are those BMPs that were already reported to DEQ through VDOT’s monthly CGP permit termination process, or those where the project and CGP permit was administered by others such as a locality (e.g. LAP or LUP project) in accordance with Part I.C.5.f-h.

**Appendix C**  
**BMP Inspections Performed during the**  
**Reporting Year**

District	Number of BMPs	Number of BMP Inspections*
Bristol	8	8
Culpeper	29	29
Fredericksburg	73	72 (1 under construction)
Hampton Roads	105	105
Lynchburg	8	8
Northern Virginia	585	564 (3 Removed, 15 Under Construction, 3 New)
Richmond	188	175 (13 Removed)
Salem	50	50
Staunton	47	47
Rest Area	17	16 (1 not in database)

\* Inspections reported for BMPs in the Urbanized Area.

\*\* The numbers in Lynchburg decreased due to Danville CUA Being dropped.

# **Appendix D**

## **VDOT Environmental Employee Training Summary**



<b>MS4 Permit Year 2018 - 2019</b>	
<b>Type of Training</b>	<b>Number of Employees Trained</b>
SPCC	905
Facility SWPPP	572
DOT Hazmat Awareness	7
VDOT Salt Infrastructure	79
Facility Leak & Spill Control	78
Good Housekeeping and Pollution Prevention for Contractors	20
<b>Total</b>	<b>1661</b>

# **Appendix E**

## **MCM 7 Infrastructure Coordination Meetings**

**Infrastructure Coordination Meetings with Other MS4s**

<b>Meeting Name/Venue</b>	<b>Date</b>	<b>Anticipated Future Participation</b>
Prince William County & VDOT Annual Infrastructure Coordination Meeting	07/26/18	Yes, anticipate Infrastructure Coordination meeting during PY20
Arlington County & VDOT Annual Infrastructure Coordination Meeting	7/26/18, 4/30/19	Yes, anticipate Infrastructure Coordination meeting during PY20
Chesterfield County & VDOT Annual Infrastructure Coordination Meeting	11/20/18	Yes, anticipate Infrastructure Coordination meeting during PY20
Henrico County & VDOT Annual Infrastructure Coordination Meeting	11/20/18	Yes, anticipate Infrastructure Coordination meeting during PY20
Chesapeake & VDOT Annual Infrastructure Coordination Meeting	04/04/19	Yes, anticipate Infrastructure Coordination meeting during PY20
Hampton & VDOT Annual Infrastructure Coordination Meeting	04/04/19	Yes, anticipate Infrastructure Coordination meeting during PY20
Newport News & VDOT Annual Infrastructure Coordination Meeting	04/04/19	Yes, anticipate Infrastructure Coordination meeting during PY20
Norfolk & VDOT Annual Infrastructure Coordination Meeting	01/25/19, 02/21/19, 04/04/19	Yes, anticipate Infrastructure Coordination meeting during PY20
Virginia Beach & VDOT Annual Infrastructure Coordination Meeting	01/25/19, 02/21/19, 04/04/19	Yes, anticipate Infrastructure Coordination meeting during PY20
Portsmouth & VDOT Annual Infrastructure Coordination Meeting	04/04/19	Yes, anticipate Infrastructure Coordination meeting during PY20
Fairfax County & VDOT Annual Infrastructure Coordination Meeting	01/10/19, 06/11/19	Yes, anticipate Infrastructure Coordination meeting during PY20

# **Appendix F**

## **CB TMDL Action Plan Implementation and Credits Achieved To-Date**

## TOTAL REDUCTIONS ACHIEVED TO-DATE IN CHESAPEAKE BAY WATERSHED

	Parameter		
	TP (lb/yr)	TN (lb/yr)	TSS (lb/yr)
James	4302.91	11208.72	1047482.19
Potomac	4546.62	13432.42	1383182.70
Rappahannock	124.92	659.79	176658.17
York	204.97	625.18	61143.32
<b>Total Reductions Reported to Date (all basins):</b>	<b>9179.42</b>	<b>25926.11</b>	<b>2668466.38</b>
<b>Reduction Requirement (Special Condition D2- 36%)</b>	5227.00	27581.00	3551947.00
<b>% Complete to date (Special Condition D2- 36%)</b>	175.62%	94.00%	75.13%

# James River Basin

	Reductions		
	TP (lb/yr)	TN (lb/yr)	TSS (lb/yr)
Redevelopment			
<i>Jamestown-Scotland Ferry (UPC 102110)</i>	1.83	14.09	894.20 <--Previously reported in 2016 MS4 Annual Report
<i>Rt. 264 (UPC 104331)</i>	6.35	45.76	3465.59 <--Previously reported in 2016 MS4 Annual Report
Stream Restoration and Stabilization			
<i>Lithia Road Stream Restoration</i>	93.70	103.30	61812.40 <--Previously reported in 2018 MS4 Annual Report
<i>Skiffes Creek Stream Restoration</i>	199.00	469.00	23000.00 <--Previously reported in 2018 MS4 Annual Report
<i>Timsbury Creek Stream Restoration</i>	985.00	2700.38	103800.00 <--Previously reported in 2018 MS4 Annual Report
Outfall and Channel Stabilization			
<i>Route 60 (UPC 105139)</i>	3.53	3.89	784.57 <--Previously reported in 2017 MS4 Annual Report. Verified 2/14/201
<i>Route 5 (UPC 106842)</i>	1.22	1.35	272.34 <--Previously reported in 2017 MS4 Annual Report
<i>Quarterpath Outfall</i>	5.44	6.00	1210.40 <--Previously reported in 2018 MS4 Annual Report
Historical BMPs	3.00	22.00	3538.00 <--Previously reported in 2016 MS4 Annual Report
Forest Buffers			
Land Cover Conversion			
<i>Skiffes Land Cover Conversion</i>	0.15	1.61	20.00 <--Previously reported in 2018 MS4 Annual Report
<i>RDC Land Cover Conversion</i>	1.76	18.46	212.20 <--Previously reported in 2018 MS4 Annual Report
<b><i>I-295 Plantings</i></b>	<b>11.25</b>	<b>117.79</b>	<b>1400.83</b> <--FY 2019 New
<b>Street Sweeping and Catch Basin Cleanout</b>	<b>2,796.00</b>	<b>6,991.00</b>	<b>838,818.00</b> <--FY 2019 New
Nutrient Credit Purchase			
<i>Swiss Dixie Nutrient Bank (6/21/16)</i>	20.00	66.94	0.00 <--Previously reported in 2016 MS4 Annual Report
<i>Cranston's Mill Pond Bank (5/19/15)</i>	15.00	33.00	0.00 <--Previously reported in 2016 MS4 Annual Report
<i>Swiss Dixie Nutrient Bank (6/2/17)</i>	2.00	6.69	0.00 <--Previously reported in 2017 MS4 Annual Report
<i>Swiss Dixie Nutrient Bank (6/2/17)</i>	103.00	344.74	0.00 <--Previously reported in 2017 MS4 Annual Report
<i>Hunts Creek Huntrient Bank (6/7/2018)</i>	15.12	50.61	TBD <--Previously reported in 2018 MS4 Annual Report
<i>Namozine Nutrient Bank (6/7/2018)</i>	0.90	3.01	TBD <--Previously reported in 2018 MS4 Annual Report
<i>Sams Nutrient Bank (6/7/18)</i>	6.90	31.00	TBD <--Previously reported in 2018 MS4 Annual Report
<b><i>Potamoi Holdings (4/25/19)</i></b>	<b>13.14</b>	<b>100.00</b>	<b>0.00</b> <--FY 2019 New
Incidental Retrofits			
Structural BMP Enhancement and Retrofit			
<i>Lynchburg District Stormwater Pond</i>	11.89	37.29	5708.01 <--Previously reported in 2017 MS4 Annual Report
<i>VDOT Richmond District Outfall Retrofit</i>	2.49	17.80	1160.00 <--Previously reported in 2017 MS4 Annual Report
<i>Pine Chapel</i>	2.22	8.27	1005.65 <--Previously reported in 2017 MS4 Annual Report
<i>Skiffes Upland Dry Swale</i>	0.77	5.85	380.00 <--Previously reported in 2018 MS4 Annual Report
<i>RDC Level Spreader</i>	1.25	8.89	0.00 <--Previously reported in 2018 MS4 Annual Report
<b>Total Credit Reported</b>	<b>4302.91</b>	<b>11208.72</b>	<b>1047482.19</b>
<b>Reduction Requirement (Special Condition D2- 36%)</b>	<b>1948.00</b>	<b>7007.00</b>	<b>904473.00</b>
<b>% Complete to date (Special Condition D2 36%)</b>	<b>220.89%</b>	<b>159.96%</b>	<b>115.81%</b>

Project Name: **I-295 LCC 2019**

**Location** **UPC Code or BMP ID:** 0

Geographic (County/City): **Hanover County** District: **Richmond** Residency: **Ashland** River Basin: **James**  
 Inside Year 2000 Urbanized Area? (Y/N) **Yes** Latitude: **37.6434** Longitude: **-77.41423**

**BMP Type:** **Land Cover Conversion**

**Project Description:**  
*Pervious to Forest conversion. Project spans across multiple AHQ boundaries and counties.*

**Photos, Plans and/or Project graphics**

**Land Cover Conversion:** Edge of Stream Reductions by POC achieved by conversion

Conversion Area	From / To	Acres	TN lbs/yr	TP lbs/yr	TSS lbs/yr
Area 1	Pervious to Forest	23.4	117.79	11.25	1,400.83
Area 2					
Area 3					

**Minimum Criteria for Forest Classification:**  
 If converting TO forest, minimum contiguous area of 30 meters by 30 meters (0.186 acres) met? (Y/N) **Y**  
 Is Minimum Tree Density Criteria met? Refer to table V.H.1 in DEQ Guidance Memo 15-2005 **Y**

**Forest Buffer (if applicable)**  
 Converted riparian buffer (acres) **0**  
 Upland area draining to forest buffer (acres): **0.00**  
 Maximum upland acres creditable: **0.00**  
 NOTE: Min. ratio of upland area to forest buffer is 2:1 (ex. 2 acres sheet flows to 1 acre of forest buffer).

**Credit Achieved by Forest Buffer**

lbs/yr	TN	TP	TSS

NOTE: Load reductions achieved through land cover conversion and forest buffer installation are additive.

**Discussion**  
*VA DEQ Guidance Memo No. 15-2005 Appendix V.H used to find reduction rates for pervious-to-forest conversion in the James River basin. Acreage back-calculated from final crediting numbers.*

**Photos, Plans and/or Project graphics**  
**Plans, Profile sheets available? (Y/N)** **N**  
 Please include as attachments

**Date BMP Functional:** **6/30/2019** **Project Contact Name:** **Tracey Harmon**  
**Project Completed:** **Yes** **Contact Information (email/phone):** **(804) 371-6834**



4/29/2019

Reforestation efforts in five locations in the Richmond District will improve the environ by reducing the number of pollutants that end up in surface waters, and then ultimate Chesapeake Bay, through runoff.

Last week, VDOT planted trees in five areas of state-owned right of way adjacent to en and exit ramps on Interstate 295. "Tree canopies intercept rainfall, which means it car easily evaporate or be absorbed by the tree roots, reducing the amount of stormwater runoff," said VDOT Project Manager Joe Parfitt.

VDOT is working to identify other areas within the Chesapeake Bay watershed that car returned to forests or unmanaged meadows. Once this work is done, maintenance cre stop mowing – meaning the projects are good for the environment and reduce mainte

Joe noted that any selected sites will be thoroughly reviewed for safety and visibility a motorists' lines of sight will not be affected.

The selected areas along I-295, from Brook Road to Mechanicsville Turnpike, were tille then each location was planted with native tree species, such as tulip poplar, willow o chestnut oak, black locust, black cherry, flowering dogwood, persimmon and smooth s

### FEATURED

#### STAY CONNECTED

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HR Peninsula IMO FY19					
Tons of Material Collected	Pounds of Material Collected	Dry Weight Ratio (lbs dry/lbs material)	TN Reduction Ratio	TP Reduction Ratio	TSS Reduction
265	529540	0.7	0.0025	0.001	0.3

	Total	York (CUA)	James (CUA)
	145	44	49
Weighted		0.3034	0.3379

James

TN Removed	313	lbs
TP Removed	125	lbs
TSS Removed	37579	lbs

York

TN Removed	281	lbs
TP Removed	112	lbs
TSS Removed	33744	lbs

Hampton Roads Southside IMO FY19					
Tons of Material Collected	Pounds of Material Collected	Dry Weight Ratio (lbs dry/lbs material)	TN Reduction Ratio	TP Reduction Ratio	TSS Reduction Ratio
2182	4363920	0.7	0.0025	0.001	0.3

No CUA Discount

TN Removed	7637	lbs
TP Removed	3055	lbs
TSS Removed	916423	lbs

CUA Discount

TN Removed	5184	lbs
TP Removed	2074	lbs
TSS Removed	622069	lbs

Total CUA 317/467  
 467 317  
 Weighted 0.679

To determine street sweeping performed within CUA and watershed, the ratio of interstate roads within CUA and watershed and all interstate roads in the Southside HR IMO were calculated. Miles of VDOT maintained roads within the Hampton Roads Southside IMO: 159.02 and Miles of VDOT maintained roads within the CUA (Southside): 158.04. Ratio applied: 158/159 = 0.994

Free Union AHQ FY19					
Tons of Material Collected	Pounds of Material	Dry Weight	TN Reduction	TP Reduction	TSS Reduction
9	17740	0.7	0.0025	0.001	0.3

No CUA Discount

TN Removed	31	lbs
TP Removed	12	lbs
TSS Removed	3725	lbs

For Ches Bay

TN Removed	7	lbs
TP Removed	3	lbs
TSS Removed	809	lbs

To determine street sweeping performed within CUA and watershed, the ratio of VDOT maintained roads within CUA and all VDOT maintained roads in the Free Union AHQ were calculated. Miles of VDOT maintained roads within Free Union AHQ: 528.98 and Miles of VDOT maintained roads within the CUA: 114.89. Ratio applied:  $114.89/528.98=0.21719$

Length of Free Union AHQ roads in CUA            114.89 miles  
 Length of Free Union AHQ roads                    528.98 miles  
 Discount Factor    0.21719

Richmond IMO FY19						
Tons of Material Collected	Pounds of Material Collected	Dry Weight Ratio (lbs dry/lbs material)	TN Reduction Ratio	TP Reduction Ratio	TSS Reduction	
795	1590240	0.7	0.0025	0.001	0.3	

Before Discount

TN Removed	2783	lbs
TP Removed	1113	lbs
TSS Removed	333950	lbs

With CUA Discount James

TN Removed	1456	lbs
TP Removed	582	lbs
TSS Removed	174664	lbs

With CUA Discount York

TN Removed	114	lbs
TP Removed	45	lbs
TSS Removed	13639	lbs

	Total	York (CUA)	James (CUA)
	453.23	18.51	237.05
Weighted		0.0408	0.5230

<b>Salem District FY19</b>					
Tons of Material Collected	Pounds of Material	Dry Weight	TN Reduction	TP Reduction Ratio	TSS Reduction Ratio
148	295260	0.7	0.0025	0.001	0.3

No CUA Discount

TN Removed	<b>517</b>	lbs
TP Removed	<b>207</b>	lbs
TSS Removed	<b>62005</b>	lbs

CUA Discount

TN Removed	<b>31</b>	lbs
TP Removed	<b>12</b>	lbs
TSS Removed	<b>3697</b>	lbs

To determine street sweeping performed within CUA and watershed, the ratio of roads within CUA and watershed and all roads in the watershed were calculated. Miles of VDOT maintained roads within James River watershed: 1951.12 and Miles of VDOT maintained roads within the CUA within watershed: 116.32. Ratio applied:  $116.32/1951.12=0.0596$

(James River Basin)

Salem roads in CUA in watershed	116.32
Total Salem roads in watershed	1951.12
Discount	0.059617

Project Name: **Potamoi Holdings 4/25/19 (James)**

<b>Location</b>		<b>VDOT Project #:</b> <i>VDOT TMDL Action Plan</i>	
Bank Name:	<i>Potamoi Holdings (CBAY-VA, LLC)</i>	PO #	
HUC (if provided):	<i>020802060101</i>	Contract #:	<i>47540</i>
<b>BMP Type:</b> <i>Nutrient Credit</i>			
<b>Project Description:</b> <i>Nutrient credits were purchased April 25th, 2019.</i>			
<b>Qualifying Criteria:</b>		<b>Affidavit and/or Supporting Documents:</b>	
Were the credits purchased and retired for Chesapeake Bay TMDL Purpose	<i>Yes</i>	Affidavit/Supporting Documents available? (Y/N)	<i>N</i>
Are the credits Perpetual Nutrient Credits (not term)	<i>No</i>	Please include as attachments	
Has the transaction been completed	<i>Yes</i>		
<b>Estimated Credit</b>	<b>TN</b>	<b>TP</b>	<b>TSS</b>
lbs/yr	<i>100.00</i>	<i>13.14</i>	
<b>Discussion</b>			
<b>Purchase Date:</b>	<i>4/25/2019</i>	<b>Project Contact Name:</b>	<i>Tracey Harmon</i>
<b>Project Completed:</b>	<i>Yes</i>	<b>Contact Information (email/phone):</b>	<i>(804) 371-6834</i>

**CBAY-VA LLC – MIYAGI CREEK**

**AFFIDAVIT OF PHOSPHORUS CREDIT SALE**

CBAY-VA LLC, a Virginia limited liability company (the “Company”), hereby certifies the following:

1. Pursuant to that certain **Contract #47540** (“Contract”) and **Purchase Order # A501 0001195718** (“Purchase Order”), between the Company (as Seller) and **The Commonwealth of Virginia, Department of Transportation** (“Purchaser”), the Company, for the benefit of the Purchaser, agrees to sell **13.14** pounds of nonpoint source phosphorus Credits to Purchaser and retire the associated ratio of nonpoint source nitrogen Credits at the credit generating facility in the amount of **100.00** pounds of nitrogen Credits;

2. The Company and the Purchaser will close the transaction contemplated by the Agreement on **May 6, 2019** (the “Closing Date”) and, as of the date hereof, the Company shall reserve for Purchaser the phosphorus Credits.

WITNESS the following signature:

CBAY-VA LLC,  
a Virginia limited liability company

By: *Daniel B. Ramsay*  
Authorized Signatory

Date: May 6, 2019

Sworn to and subscribed before me this 6th day of May, 2019, by Daniel B. Ramsay, Authorized Signatory, on behalf of CBAY-VA LLC, a Virginia limited liability company.

State of North Carolina  
County of: Wake

My commission expires: 09/04/2023



*Amy Staley*  
Notary Public

MS4 Permit #: VA 0092975  
Permittee: **The Commonwealth of Virginia, Department of Transportation**  
Phosphorus Credits: **13.14 pounds**  
Associated Nitrogen Credits: **100.00 pounds**

CBAY-VA LLC

**CBAY-VA LLC – MIYAGI CREEK**

**BILL OF SALE**

**BILL OF SALE**, made as of May 6, 2019, by **CBAY-VA LLC**, a Virginia limited liability company (“Seller”), to **The Commonwealth of Virginia, Department of Transportation** (“Purchaser”).

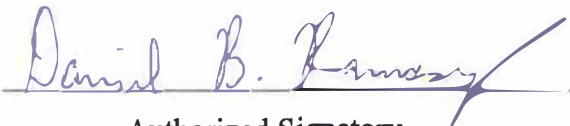
**WHEREAS**, Seller and Purchaser have entered into that certain **Contract #47540** (“Contract”) and **Purchase Order #A501 0001195718** (“Purchase Order”), with respect to the sale by the Seller and purchase by the Purchaser of nonpoint source phosphorus Credits generated within the James River Watershed HUC 02080208 in Suffolk City County, Virginia.

NOW, THEREFORE, for and in consideration of the payment of the Purchase Price of **One Hundred Thirty-Nine Thousand and 00/100 Dollars (\$139,000.00)** and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Seller hereby sells, transfers, assigns, conveys, delivers and sets over to Purchaser, its successors and assigns, **13.14** pounds of phosphorus Credits and retires **100.00** pounds of nitrogen Credits and any pending sediment associated with the phosphorous Credits. **TO HAVE AND TO HOLD** all such phosphorus Credits hereby sold and transferred to Buyer and its successors and assigns forever.

**IN WITNESS WHEREOF**, Seller has caused this Bill of Sale to be executed by its duly authorized representative as of the date first above written.

**CBAY-VA LLC,**

**a Virginia limited liability company**

By:   
Authorized Signatory

MS4 Permit #: VA 0092975  
Permittee: The Commonwealth of Virginia, Department of Transportation  
Phosphorus Credits: 13.14 pounds  
Associated Nitrogen Credits: 100.00 pounds  
Associated TSS: Pending DEQ Determination



# Potomac River Basin

	Reductions			
	TP (lb/yr)	TN (lb/yr)	TSS (lb/yr)	
Redevelopment				
<i>Gloucester Parkway (104418)</i>	1.38	4.45	618.22	<--Previously reported in 2016 MS4 Annual Report
Stream Restoration and Stabilization				
<i>Harrisonburg Stream Restoration</i>	96.64	103.99	36680.00	<--Previously reported in 2016 MS4 Annual Report
<i>Harrisonburg Stream Restoration-Protocol 3</i>	0.00	136.70	0.00	<--Previously reported in 2018 MS4 Annual Report
<b><i>Lake Ridge AHQ Stream Restoration</i></b>	<b>178.34</b>	<b>494.89</b>	<b>61600.00</b>	<--FY 2019 New
<b><i>Wancopin</i></b>	<b>164.00</b>	<b>356.00</b>	<b>56000.00</b>	<--FY 2019 New
Outfall and Channel Stabilization	0.00	0.00	0.00	
Historical BMPs	45.00	569.00	90783.00	<--Previously reported in 2016 MS4 Annual Report
Forest Buffers				
<i>Harrisonburg Land Cover Conversion</i>	0.10	12.50	436.00	<--Previously reported in 2017 MS4 Annual Report
Land Cover Conversion				
<i>Harrisonburg Land Cover Conversion</i>	8.41	158.45	2942.40	<--Previously reported in 2017 MS4 Annual Report
<b>Street Sweeping and Catch Basin Cleanout</b>	<b>3,777.00</b>	<b>9,443.00</b>	<b>1,133,181.00</b>	<--FY 2019 New
Nutrient Credit Purchase				
<i>Edgecliff Bank (1/31/17)</i>	112.00	832.16	0.00	<--Previously reported in 2017 MS4 Annual Report
<i>CBAY-VA LLC (11/15/2017)</i>	150.00	1114.50	0.00	<--Previously reported in 2018 MS4 Annual Report
<b><i>Potamoi Holdings (4/25/19)</i></b>	<b>9.54</b>	<b>150.00</b>	<b>0.00</b>	<--FY 2019 New
<b><i>RLP Investments, LC (4/25/19)</i></b>	<b>3.19</b>	<b>50.00</b>	<b>0.00</b>	<--FY 2019 New
Incidental Retrofits	0.00	0.00	0.00	
Structural BMP Enhancement and Retrofit	0.00	0.00	0.00	
<b><i>Reston MTD</i></b>	<b>1.02</b>	<b>6.78</b>	<b>942.08</b>	<--FY 2019 New
<b>Total Credit Reported</b>	<b>4546.62</b>	<b>13432.42</b>	<b>1383182.70</b>	
<b>Reduction Requirement (Special Condition D2- 36%)</b>	<b>2811.00</b>	<b>18801.00</b>	<b>2477611.00</b>	
<b>% Complete to date (Special Condition D2- 36%)</b>	<b>161.74%</b>	<b>71.45%</b>	<b>55.83%</b>	

Project Name: **Lake Ridge AHQ 2019**

**Location** **UPC Code or BMP ID:** 0

Geographic (County/City): **Prince William C** District: **Northern Virginia** Residency: **Manassas** River Basin: **Potomac**  
 Inside Year 2000 Urbanized Area? (Y/N) **Yes** Latitude: **38.671472** Longitude: **-77.330825** Coastal/ Non-Coastal: **Non-Coastal**

**BMP Type:** **Stream Restoration**

**Project Description:**

*The restoration site includes two reaches of an unnamed tributary (UT) to Hooes Run totaling approximately 700 feet of existing channel and an 80-foot culvert. These reaches had high rates of downcutting, leading to widening and high amounts of erosion along both banks.*

**Photos, Plans and/or Project graphics**



**Project Drainage Area:**

Inside CUA **Impervious Area (ac.) 4.65 Pervious Area (ac.) 30.02**  
 Outside CUA **Impervious Area (ac.) 0 Pervious Area (ac.) 0 Forested Area (ac.) 0.00**

**Existing Conditions Proposed Improvements:**

Compensatory? (Y/N) **N** Onsite stream relocation? (Y/N) **N**  
 Condition of Existing Stream **Unstable vertically and laterally.**  
 Proposed Stream Designed using Natural Channel principles? (Y/N) **Y**  
 Linear Feet Restored (centerline) **780.00** Existing Avg Bank Height Restored (ft) **2.00**  
 Method of Stabilization: **Protocol 1, Protocol 2** Existing Avg Channel Top Width (ft) **6.00**

**Qualifying Conditions:**

Project primarily designed to protect public infrastructure by bank armoring or rip rap? (Y/N) **N**  
 Stream Reach > 100 L.F.? (Y/N) **Y** Existing stream still actively enlarging or degrading? (Y/N) **Y**  
 Project utilizing comprehensive approach to SR addressing long term stability of channels, banks, and floodplain? (Y/N) **Y**  
 Will project comply with all state and federal permitting requirements, including 404 and 401 permits? **Y**  
 Project proposed for sole purpose of receiving nutrient or sediment reduction? **N**  
 Will project have a designated authority responsible for routine maintenance and long term repairs? **Y**

**Method of Estimating Bank Erosion**

1.) Measured in-field pre-restoration **N** 2.) BANCS Method **Y** 3.) Interim Rate **N**  
 Protocols applied: **Protocol 1, Protocol 2**

Estimated Credit	TN	TP	TSS	*SDR applied? (Y/N)
lbs/yr	494.89	178.34	61,600.00	Y

**Discussion**

*The Upper Reach was restored by creating a step-pool morphology and raising the bed of the stream in order to gain connection to the floodplain and encourage more out of bank flows. The Lower Reach was restored by creating a riffle/pool morphology and*



**Photos, Plans and/or Project graphics**

**Plans, Profile sheets available? (Y/N)** **Y**  
 Please include as attachments

**Est. Implementation Date:** **5/14/2019** **Project Contact Name:** **Tracey Harmon**  
**Project Completed:** **No** **Contact Information (email/phone):** **(803) 371-6834**

Project Name: **Wancopin Creek**

**Location** **UPC Code or BMP ID:** 0

Geographic (County/City): **Loudoun County** District: **Northern Virginia** Residency: **Fairfax** River Basin: **Potomac**  
 Inside Year 2000 Urbanized Area? (Y/N) **Yes** Latitude: **TBD** Longitude: **TBD** Coastal/ Non-Coastal: **Non-Coastal**

**BMP Type:** **Stream Restoration**

**Project Description:**  
*Credits achieved for completion of approximately 1200 feet of stream (M2H).*

**Photos, Plans and/or Project graphics**



**Project Drainage Area:**  
 Inside CUA Impervious Area (ac.) **0.00** Pervious Area (ac.) **0.00**  
 Outside CUA Impervious Area (ac.) **2.6** Pervious Area (ac.) **65.5** Forested Area (ac.) **30.20**

**Existing Conditions Proposed Improvements:**  
 Compensatory? (Y/N) **N** Onsite stream relocation? (Y/N) **N**  
 Condition of Existing Stream **Severe bank erosion**  
 Proposed Stream Designed using Natural Channel principles? (Y/N) **Y**  
 Linear Feet Restored (centerline) **2,763.00** Existing Avg Bank Height Restored (ft) **2.00**  
 Method of Stabilization: Existing Avg Channel Top Width (ft) **5.00**



**Qualifying Conditions:**  
 Project primarily designed to protect public infrastructure by bank armoring or rip rap? (Y/N) **N**  
 Stream Reach > 100 L.F.? (Y/N) **Y** Existing stream still actively enlarging or degrading? (Y/N) **Y**  
 Project utilizing comprehensive approach to SR addressing long term stability of channels, banks, and floodplain? (Y/N) **Y**  
 Will project comply with all state and federal permitting requirements, including 404 and 401 permits? **Y**  
 Project proposed for sole purpose of receiving nutrient or sediment reduction? **N**  
 Will project have a designated authority responsible for routine maintenance and long term repairs? **Y**

**Method of Estimating Bank Erosion**  
 1.) Measured in-field pre-restoration **Y** 2.) BANCS Method **Y** 3.) Interim Rate **Y**  
 Protocols applied:

Estimated Credit	TN	TP	TSS	*SDR applied? (Y/N)
lbs/yr	356.00	164.00	56,000.00	Y

**Discussion**

**Photos, Plans and/or Project graphics**

Est. Implementation Date: **6/30/2019** Project Contact Name: **Tracey Harmon**  
 Project Completed: **Yes** Contact Information (email/phone): **(804) 371-6834**

Plans, Profile sheets available? (Y/N) **N**  
 Please include as attachments

NOVA IMO FY19						
Tons of Material	Pounds of Material	Dry Weight	TN Reduction	TP Reduction	TSS Reduction	
2359	4717200	0.7	0.0025	0.001	0.3	

No CUA Discount

TN Removed	<b>8255</b>	lbs
TP Removed	<b>3302</b>	lbs
TSS Removed	<b>990612</b>	lbs

For Ches Bay, a discount factor of 0.9736 was used to account for areas outside of the CUA

TN Removed	8037.165 lbs
TP Removed	3214.866 lbs
TSS Removed	964459.8 lbs

**Manassas Residency FY19**

Tons of Material	Pounds of Material	Dry Weight	TN Reduction	TP Reduction	TSS Reduction	
378	756000	0.7	0.0025	0.001	0.3	

Before Discount

TN Removed	<b>1323</b>	lbs
TP Removed	<b>529</b>	lbs
TSS Removed	<b>158760</b>	lbs

For Ches Bay, discounted by 0.82 to account for roads not in the CUA

TN Removed	1090 lbs
TP Removed	436 lbs
TSS Removed	130829 lbs

For Bull Run, discounted by 0.16 (Manassas residency is 230960, Bull Run CUA in Manassas Residency is 20919)

TN Removed	215 lbs
TP Removed	86 lbs
TSS Removed	25783 lbs

<b>Staunton District FY19</b>					
Tons of Material Collected	Pounds of Material	Dry Weight	TN Reduction	TP Reduction Ratio	TSS Reduction
1050	2100000	0.7	0.0025	0.001	0.3

No CUA Discount

TN Removed	<b>3675</b>	lbs
TP Removed	<b>1470</b>	lbs
TSS Removed	<b>441000</b>	lbs

Cbay Discount

TN Removed	<b>316</b>	lbs
TP Removed	<b>126</b>	lbs
TSS Removed	<b>37892</b>	lbs

To determine street sweeping performed within CUA and watershed, the ratio of roads within CUA and watershed and all roads in the watershed were calculated. Miles of VDOT maintained roads within Potomac River watershed: 10004.21 and Miles of VDOT maintained roads within the CUA within watershed: 859.59. Ratio applied:  $859.59/10004.21=0.086$

(Potomac River Basin)

Staunton roads in CUA in watershed	859.59
Total Staunton roads in watershed	10004.21
Discount	0.085923

Project Name: **Potamoi Holdings 4/25/19 (Potomac)**

<b>Location</b>		<b>VDOT Project #:</b> <i>VDOT TMDL Action Plan</i>	
Bank Name:	<i>Potamoi Holdings (CBAY-VA, LLC)</i>	PO #	
HUC (if provided):	<i>020700111001</i>	Contract #:	<i>47540</i>
<b>BMP Type:</b> <i>Nutrient Credit</i>			
<b>Project Description:</b> <i>Nutrient credits were purchased April 25th, 2019.</i>			
<b>Qualifying Criteria:</b>		<b>Affidavit and/or Supporting Documents:</b>	
Were the credits purchased and retired for Chesapeake Bay TMDL Purpose	<i>Yes</i>	Affidavit/Supporting Documents available? (Y/N)	<i>N</i>
Are the credits Perpetual Nutrient Credits (not term)	<i>No</i>	Please include as attachments	
Has the transaction been completed	<i>Yes</i>		
<b>Estimated Credit</b>	<b>TN</b>	<b>TP</b>	<b>TSS</b>
lbs/yr	<i>150.00</i>	<i>9.58</i>	
<b>Discussion</b>			
<b>Purchase Date:</b>	<i>4/25/2019</i>	<b>Project Contact Name:</b>	<i>Tracey Harmon</i>
<b>Project Completed:</b>	<i>Yes</i>	<b>Contact Information (email/phone):</b>	<i>(804) 371-6834</i>

**CBAY-VA LLC – COLE’S POINT**

**AFFIDAVIT OF PHOSPHORUS CREDIT SALE**

CBAY-VA LLC, a Virginia limited liability company (the “Company”), hereby certifies the following:

1. Pursuant to that certain **Contract #47540** (“Contract”) and **Purchase Order # A501 0001196169** (“Purchase Order”), between the Company (as Seller) and **The Commonwealth of Virginia, Department of Transportation** (“Purchaser”), the Company, for the benefit of the Purchaser, agrees to sell **9.58** pounds of nonpoint source phosphorus Credits to Purchaser and retire the associated ratio of nonpoint source nitrogen Credits at the credit generating facility in the amount of **150.00** pounds of nitrogen Credits;

2. The Company and the Purchaser will close the transaction contemplated by the Agreement on **May 10, 2019** (the “Closing Date”) and, as of the date hereof, the Company shall reserve for Purchaser the phosphorus Credits.

WITNESS the following signature:

CBAY-VA LLC,  
a Virginia limited liability company

By: *Caitlan B. Parker*  
Authorized Signatory

Date: May 10, 2019

Sworn to and subscribed before me this 10th day of May, 2019, by Caitlan B. Parker, Authorized Signatory, on behalf of CBAY-VA LLC, a Virginia limited liability company.

My commission expires: 09/04/2023

State of North Carolina  
County of: Wake

**AMY STALEY  
NOTARY PUBLIC  
Johnston County  
North Carolina  
My Commission Expires Sept. 4, 2023**

*Amy Staley*  
Notary Public

MS4 Permit #: VA 0092975  
Permittee: The Commonwealth of Virginia, Department of Transportation  
Phosphorus Credits: 9.58 pounds  
Associated Nitrogen Credits: 150.00 pounds  
Associated TSS: Pending DEQ Determination  
CBAY-VA LLC



**CBAY-VA LLC – COLE’S POINT**

**BILL OF SALE**

**BILL OF SALE**, made as of May 10, 2019, by **CBAY-VA LLC**, a Virginia limited liability company (“Seller”), to The Commonwealth of Virginia, Department of Transportation (“Purchaser”).

**WHEREAS**, Seller and Purchaser have entered into that certain Contract #47540 (“Contract”) and Purchase Order #A501 0001196169 (“Purchase Order”), with respect to the sale by the Seller and purchase by the Purchaser of nonpoint source phosphorus Credits generated within the Potomac River Watershed HUC 02070010 in Westmoreland County, Virginia.

**NOW, THEREFORE**, for and in consideration of the payment of the Purchase Price of One Hundred Nineteen Thousand Eight Hundred Fifty and 00/100 Dollars (\$119,850.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Seller hereby sells, transfers, assigns, conveys, delivers and sets over to Purchaser, its successors and assigns, 9.58 pounds of phosphorus Credits and retires 150.00 pounds of nitrogen Credits and any pending sediment associated with the phosphorous Credits. **TO HAVE AND TO HOLD** all such phosphorus Credits hereby sold and transferred to Buyer and its successors and assigns forever.

**IN WITNESS WHEREOF**, Seller has caused this Bill of Sale to be executed by its duly authorized representative as of the date first above written.

**CBAY-VA LLC,**

**a Virginia limited liability company**

By: 

Authorized Signatory

**MS4 Permit #: VA 0092975**

**Permittee: The Commonwealth of Virginia, Department of Transportation**

**Phosphorus Credits: 9.58 pounds**

**Associated Nitrogen Credits: 150.00 pounds**

**Associated TSS: Pending DEQ Determination**

Project Name: **RLP Investments, LC**

<b>Location</b>		<b>VDOT Project #:</b> <i>VDOT TMDL Action Plan</i>	
Bank Name:	<i>RLP Investments, LC</i>	PO #	
HUC (if provided):	<i>020700010101</i>	Contract #:	<i>47542</i>
<b>BMP Type:</b> <i>Nutrient Credit</i>			
<b>Project Description:</b> <i>Nutrient credits were purchased April 25th, 2019.</i>			
<b>Qualifying Criteria:</b>		<b>Affidavit and/or Supporting Documents:</b>	
Were the credits purchased and retired for Chesapeake Bay TMDL Purpose	<i>Yes</i>	Affidavit/Supporting Documents available? (Y/N)	<i>N</i>
Are the credits Perpetual Nutrient Credits (not term)	<i>No</i>	Please include as attachments	
Has the transaction been completed	<i>Yes</i>		
<b>Estimated Credit</b>	<b>TN</b>	<b>TP</b>	<b>TSS</b>
lbs/yr	<i>50.00</i>	<i>3.19</i>	
<b>Discussion</b>			
<b>Purchase Date:</b>	<i>4/25/2019</i>	<b>Project Contact Name:</b>	<i>Tracey Harmon</i>
<b>Project Completed:</b>	<i>Yes</i>	<b>Contact Information (email/phone):</b>	<i>(804) 371-6834</i>

## EXHIBIT A

### AFFIDAVIT OF NUTRIENT CREDITS

I, Ronald Pembelton, certify that I am now, and at all times mentioned herein have been, the Manager of RLP Investments, LC, a Virginia limited liability company (the "Company"), which is the owner of the Kinsale Nutrient Bank located in the Potomac Watershed in Westmoreland County, Virginia, and as such I hereby certify the following:

- 1) Pursuant to that certain Contract #47542 ("The Contract") and Purchase Order #50100-0001196171 (Purchase Order), between Company (as Seller), and The Commonwealth of Virginia, Department of Transportation, ("Acquirer"), the Company, for the benefit of the Acquirer, agree to sell 50.00 pounds of nitrogen offsets, or 3.19 pounds of phosphorus offsets, an a pending number of sediment offset credits/pounds(July 1, 2016 Virginia State Regulations, HB-438), and retire 50.00 pounds of nitrogen offsets at the offset generating facility) offsets to Acquirer;
- 2) The Company and the Acquirer will closed the transaction contemplated by the Purchase Order on May 21, 2019, (the "Closing Date") and, as of the date hereof, the Company shall reserve for Acquirer the nitrogen credits.

The execution and delivery of this Affidavit has been duly authorized and is not in violation of the Operating Agreement of the Company or any other agreement, document or obligation to which the Company is bound.

IN WITNESS WHEREOF, I have duly executed this Affidavit as of the 31 day of May, 2019.

RLP Investments, LC,  
a Virginia limited liability company

By: [Signature]  
Name: Ronald Pembelton  
Title: Manager

COMMONWEALTH OF VIRGINIA,

~~City/County of~~ Amelia, to-wit:

Sworn to and subscribed before me this 31 day of May, 2019, the undersigned Notary Public for and in the jurisdiction aforesaid, by Ronald Pembelton, the Manager of RLP Investments, LC, a Virginia limited liability company.

[Signature]  
Notary Public



My commission expires: 08/31/2020  
Registration No.: 291762

Acquirer: The Commonwealth of Virginia, Department of Transportation

VDOT Project#: VDOT Chesapeake Bay TMDL

Watershed: Potomac River

Nitrogen offsets: 50.00 lbs.

Phosphorus offsets: 3.19 lbs.

Sediment offsets: To Be Determined per July 1, 2016 Virginia State Regulations, HB-438

EX/HIBIT B

BILL OF SALE

THIS BILL OF SALE is made as of the 31 day of May, 2019, by R&J Investment, LC, a Virginia limited liability company ("Seller") and The Commonwealth of Virginia, Department of Transportation, ("Purchaser").

Seller and Purchaser have entered into that certain Contract #47542 (The Contract) and Purchase Order #50100-0001196171 (Purchase Order) for the Sale of Nutrient Offset Credits dated May 21, 2019, (the "Purchase Order"), the terms of which are incorporated herein by reference and made a part hereof, with respect to the sale by Seller and the purchase by Purchaser of nutrient offset credits generated by Seller's Kinsale Nutrient Bank located in Westmoreland County, Virginia.

In consideration of the payment of the Purchase Price \$29,950.00 and (as defined in the Purchase Order # 50100-0001196171) and other good and valuable consideration, the receipt and sufficiency of which are mutually acknowledged, Seller hereby sells, transfers, assigns, conveys, delivers, and sets over to Purchaser, its successors or assigns the following nutrient offset credits.

VDOT Project#: VDOT Chesapeake Bay TMDL

Nitrogen offsets: 50.00 lbs.

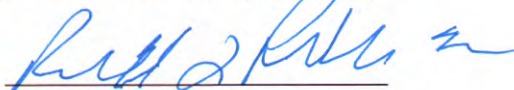
Phosphorus offsets: 3.19 lbs.

Watershed: Potomac River


Sediment: Pending July1, 2016 Virginia State Regulations, HB-438

WITNESS the following authorized signature:

R&J Investment, LC,  
a Virginia limited liability company

By:   
Name: Ronald Pembelton  
Title: Manager

Project Name: **Reston AHQ BMP**

<b>Location</b>		<b>UPC Code or BMP ID:</b> <b>SWMID 29271</b>	
Geographic (County/City):	<b>Fairfax</b>	District:	<b>Northern Virginia</b>
Residency:	<b>Fairfax</b>	River Basin:	<b>Potomac</b>
Inside Year 2000 Urbanized Area? (Y/N)	<b>Yes</b>	Latitude:	<b>38.947297</b>
		Longitude:	<b>-77.320081</b>
<b>BMP Type:</b> <b>Manufactured Device - Hydrodynamic</b>			
<b>Project Description:</b>		<b>Photos, Plans and/or Project graphics</b>	
<i>Hydrodynamic device installed at Reston AHQ for sediment control purposes.</i>			
<b>Project Drainage Area:</b>			
Inside CUA	<i>Impervious Area (acres):</i> <b>1.04</b> <i>Pervious Area (acres):</i> <b>0.00</b>		
Outside CUA	<i>Impervious Area (acres):</i> <b>0.00</b> <i>Pervious Area (acres):</i> <b>0.00</b>		
	<i>BMP runoff storage (acres feet)</i> <b>0.00</b>		
<b>Qualifying Criteria:</b>			
Does the BMP meet the design standards and specs in the Virginia Stormwater BMP Clearinghouse?		<b>No</b>	
<b>Method for Crediting</b>			
Methodology II - Chesapeake Bay Program Retrofit Curves/Equations			
<b>Estimated Credit</b>	<b>TN</b>	<b>TP</b>	<b>TSS</b>
lbs/yr	<b>6.78</b>	<b>1.02</b>	<b>942.08</b>
<b>Discussion</b>			
<i>The BMP was installed in May of 2019 and brought into VDOT's BMP Inventory on 8/21/2019 by the VDOT NOVA District Maintenance Division. The assigned Maint SWM ID is 29271. The MTD is a Contech CDS device. See O&amp;M guide for this MTD and plan sheets, available in Central Office, for more information.</i>			
<b>Implementation Date</b>		<b>Project Contact Name:</b>	
<b>May 2019</b>		<b>Jeff Hancock</b>	
<b>Project Completed:</b>		<b>Contact Information (email/phone):</b>	
<b>Yes</b>		<b>(804) 786-4364</b>	
		<b>Photos, Plans and/or Project graphics</b>	
		<b>Plans, Profile sheets available? (Y/N)</b> <b>Y</b>	
		Please include as attachments	

## Rappahannock Basin

	Reductions			
	TP (lb/yr)	TN (lb/yr)	TSS (lb/yr)	
Redevelopment	0.00	0.00	0.00	
Stream Restoration and Stabilization				
<i>Industrial Drive Stream Restoration Project</i>	110.00	475.00	176378.35	<--Previously reported in 2016 MS4 Annual Report
<i>Industrial Drive Stream Restoration-Protocol 3</i>	0.00	36.70	0.00	<--Previously reported in 2018 MS4 Annual Report
Outfall and Channel Stabilization	0.00	0.00	0.00	
Historical BMPs	0.00	0.00	0.00	
Forest Buffers	0.00	0.00	0.00	
Land Cover Conversion	0.00	0.00	0.00	
Street Sweeping and Catch Basin Cleanout	0.00	0.00	0.00	
Nutrient Credit Purchase	0.00	0.00	0.00	
<b><i>William Walker III (4/25/19)</i></b>	<b>13.83</b>	<b>145.17</b>	<b>0.00</b>	<--FY 2019 New
Incidental Retrofits	0.00	0.00	0.00	
Structural BMP Enhancement and Retrofit	0.00	0.00	0.00	
<i>Fredericksburg Filterras (89-062 and 89-063)</i>	1.09	2.92	279.82	<--Previously reported in 2017 MS4 Annual Report
<b>Total Credit Reported</b>	<b>124.92</b>	<b>659.79</b>	<b>176658.17</b>	
<b>Reduction Requirement (Special Condition D2- 36%)</b>	<b>213.00</b>	<b>905.00</b>	<b>77268.00</b>	
<b>% Complete to date (Special Condition D2- 36%)</b>	<b>58.65%</b>	<b>72.90%</b>	<b>228.63%</b>	

Project Name: *William Walker III Consulting Forester*

<b>Location</b>		<b>VDOT Project #:</b> <i>VDOT TMDL Action Plan</i>	
Bank Name:	<i>William Walker III Consulting Forester</i>	PO #	
HUC (if provided):	<i>020801040503</i>	Contract #:	<i>47543</i>
<b>BMP Type:</b> <i>Nutrient Credit</i>			
<b>Project Description:</b> <i>Nutrient credits were purchased April 25th, 2019.</i>			
<b>Qualifying Criteria:</b>		<b>Affidavit and/or Supporting Documents:</b>	
Were the credits purchased and retired for Chesapeake Bay TMDL Purpose	<i>Yes</i>	Affidavit/Supporting Documents available? (Y/N)	<i>N</i>
Are the credits Perpetual Nutrient Credits (not term)	<i>No</i>	Please include as attachments	
Has the transaction been completed	<i>Yes</i>		
<b>Estimated Credit</b>	<b>TN</b>	<b>TP</b>	<b>TSS</b>
lbs/yr	<i>145.17</i>	<i>13.83</i>	
<b>Discussion</b>			
<b>Purchase Date:</b>	<i>4/25/2019</i>	<b>Project Contact Name:</b>	<i>Tracey Harmon</i>
<b>Project Completed:</b>	<i>Yes</i>	<b>Contact Information (email/phone):</b>	<i>(804) 371-6834</i>



Bill of Sale

I, William M. Walker III, the undersigned seller, hereby sell for the sum of \$143,718.30 (one hundred forty- three thousand seven hundred eighteen dollars and 30 cents), to the undersigned buyer, Virginia Department of Transportation / Sandra A. Clary the following item:

- 145.17 pounds of nitrogen reduction credits, 13.83 pounds of phosphorus reduction credits and any potential sediment credits in the Rappahannock Watershed from the Sharps Nutrient Bank, Rappahannock-008 located in Richmond County, Virginia for \$990.00 per pound of nitrogen credits.

The seller and buyer agree to the sale as described above.

SELLER

William M. Walker III  
Walker Consulting Forestry, LLC  
P.O. Box 293  
Warsaw, VA 22572  
(804) 761-7746

Seller Signature



Date 5-23-19

BUYER

Virginia Department of Transportation  
Sandra A. Clary  
1221 E. Broad Street  
Richmond, VA 23219  
(804) 371-6757

Buyer Signature \_\_\_\_\_

Date \_\_\_\_\_



Sharps Nutrient Bank Affidavit

William M. Walker III  
Bill Walker Consulting Forester, LLC  
P.O. Box 293  
Warsaw, VA 22572

I, William M. Walker III, personally appeared before the undersigned notary public, and under oath or affirmation make the following statements:

On May 23, 2019 I, William M. Walker III, transferred 145.17 pounds of nitrogen reduction credits, 13.83 pounds of phosphorus reduction credits and any potential sediment credits from the Sharps Nutrient Bank to the Virginia Department of Transportation, per purchase order #50100-0001195858. This leaves a balance of 0 nitrogen credits, 0 phosphorus credits and 0 sediment credits in the Sharps Nutrient Bank, Rappahannock - 008.

For this transfer, I will be compensated at a rate of \$990.00 per pound of nitrogen reduction credits. Total compensation shall be \$143,718.30.

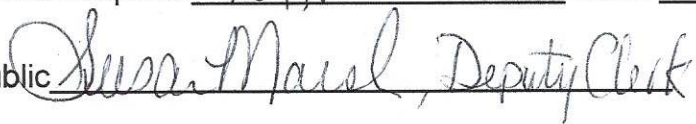
Signature of Affiant  Date 6-4-19

Commonwealth of Virginia

City/County of Richmond, To-wit:

The foregoing instrument dated May 23, 2019 was acknowledged before me this 04th of June 2019 by William M. Walker III.

My Commission expires: N/A I.D. # N/A

Notary Public  Deputy Clerk

RICHMOND COUNTY CIRCUIT COURT

# York River Basin

	Reductions			
	TP (lb/yr)	TN (lb/yr)	TSS (lb/yr)	
Redevelopment				
<i>Lakeside (UPC 13714)</i>	3.63	15.91	1467.60	<--Previously reported in 2016 MS4 Annual Report
<i>Rt. 17 (UPC 60843)</i>	15.50	46.14	7355.04	<--Previously reported in 2016 MS4 Annual Report
Stream Restoration and Stabilization	0.00	0.00	0.00	
Outfall and Channel Stabilization				
<i>Stonehouse Road (UPC 103332)</i>	1.71	1.88	379.68	<--Previously reported in 2017 MS4 Annual Report. Verified 2/14/2019
<i>Route 199 (UPC 106844)</i>	5.44	6.00	1210.40	<--Previously reported in 2017 MS4 Annual Report
<i>Pasture Circle (UPC 106845)</i>	0.71	0.78	157.62	<--Previously reported in 2017 MS4 Annual Report
Historical BMPs	9.00	55.00	2631.00	<--Previously reported in 2016 MS4 Annual Report
Forest Buffers	0.00	0.00	0.00	
Land Cover Conversion	0.00	0.00	0.00	
<b>Street Sweeping and Catch Basin Cleanout</b>	<b>158.00</b>	<b>395.00</b>	<b>47,383.00</b>	<--FY 2019 New
Nutrient Credit Purchase	0.00	0.00	0.00	
<i>Healy's Pond (4/25/19)</i>	<b>9.54</b>	<b>100.00</b>	<b>0.00</b>	<--FY 2019 New
Incidental Retrofits	0.00	0.00	0.00	
Structural BMP Enhancement and Retrofit	0.00	0.00	0.00	
<i>Seaford AHQ MTD</i>	1.44	4.47	558.98	<--Previously reported in 2018 MS4 Annual Report
<b>Total Credit Reported</b>	<b>204.97</b>	<b>625.18</b>	<b>61143.32</b>	
<b>Reduction Requirement (Special Condition D2- 36%)</b>	<b>255.00</b>	<b>868.00</b>	<b>92595.00</b>	
<b>% Complete to date (Special Condition D2- 36%)</b>	<b>80.38%</b>	<b>72.03%</b>	<b>66.03%</b>	

HR Peninsula IMO FY19					
Tons of Material Collected	Pounds of Material Collected	Dry Weight Ratio (lbs dry/lbs material)	TN Reduction Ratio	TP Reduction Ratio	TSS Reduction
265	529540	0.7	0.0025	0.001	0.3

	Total	York (CUA)	James (CUA)
	145	44	49
Weighted		0.3034	0.3379

James

TN Removed	313	lbs
TP Removed	125	lbs
TSS Removed	37579	lbs

York

TN Removed	281	lbs
TP Removed	112	lbs
TSS Removed	33744	lbs

Richmond IMO FY19						
Tons of Material Collected	Pounds of Material Collected	Dry Weight Ratio (lbs dry/lbs material)	TN Reduction Ratio	TP Reduction Ratio	TSS Reduction	
795	1590240	0.7	0.0025	0.001	0.3	

Before Discount

TN Removed	2783	lbs
TP Removed	1113	lbs
TSS Removed	333950	lbs

With CUA Discount James

TN Removed	1456	lbs
TP Removed	582	lbs
TSS Removed	174664	lbs

With CUA Discount York

TN Removed	114	lbs
TP Removed	45	lbs
TSS Removed	13639	lbs

	Total	York (CUA)	James (CUA)
	453.23	18.51	237.05
Weighted		0.0408	0.5230

Project Name: **Healys Pond Nutrient Offset Trading Bank**

<b>Location</b>		<b>VDOT Project #:</b> <b>VDOT TMDL Action Plan</b>	
Bank Name:	<b>Healys Pond Nutrient Offset Trading Bank</b>	PO #	
HUC (if provided):	<b>020801070204</b>	Contract #:	<b>47541</b>
<b>BMP Type:</b> <b>Nutrient Credit</b>			
<b>Project Description:</b> <i>Nutrient credits were purchased April 25th, 2019.</i>			
<b>Qualifying Criteria:</b>		<b>Affidavit and/or Supporting Documents:</b>	
Were the credits purchased and retired for Chesapeake Bay TMDL Purpose	<b>Yes</b>	Affidavit/Supporting Documents available? (Y/N)	<b>N</b>
Are the credits Perpetual Nutrient Credits (not term)	<b>No</b>	Please include as attachments	
Has the transaction been completed	<b>Yes</b>		
<b>Estimated Credit</b>	<b>TN</b>	<b>TP</b>	<b>TSS</b>
lbs/yr	<b>100.00</b>	<b>9.54</b>	
<b>Discussion</b>			
<b>Purchase Date:</b>	<b>4/25/2019</b>	<b>Project Contact Name:</b>	<b>Tracey Harmon</b>
<b>Project Completed:</b>	<b>Yes</b>	<b>Contact Information (email/phone):</b>	<b>(804) 371-6834</b>

**HEALY'S POND NUTRIENT OFFSET TRADING BANK, LLC**

**BILL OF SALE**

**BILL OF SALE**, made as of May 21, 2019, by **HEALY'S POND NUTRIENT OFFSET TRADING BANK, LLC**, a Virginia limited liability company ("Seller"), to **The Commonwealth of Virginia, Department of Transportation** ("Purchaser").

WHEREAS, Seller and Purchaser have entered into that certain **Contract # 47541** ("Contract") and **Purchase Order #50100-0001195721** ("Purchase Order"), with respect to the sale by the Seller and purchase by the Purchaser of nonpoint source Nitrogen Credits generated within the Healy's Pond Property in Middlesex County, Virginia.

NOW, THEREFORE, for and in consideration of the payment of the Purchase Price of **One Hundred Thirty Three Thousand Eight Hundred and 00/100** Dollars (**\$133,800.00**) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Seller hereby sells, transfers, assigns, conveys, delivers and sets over to Purchaser, its successors and assigns, **100** pounds of Nitrogen Credits and retires **9.54** pounds of Phosphorus Credits associated with the Nitrogen Credits generated at the Healy's Pond Property as such are described in the Contract and the Purchase Order.

**TO HAVE AND TO HOLD** all such Nitrogen Credits hereby sold and transferred to Buyer and its successors and assigns forever.

IN WITNESS WHEREOF, Seller has caused this Bill of Sale to be executed by its duly authorized representative as of the date first above written.

**HEALY'S POND NUTRIENT OFFSET TRADING BANK, LLC,**  
**a Virginia Limited Liability Company**



By: \_\_\_\_\_

Manager or Authorized Representative

DEQ Permit #: Pending  
Permittee: The Commonwealth of Virginia, Department of Transportation  
Nitrogen Credits: 100 pounds  
Associated Phosphorus Credits: 9.54 pounds  
Sediment Credits: TBD pending DEQ release of credits

HEALY'S POND NUTRIENT OFFSET TRADING BANK, LLC

AFFIDAVIT OF NUTRIENT CREDIT SALE

HEALY'S POND NUTRIENT OFFSET TRADING BANK, LLC, a Virginia limited liability company (the "Company"), hereby certifies the following:

1. Pursuant to that certain Contract #47541 ("Contract") and Purchase Order #50100-0001195721 ("Purchase Order"), between the Company (as Seller) and The Commonwealth of Virginia, Department of Transportation ("Purchaser"), the Company, for the benefit of the Purchaser, agreed to sell 100 pounds of nonpoint source nutrient Credits to Purchaser and retire the associated ratio of nonpoint source phosphorus Credits at the credit generating facility in the amount of 9.54 pounds of phosphorus Credits;

2. The Company and the Purchaser, as of the date hereof, have closed the transaction contemplated by the Agreement and the Company has sold to Purchaser the nitrogen Credits.

WITNESS the following signature:

HEALY'S POND NUTRIENT OFFSET TRADING BANK, LLC, a Virginia limited liability company

*Oscar M. Barber*

By: \_\_\_\_\_  
Manager or Authorized Representative

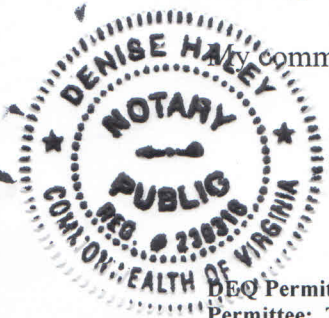
Date: 5-28-19

Sworn to and subscribed before me this 28<sup>TH</sup> day of MAY, 2019, by OSCAR M. BARBER, Manager, on behalf of Healy's Pond Nutrient Offset Trading Bank, LLC, a Virginia limited liability company.

My commission expires: 11/31/20

City / County of: MIDDLESEX

*[Signature]*  
\_\_\_\_\_  
Notary Public RE # 239318



DEQ Permit #: Pending  
Permittee: The Commonwealth of Virginia, Department of Transportation  
Nitrogen Credits: 100 pounds  
Associated Phosphorus Credits: 9.54 pounds  
District: York Watershed  
Sediment Credits: TBD pending DEQ release of credits



Date Installed	BMP Name	Practice Description	Impervious Acres Treated	Total Acres Treated	Runoff Captured (Ac-ft)	Measurement Unit	Amount Applied	Latitude
5/14/2019	Lake Ridge (Potomac)	Urban Stream Restoration	4.65	34.67	N/A	linear feet	780.00	38.671472
5/14/2019	Lake Ridge (Potomac)	Urban Stream Restoration	4.65	34.67	N/A	lb TP/yr	178.34	38.671472
5/14/2019	Lake Ridge (Potomac)	Urban Stream Restoration	4.65	34.67	N/A	lb TN/yr	494.89	38.671472
5/14/2019	Lake Ridge (Potomac)	Urban Stream Restoration	4.65	34.67	N/A	lb TSS/yr	61600.00	38.671472
1/31/2019	I-295 (James)	Urban Tree Planting	0	23.4	N/A	acres	23.40	37.6434
1/31/2019	I-295 (James)	Urban Tree Planting	0	23.4	N/A	lp TP/yr	11.25	37.6434
1/31/2019	I-295 (James)	Urban Tree Planting	0	23.4	N/A	lb TN/yr	117.79	37.6434
1/31/2019	I-295 (James)	Urban Tree Planting	0	23.4	N/A	lb TSS/yr	1400.83	37.6434
7/19/2019	Nova IM (Potomac)	Street Sweeping	N/A	N/A	N/A	lbs (total solids collected)	4717200.00	38.84937
7/19/2019	Nova IM (Potomac)	Street Sweeping	N/A	N/A	N/A	lb TP/yr	3215.00	38.84937
7/19/2019	Nova IM (Potomac)	Street Sweeping	N/A	N/A	N/A	lb TN/yr	8037.00	38.84937
7/19/2019	Nova IM (Potomac)	Street Sweeping	N/A	N/A	N/A	lb TSS/yr	964460.00	38.84937
6/28/2019	Manassas Residency (Potomac)	Street Sweeping	N/A	N/A	N/A	lbs (total solids collected)	756000.00	38.730719
6/28/2019	Manassas Residency (Potomac)	Street Sweeping	N/A	N/A	N/A	lb TP/yr	436.00	38.730719
6/28/2019	Manassas Residency (Potomac)	Street Sweeping	N/A	N/A	N/A	lb TN/yr	1090.00	38.730719
6/28/2019	Manassas Residency (Potomac)	Street Sweeping	N/A	N/A	N/A	lb TSS/yr	130829.00	38.730719
7/26/2019	Richmond IMO (James)	Street Sweeping	N/A	N/A	N/A	lbs (total solids collected)	1590240.00	37.5332
7/26/2019	Richmond IMO (James)	Street Sweeping	N/A	N/A	N/A	lb TP/yr	582.00	37.5332
7/26/2019	Richmond IMO (James)	Street Sweeping	N/A	N/A	N/A	lb TN/yr	1456.00	37.5332
7/26/2019	Richmond IMO (James)	Street Sweeping	N/A	N/A	N/A	lb TSS/yr	174664.00	37.5332
7/26/2019	Richmond IMO (York)	Street Sweeping	N/A	N/A	N/A	lbs (total solids collected)	1590240.00	37.64178
7/26/2019	Richmond IMO (York)	Street Sweeping	N/A	N/A	N/A	lb TP/yr	45.00	37.64178
7/26/2019	Richmond IMO (York)	Street Sweeping	N/A	N/A	N/A	lb TN/yr	114.00	37.64178
7/26/2019	Richmond IMO (York)	Street Sweeping	N/A	N/A	N/A	lb TSS/yr	13639.00	37.64178
7/23/2019	Free Union AHQ (James)	Street Sweeping	N/A	N/A	N/A	lbs (total solids collected)	17740.00	38.0168
7/23/2019	Free Union AHQ (James)	Street Sweeping	N/A	N/A	N/A	lb TP/yr	3.00	38.0168
7/23/2019	Free Union AHQ (James)	Street Sweeping	N/A	N/A	N/A	lb TN/yr	7.00	38.0168
7/23/2019	Free Union AHQ (James)	Street Sweeping	N/A	N/A	N/A	lb TSS/yr	809.00	38.0168
7/25/2019	HR IMO - Southside (James)	Street Sweeping	N/A	N/A	N/A	lbs (total solids collected)	4363920.00	36.85778
7/25/2019	HR IMO - Southside (James)	Street Sweeping	N/A	N/A	N/A	lb TP/yr	2074.00	36.85778
7/25/2019	HR IMO - Southside (James)	Street Sweeping	N/A	N/A	N/A	lb TN/yr	5184.00	36.85778
7/25/2019	HR IMO - Southside (James)	Street Sweeping	N/A	N/A	N/A	lb TSS/yr	622069.00	36.85778
7/18/2019	HR IMO - Peninsula (James)	Street Sweeping	N/A	N/A	N/A	lbs (total solids collected)	529540.00	37.02910
7/18/2019	HR IMO - Peninsula (James)	Street Sweeping	N/A	N/A	N/A	lb TP/yr	125.00	37.02910
7/18/2019	HR IMO - Peninsula (James)	Street Sweeping	N/A	N/A	N/A	lb TN/yr	313.00	37.02910
7/18/2019	HR IMO - Peninsula (James)	Street Sweeping	N/A	N/A	N/A	lb TSS/yr	37579.00	37.02910
7/18/2019	HR IMO - Peninsula (York)	Street Sweeping	N/A	N/A	N/A	lbs (total solids collected)	529540.00	37.34513

Longitude	HUC12	State FIPS	Lifespan	Inspect Date	Maint Date	Contact Name	Contact Phone	Contact Email	NOTES
-77.330825	ield not required i itude and longituc are provided	51	5			Tracey Harmon	804-371-6834	<a href="mailto:tracey.harmon@vdot.virginia.gov">tracey.harmon@vdot.virginia.gov</a>	
-77.330825		51	5			Tracey Harmon	804-371-6834	<a href="mailto:tracey.harmon@vdot.virginia.gov">tracey.harmon@vdot.virginia.gov</a>	
-77.330825		51	5			Tracey Harmon	804-371-6834	<a href="mailto:tracey.harmon@vdot.virginia.gov">tracey.harmon@vdot.virginia.gov</a>	
-77.330825		51	5			Tracey Harmon	804-371-6834	<a href="mailto:tracey.harmon@vdot.virginia.gov">tracey.harmon@vdot.virginia.gov</a>	
-77.41423		51	5			Tracey Harmon	804-371-6834	<a href="mailto:tracey.harmon@vdot.virginia.gov">tracey.harmon@vdot.virginia.gov</a>	
-77.41423		51	5			Tracey Harmon	804-371-6834	<a href="mailto:tracey.harmon@vdot.virginia.gov">tracey.harmon@vdot.virginia.gov</a>	
-77.41423		51	5			Tracey Harmon	804-371-6834	<a href="mailto:tracey.harmon@vdot.virginia.gov">tracey.harmon@vdot.virginia.gov</a>	
-77.41423		51	5			Tracey Harmon	804-371-6834	<a href="mailto:tracey.harmon@vdot.virginia.gov">tracey.harmon@vdot.virginia.gov</a>	
-77.374514		51	1			Maria Polly	703-486-3393	<a href="mailto:maria.polly@vdot.virginia.gov">maria.polly@vdot.virginia.gov</a>	
-77.374514		51	1			Maria Polly	703-486-3393	<a href="mailto:maria.polly@vdot.virginia.gov">maria.polly@vdot.virginia.gov</a>	
-77.374514		51	1			Maria Polly	703-486-3393	<a href="mailto:maria.polly@vdot.virginia.gov">maria.polly@vdot.virginia.gov</a>	
-77.374514		51	1			Maria Polly	703-486-3393	<a href="mailto:maria.polly@vdot.virginia.gov">maria.polly@vdot.virginia.gov</a>	
-77.527802		51	1			Bobby Shetley	703-366-1026	<a href="mailto:bobby.shetley@vdot.virginia.gov">bobby.shetley@vdot.virginia.gov</a>	
-77.527802		51	1			Bobby Shetley	703-366-1026	<a href="mailto:bobby.shetley@vdot.virginia.gov">bobby.shetley@vdot.virginia.gov</a>	
-77.527802		51	1			Bobby Shetley	703-366-1026	<a href="mailto:bobby.shetley@vdot.virginia.gov">bobby.shetley@vdot.virginia.gov</a>	
-77.527802		51	1			Bobby Shetley	703-366-1026	<a href="mailto:bobby.shetley@vdot.virginia.gov">bobby.shetley@vdot.virginia.gov</a>	
-77.421206		51	1			Gary Jennings	757-345-1005	<a href="mailto:gary.jennings@vdot.virginia.gov">gary.jennings@vdot.virginia.gov</a>	
-77.421206		51	1			Gary Jennings	757-345-1005	<a href="mailto:gary.jennings@vdot.virginia.gov">gary.jennings@vdot.virginia.gov</a>	
-77.421206		51	1			Gary Jennings	757-345-1005	<a href="mailto:gary.jennings@vdot.virginia.gov">gary.jennings@vdot.virginia.gov</a>	
-77.421206		51	1			Gary Jennings	757-345-1005	<a href="mailto:gary.jennings@vdot.virginia.gov">gary.jennings@vdot.virginia.gov</a>	
-77.437991		51	1			Gary Jennings	757-345-1005	<a href="mailto:gary.jennings@vdot.virginia.gov">gary.jennings@vdot.virginia.gov</a>	
-77.437991		51	1			Gary Jennings	757-345-1005	<a href="mailto:gary.jennings@vdot.virginia.gov">gary.jennings@vdot.virginia.gov</a>	
-77.437991		51	1			Gary Jennings	757-345-1005	<a href="mailto:gary.jennings@vdot.virginia.gov">gary.jennings@vdot.virginia.gov</a>	
-77.437991		51	1			Gary Jennings	757-345-1005	<a href="mailto:gary.jennings@vdot.virginia.gov">gary.jennings@vdot.virginia.gov</a>	
-78.411954		51	1			Mark Shifflett	434-973-5838	<a href="mailto:mark2.shifflett@vdot.virginia.gov">mark2.shifflett@vdot.virginia.gov</a>	
-78.411954		51	1			Mark Shifflett	434-973-5838	<a href="mailto:mark2.shifflett@vdot.virginia.gov">mark2.shifflett@vdot.virginia.gov</a>	
-78.411954		51	1			Mark Shifflett	434-973-5838	<a href="mailto:mark2.shifflett@vdot.virginia.gov">mark2.shifflett@vdot.virginia.gov</a>	
-78.411954		51	1			Mark Shifflett	434-973-5838	<a href="mailto:mark2.shifflett@vdot.virginia.gov">mark2.shifflett@vdot.virginia.gov</a>	
-77.28467		51	1			Steve Stephenson	757-494-5474	<a href="mailto:steven.stephenson@vdot.virginia.gov">steven.stephenson@vdot.virginia.gov</a>	
-77.28467		51	1			Steve Stephenson	757-494-5474	<a href="mailto:steven.stephenson@vdot.virginia.gov">steven.stephenson@vdot.virginia.gov</a>	
-77.28467		51	1			Steve Stephenson	757-494-5474	<a href="mailto:steven.stephenson@vdot.virginia.gov">steven.stephenson@vdot.virginia.gov</a>	
-77.28467		51	1			Steve Stephenson	757-494-5474	<a href="mailto:steven.stephenson@vdot.virginia.gov">steven.stephenson@vdot.virginia.gov</a>	
-76.406667		51	1			David Meador	757-253-5150	<a href="mailto:david.meador@vdot.virginia.gov">david.meador@vdot.virginia.gov</a>	
-76.406667		51	1			David Meador	757-253-5150	<a href="mailto:david.meador@vdot.virginia.gov">david.meador@vdot.virginia.gov</a>	
-76.406667		51	1			David Meador	757-253-5150	<a href="mailto:david.meador@vdot.virginia.gov">david.meador@vdot.virginia.gov</a>	
-76.406667		51	1			David Meador	757-253-5150	<a href="mailto:david.meador@vdot.virginia.gov">david.meador@vdot.virginia.gov</a>	
-76.741501		51	1			David Meador	757-253-5150	<a href="mailto:david.meador@vdot.virginia.gov">david.meador@vdot.virginia.gov</a>	

7/18/2019	HR IMO - Peninsula (York)	Street Sweeping	N/A	N/A	N/A	lb TP/yr	112.00	37.34513
7/18/2019	HR IMO - Peninsula (York)	Street Sweeping	N/A	N/A	N/A	lb TN/yr	281.00	37.34513
7/18/2019	HR IMO - Peninsula (York)	Street Sweeping	N/A	N/A	N/A	lb TSS/yr	33744.00	37.34513
8/19/2019	Staunton District (Potomac)	Catch Basin Cleanout	N/A	N/A	N/A	lbs (total solids collected)	2100000.00	38.16057
8/19/2019	Staunton District (Potomac)	Catch Basin Cleanout	N/A	N/A	N/A	lb TP/yr	126.00	38.16057
8/19/2019	Staunton District (Potomac)	Catch Basin Cleanout	N/A	N/A	N/A	lb TN/yr	316.00	38.16057
8/19/2019	Staunton District (Potomac)	Catch Basin Cleanout	N/A	N/A	N/A	lb TSS/yr	37892.00	38.16057
6/30/2014	Route 60 (UPC 105139)	Urban Stream Restoration	2.7	19.89	N/A	linear feet	60.00	37.410397
6/30/2014	Route 60 (UPC 105139)	Urban Stream Restoration	2.7	19.89	N/A	lb TP/yr	3.53	37.410397
6/30/2014	Route 60 (UPC 105139)	Urban Stream Restoration	2.7	19.89	N/A	lb TN/yr	3.89	37.410397
6/30/2014	Route 60 (UPC 105139)	Urban Stream Restoration	2.7	19.89	N/A	lb TSS/yr	784.57	37.410397
10/31/2013	Stonehouse Road (UPC 103332)	Urban Stream Restoration	0.102	0.16	N/A	linear feet	70.00	37.403732
10/31/2013	Stonehouse Road (UPC 103332)	Urban Stream Restoration	0.102	0.16	N/A	lb TP/yr	1.71	37.403732
10/31/2013	Stonehouse Road (UPC 103332)	Urban Stream Restoration	0.102	0.16	N/A	lb TN/yr	1.88	37.403732
10/31/2013	Stonehouse Road (UPC 103332)	Urban Stream Restoration	0.102	0.16	N/A	lb TSS/yr	379.68	37.403732
6/30/2019	Wancopin Creek	Urban Stream Restoration	2.6	98.3	N/A	linear feet	2763.00	39.04164
6/30/2019	Wancopin Creek	Urban Stream Restoration	2.6	98.3	N/A	lb TP/yr	164.00	39.04164
6/30/2019	Wancopin Creek	Urban Stream Restoration	2.6	98.3	N/A	lb TN/yr	356.00	39.04164
6/30/2019	Wancopin Creek	Urban Stream Restoration	2.6	98.3	N/A	lb TSS/yr	56000.00	39.04164
5/31/2019	Reston MTD	Hydrodynamic Structures	1.04	1.04	N/A	acres	1.04	38.947297
5/31/2019	Reston MTD	Hydrodynamic Structures	1.04	1.04	N/A	lp TP/yr	1.02	38.947297
5/31/2019	Reston MTD	Hydrodynamic Structures	1.04	1.04	N/A	lb TN/yr	6.78	38.947297
5/31/2019	Reston MTD	Hydrodynamic Structures	1.04	1.04	N/A	lb TSS/yr	942.08	38.947297

-76.741501	51	1		David Meador	757-253-5150	<a href="mailto:david.meador@vdot.virginia.gov">david.meador@vdot.virginia.gov</a>	
-76.741501	51	1		David Meador	757-253-5150	<a href="mailto:david.meador@vdot.virginia.gov">david.meador@vdot.virginia.gov</a>	
-76.741501	51	1		David Meador	757-253-5150	<a href="mailto:david.meador@vdot.virginia.gov">david.meador@vdot.virginia.gov</a>	
-79.047756	51	1		Mike Mitchell	540-332-9200	<a href="mailto:michael.mitchell@vdot.virginia.gov">michael.mitchell@vdot.virginia.gov</a>	
-79.047756	51	1		Mike Mitchell	540-332-9200	<a href="mailto:michael.mitchell@vdot.virginia.gov">michael.mitchell@vdot.virginia.gov</a>	
-79.047756	51	1		Mike Mitchell	540-332-9200	<a href="mailto:michael.mitchell@vdot.virginia.gov">michael.mitchell@vdot.virginia.gov</a>	
-79.047756	51	1		Mike Mitchell	540-332-9200	<a href="mailto:michael.mitchell@vdot.virginia.gov">michael.mitchell@vdot.virginia.gov</a>	
-76.859888	51	5	2/14/2019	Andrew Scott	(757) 925-3685	Andrew.Scott@VDOT.Virginia.gov	Outfall stabilization verified tto be functioning as intended.
-76.859888	51	5	2/14/2019	Andrew Scott	(757) 925-3685	Andrew.Scott@VDOT.Virginia.gov	Outfall stabilization verified tto be functioning as intended.
-76.859888	51	5	2/14/2019	Andrew Scott	(757) 925-3685	Andrew.Scott@VDOT.Virginia.gov	Outfall stabilization verified tto be functioning as intended.
-76.859888	51	5	2/14/2019	Andrew Scott	(757) 925-3685	Andrew.Scott@VDOT.Virginia.gov	Outfall stabilization verified tto be functioning as intended.
-76.731158	51	5	2/14/2019	Andrew Scott	(757) 925-3685	Andrew.Scott@VDOT.Virginia.gov	Outfall stabilization verified tto be functioning as intended.
-76.731158	51	5	2/14/2019	Andrew Scott	(757) 925-3685	Andrew.Scott@VDOT.Virginia.gov	Outfall stabilization verified tto be functioning as intended.
-76.731158	51	5	2/14/2019	Andrew Scott	(757) 925-3685	Andrew.Scott@VDOT.Virginia.gov	Outfall stabilization verified tto be functioning as intended.
-76.731158	51	5	2/14/2019	Andrew Scott	(757) 925-3685	Andrew.Scott@VDOT.Virginia.gov	Outfall stabilization verified tto be functioning as intended.
-77.414361	51	5		Tracey Harmon	804-371-6834	<a href="mailto:tracey.harmon@vdot.virginia.gov">tracey.harmon@vdot.virginia.gov</a>	
-77.414361	51	5		Tracey Harmon	804-371-6834	<a href="mailto:tracey.harmon@vdot.virginia.gov">tracey.harmon@vdot.virginia.gov</a>	
-77.414361	51	5		Tracey Harmon	804-371-6834	<a href="mailto:tracey.harmon@vdot.virginia.gov">tracey.harmon@vdot.virginia.gov</a>	
-77.414361	51	5		Tracey Harmon	804-371-6834	<a href="mailto:tracey.harmon@vdot.virginia.gov">tracey.harmon@vdot.virginia.gov</a>	
-77.320081	51	5		James Martin	804-371-6777	jamest.martin@vdot.virginia.gov	
-77.320081	51	5		James Martin	804-371-6777	jamest.martin@vdot.virginia.gov	
-77.320081	51	5		James Martin	804-371-6777	jamest.martin@vdot.virginia.gov	
-77.320081	51	5		James Martin	804-371-6777	jamest.martin@vdot.virginia.gov	

## FY20 Project Implementation Schedule

Project Name	River Basin	Project Description	Estimated Credits
Richmond Outfall Stabilization	James River	1 outfall stabilizations (Harbour Point)	TN: 0.58; TP: 0.52; TSS: 347.8
Proctors Creek	James River	Stream restoration	TN: 100; TP: 46; TSS: 15,916
Richmond District Complex	James River	3 outfall stabilizations; land cover conversion; BMP enhancements	TN: 16; TP: 19; TSS: 12,566
Slatersville AHQ	James River	Stream restoration	TN: 264.4; TP: 118.0; TSS: 40,764.0
288 BMP retrofit – 20030	James River	Outfall Stabilization	TN: 147.2; TP: 32.5; TSS: 8,894
288 BMP retrofit – 20046	James River	Outfall Stabilization	TN: 140.5; TP: 33.4; TSS: 6,798.7
Pike Branch	Potomac River	Stream restoration	TN: 1950; TP: 900
Staunton District Land Cover Conversion	Potomac River	Land Cover Conversion	TN: 30,480; TP: 893; TSS: 0

# **Appendix G**

## **Local TMDL Action Plan Implementation Summary**

<p>Abrams and Opequon Bacteria and Sediment TMDLs</p>	<p>VDOT will address the Abrams Creek Bacteria TMDL by continuing to implement programmatic BMPs effective in reducing bacteria discharges from VDOT's MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>VDOT will address the Abrams Creek and Opequon Creek Sediment TMDLs by continuing to implement programmatic BMPs effective in reducing sediment discharges from VDOT's MS4. Refer to BMPs 1(A), 2(A), 2(B), 2(C), 2(D), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>No additional BMPs are necessary at this time.</p>
<p>Lower Accotink Creek Bacteria TMDL</p>	<p>VDOT will address the Lower Accotink Creek Bacteria TMDL by continuing to implement programmatic BMPs effective in reducing bacteria discharges from VDOT's MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>No additional BMPs are necessary at this time.</p>
<p>Bull Run Sediment TMDL</p>	<p>VDOT will address the Bull Run Sediment TMDL by continuing to implement programmatic BMPs effective in reducing sediment discharges from VDOT's MS4. Refer to BMPs 1(A), 2(A), 2(B), 2(C), 2(D), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>VDOT also conducted street-sweeping in the Bull Run watershed. 180,382 pounds of sediment were removed from the watershed in FY2019.</p>
<p>Chickahominy River and Tributaries Bacteria TMDL</p>	<p>VDOT will address the Chickahominy River and Tributaries Bacteria TMDL by continuing to implement programmatic BMPs effective in reducing bacteria discharges from VDOT's MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p>

	<p>No additional BMPs are necessary at this time.</p>
Crab Creek Bacteria and Sediment TMDL	<p>VDOT will address the Crab Creek Bacteria TMDL by continuing to implement programmatic BMPs effective in reducing bacteria discharges from VDOT’s MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>VDOT will address the Crab Creek sediment TMDL by continuing to implement programmatic BMPs effective in reducing sediment discharges from VDOT’s MS4. Refer to BMPs 1(A), 2(A), 2(B), 2(C), 2(D), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>VDOT also conducted street-sweepng in the Crab Creek watershed. 252 pounds of sediment were removed from the watershed in FY2019.</p>
Difficult Run Bacteria and Sediment TMDL	<p>VDOT will address the Difficult Run Bacteria TMDL by continuing to implement programmatic BMPs effective in reducing bacteria discharges from VDOT’s MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>VDOT will address the Difficult Run sediment TMDL by continuing to implement programmatic BMPs effective in reducing sediment discharges from VDOT’s MS4. Refer to BMPs 1(A), 2(A), 2(B), 2(C), 2(D), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>No additional BMPs are necessary at this time.</p>
Four Mile Run Bacteria TMDL	<p>VDOT will address the Four Mile Run Bacteria TMDL by continuing to implement programmatic BMPs effective in reducing bacteria discharges from VDOT’s MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>No additional BMPs are necessary at this time.</p>
Goose Creek Sediment TMDL	<p>VDOT will address the Goose Creek sediment TMDL by continuing to implement programmatic</p>



	<p>BMPs effective in reducing sediment discharges from VDOT’s MS4. Refer to BMPs 1(A), 2(A), 2(B), 2(C), 2(D), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>No additional BMPs are necessary at this time.</p>
Hoffler Creek Bacteria TMDL	<p>VDOT will address the Hoffler Creek Bacteria TMDL by continuing to implement programmatic BMPs effective in reducing bacteria discharges from VDOT’s MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>No additional BMPs are necessary at this time.</p>
Hunting Creek, Cameron Run, and Holmes Run Bacteria TMDL	<p>VDOT will address the Hunting Creek, Cameron Run, and Holmes Run Bacteria TMDLs by continuing to implement programmatic BMPs effective in reducing bacteria discharges from VDOT’s MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>No additional BMPs are necessary at this time.</p>
James River (City of Lynchburg) Bacteria TMDL	<p>VDOT will address the James River Bacteria TMDL (Lynchburg area) by continuing to implement programmatic BMPs effective in reducing bacteria discharges from VDOT’s MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>No additional BMPs are necessary at this time.</p>
James River (City of Richmond) Bacteria TMDL	<p>VDOT will address the James River Bacteria TMDL (Richmond area) by continuing to implement programmatic BMPs effective in reducing bacteria discharges from VDOT’s MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>No additional BMPs are necessary at this time.</p>
Neabsco Creek Bacteria TMDL	<p>VDOT will address the Neabsco Creek Bacteria TMDL (Richmond area) by continuing to implement programmatic BMPs effective in</p>

	<p>reducing bacteria discharges from VDOT's MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>No additional BMPs are necessary at this time.</p>
<p>Occoquan River and Tributaries Bacteria TMDL</p>	<p>VDOT will address the Occoquan River Bacteria TMDL by continuing to implement programmatic BMPs effective in reducing bacteria discharges from VDOT's MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>No additional BMPs are necessary at this time.</p>
<p>Popes Head Creek Sediment TMDL</p>	<p>VDOT will address the Popes Head Creek sediment TMDL by continuing to implement programmatic BMPs effective in reducing sediment discharges from VDOT's MS4. Refer to BMPs 1(A), 2(A), 2(B), 2(C), 2(D), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>No additional BMPs are necessary at this time.</p>
<p>Potomac River PCB TMDL Watershed</p>	<p>VDOT will address the Potomac River PCB TMDL by continuing to implement programmatic BMPs effective in reducing potential PCB discharged from VDOT's MS4. Refer to BMPs 1(A), 2(A), 2(B), 2(C), 2(D), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>No additional BMPs are necessary at this time.</p>
<p>Rappahannock River Bacteria TMDL</p>	<p>VDOT will address the Rappahannock River Bacteria TMDL by continuing to implement programmatic BMPs effective in reducing bacteria discharges from VDOT's MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>No additional BMPs are necessary at this time.</p>
<p>Rivanna River Bacteria and Sediment TMDL</p>	<p>VDOT will address the Rivanna River Bacteria TMDL by continuing to implement programmatic BMPs effective in reducing bacteria discharges</p>

	<p>from VDOT’s MS4. Refer to BMPs 11(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>VDOT will address the Rivanna River sediment TMDL by continuing to implement programmatic BMPs effective in reducing sediment discharges from VDOT’s MS4. Refer to BMPs 1(A), 2(A), 2(B), 2(C), 2(D), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>VDOT also conducted street-sweeping in the Rivanna River watershed. 809 pounds of sediment were removed from the watershed in FY2019.</p>
<p>Roanoke River Bacteria and Sediment TMDL</p>	<p>VDOT will address the Roanoke River Bacteria TMDL by continuing to implement programmatic BMPs effective in reducing bacteria discharges from VDOT’s MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>VDOT will address the Roanoke River sediment TMDL by continuing to implement programmatic BMPs effective in reducing sediment discharges from VDOT’s MS4. Refer to BMPs 1(A), 2(A), 2(B), 2(C), 2(D), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>VDOT also conducted street-sweeping in the Roanoke River watershed. 2,498 pounds of sediment were removed from the watershed in FY2019.</p>
<p>Stroubles Creek Sediment TMDL Watershed</p>	<p>VDOT will address the Stroubles Creek sediment TMDL by continuing to implement programmatic BMPs effective in reducing sediment discharges from VDOT’s MS4. Refer to BMPs 1(A), 2(A), 2(B), 2(C), 2(D), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p>
<p>Back Bay, North Landing River, and Tributaries</p>	<p>VDOT will address the Back Bay, North Landing River, and Tributaries Bacteria TMDLs by continuing to implement programmatic BMPs effective in reducing bacteria discharges from</p>

	<p>VDOT's MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>No additional BMPs are necessary at this time.</p>
Back River in York County and Cities of Hampton, Poquoson, and Newport News	<p>VDOT will address the Back River Bacteria TMDL by continuing to implement programmatic BMPs effective in reducing bacteria discharges from VDOT's MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>No additional BMPs are necessary at this time.</p>
Mattaponi River Watershed	<p>VDOT will address the Mattaponi River Watershed Bacteria TMDL by continuing to implement programmatic BMPs effective in reducing bacteria discharges from VDOT's MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>No additional BMPs are necessary at this time.</p>
Pamunkey River and Tributaries	<p>VDOT will address the Pamunkey River and Tributaries Bacteria TMDL by continuing to implement programmatic BMPs effective in reducing bacteria discharges from VDOT's MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>No additional BMPs are necessary at this time.</p>
Poquoson River and Back Creek in York County	<p>VDOT will address the Poquoson River and Back Creek Bacteria TMDLs by continuing to implement programmatic BMPs effective in reducing bacteria discharges from VDOT's MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>No additional BMPs are necessary at this time.</p>
Potomac River Tributaries in Prince William and Stafford Counties	<p>VDOT will address the Potomac River Tributaries Bacteria TMDL by continuing to implement</p>

	<p>programmatic BMPs effective in reducing bacteria discharges from VDOT's MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>No additional BMPs are necessary at this time.</p>
Shenandoah Tributaries	<p>VDOT will address the Shenandoah Tributaries Bacteria TMDL by continuing to implement programmatic BMPs effective in reducing bacteria discharges from VDOT's MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>No additional BMPs are necessary at this time.</p>
Sugarland Run, Mine Run, and Pimmit Run in Arlington, Fairfax, and Loudoun Counties	<p>VDOT will address the Back Bay, North Landing River, and Tributaries Bacteria TMDL by continuing to implement programmatic BMPs effective in reducing bacteria discharges from VDOT's MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>No additional BMPs are necessary at this time.</p>
Tye River Watershed in Nelson and Amherst Counties	<p>VDOT will address the Tye River Watershed Bacteria TMDL by continuing to implement programmatic BMPs effective in reducing bacteria discharges from VDOT's MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>No additional BMPs are necessary at this time.</p>
Chickahominy River	<p>VDOT will address the Chickahominy River sediment TMDL by continuing to implement programmatic BMPs effective in reducing sediment discharges from VDOT's MS4. Refer to BMPs 1(A), 2(A), 2(B), 2(C), 2(D), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>VDOT also conducted street-sweeping in the Chickahominy River watershed. 2,955 pounds of</p>

	<p>sediment were removed from the watershed in FY2019.</p>
<p>Little Otter River, Johns Creek, Wells Creek, and Buffalo Creek</p>	<p>VDOT will address the Little Otter River, Johns Creek Wells Creek, and Buffalo Creek sediment TMDLs by continuing to implement programmatic BMPs effective in reducing sediment discharges from VDOT's MS4. Refer to BMPs 1(A), 2(A), 2(B), 2(C), 2(D), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p>
<p>Moores Creek, Lodge Creek, Meadow Creek, and Schenks Branch</p>	<p>VDOT will address the Moores Creek, Lodge Creek, Meadow Creek, and Schenks Branch sediment TMDLs by continuing to implement programmatic BMPs effective in reducing sediment discharges from VDOT's MS4. Refer to BMPs 1(A), 2(A), 2(B), 2(C), 2(D), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation.</p> <p>VDOT also conducted street-sweeping in the Moores Creek, Lodge Creek, Meadow Creek, and Schenks Branch watershed. 414 pounds of sediment were removed from the watershed in FY2019.</p>