

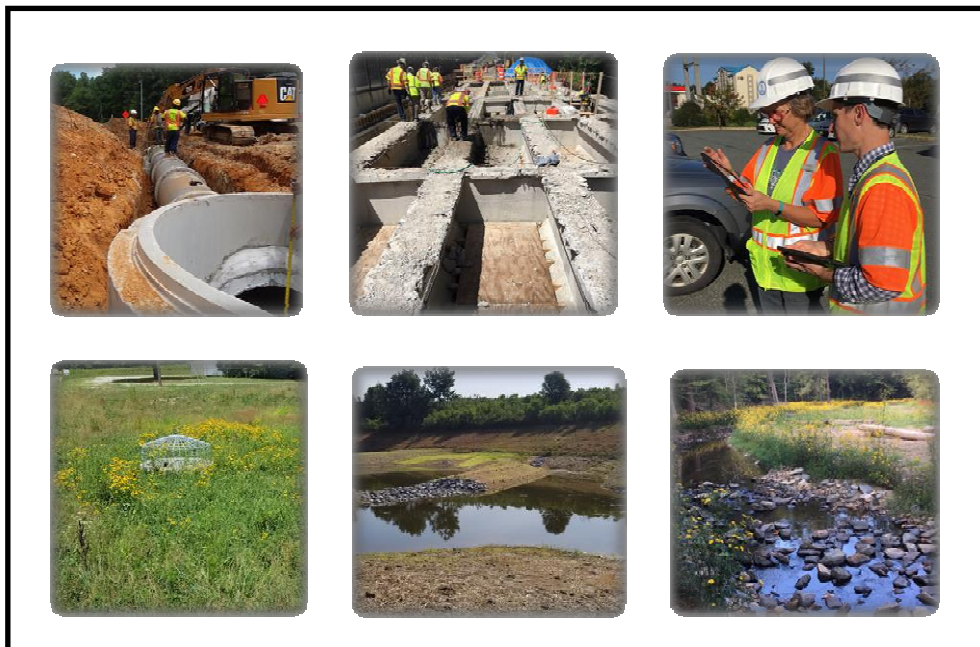


MS4 PERMIT YEAR 2022 ANNUAL REPORT

JULY 1, 2022 TO JUNE 30, 2023

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*

*Administratively Continued to present

October 1, 2023

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

VDOT MS4 Annual Report – PY2023

VPDES #: VA0092975

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 Stephen C. Brich

Name Stephen C. Brich, P.E.

Title Commissioner of Highways
Commonwealth of Virginia,

Organization Department of Transportation

Date 9/28/2023

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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	US Department of Defense
EPA	US 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

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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 December 15, 2019. 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).

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)(2)	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

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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
Section I.B.2.c	List of documents incorporated by reference	Reference Document List
MCM1		
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) *
MCM2		
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) *
MCM3		
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)*
MCM4		
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)

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Permit Reference	Permit Description	MS4 Program Plan BMP
Section I.C.4.d	Program Plan requirements	BMP 4(A), 4(B)
Section I.C.4.e	Annual Report requirements	BMP 4(B)*
MCM5		
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)*
MCM6		
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)*
MCM7		
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)*
TMDL SC Requirements Affecting other MCMs		
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)

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** 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.*

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MCM#1: PUBLIC EDUCATION AND OUTREACH ON STORMWATER IMPACTS¹

¹ 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.

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BMP 1(A) – Maintain and Update Stormwater Webpage

Description and Measurable Goal:	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”).
Lead Division:	Location & Design
Reference Materials:	VDOT Stormwater Webpage

Efforts and Expected Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
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.	<p>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.</p> <p>https://www.virginiadot.org/business/locdes/water_resources_program.asp</p> <p>This webpage includes the MS4 Program Plan, annual reports, other program documents, contact information, announcements, and other useful resources.</p>
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.	<p>VDOT has maintained its link for the public to report illicit discharges, improper disposal.</p> <p>IDDEReports@VDOT.Virginia.gov.</p>

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

Description and Measurable Goal:	Provide informational signage at rest areas identified in permit.
Lead Division:	Maintenance
Reference Materials:	Templates for Pet Waste and Litter Signage

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
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>The pet waste station maintenance and restocking responsibility is part of VDOT's Monthly Quality Assessment Review/Safety Rest Area Inspection Program. 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 -- VDOT has them in all 42 Safety Rest Areas and Welcome Centers, 11 of which are within Census Urban Areas subject to our MS4 Permit Program. No new Safety Rest Areas were established and no major rebuilds were completed this past year. During the last year deteriorated or damaged pet stations were replaced as needed. Estimates from 2022, which is the most recent VDOT has, indicate that 16,562,600 people visited VDOT Rest Areas and Welcome Centers across the state and were exposed to our Pet Waste messaging and facilities.</p> <p>VDOT has installed a total of 16 Litter Control signs at 11 Safety Rest Areas/Welcome Centers located within Census Urban Areas subject to our MS4 permit. VDOT's most recent estimates indicated that 4,517,200 people visited the 11 MS4 area Rest Areas/Welcome Centers where VDOT had litter control signs posted and were exposed to that messaging.</p>

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BMP 1(C) – Annual Reporting and Effectiveness Review

Description and Measurable Goal:	Provide annual reports and assess effectiveness of outreach efforts.
Lead Division:	Location & Design
Reference Materials:	VDOT Stormwater Webpage

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
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 st of each year.	<p>VDOT has continued to post its MS4 Program Plan and Annual Reports on its stormwater webpage located at:</p> <p>https://www.virginiadot.org/business/locdes/water_resources_program.asp</p> <p>This past year represents the sixth year that VDOT operated under the IP. The current version of the Program Plan is dated December 15th, 2019, and a copy was posted to the website within 30 days after that date.</p> <p>As VDOT has not been reissued a new IP and is currently operating under an administratively continued IP, this Annual Report is the sixth to be submitted under the IP requirements. The reporting structure 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 regard 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 reported in MCM3. This estimate was calculated by tallying the number staff trained during SWPPP and Good Housekeeping and Pollution</p>

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		<p>Prevention for Contractors MS4 training modules. VDOT has developed a VDOT Illicit Discharge Detection and Elimination Program Manual and a field guide. The field guide has been distributed to VDOT field staff and key maintenance personnel.</p> <p>2.) VDOT has installed a total of 16 Litter Control signs at 11 Safety Rest Areas/Welcome Centers located within Census Urban Areas subject to our MS4 permit. The latest figures we have, for 2022, indicated that 4,517,200 people visited the 11 MS4 area Rest Areas/Welcome Centers where VDOT had litter control signs posted and were exposed to that messaging.</p> <p>3.) Other Educational and Outreach Programs:</p> <ul style="list-style-type: none"> – Watershed Signs – During PY23, VDOT installed two (2) new Watershed signs for the Jackson River crossing of I-64 in Covington. Replacement of two (2) Watershed signs for the James River Crossing of US 29 on the border of Amherst & Lynchburg and replaced two (2) Watershed signs for the Appomattox River Crossing of Route 144 in Colonial Heights. To date, VDOT’s IDSP has installed 148 watershed signs within the MS4 service area and plans to continue to maintain them. – 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. – VDOT continued to maintain the “Virginia is for Lover’s not Litter” campaign and website: https://www.loversnotlitter.org/ <p>The Public Education and Outreach component has been successful with the use of georeferenced events and interactive mapping to share with the public and staff activities that are underway or planned, and allows 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

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

Description and Measurable Goal:	Promote, support, and maintain public involvement activities that encourage public awareness of stormwater pollution
Lead Division:	Maintenance
Reference Materials:	Adopt-A-Highway Documentation VDOT's Stormwater Page

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
Continue to promote the Adopt-A-Highway program.	Annually promote Adopt-A-Highway through use of VDOT's stormwater webpage*.	<p>The VDOT Adopt-a-Highway program has 7,930 miles adopted as of the end of FY 2023. This represents a decrease of 1,605 miles (16.8%) from FY22's reported 9,535 adopted miles. In the spring of 2023, VDOT completed a re-design and upgrade to the tracking system to include spatial view and geometry-based mileage calculations for all adopted roadways and adjusting a number of mis-mapped or defunct adoptions. We attribute this year's perceived decrease in adopted miles to the utilization of this updated system providing a more accurate calculation of adopted miles.</p> <p>The total adopted mileage for each of VDOT Districts is:</p> <ul style="list-style-type: none"> • Bristol – 396 miles • Culpeper – 693 miles • Fredericksburg – 660 miles • Hampton Roads – 667 miles • Lynchburg – 740 miles • Northern Virginia – 1,407 miles • Richmond – 930 miles • Salem – 1,131 miles • Staunton – 1,303 miles <p>The Adopt-a-Highway Program had 8,229 volunteers participate in roadside litter cleanups in FY 23. This represents a 36% decrease from the 12,864 participants reported in FY 22. We established a new calculation methodology for counting volunteer participants. Because Adopt-a-Highway permittees are required to perform at least two pickups per year, we only sum the count of participants from one pickup report per each permittee (the report with the highest count of participants for that permittee). This helps us avoid double counting individuals participating in multiple pickups.</p>

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

Description and Measurable Goal:	Promote, support, and maintain public involvement activities that encourage public awareness of stormwater pollution
Lead Division:	Office of Land Use
Reference Materials:	VDOT's Stormwater Page LUP-SDS The number and location of LUP's that were issued for stenciling activities

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
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>Storm sewer stenciling is promoted through VDOT's stormwater webpage.</p> <p>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"> – LUP-A: Land Use Permit Application for Storm Sewer Stenciling: http://www.virginiadot.org/business/resources/land_use_regs/newPermitPackages/LUP-A.pdf – LUP-SPG Permittee Agreement for Storm Sewer Stenciling: http://www.virginiadot.org/business/resources/land_use_regs/LUP-SPG_Special_Provisions_-_General.pdf <p>During this reporting cycle, VDOT issued one county-wide permit for storm sewer stenciling to the Northern Virginia Soil & Water Conservation District, allowing the stenciling of storm drains on any secondary highway in Fairfax County.</p>

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BMP 2(C) – Participation in Development of Local TMDLs

Description and Measurable Goal:	Track activities in which VDOT participated related to development of Local TMDLs.
Lead Division:	Environmental
Reference Materials:	

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
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 in 4 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 0 local TMDL and watershed implementation plan meetings.
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 22 additional 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.

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

Description and Measurable Goal:	Promote, support, and maintain public involvement activities that encourage public awareness of stormwater pollution
Lead Division:	Location & Design
Reference Materials:	

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
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 numerous Stream Cleanup Events during the reporting year including:</p> <ol style="list-style-type: none"> 1. Accotink River Watershed - Friends of the Accotink Events 2. Belle Isle State Park Waterway Clean Up 3. Caledon State Park Potomac Beach Clean Up 4. Chesapeake Bay - Alliance for the Chesapeake Bay Events 5. CBF - Clean the Bay Day 6. CBF - Portsmouth Shoreline Construction 7. Clean Newmarket Creek Day – Clean the Bay Day 8. Clean Up with Potomac Conservancy at Piscataway Park 9. Fairfax County Park Authority Events 10. Hampton Roads Events 11. James River Regional Clean - Up 12. King George & FOR Stream Clean Up 13. Longwood University - Clean Virginia Waterways 2023 Events 14. Loudoun Sterling Park Earth Day Stream Clean-Up 15. Port Royal/Rt 17 Mill Creek Bridge Clean Up 16. Potomac Pride River Cleanup at Columbia Island! (Arlington, VA) 17. Potomac River Cleanup at Glenmont Local Park 18. Potomac River Cleanup at Gravelly Point! (Arlington, VA) 19. Potomac River Cleanup at Jones Point Park 20. Potomac River Cleanup at Jones Point Park! (Alexandria, VA) 21. Potomac River Cleanup with Latino Outdoors at Gravelly Point 22. Potomac River Watershed - Ferguson Foundation Events 23. Potomac River Watershed - Potomac Conservancy Events 24. Project Clean Stream Community Clean Up at Conestoga River at Broad St.

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		<ul style="list-style-type: none">25. Project Clean Stream Community Clean Up at Holly Point Park26. Project Clean Stream Community Clean Up at Maple Grove Park27. Project Clean Stream Community Clean Up at Swarr Run28. Rappahannock River - Friends of the Rappahannock Events29. Roanoke Valley Events
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BMP 2(E) – Annual Reporting and Effectiveness Review

Description and Measurable Goal:	Report efforts and results of Public Involvement/Participation BMPs in the Annual Report and Monitor Effectiveness
Lead Division:	Location & Design
Reference Materials:	

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
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"> 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. 2. VDOT participated in coordination meetings with 11 other Localities to discuss MS4 and infrastructure coordination during the reporting year. A list is provided under Annual Report Information in MCM 7. 3. Other Public Involvement Activities: VDOT continued coordination with Fairfax County as part of the County funded trash cleanup program in conjunction with Adopt a Highway for access. Operation Stream Shield (OSS) partners with local homeless shelters to pay residents to pick up trash and litter. In PY22 OSS resulted in 2 tons of debris being picked up from VDOT R/W at 28 sites. 4. Urban Stormwater Workgroup (USWG) participation. 5.) VDOT participated on several TACs and SAGs, organized and facilitated by DEQ including the MS4 GP, CGP 2024, and Stormwater Handbook. Support for Renew the New. VDOT provided 1,250 trash bags in support of the Renew the New River trash cleanup held August 23, 2022. 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.

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<p>Identify Partners.</p>	<p>Annually.</p>	<p>VDOT participated in meetings, workshops, or conferences with environmental organizations during the reporting year. A summary of any other activities (other than those listed in BMP 2A-2D) in which VDOT participated (e.g. workshops, meetings) or which VDOT sponsored with the goal of reducing stormwater pollutant loads; improving water quality; and supporting local water quality restoration is provided in Appendix A.</p>
<p>Evaluate and describe effectiveness of each strategy and practice.</p>	<p>Annually.</p>	<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 including:</p> <ul style="list-style-type: none"> – 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. – VDOT began the process of updating the tracking and reporting database associated with the Adopt-A-Highway program in PY18 and PY19. VDOT developed a new, geo-referenced database, guidance, and associated map for use and rolled it out to Districts along with training. – The georeferenced locations of VDOT Pet Waste, Litter and Watershed Signage are now publicly available in an interactive map on VDOT’s website through an ESRI ArcGIS Suite Storymap. <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"> – Adopt-a-Highway (AAH) Program – VDOT completed the re-design and upgrade to the tracking system to include spatial view and geometry-based mileage calculations.

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MCM#3: ILLICIT DISCHARGE DETECTION AND ELIMINATION²

² 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.

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BMP 3(A) – Storm Sewer Map

Description and Measurable Goal:	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: <ul style="list-style-type: none"> – The permittee’s MS4 service area based on the CUA as determined by the U.S. Census Bureau’s 2010 census; – Location of all outfalls owned or operated by the permittee discharging to state waters; – Known points of discharge to downstream, directly adjacent MS4s; – A unique identifier for each outfall and point of discharge; – Names of receiving waters to which the outfalls discharge; and – Stormwater management facilities owned or operated by the permittee.
Lead Division:	Location & Design
Reference Materials:	Storm Sewer Map VDOT Right of Way Determination and Mapping Protocols VDOT Outfall Inventory Manual

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
Complete storm sewer system map.	Storm sewer map was previously developed. VDOT will update with necessary information as needed.	<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 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>VDOT’s stormwater management facility BMP Inventory and Inspection information is hosted in the ArcGIS Suite in a uniform centralized database solution. The database was migrated from an ArcGIS Online platform to the ArcGIS Portal during PY20 in coordination with the VDOT IT Division. These facilities are kept up to date in accordance with written procedures and by trained staff in each of the nine (9) VDOT Districts in coordination with VDOT Central Office through the inventorying of</p>

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		<p>BMPs as they come online through project delivery and inspection/acceptance procedures throughout the year. A major undertaking in PY20 and PY21 is the updating of the stormwater BMP database fields in Survey 123 and ArcGIS portal to reflect recent BMP maintenance research and associated updates to the VDOT BMP Inspection and Maintenance Manual. The BMP inventory and inspection system was moved from portal to ArcGIS online around October, 2021. VITA updated the policy, so the BMP database could be stored in ArcGIS online. This switch gave VDOT more flexibility to make changes to the survey 123 forms and the database structure. Along with this transfer, updates to the inspection system and the survey forms were also made. During the transferring process, VDOT also switched to use Field Maps instead of Collector for BMP field inspection. This is because the Collector app was being retired by the end of 2021. New trainings to the District Maintenance staff was conducted in 2021, and 2022 to make sure they are using the Field Maps for BMP field annual inspections going forward.</p> <p>A BMP inspection Dashboard was created to monitor and track the annual inspection work on VDOT maintained BMP facilities. From the dashboard, District Maintenance staff in each district can easily get a list of the BMPs that need to be inspected before the end of the fiscal year. This has greatly improved the efficiency of their work as all the BMPs have been inspected a month before the end of June.</p> <p>Other updates include:</p> <ul style="list-style-type: none"> – Manually updating fields in the BMP inventory layer (receiving water, pervious/impervious treated, etc.) based on the information from the CGP Notice of terminations, comports with the recent DEQ MS4 audit findings. – Adding a road type question in the BMP inventory S123 form to capture this info. <p>VDOT created a customized BMP reporting tool in October, 2021 but has encountered many issues its deployment. One of which is the current VITA policy. While trying to overcome these issues, VDOT continues to utilize the survey123 report functionality as a work around.</p>
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BMP 3(B)1 - Prohibition of Non-Stormwater Discharge

Description and Measurable Goal:	Prohibit non-stormwater discharges into the storm sewer system through updated manuals of practice.
Lead Division:	Maintenance
Reference Materials:	Maintenance Best Practices Manual

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
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. Revisions will be made as appropriate to update this Manual.	The VDOT Maintenance Best Practices Manual continues to be implemented, in order to ensure that non-stormwater discharges of pollutants from roads, streets, and parking lot maintenance are being prevented or minimized.

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

Description and Measurable Goal:	Prohibit non-stormwater discharges into the storm sewer system
Lead Division:	Environmental
Reference Materials:	Waste Management and Pollution Prevention Guides Transportation-related Incident Procedures

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
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. The Guide was also reviewed this permit cycle (January 2022) and minor updates for a few sections are being drafted to provide additional clarification. The updated Guide is expected to be published concurrent with the issuance of the new MS4 permit in CY 2023.
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.

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

Description and Measurable Goal:	Review of legal authorities to continue providing adequate legal authority.
Lead Division:	Location & Design
Reference Materials:	Laws, Regulations, permit(s), Program Plan, and related VDOT Governance Documents

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
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.

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

Description and Measurable Goal:	Utilize written procedures to detect, identify, and address unauthorized non-stormwater discharges, including illegal dumping, to VDOT's MS4.
Lead Division:	Environmental
Reference Materials:	VDOT IDDE Program Manual VDOT IDDE Field Guide IDDE Geodatabase Storm Sewer Map

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
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 IDDE Field Guide during PY19. Update IDDE Program Manual as appropriate.	Proper notification language was incorporated into the PY20 update of the IDDE Program Manual, and in PY19 update of the IDDE Field Guide.
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 Program Manual underwent a revision in PY20. The updated guide outlines steps VDOT personnel and the public can use to report suspected illicit discharges, the process VDOT Illicit Discharge Team members use to report or resolve illicit discharges, as well methods used to track illicit discharge reports in a geodatabase.</p> <p>In PY19, the IDDE Field Guide was streamlined and converted to a smaller format for easier field use by maintenance and field crews. The guide includes contact information for reporting illicit discharges, as well as color photos and diagrams outlining the investigation and reporting process. Copies of the guide have been distributed to all VDOT maintenance facilities within 3 miles of an MS4 area.</p> <p>Copies of both the IDDE Program Manual and Field Guide are available on VDOT Stormwater webpages, as well as by request to the VDOT MS4 group.</p>

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<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.</p>	<p>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>	<p>VDOT’s Environmental Division has an IDDE training video available on various digital platforms including YouTube, the internal VDOT Virtual Campus, and the Electronic Bulletin Boards found at every VDOT facility. Additionally, several other MS4-related educational modules provide training on aspects of illicit discharges, including the Facility SWPPP and Good Housekeeping and Pollution Prevention for Contractors trainings.</p> <p>Language requiring the viewing of the Illicit Discharge Detection and Elimination training video inserted into various new/renewed maintenance contracts (i.e., mowing contracts, salt distribution contracts, etc.) has seen larger adoption this permit year as contracts have expired/renewed.</p> <p>During PY23, VDOT provided IDDE-related training to approximately 2,133 employees and contractors. For a further breakdown of training numbers, see BMP 6(C)1.</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>Thirty-one (31) potential illicit discharges were reported to VDOT’s IDDE program in PY 2023. Based on follow-up investigation, 11 reported discharges were determined not to qualify as illicit discharges and the reports were closed. VDOT’s effort to resolve the 20 confirmed discharges are summarized below. A detailed copy of the reports, and the IDDE tracking geodatabase, can be obtained by contacting the Environmental Division’s MS4 group.</p> <p>VDOT or VDOT contractors were the responsible party in one confirmed illicit discharge within MS4 areas.</p> <table border="1" data-bbox="889 1596 1466 1806"> <thead> <tr> <th>District</th> <th>Reported</th> <th>Confirmed</th> </tr> </thead> <tbody> <tr> <td>Bristol</td> <td>1</td> <td>1</td> </tr> <tr> <td>Culpeper</td> <td>0</td> <td>0</td> </tr> <tr> <td>Fredericksburg</td> <td>0</td> <td>0</td> </tr> <tr> <td>Hampton Roads</td> <td>1</td> <td>1</td> </tr> </tbody> </table>	District	Reported	Confirmed	Bristol	1	1	Culpeper	0	0	Fredericksburg	0	0	Hampton Roads	1	1
District	Reported	Confirmed															
Bristol	1	1															
Culpeper	0	0															
Fredericksburg	0	0															
Hampton Roads	1	1															

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		<p>Lynchburg 1 0</p> <p>Northern Virginia 18 11</p> <p>Richmond 8 5</p> <p>Salem 1 1</p> <p>Staunton 1 1</p> <p>TOTAL 31 20</p> <p><u>Summary of IDDE's confirmed:</u></p> <p>Bristol District</p> <p>1. In July of 2022, personnel at the Bristol District Complex reported an illicit discharge onto VDOT property from construction activity on the adjacent FedEx property. The issue was referred to the local VSMP authority for resolution. No recoverable material was found to clean up, so the report was closed.</p> <p>Hampton Roads District</p> <p>1. In February 2023, Hampton Roads NPDES Coordinator reported a discharge to a ditch/surface water near the site of the High-Rise Bridge project, within VDOT's ROW. The discharge appeared to originate from businesses adjacent to the ROW. VDOT contacted Tidewater DEQ PREP for further investigation. DEQ visited the sites to examine the discharge and ensure that any businesses with VPDES permits were in compliance. DEQ found no Responsible Party (RP) could be determined, and no further cleanup or action was necessary on VDOT's part, so the IDDE report was closed.</p> <p>NOVA (Northern Virginia District)</p> <p>1. In July 2022, NOVA NPDES Coordinator forwarded a report from a contractor of a potential sanitary sewer leak into a stormwater pond. The matter was referred to the locality (Fairfax County), who indicated the issue was a leaking manhole and they were enroute for cleanup. The incident was reported to DEQ NRO PREP and the IDDE report was closed.</p>
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		<ol style="list-style-type: none"> 2. Fairfax County (FFX) informed VDOT of a private driveway paving contractor who had spilled hydraulic oil onto the pavement, and some had reached the storm sewer system. FFX issued a Notice of Corrective Action to the contractor, who was required to clean up the material. 3. August 2022, Arlington County (ARL) informed VDOT of a paving contractor that had leaked tar onto the road surface/storm sewer system. At the time of ARL reporting the incident it was already under investigation, and a cleanup begun. Recoverable material was removed and leaking equipment repaired, so the report was closed. 4. August 2022, NOVA NPDES forwarded a report from FFX of a private contractor discharge of sediment to the MS4 during construction. FFX, as the VSMP authority, had already visited the site and had the contractor address the issues. Material was nonrecoverable, and the report was closed. 5. November 2022, ARL simultaneously informed VDOT and DEQ NRO PREP of a sanitary sewer overflow that was affected VDOT’s MS4. ARL was in the process of addressing the leak and cleaning up material. DEQ responded that they were aware of and monitoring the issue. As all appropriate referrals had been made, and cleanup would be overseen by DEQ, VDOT closed the IDDE report. 6. November 2022, NOVA NPDES reported to DEQ and FFX that concrete was being tracked from a concrete plant and into VDOT’s ROW, resulting in discharges of pollutant-contaminated stormwater to the MS4. This was the second instance of tracking/improper controls at this particular concrete plant that had been identified. FFX visited the site and confirmed a lack of appropriate controls at the facility, and DEQ performed a follow-up inspection under the facilities VPDES permit. DEQ’s report with findings was distributed to both FFX and
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		<p>VDOT. As any further enforcement action would be handles by DEQ, VDOT’s IDDE report was closed.</p> <ol style="list-style-type: none"> 7. December 2022, NOVA NPDES forwarded a report from DEQ’s PREP group that indicated a commercial vector truck had been dumping water onto the roadway. DEQ asked VDOT to investigate its contractors for compliance. VDOT investigated its contractors, but based on the photos and description, was unable to determine if this was a VDOT contractor, or a utility contractor working in the area. The discharge was determined to be de minimis, so the report was closed. 8. March 2023, NOVA NPDES forwarded an inspection report from DEQ of the concrete plant that was investigated the previous year. The initial inspection was instigated by a VDOT complaint concerning tracking of material and discharges to VDOT’s MS4, while the second inspection was the result of a FFX filed complaint. The DEQ report contained corrective actions and outlined potential enforcement actions that would be brought out if compliance was not achieved. As the issue was being further addressed by DEQ, and any further enforcement would come through them, the IDDE report was closed. 9. May 2023, NOVA NPDES forwarded report from DEQ and FFX of a diesel fuel spill to a roadside ditch that occurred during a VDOT paving and milling incident. FFX and DEQ had responded to the incident, which was reported via DEQ PREP’s online tool. DEQ contractors were deployed to clean up the spill, and a Notice of Violation with a Request for Corrective Action was issued to the contractor. The contractor was responsive to the RCA and corrective actions overseen by DEQ. Thus the IDDE report was closed. 10. June 2023, NOVA NPDES notified Loudoun County of a discharge of possible equipment and vehicle fluids from a non-VDOT construction site onto VDOT ROW.
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		<p>11. June 2023, Loudoun Co notified VDOT of a discharge into a storm drain discovered by County workers. The substance was brown and somewhat frothy and had hardened (likely polyurethane). It did not appear to have traveled out of the initial drop inlet box. The incident was not forwarded to VDOT until a week after discovery, so determination of an RP was unable to be made. The incident was forwarded to DEQ NRO PREP to investigate the substance, and whether they felt it posed an ongoing water quality or health hazard.</p> <p>Richmond District</p> <ol style="list-style-type: none"> 1. July 2022, Chesterfield Co (CCO) copied VDOT on a response to PRO DEQ regarding cleanup of a motor oil dumping in a VDOT ditch. Both DEQ and CCO had responded and applied absorbent booms to contain the spill. Cleanup and enforcement were already being pursued by the other groups, so VDOT closed the IDDE report. 2. August 2022, CCO forwarded the five-day follow-up report from a spill of titanium dioxide used as a dye pigment into the storm sewer system as a result of an incident at a chemical plant. Minimal material had migrated into the storm sewer system, and the communication was the five-day follow-up report detailing cleanup actions and outlining that no recoverable material remained, and the spill had not reached a surface water. Thus, the IDDE report was closed. 3. September 2022, CCO notified VDOT and DEQ simultaneously of a grease, tar and asphalt spill that had entered a private stormwater inlet that interconnected to VDOT’s MS4. Initial containment efforts had been made by Chesterfield County, and no imminent threat to a surface water was obvious. DEQ PRO PREP responded that they would investigate the incident and attempt to determine an RP and any necessary enforcement actions, so the IDDE report was closed.
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		<p>4. October 2022, CCO notified VDOT and DEQ of improperly managed dumpsters resulting in impacts to VDOT’s MS4. DEQ NRO PREP responded and indicated they would follow up and investigate to determine enforcement actions. No further involvement from VDOT was necessary and the report was closed.</p> <p>5. January 2023, CCO notified VDOT of an antifreeze spill into a curb inlet (possibly from a vehicular accident). CCO had applied absorbent booms to control materials on the road surface, but the drop inlet required cleanup. VDOT referred the matter to DEQ PREP for cleanup. DEQ PREP requested that, under the circumstances of a low-risk solid waste, VDOT attempt to deploy maintenance staff to the location to mop up any recoverable material. VDOT’s IDDE Coordinator reaching out to local maintenance crews to assist with cleanup, which was performed, documented, and sent to DEQ for report closure. Thus, the IDDE report was closed.</p> <p>Salem District</p> <p>1. February 2023, Salem/Lynchburg Regional Hazmat staff notified the CO IDDE Team of an instance of vehicular fluids dumped into a storm drain on VDOT ROW. Regional Hazmat staff determined the spill was contained to the drop inlet, low risk, and VDOT maintenance crew members were already at the scene addressing cleanup. Cleanup was documented, no RP was able to be determined, and the report was closed.</p> <p>Staunton District</p> <p>1. March 2023, Staunton District NPDES notified CO IDDE staff of a discharge of sewage within the City of Winchester. A private sanitary sewer line was actively leaking and discharging effluent into the VDOT MS4. The Town of Winchester was aware of the incident but attempts to reach the private property owner were unfruitful.</p>
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		<p>CO IDDE advised Staunton NPDES to reach out to local Lord Fairfax Health District to notify them and DEQ within 24 hours of the discharge. This was done, and the locality was successful in engaging the property owner to resolve the matter within 48 hours. The affected area was addressed with lime, and the report was closed.</p>
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VPDES #: VA0092975

BMP 3(D) – Annual Reporting and Effectiveness Review

Description and Measurable Goal:	Report efforts and results of IDDE Efforts in the Annual Report and Monitor Effectiveness
Lead Division:	Location & Design
Reference Materials:	

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
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"> - 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. - During PY22, language requiring the viewing of the Illicit Discharge Detection and Elimination training video was inserted into various new/renewed maintenance and facility contracts (i.e. mowing contracts, salt distribution contracts, etc.). Prior to the start of work, contractors are required to notify VDOT that relevant employees have viewed the training, as well as the number of trainees. - In PY21, the IDDE ArcGIS Storymap module was completed. It includes elements from the IDDE manual and videos from training content. - The IDDE ArcGIS application that was developed in PY 18 and refined in PY19 is still under development for public access. - The Maintenance Division completed updates to existing sections of the

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		<p>Maintenance Best Practices Manual, as well as adding a new "Environmental" chapter.</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> <p>The L&D Division anticipates continuing the enhancement of its Storm Sewer Mapping systems through use of the ESRI ArcGIS Suite over the upcoming PY. Updates include the updating of the stormwater BMP database fields in Survey 123 and ArcGIS Portal to reflect recent research and associated updates to the stormwater BMP Inspection and Maintenance Manual, completed by the VDOT Maintenance Division. This may also include updating the MS4 Service Area mapping layer, to reflect the 2020 census urbanized areas, and enhancing use of GIS data layers through an internal ESRI Storymap type of application and through training and outreach efforts.</p>
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VPDES #: VA0092975

MCM#4: CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

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VPDES #: VA0092975

BMP 4(A) – Annual Standards and Specifications

Description and Measurable Goal:	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.
Lead Division:	Location & Design
Reference Materials:	VDOT's Annual ESC and SWM Standards & Specifications Database to track land-disturbing activities regulated under CGP

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
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>VDOT made continual modifications, revisions, and updates to VDOT 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. VDOT continued coordination with DEQ during the reporting year to facilitate the approval process and to address comments and update various components.</p> <p>VDOT submitted its updated ESC and SWM Annual Standards & Specifications to DEQ on December 31, 2022. VDOT provided responses to DEQ's comments on June 7, 2023 and is awaiting approval or related response from DEQ.</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.	VDOT continues to require ESC Plans for RLDAs are 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	This aspect of the BMP is currently implemented and is an ongoing annual effort.	VDOT 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, 2022 to June 30, 2023, within the MS4 urbanized area there were approximately :

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<p>stormwater from construction sites.</p>		<ul style="list-style-type: none">– Total number of regulated land-disturbing activities initiated in the regulated MS4 area that required new CGP coverage during PY23 = 14 – Total number of acres disturbed that required new CGP coverage during PY23 = 383 acres. <p>Note: These numbers are based on the dates of the DEQ registration letters that were received between July 1, 2022 and June 31, 2023.</p>
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BMP 4(B) – Annual Reporting and Effectiveness Review

Description and Measurable Goal:	Inspect and enforce compliance with the VPDES Construction General Permit and attending regulations on applicable projects.
Lead Division:	Construction
Reference Materials:	VDOT's Annual ESC and SWM Standards & Specifications

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
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 24 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 waters are 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 to include 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 647 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&S. Of these, approx. 5,993 erosion and sediment control and Construction Stormwater General Permit deficiencies were noted; and 5,471 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"> – Stabilization – Perimeter control maintenance – Inlet protection maintenance – Good housekeeping / pollution prevention – Check dam maintenance – Construction entrance maintenance <p>VDOT utilized enforcement measures to address insufficient ESC measures and to correct deficiencies.</p>

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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 a minimum of 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 IIM was included in VDOT's 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 developed an ArcGIS Online cloud-based database and mapping mechanism that allows for the tracking of construction ESC periodic compliance oversight inspections over previous permit years. 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-LD-256. The database system was first rolled out to District NPDES Coordinators in PY18, and VDOT has continued to work on its functionality to improve issues and address the reliability and capabilities. Following the migration of the database and system from an Online cloud-based system to Portal, another round of training was held with District NPDES Coordinators in PY22, and the database has been utilized since the PY22 to track inspections. VDOT CO kept District NPDES Coordinators informed with improvements to the database, such as the revised construction inspection form, as part of their quarterly and/or annual meetings.

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<p>Evaluate and describe effectiveness of each strategy and practice.</p>	<p>Annually.</p>	<p>VDOT 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"> – Awarded Environmental Performance Program (EPP) awards to: <ul style="list-style-type: none"> ▪ Bristol District – Jones Road and Bridge ▪ Fredericksburg District (and Statewide Winner) – Joseph B. Fay Co. ▪ Hampton Roads District – Crowder Construction ▪ Lynchburg District – Caton Construction Group ▪ Richmond District – Burleigh Construction Co. ▪ Salem District – Crossroads Bridge ▪ Staunton District – Caton Construction <p><i>Note: The EPP Award is a VDOT district-based state-wide performance award program for private contractors.</i></p> <ul style="list-style-type: none"> – Implemented and rolled out a universal electronic NPDES inspection form in PY23 that was developed in PY22. – The continued use of PlanGrid throughout the state has allowed construction project teams to communicate ESC and SWM issues immediately for correction, resulting in faster, more efficient, and more accurate project communication. – Received and addressed DEQ comments on VDOT’s PY22 Annual Standards & Specifications for ESC & SWM. – Continued updating of SWPPP General Information Sheets and permitting forms. – Maintained additional NPDES staff designees – Developed and began implementation of an Offsite Excavated Fill Disposal guidance and revised related forms with new regulatory requirements.
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		<ul style="list-style-type: none">– Additional resourcing for District NPDES Coordinators to support ESC construction periodic oversight inspections to facilitate compliance.– Held quarterly meetings and one annual meeting bringing together District NPDES Coordinators and Central Office staff to discuss program implementation, share best practices, and to improve effectiveness.– Continued refinement of geospatial ArcGIS RLDA database and tracking software to track active/terminated VDOT projects.– Continued to review and update VDOT’s Road and Bridge Standards and Specifications associated with EC and associated Approved Product Lists (APLs), and New Products Evaluation List (NPEL). Approximately 60% of the submitted new erosion control products are approved through the NPEL and added to the APL.– Implemented a study to identify improvements in the utilization of silt fence.– Reviewed contract language associated with Design Build projects to ensure effectiveness.– Implemented a cross-training initiative with District NPDES Coordinators to provide means of ensuring consistency.– Participation in DEQ led RAP and TAC for MS4 GP and the 2024 CGP. <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">– VDOT continues to enhance the tracking mechanism for NPDES Construction ESC Inspections to improve functionality and reliability. This may include addressing any issues with software application and a greater ability to support annual reporting.– VDOT Districts continue to utilize the PlanGrid software on periodic NPDES ESC Site Inspections and to evaluate ways to integrate the best functionality of the software with that of the ArcGIS platform.
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		<p>The Plan-Grid software can be utilized to conduct inspections with an iPad in the field and allows for immediate communication with VDOT inspectors and in some cases the Contractor, and allows site photos to be linked to where ESC issues are occurring on the plan sheets. New uses such as electronic SWPPP and SWPPP self-inspections will continue to be tested.</p> <ul style="list-style-type: none">– VDOT plans to implement new training initiatives for Construction, Maintenance, and Design staff members. Continuing education topics may include subjects such as erosion and sediment control field implementation, pollution prevention, SWPPP implementation, design best practices, and project phasing– Institute field research in assessing the effectiveness of existing efforts in minimizing turbidity from dewatering discharges.– Modernize and expand training programs for Construction and L&D staff.– Continue collaboration with research partners including the Virginia Transportation Research Council (VTRC), for example on potential improvements to sediment basin design adaptations that can lead to better standards for the practice.
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MCM#5: POST-CONSTRUCTION STORMWATER MANAGEMENT

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BMP 5(A) – Standards and Specifications

Description and Measurable Goal:	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.
Lead Division:	Location & Design
Reference Materials:	VDOT's Annual ESC and SWM Standards and Specifications

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
Continue to obtain annual approval of VDOT's ESC and SWM Standards & Specifications.	<p>Update components of the Standards & 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 VDOT ESC and SWM Standards and Specifications, dated December 31, 2022, were submitted to DEQ. VDOT responded to DEQ's comments on June 7, 2023 and is awaiting DEQ approval or related response.</p> <p>VDOT made continual modifications, revisions, and updates to Instructional and Informational Memorandums (IIMs) and VDOT Drainage Manual to address discharges entering the MS4 from land disturbing activities regulated by the VPDES and VSMP during the reporting year to implement improvements based on observed needs and lessons learned and 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 Standards & Specifications for ESC & SWM.
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.	VDOT continues to require that SWM Plans for RLDAs were developed in accordance with VDOT's Annual Standards and Specifications for ESC and SWM.

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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 PY23 period within the urbanized area is provided in Appendix B. Note that these BMPs do not include those BMPs already reported to DEQ through VDOT’s monthly CGP termination process, or those where the project and CGP permit were 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 also not included.
Land Disturbing Projects and SWM facilities follow appropriate requirements and are reported properly to DEQ.	VDOT has developed queries and reports from current databases in a specific tabular format such that BMPs can be reported in a format that is compatible with the Virginia Construction Stormwater Database.	VDOT submitted information for SWM 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. BMPs not associated with a CGP but required for VESCR Minimum Standard 19 compliance or CBPA Land Disturbing Activities < 1-acre are reported in a summary table in Appendix B.

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

Description and Measurable Goal:	Provide adequate long-term operation and maintenance of its SWM facilities in accordance with the VDOT BMP Inspection and Maintenance Manuals.
Lead Division:	Maintenance
Reference Materials:	VDOT's Annual ESC and SWM Standards and Specifications, including: <ul style="list-style-type: none"> – VDOT BMP Inspection & Maintenance Manual

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
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.	All stormwater facility BMPs within the urbanized area were inspected during the reporting year in accordance with VDOT's BMP Inspection-Maintenance Manual. Inspection records 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.	VDOT's permanent SWM BMPs/facilities continue to be maintained in accordance with the VDOT BMP Inspection & Maintenance Manuals which were updated and consolidated into a single Manual. For a summary of SWM BMP maintenance activities performed to address structural deficiencies or other significant maintenance activities, see Appendix D.
Report BMP Data in a format acceptable to DEQ.	VDOT submits the BMP information per the termination process in a format as requested by DEQ on an ongoing basis.	VDOT reports stormwater BMP facilities brought online during the reporting period to DEQ through its monthly CGP project termination process. Non-CGP stormwater BMP facilities brought online during this PY are included in Appendix B, in accordance with Part I.C.5.f-h.

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BMP 5(C) – Annual Reporting and Effectiveness Review

Description and Measurable Goal:	Report efforts and results of Post-Construction Stormwater BMPs in the Annual Report and Monitor Effectiveness
Lead Division:	Location & Design
Reference Materials:	

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
Summarize Activities in BMP 5A-5B as required by permit.	Annually.	The information to demonstrate compliance with each control measure practice for this MCM is itemized in BMPs 5A-5B above.
Evaluate and describe effectiveness of each strategy and practice.	Annually.	<p>VDOT 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 the past reporting year:</p> <ul style="list-style-type: none"> – Continued collaboration with DEQ on Annual Standards and Specifications for ESC and SWM during the permit year. – VDOT’s Maintenance Division implemented a comprehensive update to the Stormwater BMP Inspection and Maintenance Manual, combining two separate manuals into a single, consolidated manual that was published in a prior reporting year. – The Survey 123 electronic forms that are used in conjunction with the ArcGIS Portal stormwater BMP database by District staff were updated to reflect the Manual updates in the prior year. – UVA/VTRC research and publications, continuing research into off-site trading and use of nutrient credits. Also a previous research project on water quantity technical criteria as it relates to sheet flow and level spreaders was published and shared with the DEQ Stormwater Handbook Stakeholder Advisory Group (SAG). – UVA grad students continue to research average annual long-term BMP category maintenance costs to assist VDOT with annual budgeting for BMP maintenance and

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		<p>determining which kinds of BMPS are most cost effective to employ over their life cycles.</p> <ul style="list-style-type: none"> – Quarterly partnering meetings held with DEQ. – Participation on the DEQ led Stormwater Handbook Stakeholder Advisory Group (SAG) throughout the past year and coordinated to collect and consolidate comments for the SAG. – Participation in the FHWA / NOAA project to update NOAA Atlas 14 publication on rainfall and shared progress with other stakeholders and partners in the Commonwealth of Virginia. <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"> – Continued effort to update electronic Survey 123 forms in PY23 again to reflect feedback from District BMP Inspectors using the App. – Comprehensive review of VDOT Stormwater BMP and ESC related materials and standards in general for improvements, as well as coordination to reflect the new DEQ Stormwater Handbook that will be published, the new Construction General Permit and the consolidated VSMP and VESCP regulations that will take effect in 2024. – 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 may include: <ul style="list-style-type: none"> – Ability to research the possibility of generating automated reports of structural deficiencies for annual reporting. <p>Ability to generate reports useful to Districts such as pulling requests for remaining BMPs that need to be inspected for the PY.</p>
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MCM#6: POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR VDOT OPERATIONS

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

Description and Measurable Goal:	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.
Lead Division:	Maintenance
Reference Materials:	Maintenance Best Practices Manual

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
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. Revisions will be made as appropriate to update this Manual.	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.
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 (2020).	Guidance provided in the VDOT Maintenance Best Practices Manual and the Roadside Development Specifications (Division VI of the VDOT Road and Bridge Specifications, 2020) continues to be implemented correctly.

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

Description and Measurable Goal:	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.
Lead Division:	Environmental
Reference Materials:	Waste Management and Pollution Prevention Guide List of High Priority Facilities Applicable Stormwater Pollution Prevention Plans

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
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. The Guide was reviewed again in January 2022 with minor updates for a few sections being drafted to provide additional clarification. An updated Guide is expected to be published concurrent with the reissuance of the MS4 permit.
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 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, 65 facilities are identified as high-priority facilities in the MS4 area with no new sites identified this permit year.
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.	VDOT has developed SWPPPs for all high-priority facilities in the VDOT MS4 regulated area. Each SWPPP is reviewed at least annually during the annual MS4 compliance assessments and/or by the SWPPP Facility Stormwater Coordinator. Most SWPPPs are on the second or third formal revision update for continued refinement. General amendments regarding digital workflows (2020) and guidance updates and lot staining (2022) were added to keep the SWPPPs current. VDOT will continue to implement the SWPPPs, as well as revise and modify SWPPPs as appropriate.

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Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
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 in the spring of 2023. One main 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 continues to implement our Comprehensive Environmental Data and Reporting (CEDAR) Facility Module (FM) digital platform. The CEDAR FM provides documentation storage and allows annual MS4 compliance assessments (along with the monthly SWPPP inspections) to be performed electronically with corrective actions automatically uploaded to the CEDAR system for tracking and program management.</p>
Develop a list of facilities with onsite septic in local watersheds with a bacteria TMDL that allocates a WLA to VDOT's MS4.	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>There are three VDOT Facilities with on-site septic systems in local watersheds with a bacteria TMDL and VDOT WLA.</p> <ul style="list-style-type: none"> – The Chester Area Headquarters' septic tank was pumped in January 2020. – The Merrifield Area Headquarters' septic tank was pumped in March 2021. – The Winchester Residency Complex's septic tank was pumped in September 2021.

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BMP 6(B) – Turf and Landscape Management

Description and Measurable Goal:	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
Lead Division:	Maintenance
Reference Materials:	List of Applicable Lands that Require NMPs Applicable Nutrient Management Plans (once developed) Roadside Development Standards and Specifications

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
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 individual VDOT facilities where nutrients are applied to contiguous areas exceeding one (1) acre in size; 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 confidently estimate the acreage upon which nutrients are applied subject to VDOT's two DCR-approved Nutrient Management Plans, updated July 1, 2023: (1) one plan applicable to all new construction; (2) the other plan applicable to all roadside management activities. These current plans are valid until June 30, 2026.
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 (2020).	VDOT's Maintenance Best Practices Manual, Waste Management Guide, Pollution Prevention Guide, and Roadside Development Specifications include standards and specifications for tree trimming and brush disposal as well as for handling yard waste and grass clippings.

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BMP 6(C)1 – Training of VDOT Forces

Description and Measurable Goal:	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.
Lead Division:	Environmental (for division specific elements of VDOT’s Employee Training Program for MS4 and Stormwater)
Reference Materials:	VDOT Employee Training Program for MS4 and Stormwater

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
<p>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.</p>	<p>This aspect of the BMP is currently implemented and is an ongoing effort.</p>	<p>The following is a summary of training provided by the Environmental Division for the reporting year. There were over 6,000 different training events involving MS4-related material during the reporting year. A summary of those trainings is below, and a breakdown of training numbers can be found in Appendix E.</p> <p><i>Spill Prevention Control and Countermeasure (SPCC)</i> training is delivered at facilities that operate under an SPCC plan and includes spill prevention and good housekeeping elements. <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. A separate Facility SWPPP Coordinator and Inspector Training is also available to any individual who will be performing monthly SWPPP facility inspections or acting as a SWPPP Coordinator and goes into greater depth on requirements found within the SWPPP.</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</i> training is based on a particular aspect of the Facility GHPP program that VDOT Environmental staff identified as requiring special focus and is available on VDOT U. It is deployed on an as-needed basis and can be utilized by personnel in the preparation for winter deicing operations.</p>

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		<p>The Facility Leak and Spill Prevention, like the Salt Infrastructure training, is based on a particular aspect of GHPP that VDOT Environmental staff identified as requiring special focus and is available on VDOT U. This module is to be used on an as-needed basis and is intended for facilities that do not necessarily have a requirement to complete SPCC training.</p> <p>Good Housekeeping and Pollution Prevention for Contractors training is available on the EBBs as well as VDOT's Training YouTube channel. This training 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 any VDOT maintenance facility and includes many aspects of stormwater pollution prevention. Contract language inserted into various new/renewed maintenance contracts (i.e. mowing contracts, salt distribution contracts, etc.) requires the viewing of this and the Illicit Discharge Detection and Elimination training video. Prior to the start of work, relevant contractor employees are required view the trainings, as well as notify VDOT that employees have viewed the trainings and the number of trainees.</p> <p>Facility Erodibles Stockpile Management training is available on VDOT's Virtual Campus, and similar to the Salt Infrastructure and Facility Leak and Spill Prevention training modules, the Erodibles Management training was developed with focus on one aspect of GHPP. It is utilized on an as-needed basis by those facilities or personnel who manage stockpiled erodibles such as sand and dirt.</p> <p>Illicit Discharge Detection and Elimination training is available on the VDOT Virtual Campus as well VDOT's YouTube channel and EBBs. This training focuses on identifying an illicit discharge and proper reporting procedures. Similar to the Good Housekeeping and Pollution Prevention for Contractors training, language was inserted into new/renewed maintenance contracts that required viewing of this training, and notification to VDOT of the number of employees trained and date of training.</p>
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BMP 6(C)2 – Training of VDOT Forces

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

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information								
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 currently has 114 certified Commercial/Registered technician applicators on the Virginia Department of Agriculture and Consumer Services Pesticides List of Certified Pesticide Applicators. Previous training has been accomplished through Virginia Cooperative Extension Offices and online events since the beginning of COVID-19. VDOT-specific courses may be restored in the future.</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 individuals that are certified as Registered Technicians.</p>								
Ensure that VDOT employees and contractors are trained in good housekeeping and pollution prevention practices and the IDDE Program.	This aspect of the BMP is currently implemented and is an ongoing effort	<p>Currently, various kinds of MS4 related training are provided independently by VDOT Districts and Divisions and through VDOT University. Separately, DEQ provides necessary certification courses for stormwater management and erosion/sediment control. What tracking occurs is managed and monitored by VDOT’s Workforce Development/VDOT University staff. However, that may not capture all relevant participation at this time.</p> <p>The following is a summary of training classes/modules attended during this permit reporting year:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Type of Training</th> <th style="text-align: center;"># Employees Trained</th> </tr> </thead> <tbody> <tr> <td>Spill Prevention, Control, & Countermeasure</td> <td style="text-align: center;">813</td> </tr> <tr> <td>DOT Hazmat Awareness</td> <td style="text-align: center;">105</td> </tr> <tr> <td>Facility SWPPP (including Coordinator Training)</td> <td style="text-align: center;">895</td> </tr> </tbody> </table>	Type of Training	# Employees Trained	Spill Prevention, Control, & Countermeasure	813	DOT Hazmat Awareness	105	Facility SWPPP (including Coordinator Training)	895
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		Type of Training	# Employees Trained
		VDOT Salt Infrastructure	102
		Facility Leak & Spill Control	176
		Facility Erodible Stockpile Management	83
		Illicit Discharge Detection & Elimination (IDDE) Online Training*	2,133
		Good Housekeeping and Pollution Prevention for Contractors**	2,055
		TOTAL	6,364
		*Sum of the number of contractors that reported viewing, plus the number of trainees via VDOT's Virtual Campus. Does not include YouTube video views that may have been from general public, localities, or agencies.	
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BMP 6(C)3 – Training of VDOT Forces

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

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information																										
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 999 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="0"> <thead> <tr> <th><u>DEQ ESC/SWM Certifications</u></th> <th><u>Certified</u></th> </tr> </thead> <tbody> <tr> <td>SWM Program Administrator</td> <td>3</td> </tr> <tr> <td>SWM Inspector</td> <td>39</td> </tr> <tr> <td>SWM Plan Reviewer</td> <td>7</td> </tr> <tr> <td>SWM Combined Administrator</td> <td>4</td> </tr> <tr> <td>ESC Program Administrator</td> <td>2</td> </tr> <tr> <td>ESC Inspector</td> <td>374</td> </tr> <tr> <td>ESC Plan Reviewer</td> <td>11</td> </tr> <tr> <td>ESC Combined Administrator</td> <td>33</td> </tr> <tr> <td>Responsible Land Disturber</td> <td>280</td> </tr> <tr> <td>Dual Combined Administrator</td> <td>30</td> </tr> <tr> <td>Dual Inspector</td> <td>210</td> </tr> <tr> <td>Dual Plan Reviewer</td> <td>6</td> </tr> </tbody> </table> <p>This relates only to the certifications awarded by DEQ.</p>	<u>DEQ ESC/SWM Certifications</u>	<u>Certified</u>	SWM Program Administrator	3	SWM Inspector	39	SWM Plan Reviewer	7	SWM Combined Administrator	4	ESC Program Administrator	2	ESC Inspector	374	ESC Plan Reviewer	11	ESC Combined Administrator	33	Responsible Land Disturber	280	Dual Combined Administrator	30	Dual Inspector	210	Dual Plan Reviewer	6
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BMP 6(C)4 – Training of VDOT Forces

Description and Measurable Goal:	Continue to implement VDOT’s efforts to prevent and reduce stormwater pollution from VDOT-related activities.
Lead Division:	L&D on behalf of Workforce Development (for division specific elements of VDOT’s Employee Training Program for MS4 and Stormwater)
Reference Materials:	VDOT Employee Training Program for MS4 and Stormwater

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information																										
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 999 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> </tr> </thead> <tbody> <tr> <td>SWM Program Administrator</td> <td>3</td> </tr> <tr> <td>SWM Inspector</td> <td>39</td> </tr> <tr> <td>SWM Plan Reviewer</td> <td>7</td> </tr> <tr> <td>SWM Combined Administrator</td> <td>4</td> </tr> <tr> <td>ESC Program Administrator</td> <td>2</td> </tr> <tr> <td>ESC Inspector</td> <td>374</td> </tr> <tr> <td>ESC Plan Reviewer</td> <td>11</td> </tr> <tr> <td>ESC Combined Administrator</td> <td>33</td> </tr> <tr> <td>Responsible Land Disturber</td> <td>280</td> </tr> <tr> <td>Dual Combined Administrator</td> <td>30</td> </tr> <tr> <td>Dual Inspector</td> <td>210</td> </tr> <tr> <td>Dual Plan Reviewer</td> <td>6</td> </tr> </tbody> </table> <p>This relates only to the certifications awarded by DEQ.</p>	<u>DEQ ESC/SWM Certifications</u>	<u>Certified</u>	SWM Program Administrator	3	SWM Inspector	39	SWM Plan Reviewer	7	SWM Combined Administrator	4	ESC Program Administrator	2	ESC Inspector	374	ESC Plan Reviewer	11	ESC Combined Administrator	33	Responsible Land Disturber	280	Dual Combined Administrator	30	Dual Inspector	210	Dual Plan Reviewer	6
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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 approximately 350 individuals trained during this reporting year.																										

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BMP 6(D) – Oversight of VDOT Maintenance Contractors

Description and Measurable Goal:	Contractual oversight procedures for VDOT contractors for maintenance of roadway or operation and use of VDOT facilities.
Lead Division:	Maintenance
Reference Materials”	Maintenance Contracts

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
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 contractors are required to comply with contract language, VDOT’s Annual Standards and Specifications, and all other relevant, policy, and guidance providing stipulations regarding use of appropriate control measures for stormwater discharges and prevention of non-stormwater discharges from the VDOT MS4 system.

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BMP 6(E) – Annual Reporting and Effectiveness Review

Description and Measurable Goal:	Report efforts and results of Pollution Prevention/Good Housekeeping BMPs in the Annual Report and Monitor Effectiveness
Lead Division:	Location & Design

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
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 is periodically assessed during facility compliance assessments.</p> <p>No deicing chemicals containing urea or other forms of nitrogen or phosphorus were approved for use by the Department or within its Right of Way under VDOT's New Product Review process 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 in line through the above BMP responses, as appropriate.

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MCM#7: INFRASTRUCTURE COORDINATION

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BMP 7(A) – Infrastructure Coordination

Description and Measurable Goal:	Coordinate with other large MS4s regarding physical interconnection of systems.
Lead Division:	Location & Design

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information																								
<p>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.</p> <p><i>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.</i></p>	<p>This aspect of the BMP is currently being implemented and is an ongoing effort.</p>	<p>VDOT coordinated and met with the following Phase 1 MS4 localities during the reporting year:</p> <table border="1"> <thead> <tr> <th>Locality</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Prince William County</td> <td>05/12/23</td> </tr> <tr> <td>Arlington County</td> <td>05/12/23</td> </tr> <tr> <td>Chesterfield County</td> <td>12/08/22</td> </tr> <tr> <td>Henrico County</td> <td>12/08/22</td> </tr> <tr> <td>Chesapeake</td> <td>06/01/23</td> </tr> <tr> <td>Hampton</td> <td>06/01/23</td> </tr> <tr> <td>Newport News</td> <td>06/01/23</td> </tr> <tr> <td>Norfolk</td> <td>06/01/23</td> </tr> <tr> <td>Virginia Beach</td> <td>06/01/23</td> </tr> <tr> <td>Portsmouth</td> <td>06/01/23</td> </tr> <tr> <td>Fairfax County</td> <td>05/12/23</td> </tr> </tbody> </table> <p>The primary issues discussed during the meetings with each Phase 1 permittee included:</p> <ul style="list-style-type: none"> – Priority issues and updates – SWM implementation on new construction projects – Status of Mapping program – Chesapeake Bay TMDL Action Plans - means, methods and schedule – Other TMDL Action Plans – Credit for TMDL Implementation – BMPs and strategies to meet reduction requirements – Data Management system approaches and software utilized to facilitate – IDDE – Coordination on high-risk industrial facilities, contact information and process 	Locality	Date	Prince William County	05/12/23	Arlington County	05/12/23	Chesterfield County	12/08/22	Henrico County	12/08/22	Chesapeake	06/01/23	Hampton	06/01/23	Newport News	06/01/23	Norfolk	06/01/23	Virginia Beach	06/01/23	Portsmouth	06/01/23	Fairfax County	05/12/23
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<p>Participate in coordination efforts initiated by Phase 1 MS4 and Small MS4 operators when the VDOT MS4 is physically-interconnected.</p>	<p>Engage and participate with Phase 1 and Small MS4s as requested.</p>	<p>VDOT coordinated and met with the New River Valley MS4 local government staff throughout the reporting year. These small MS4's include the Town of Blacksburg, Town of Christiansburg, Montgomery County, and Virginia Tech.</p>																								

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SC#1: SPECIAL CONDITIONS FOR CHESAPEAKE BAY TMDL³

³ *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.

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BMP SC1(A) – Action Plan for Chesapeake Bay TMDL

Description and Measurable Goal:	Develop and implement 2 nd Phase TMDL Action Plan for the Chesapeake Bay Watershed TMDL
Lead Division:	Environmental
Reference Materials:	Chesapeake Bay 2 nd Phase TMDL Action Plan

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information																																			
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 G 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" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="text-align: center;">Tributary</th> <th colspan="3" style="text-align: center;">Parameter</th> </tr> <tr> <th style="text-align: center;">TP (lb./yr.)</th> <th style="text-align: center;">TN (lb./yr.)</th> <th style="text-align: center;">TSS (lb./yr.)</th> </tr> </thead> <tbody> <tr> <td colspan="4" style="text-align: center;">Loading rates > 10 lbs. are rounded to the nearest pound without regard to mathematical rules of precision.</td> </tr> <tr> <td style="text-align: center;">James</td> <td style="text-align: center;">14,803</td> <td style="text-align: center;">48,067</td> <td style="text-align: center;">13,767,072</td> </tr> <tr> <td style="text-align: center;">Potomac</td> <td style="text-align: center;">12,751</td> <td style="text-align: center;">52,675</td> <td style="text-align: center;">10,794,660</td> </tr> <tr> <td style="text-align: center;">Rappahannock</td> <td style="text-align: center;">646</td> <td style="text-align: center;">4,651</td> <td style="text-align: center;">1,841,196</td> </tr> <tr> <td style="text-align: center;">York</td> <td style="text-align: center;">2,660</td> <td style="text-align: center;">9,441</td> <td style="text-align: center;">4,013,228</td> </tr> <tr> <td colspan="4" style="text-align: center;">Total Reductions Reported to Date (all basins):</td> </tr> <tr> <td></td> <td style="text-align: center;">30,859</td> <td style="text-align: center;">114,833</td> <td style="text-align: center;">30,416,156</td> </tr> </tbody> </table>	Tributary	Parameter			TP (lb./yr.)	TN (lb./yr.)	TSS (lb./yr.)	Loading rates > 10 lbs. are rounded to the nearest pound without regard to mathematical rules of precision.				James	14,803	48,067	13,767,072	Potomac	12,751	52,675	10,794,660	Rappahannock	646	4,651	1,841,196	York	2,660	9,441	4,013,228	Total Reductions Reported to Date (all basins):					30,859	114,833	30,416,156
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A list of control measures that are planned to be implemented	Report annually	See Appendix G for details on the proposed PY24 implementation schedule.																																			

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

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SC#2: SPECIAL CONDITIONS FOR APPROVED LOCAL TMDLS⁴

⁴ *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.*

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BMP SC2(A) – Action Plans for Approved Local TMDL

Description and Measurable Goal:	Develop and implement applicable TMDL Action Plans for approved TMDLs that have assigned VDOT's MS4 a wasteload allocation.
Lead Division:	Environmental
Reference Materials:	List of approved local TMDLs that have assigned VDOT's MS4 a WLA Local TMDL Action Plans (once developed)

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
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 H.
Update Existing Local TMDL Action Plans (<i>TMDLs approved before July 2013</i>)* in accordance with Special Conditions of Permit.	Update Existing Local TMDL Action Plans within 12 months of receiving permit coverage.	Existing TMDL Action Plans were updated within 12 months of permit coverage.
Develop New Local TMDL Action Plans (<i>TMDLs approved between July 2013 and June 2017</i>)* in accordance with Special Conditions of Permit.	Develop Local TMDL Action Plans within 24 months of receiving permit coverage.	TMDL Action Plans were updated to include new TMDLs within 24 months of permit coverage.
Implement Local TMDL Action Plans.	Schedule to be identified during the development of the Local TMDL Action Plans.	Schedule of implementation identified in TMDL Action Plans. Implementation progress for each Local TMDL is included in Appendix H.
Evaluate effectiveness of applicable local TMDL Action Plans	No later than 48 months from permit effective date (7/1/2021)	TMDL effectiveness evaluation was submitted 7/1/2021.

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

Action Plan Text:

VDOT will annually evaluate the implementation of the MS4 Program Plan as well as the BMPs identified in this Action Plan for effectiveness in addressing the bacteria WLAs.

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The annual evaluation will include an assessment on the appropriateness and effectiveness of the identified BMPs in the MS4 Program Plan and the Action Plan to reduce bacteria discharges in the specific watershed. During this evaluation, VDOT will also determine if additional BMPs are necessary to demonstrate that adequate progress is being made to reduce the pollutant discharge.

VDOT will annually report its progress on implementation of the BMPs in the Local Bacteria TMDL Action Plan, other interim milestone activities, and applicable results from the evaluation. If, because of the annual evaluation, a Program Plan and/or Action Plan modification is appropriate, VDOT will perform the modification in accordance with its MS4 Program Plan procedures and in accordance with the MS4 Individual Permit.

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PROGRAM EVALUATION, MODIFICATION, AND REPORTING

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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. Minor modifications have been made to the Program Plan during a past permit year, with the most current being December 2019.

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).

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Appendix A: List of TMDL Committees, Meetings & Activities

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Local TMDL Technical Advisory Committee Meetings

Meeting Name/Venue	Date
PCB TMDL TAC Meeting	8/2/2022
PCB TMDL TAC Meeting	11/2/2022
Sand Branch Benthic TMDL Public Meeting and Technical Advisory Committee (TAC)	1/31/2023
TMDL Study for Benthic Impairments on Watersheds in Henrico and Goochland Counties	5/2/2023

Local TMDL & Watershed Implementation Plan Meetings

Meeting Name/Venue	Date
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Activities

Meeting Name/Venue	Date
VIMS Shoreline Management Workshop	07/14/2022
MS4 Steering Committee Quarterly Meeting	07/27/2022
WaterJam	09/13-9/16/2022
StormCon	9/26-9/28/2022
RVAH2O Stakeholders Meeting	10/25/2022
VDOT Riparian Buffer Reporting Meeting	11/03/2022
MS4 Infrastructure Coordination Meeting	12/08/2022
VA Buffer Reporting Discussion	01/11/2023
Urban Stormwater Workgroup (USWG)	01/17/2023
Chesterfield Stream Restoration/VDOT Outfall Discussion	02/02/2023
Combating Climate Change through Sustainable Development	02/03/2023
Bay Interagency Meeting	02/08/2023
VLWA Meeting	03/06-03/07/2023
VDOT/DEQ Quarterly Meeting	03/16/2023
Bay Interagency Meeting	04/11/2023
RVAH2O Stakeholders Meeting	04/25/2023
Urban Stormwater Workgroup (USWG)	04/18/2023
ENV Stakeholders Presentation	04/28/2023
ACEC TMDL Presentation	05/09/2023
Hampton Roads MS4 Coordinators Meeting	06/01/2023
York River Symposium	04/17/2023
NHI Class – Climate Resilience	06/26-06/28/2023

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

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VDOT Facility Type*	DEQ Facility Type (Water Quality)	Latitude	Longitude	Total Acres Treated	Pervious Acres Treated	Impervious Acres Treated	Date Brought Online	6 th Order HUC	Date Last Inspected
Bioretention Basin	Bioretention Basin	36.9275	-76.2867	1.54	0.93	0.61	07/01/22	JL57	07/01/22
Dry Detention Basin	Part II C - Other	36.9246	-76.2825	4.89	2.93	1.96	07/01/22	JL57	07/01/22
Bioretention Basin	Bioretention Basin	36.9244	-76.2806	0.40	0.10	0.30	07/01/22	JL57	07/01/22
Bioretention Basin	Bioretention Basin	36.9238	-76.2803	1.01	0.45	0.56	07/01/22	JL57	07/01/22
Enhanced Extended Detention Basin	Extended Detention-Enhanced	36.8304	-76.1959	3.90	1.80	2.10	02/08/23	JL54	02/08/23
Enhanced Extended Detention Basin	Extended Detention-Enhanced	36.8440	-76.1949	6.40	3.00	3.40	03/22/23	JL54	03/22/23
Enhanced Extended Detention Basin	Extended Detention-Enhanced	36.8445	-76.1937	5.70	3.30	2.40	03/22/23	JL54	03/22/23
Dry Swale 1 CH	Dry Swale 1	37.5253	-77.3278	0.55	0.43	0.12	11/15/22	JL01	11/15/22
Extended Detention Basin	n/a	37.5307	-77.3294	6.93	6.70	0.23	11/15/22	JL01	11/15/22
Bioretention Basin	Bioretention Basin	37.5305	-77.3296	7.61	4.28	3.33	11/15/22	JL01	11/15/22

* Stormwater BMP facilities in this table represent those within the urbanized area brought online during the PY23 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

VDOT MS4 Annual Report – PY2023
VPDES #: VA0092975

Appendix C: BMP Inspections Performed During the Reporting Year

VDOT MS4 Annual Report – PY2023

VPDES #: VA0092975

District	Number of BMPs	Number of BMP Inspections*
Bristol	8	8
Culpeper	41	40 (1 removed)
Fredericksburg	75	72 (2 removed, 1 under construction)
Hampton Roads	170	123 (47 new)
Lynchburg	14	14
Northern Virginia	608	545 (8 removed, 47 under construction, 8 new)
Richmond	225	192 (19 removed, 14 new)
Salem	71**	69 (2 under construction)
Staunton	48	46 (2 removed)
Rest Areas	17	16 (1 under construction)

* Inspections reported for BMPs in the Urbanized Area.

** Denotes removal of duplicate entry into database that was found during this reporting cycle.

VDOT MS4 Annual Report – PY2023
VPDES #: VA0092975

Appendix D: Summary of Significant BMP Maintenance Activities

VDOT MS4 Annual Report – PY2023

VPDES #: VA0092975

BMP Category	Permit Year	# Needing Significant Maintenance	% of VDOT BMPs	Significant Maintenance Activities Performed
Basins	FY2023	55	2.40%	Principal Spillway (PSP) metal pipe replacement with plastic pipe; PSP repair concrete pipe by resetting pipe and sealing; clear & grub trees & vegetation from interior & side slopes and haul away; reconstruct and stabilize collapsed forebay; repair displaced riprap at forebay spillway & inlet area; regrade forebay & spillway area; install additional riprap; parge joint at principal spillway connection to riser pipe; clear debris from inlet trash rack and inside discharge pipe; replace basin plate/gate assembly; replace trash rack ; fill animal burrows on dams and embankments; complete dam reconstruction; inlet pipe replacement; inlet channel repair; riser/control structure replacement; separated pipe repair; damaged outlet end-section repaired; significant side slope repair/erosion stabilization; significant erosion repairs generally; sediment removal from riser pipe outlet orifices; most common Basin repair is major sediment removal from Basin bottoms or Forebays
Filtration	FY2023	1	0.04%	Clear trees & brush around forebay for access; dewater forebay; excavate sediment at inlet structures and forebay; replace inlet pipe section; clear brush & small trees at outlet
Infiltration	FY2023	1	0.04%	Repair slope and outlet erosion, remove excessive silt, repair sinkholes in forebay
Conveyance	FY2023	0	0%	N/A
Miscellaneous	FY2023	1	0.04%	Repair compromised outlet structure of Riprap Check Dam (Perm E&S)
Underground Mfr Filtering	FY2023	0	0%	N/A
Underground Mfr Hydrodynamic	FY2023	0	0%	Remove excel sediment/trash/debris from underground facilities
Other Underground	FY2023	2	0.08%	Spray-in-place pipe liners to repair stormwater detention pipes
TOTALS	FY2023	60	2.56%	

VDOT MS4 Annual Report – PY2023
VPDES #: VA0092975

APPENDIX E: VDOT Environmental Employee Training Summary

VDOT MS4 Annual Report – PY2023

VPDES #: VA0092975

MS4 Permit Year 2021 - 2022	
Type of Training	Number of Employees Trained
SPCC	813
Facility SWPPP (inc. Coordinator Training)	895
DOT Hazmat Awareness	107
VDOT Salt Infrastructure	102
Facility Leak & Spill Control	176
Facility Erodible Stockpile Management	83
Illicit Discharge Detection & Elimination	2133*
Good Housekeeping and Pollution Prevention for Contractors	2055**
Total	6,364

* Sum of the number of contractors that reported viewing, plus the number of trainees via VDOT's Virtual Campus. Does not include YouTube video views that may have been from general public, localities, or agencies.

** Number of contractors reported viewing. Does not include YouTube video views that may have been from general public, localities, or agencies.

VDOT MS4 Annual Report – PY2023
VPDES #: VA0092975

Appendix F: MCM 7 Infrastructure Coordination Meetings

VDOT MS4 Annual Report – PY2023

VPDES #: VA0092975

Infrastructure Coordination Meetings with Other MS4s

Meeting Name/Venue	Date	Anticipated Future Participation
Prince William County & VDOT Annual Infrastructure Coordination Meeting	05/12/23	Yes, anticipate Infrastructure Coordination meeting during PY24
Arlington County & VDOT Annual Infrastructure Coordination Meeting	05/12/23	Yes, anticipate Infrastructure Coordination meeting during PY24
Chesterfield County & VDOT Annual Infrastructure Coordination Meeting	12/08/22	Yes, anticipate Infrastructure Coordination meeting during PY24
Henrico County & VDOT Annual Infrastructure Coordination Meeting	12/08/22	Yes, anticipate Infrastructure Coordination meeting during PY24
Chesapeake & VDOT Annual Infrastructure Coordination Meeting	06/01/23	Yes, anticipate Infrastructure Coordination meeting during PY24
Hampton & VDOT Annual Infrastructure Coordination Meeting	06/01/23	Yes, anticipate Infrastructure Coordination meeting during PY24
Newport News & VDOT Annual Infrastructure Coordination Meeting	06/01/23	Yes, anticipate Infrastructure Coordination meeting during PY24
Norfolk & VDOT Annual Infrastructure Coordination Meeting	06/01/23	Yes, anticipate Infrastructure Coordination meeting during PY24
Virginia Beach & VDOT Annual Infrastructure Coordination Meeting	06/01/23	Yes, anticipate Infrastructure Coordination meeting during PY24
Portsmouth & VDOT Annual Infrastructure Coordination Meeting	06/01/23	Yes, anticipate Infrastructure Coordination meeting during PY24
Fairfax County & VDOT Annual Infrastructure Coordination Meeting	05/12/23	Yes, anticipate Infrastructure Coordination meeting during PY24

Appendix G: Chesapeake Bay TMDL Action Plan Implementation and Credits Achieved To-Date

	Parameter		
	TP (lb/yr)	TN (lb/yr)	TSS (lb/yr)
James	14802.66	48067.29	13767072.03
Potomac	12750.88	52674.82	10794660.07
Rappahannock	645.82	4650.58	1841196.16
York	2659.51	9440.57	4013227.50
Total Reductions Reported to Date (all basins):	30858.87	114833.26	30416155.76
Reduction Requirement (Special Condition D2- 36%)	5227.00	27581.00	3551947.00
% Complete to date (Special Condition D2- 36%)	590.37%	416.35%	856.32%

Reduction Requirement (100%)	14519.44	76613.89	9866519.44
% Complete to date (100%)	212.53%	149.89%	308.28%

James River Basin

Reductions		
TP (lb/yr)	TN (lb/yr)	TSS (lb/yr)

Redevelopment:	1.83	14.09	894.20 <	Previously reported in 2016 MS4 Annual Report
Jonestown Scotland Ferry (UPC 102110)	6.35	45.76	3465.59 <	Previously reported in 2016 MS4 Annual Report
Re 264 (UPC 104331)				
Stream Restoration and Stabilization	93.70	103.30	61812.40 <	Previously reported in 2018 MS4 Annual Report. Verified 7/28/2023
Little Road Stream Restoration	192.97	453.02	367560.00 <	Previously reported in 2018 MS4 Annual Report. Verified 4/3/2023 and credits adjusted.
Sliffes Creek Stream Restoration	980.97	2690.20	18653080.00 <	Previously reported in 2018 MS4 Annual Report. Verified 5/31/2023 and credits adjusted.
Timsbury Creek Stream Restoration	186.00	425.00	353852.46 <	Previously reported in 2020 MS4 Annual Report
Statersville AllQ Stream Restoration	528.27	1373.33	1036000.00 <	Previously reported in 2022 MS4 Annual Report
Proctors Creek Stream Restoration	3461.70	7516.82	6593700.00 <	Previously reported in 2022 MS4 Annual Report
Rendolph Creek Stream Restoration				
Outfall and Channel Stabilization	3.53	3.89	784.57 <	Previously reported in 2017 MS4 Annual Report. Verified 2/14/2019
Route 60 (UPC 105139) Installed 6/30/2014	1.22	1.35	272.34 <	Previously reported in 2017 MS4 Annual Report. Verified 7/17/2021
Route 5 (UPC 105842) Installed 6/24/2016-2/28/2017	5.44	6.00	1210.40 <	Previously reported in 2018 MS4 Annual Report. Verified 7/17/2021
Quarterpath Outfall Installed 7/16/2016 9/30/2017	27.40	59.50	52200.00 <	Previously reported in 2022 MS4 Annual Report
Lebor Pointe Outfall Stabilization	37.82	84.07	131.25 <	Previously reported in 2022 MS4 Annual Report
RDC Grass Channel/Gully	3.00	22.00	3538.00 <	Previously reported in 2016 MS4 Annual Report
Historical BMPs	0.15	1.61	18.50 <	Previously reported in 2018 MS4 Annual Report. Verified 4/3/2023 and credits adjusted.
Land Cover Conversion	1.76	18.46	212.20 <	Previously reported in 2018 MS4 Annual Report.
Sliffes Land Cover Conversion	11.25	117.79	1400.83 <	Previously reported in 2019 MS4 Annual Report
RDC Land Cover Conversion	0.00	857.00	0.00 <	Previously reported in 2019 MS4 Annual Report Addendum
I-295 Plantings 2019	0.00	1997.90	0.00 <	Previously reported in 2019 MS4 Annual Report Addendum
Culpeper District	0.00	354.90	0.00 <	Previously reported in 2019 MS4 Annual Report Addendum
Stoughton District	3.09	32.39	372.36 <	Previously reported in 2020 MS4 Annual Report
Lynchburg District Pollinator Areas	0.50	5.40	62.40 <	Previously reported in 2020 MS4 Annual Report
I-295 Plantings 2020	0.90	9.40	108.10 <	Previously reported in 2020 MS4 Annual Report
BMP Retrofit 200230	0.00	8820.63	0.00 <	Previously reported in 2020 MS4 Annual Report Addendum
BMP Retrofit 200946	31.54	145.48	10496.86 <	Previously reported in 2022 MS4 Annual Report
Mowing Practices				
Richmond District LLC	8433.57	21083.93	2530072.00 <	New for 2023 MS4 Annual Report
Street Sweeping and Catch Basin Cleanout	20.00	66.94	574.60 <	Previously reported in 2016 MS4 Annual Report. TSS Updated 2021
Nutrient Credit Purchase	15.00	33.00	0.00 <	Previously reported in 2016 MS4 Annual Report.
Swiss Dike Nutrient Bank (6/22/16)	2.00	6.69	57.46 <	Previously reported in 2017 MS4 Annual Report. TSS Updated 2021
Cranson's Mill Pond Bank (5/19/15)	103.00	344.74	2959.19 <	Previously reported in 2017 MS4 Annual Report. TSS Updated 2021
Swiss Dike Nutrient Bank (6/22/17)	15.12	50.61	1302.13 <	Previously reported in 2018 MS4 Annual Report. TSS Updated 2021
Lunts Creek Nutrient Bank (6/27/2018)	0.90	3.01	25.86 <	Previously reported in 2018 MS4 Annual Report. TSS Updated 2021
Nemazine Nutrient Bank (6/7/2018)	6.90	31.00	1138.22 <	Previously reported in 2018 MS4 Annual Report. TSS Updated 2021
Sams Nutrient Bank (6/7/18)	13.14	100.00	262.29 <	Previously reported in 2019 MS4 Annual Report. TSS Updated 2021
Potomac Holdings (4/25/19)				
Structural BMP Enhancement and Retrofit	11.89	37.29	5708.01 <	Previously reported in 2017 MS4 Annual Report
Lynchburg District stormwater Pore	2.49	17.80	1160.00 <	Previously reported in 2017 MS4 Annual Report
VDOT Richmond District Outfall Retrofit	2.22	8.27	1005.65 <	Previously reported in 2017 MS4 Annual Report
Pine Chapel	0.81	5.04	294.72 <	Previously reported in 2018 MS4 Annual Report. Verified 4/3/2023 and credits adjusted.
Sliffes Upland Dry Swale	1.25	8.89	0.00 <	Previously reported in 2018 MS4 Annual Report.
RDC Level Spreader	31.70	139.80	8669.70 <	Previously reported in 2020 MS4 Annual Report
BMP Retrofit 200320	32.40	130.80	6660.00 <	Previously reported in 2020 MS4 Annual Report
BMP Retrofit 20046	6.07	32.98	3178.87 <	Previously reported in 2022 MS4 Annual Report
RDC Sediment Forebay	4.55	24.97	1749.64 <	Previously reported in 2022 MS4 Annual Report
RDC Bioretention Basin	0.52	2.55	237.22 <	Previously reported in 2022 MS4 Annual Report
RDC Bioswale	3.74	26.69	1160.00 <	Previously reported in 2022 MS4 Annual Report
RDC Level Spreader 2				
Shoreline Restoration	516.00	753.00	847684.00 <	New for 2023 MS4 Annual Report
Physical Scout Reservation Living Shoreline	14.903	48.067	13,767.072	
Total Credit Reported	14,903	48,067	13,767,072	
Credit without Street Sweeping	6,369	26,983	11,237,000	
Reduction Requirement (Special Condition D2, 36%)	1,948	7,007	904,473	
% Complete to date (Special Condition D2, 36%)	760%	686%	1522%	

Project Name: Pipsico Boy Scout Reservation

Location

UPC Code or BMP ID: 0

Geographic (County/City): Surry County **District:** Hampton Roads **Residency:** Williamsburg **River Basin:** James
Latitude: 37.20438 **Longitude:** -76.875684 **12 digit HUC:** 020802060701

BMP Type: Shoreline Stabilization

Project Description:
Pipsico Scout Reservation in Surry County, VA is a Boy Scouts of America (BSA) property that receives approximately 4,200 – 5,200 visitors per year. The Lions Beach shoreline at the reservation is characterized by highly eroded banks ranging from approximately sixty to seventy feet in height. The site has experienced sustained erosion and frequent tree falls due to bank erosion.

Photos, Plans and/or Project graphics

Existing Conditions Proposed Improvements:

Average Bank Height (FT): 48.36 **Area of Existing Marsh (SF):** 0
Method of Stabilization: Protocol 1, Protocol 2, Protocol 3, Protocol 4
Linear Feet Stabilization: 976.00 **Area of Proposed Marsh (SF):** 9,659.00

Qualifying Conditions:

Does the project impact the Chesapeake Bay Preservation Act protected vegetation (SAV) without appropriate mitigation? **N**
 Will project comply with all state and federal permitting requirements, including 404 and 401 permits? **Y**
Practice-specific Qualifying Conditions (1, 2, and 3, below)
 The site is currently experiencing shoreline erosion (Y/N)? **(All practices) Y**
 1. If living shoreline- **Y**
 -A marsh fringe habitat (a or b) or beach/dune habitat (c) is created, enhanced, or maintained (Y/N). **Y**
 2. If Revetment AND/OR Breakwater system without a living shoreline- **N**
 -A living shoreline is not technically feasible or practicable as determined by substrate, depth, or other site constraints (Y/N)? **N**
 -When the breakwater footprint would not cover SAV, shellfish beds, and/or wetlands (Y/N)? **N**
 3. If Bulkhead/Seawalls- **N**
 -The site consists of port facilities, marine industrial facilities, etc. and depths deeper than 10 ft 35 feet from shore (Y/N)? **N**



Method of Estimating Bank Erosion

Erosion Rate (FT/YR): -0.82
Source of Erosion Rate: VIMS Data (Y/N)? **N** **Manually calculated with aerials (Y/N) and years?** **Y**
Protocols applied: P1-Prevented Sediment **P2-Denitrification** **P3-Sedimentation** **P4-Marsh Redfield Ratio**
 ("x" applicable) **X** **X** **X** **X**
Estimated Credit: **TN** **TP** **TSS** **Field-collected data and elevations (Y/N)?** **Y**
lbs/yr **753.00** **516.00** **847,684.00** **Default rates applied (Y/N)?** **N**

Discussion

All Protocols were used for crediting. A custom erosion rate, refined from the VIMS data, was created using historical aerial imagery.



Est. Implementation Date: 6/30/2023 **Project Contact Name:** Joseph Parfitt
Project Completed: Yes **Contact Information (email/phone):** (804) 339-4365

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

Salem FY 23 Mass Loading Methodology (TMDL Guidance Memo)

Tons of Material Collected	Pounds of Material Collected	Dry Weight Ratio (lbs dry/lbs material)	TN Reduction Ratio	TP Reduction Ratio	TSS Reduction Ratio	Discount Factor
622	1243260	0.7	0.0025	0.001	0.3	0.06

Before Discount

TN Removed	2176	lbs
TP Removed	870	lbs
TSS Removed	261085	lbs

Total state-maintained length

13601.52956

Discount Factor (Updated 2023)

Total state-maintained length (in james)

1442.180931 mi

Total state-maintained length in CUA

80.354105 mi

James/ Overall Discount Factor

0.055717076

For Ches Bay

TN Removed	121	lbs
TP Removed	48	lbs
TSS Removed	14547	lbs

Crab Creek

TN Removed	191	lbs
TP Removed	77	lbs
TSS Removed	22967	lbs

Crab Creek Discount Factor (Updated 2023)

Total state-maintained length in CUA in Crab Creek

126.865458 mi

Crab Creek Discount Factor

0.087967782

Stroubles Discount Factor (Updated 2023)

Total state-maintained length in CUA in Stroubles

77.545801 mi

Stroubles Discount Factor

0.053769814

Upper Roanoke (Updated 2023)

Total state-maintained length in CUA in Upper Roanoke

1434.462057 mi

Upper Roanoke Discount Factor

0.994647777

Upper Roanoke		
TN Removed	2164	lbs
TP Removed	866	lbs
TSS Removed	259687	lbs

Stroubles		
TN Removed	117	lbs
TP Removed	47	lbs
TSS Removed	14038	lbs

Richmond IMO FY 22 Mass Loading Methodology (TMDL Guidance Memo)

Tons of Material Collected	Pounds of Material Collected	Dry Weight Ratio (lbs dry/lbs material)	TN Reduction Ratio	TP Reduction Ratio	TSS Reduction Ratio	Discount Factor (MS4)
4691	9382000	0.7	0.0025	0.001	0.3	

Before Discount

TN Removed	16419	lbs
TP Removed	6567	lbs
TSS Removed	1970220	lbs

Discount Factor (Updated 2022)
 Total interstate length 5.486712559 mi

James

TN Removed	6536	lbs
TP Removed	2614	lbs
TSS Removed	784336	lbs

Total interstate length 248.1358923 mi
 Total interstate length 623.3068515 mi
 Total interstate leng 253.6226049 mi
 Overall Discount Factor 0.406898471

York

TN Removed	145	lbs
TP Removed	58	lbs
TSS Removed	17343	lbs

James Discount Factor 0.398095884
 York Discount Factor 0.008802587

Chickahominy Discount Factor (Updated 2022)

Total interstate length 11.80437272 mi

Chickahominy Discount Factor 0.018938301

Chickahominy

TN Removed	311	lbs
TP Removed	124	lbs
TSS Removed	37313	lbs

HR Peninsula FY 23 Mass Loading Methodology (TMDL Guidance Memo)

Tons of Material Collected	Pounds of Material Collected	Dry Weight Ratio (lbs dry/lbs material)	TN Reduction Ratio	TP Reduction Ratio	TSS Reduction Ratio	Discount Factor (MS4)
524	1047240	0.7	0.0025	0.001	0.3	

Before Discount

TN Removed	1833	lbs
TP Removed	733	lbs
TSS Removed	219920	lbs

James

TN Removed	597	lbs
TP Removed	239	lbs
TSS Removed	71636	lbs

York

TN Removed	549	lbs
TP Removed	220	lbs
TSS Removed	65895	lbs

Discount Factor (Updated 2022)

- Total Interstate length in CUA 37.55831586 mi
- Total Interstate length in CUA 40.83092379 mi
- Total Interstate length 125.3488906 mi
- Total Interstate length in CUA 78.38923964 mi
- Overall Discount Factor 0.625368436
- James Discount Factor 0.325738214
- York Discount Factor 0.299630222

HR Southside FY 23 Mass Loading Methodology (TMDL Guidance Memo)

Tons of Material Collected	Pounds of Material Collected	Dry Weight Ratio (lbs dry/lbs material)	TN Reduction Ratio (lbs/yr)	TP Reduction Ratio (lbs/yr)	TSS Reduction Ratio (lbs/yr)	Discount Factor
4038	8076500	0.7	0.0025	0.001	0.3	0.978

Before Discount

TN Removed	14134	lbs
TP Removed	5654	lbs
TSS Removed	1696065	lbs

Discount Factor (Updated 2022)

Total interstate length 209.1308594 mi
 Total interstate length 204.6286389 mi
 James/ Overall Discount Factor 0.978471754

CUA Discount

TN Removed	13830	lbs
TP Removed	5532	lbs
TSS Removed	1659552	lbs

Potomac River Basin

	Reductions		
	TP (lb/yr)	TN (lb/yr)	TSS (lb/yr)
Redevelopment <i>Gloucester Parkway (10/4/18)</i>	1.38	4.45	618.22 <--Previously reported in 2016 MS4 Annual Report
Stream Restoration and Stabilization <i>Harrisonburg Stream Restoration</i> <i>Harrisonburg Stream Restoration-Protocol 3</i> <i>Lake Ridge AHQ Stream Restoration</i> <i>Wanocopin</i> <i>Pikes Branch</i>	204.00 0.00 178.34 5923.50 3739.00	187.00 136.70 494.89 15928.95 9195.00	417348.00 <--Previously reported in 2016 MS4 Annual Report. Verified 5/11/2021 0.00 <--Previously reported in 2018 MS4 Annual Report. Verified 5/11/2021 340331.49 <--Previously reported in 2019 MS4 Annual Report 2039600.00 <--Previously reported in 2021 MS4 Annual Report 7122295.08 <--Previously reported in 2020 MS4 Annual Report 0.00
Outfall and Channel Stabilization Historical BMPs Forest Buffers <i>Harrisonburg Land Cover Conversion</i>	0.00 45.00 0.10	0.00 569.00 12.50	0.00 90783.00 <--Previously reported in 2016 MS4 Annual Report 436.00 <--Previously reported in 2017 MS4 Annual Report. Verified 7/12/2021;
Land Cover Conversion <i>Harrisonburg Land Cover Conversion</i> <i>Culpeper District</i> <i>Staunton District</i> <i>Loudoun Residency Pollinator Areas</i> <i>Northern Virginia Mowing Practices</i> <i>NOVA LCC- Project 21</i> <i>Northern Virginia Pollinator Habitats</i> <i>Mowing Practices</i> Culpeper District LCC	8.41 0.00 0.00 0.00 0.00 0.75 0.00 0.00 3.42	158.45 1510.70 9878.10 772.80 2306.00 14.11 20.29 3994.07 64.51	2942.40 <--Previously reported in 2017 MS4 Annual Report. Verified 7/12/2021; 0.00 <--Previously reported in 2019 MS4 Annual Report Addendum 0.00 <--Previously reported in 2019 MS4 Annual Report Addendum 0.00 <--Previously reported in 2019 MS4 Annual Report Addendum 0.00 <--Previously reported in 2020 MS4 Annual Report 261.93 <--Previously reported in 2020 MS4 Annual Report 0.00 <--Previously reported in 2020 MS4 Annual Report 0.00 <--Previously reported in 2020 MS4 Annual Report Addendum 1197.97 <--Previously reported in 2022 MS4 Annual Report
Street Sweeping and Catch Basin Cleanup Nutrient Credit Purchase <i>Edgecliff Bank (1/31/17)</i> <i>Potomoi Holdings (4/25/19)</i> <i>RLP Investments, LC (Kinsales) (4/25/19)</i> Structural BMP Enhancement and Retrofit <i>Reston MTD</i> <i>Staunton BMP Retrofit (34029)</i> <i>Culpeper-Warrenton BMP Retrofit</i>	2511.76	6279.39	753526.67 <--New for 2023 MS4 Annual Report
Total Credit Reported	12,751	52,675	10,794,660
Credit without Street Sweeping	10,239	46,395	10,041,133
Reduction Requirement (Special Condition D2- 36%)	2,811	18,801	2,477,611
% Complete to date (Special Condition D2- 36%)	454%	280%	436%

Manassas FY 23 Mass Loading Methodology (TMDL Guidance Memo)

Tons of Material Collected	Pounds of Material Collected	Dry Weight Ratio (lbs dry/lbs material)	TN Reduction Ratio	TP Reduction Ratio	TSS Reduction Ratio
20	39516.4	0.7	0.0025	0.001	0.3

Before discount

TN Removed	69	lbs
TP Removed	28	lbs
TSS Removed	8298	lbs

Discount Factor (Update 2023)

Total state-maintained length 2365.416223
 Total state-maintained length in CUA 1941.018351
 Potomac/Overall Discount Factor 0.820582159

For Chesapeake Bay

TN Removed	57	lbs
TP Removed	23	lbs
TSS Removed	6810	lbs

Bull Run Discount Factor (Update 2023)

Total state-maintained length in Bull Run in CUA 388.561742
 Bull Run Discount Factor 0.16426781

For Bull Run

TN Removed	11	lbs
TP Removed	5	lbs
TSS Removed	1363	lbs

Staunton FY 23 Mass Loading Methodology (TMDL Guidance Memo)

Tons of Material Collected	Pounds of Material Collected	Dry Weight Ratio (lbs dry/lbs material)	TN Reduction Ratio	TP Reduction Ratio	TSS Reduction Ratio	Discount Factor
1310	2620000	0.7	0.0025	0.001	0.3	0.10

Before Discount

TN Removed	4585	lbs
TP Removed	1834	lbs
TSS Removed	550200	lbs

Discount Factor (Updated 2022)

Total state-maintained length in Potomac 8583.387542 mi
 Total state-maintained length in CUA 1162.04541 mi

For Ches Bay

TN Removed	453	lbs
TP Removed	181	lbs
TSS Removed	54309	lbs

Total state-maintained length in James 3189.262509 mi
 Total state-maintained length in CUA 0 mi

Total state-maintained length 11772.65005 mi
 Total state-maintained length in CUA 1162.04541 mi
 Overall Discount Factor 0.098707207
 Potomac Discount Factor 0.098707207
 James Discount Factor 0

NOVA FY 22 Mass Loading Methodology (TMDL Guidance Memo)

Tons of Material Collected	Pounds of Material Collected	Dry Weight Ratio (lbs dry/lbs material)	TN Reduction Ratio	TP Reduction Ratio	TSS Reduction Ratio
1770	3540000	0.7	0.0025	0.001	0.3

Before Discount

TN Removed	6195	lbs
TP Removed	2478	lbs
TSS Removed	743400	lbs

Discount Factor (Updated 2022)

Total Interstate length 346.332759 mi
 Total Interstate length 322.5769654 mi
 Potomac/ Overall Discount Factor 0.931407604

For Ches Bay

TN Removed	5770	lbs
TP Removed	2308	lbs
TSS Removed	692408	lbs

Bull Run Discount Factor (Updated 2022)

Total Interstate length 36.24201355 mi
 Bull Run Discount Factor 0.104645063

For Bull Run

TN Removed	648	lbs
TP Removed	259	lbs
TSS Removed	77793	lbs

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	974464.00	<--Previously reported in 2016 MS4 Annual Report. Ve
<i>Industrial Drive Stream Restoration-Protocol 3</i>	0.00	36.70	0.00	<--Previously reported in 2018 MS4 Annual Report. Ve
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	
<i>Culpeper District</i>	0.00	2379.90	0.00	<--Previously reported in 2019 MS4 Annual Report. Adde
<i>Chatham Heights</i>	0.90	12.44	124.41	<--Previously reported in 2020 MS4 Annual Report
<i>Mowing Practices</i>	0.00	813.45	0.00	<--Previously reported in 2020 MS4 Annual Report. Addc
Street Sweeping and Catch Basin Cleanup	0.00	0.00	0.00	
Nutrient Credit Purchase	0.00	0.00	0.00	
<i>William Walker III (4/25/19)</i>	13.83	145.17	13571.93	<--Previously reported in 2019 MS4 Annual Report. TSS i
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
Shoreline Stabilization				
<i>Belle Isle State Park</i>	520.00	785.00	852756.00	<--Previously reported in 2021 MS4 Annual Report
Total Credit Reported	646	4,651	1,841,196	
Credit Without Street Sweeping	646	4,651	1,841,196	
Reduction Requirement (Special Condition D2- 36%)	213	905	77,268	
% Complete to date (Special Condition D2- 36%)	303%	514%	2383%	

Revised 4/23/2021. SDR Updated
Revised 4/23/2021.

endum

endum

Updated 2021

York River Basin

	Reductions		
	TP (lb/yr)	TN (lb/yr)	TSS (lb/yr)
Redevelopment			
Lakeside (UPC 13714)	3.63	15.91	1467.60 <--Previously reported in 2016 MS4 Annual Report
Rt. 17 (UPC 60843)	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			
Stonehouse Road (UPC 103332)- Installed 10/31/2013	1.71	1.88	379.68 <--Previously reported in 2017 MS4 Annual Report. Verified 2/14/2019
Route 199 (UPC 106844)- Installed 6/24/2016-2/28/2017	5.44	6.00	1210.40 <--Previously reported in 2017 MS4 Annual Report. Verified 7/7/2021
Pasture Circle (UPC 106845)- Installed 6/24/2016-2/28/2017	0.71	0.78	157.62 <--Previously reported in 2017 MS4 Annual Report. Verified 7/7/2021
H64 Outfall Stabilization at NPS (Colonial Parkway)	437.10	941.70	822600.00 <--Previously reported in 2022 MS4 Annual Report
H64 Segment III Outfall Stabilization (ID#19)	3.40	3.75	756.50 <--Previously reported in 2022 MS4 Annual Report
H64 Segment III Outfall Stabilization (ID#19)	1.70	1.88	378.25 <--Previously reported in 2022 MS4 Annual Report
H64 Segment III Outfall Stabilization (ID#20)	3.74	4.13	832.15 <--Previously reported in 2022 MS4 Annual Report
H64 Segment III Outfall Stabilization (ID#A04)	117.59	255.34	223984.26 <--Previously reported in 2022 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	4.50	250.50	0.00 <--Previously reported in 2019 MS4 Annual Report addendum
Culpeper District	26.95	1485.45	0.00 <--Previously reported in 2020 MS4 Annual Report addendum
Mowing Practices			
Street Sweeping and Catch Basin Cleanout	277.46	693.65	83,237.83 <--New for 2023 MS4 Annual Report
Nutrient Credit Purchase	0.00	0.00	0.00
Healy's Pond (4/25/19)	9.54	100.00	12563.87 <--Previously reported in 2019 MS4 Annual Report. TSS updated 2021
Healy's Pond (6/30/2020)	12.10	100.00	15935.31 <--Previously reported in 2020 MS4 Annual Report. TSS updated 2021
Incidental Retrofits	0.00	0.00	0.00
Structural BMP Enhancement and Retrofit	0.00	0.00	0.00
Seaford AHQ MTD	1.44	4.47	558.98 <--Previously reported in 2018 MS4 Annual Report. Verified each year. th
Shoreline Stabilization			
York River State Park Shoreline Stabilization	1728.00	5474.00	2839179.00 <--Previously reported in 2022 MS4 Annual Report. Updated in 2023
Total Credit Reported	2660	9441	4013227
Credit without Street Sweeping	2382	8747	3929990
Reduction Requirement (Special Condition D2- 36%)	255	868	92595
% Complete to date (Special Condition D2- 36%)	1043%	1088%	4334%

through BMP Maintenance

Project Name: **York River 7 & 8 - Fossil Beach**

Location

UPC Code or BMP ID: 0

Geographic (County/City): James City District: Hampton Roads Residency: Williamsburg River Basin: York
 Latitude: 37.409812 Longitude: -76.706326 12 digit HUC 020801070104

BMP Type: Shoreline Stabilization

Project Description:
 York River State Park Fossil Beach improvements include a series of segmented nearshore rubble mound breakwaters along with beach nourishment, marsh plantings, and bank grading to reduce wave energy and increase the shoreline's resiliency.

Photos, Plans and/or Project graphics

Existing Conditions Proposed Improvements:

Average Bank Height (FT): 24.8 Area of Existing Marsh (SF): 0
 Method of Stabilization: Protocol 1, Protocol 2, Protocol 3, Protocol 4
 Linear Feet Stabilization: 789.00 Area of Proposed Marsh (SF): 21,162.00

Qualifying Conditions:

Does the project impact the Chesapeake Bay Preservation Act protected vegetation (SAV) without appropriate mitigation? N
 Will project comply with all state and federal permitting requirements, including 404 and 401 permits? Y
Practice-specific Qualifying Conditions (1, 2, and 3, below)
 The site is currently experiencing shoreline erosion (Y/N)? (All practices) Y
 1. If living shoreline- Y
 -A marsh fringe habitat (a or b) or beach/dune habitat (c) is created, enhanced, or maintained (Y/N).
 2. If Revetment AND/OR Breakwater system without a living shoreline- N
 -A living shoreline is not technically feasible or practicable as determined by substrate, depth, or other site constraints (Y/N)? N
 -When the breakwater footprint would not cover SAV, shellfish beds, and/or wetlands (Y/N)? N
 3. If Bulkhead/Seawalls- N
 -The site consists of port facilities, marine industrial facilities, etc. and depths deeper than 10 ft 35 feet from shore (Y/N)? N



Method of Estimating Bank Erosion

Erosion Rate (FT/YR): -4.99
 Source of Erosion Rate: VIMS Data (Y/N)? Y Manually calculated with aerials (Y/N) and years? N
 Protocols applied: P1-Prevented Sediment P2-Denitrification P3-Sedimentation P4-Marsh Redfield Ratio ("x" applicable) X X X X
Estimated Credit: TN 2,474.00 TP 1,728.00 TSS 2,839,179.00 Field-collected data and elevations (Y/N)? Y
 lbs/yr Default rates applied (Y/N)? N

Discussion

All Protocols were used for crediting. Updated crediting in 2023 to include marsh plantings.

Est. Implementation Date: 6/30/2023 **Project Contact Name:** Joseph Parfitt
Project Completed: Yes **Contact Information (email/phone):** (804) 339-4365

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



FY24 Project Implementation Schedule

Project Name	River Basin	Project Description	Estimated Credits
Chesterfield/Stonehenge BMP	James River	BMP Retrofit	TP: 3.2 lbs/yr, TN: TBD, TSS: TBD
Waynesboro Smith Property	James River	Stream Stabilization	TP: 1,517 lbs/yr, TN: 7,295 lbs/yr, TSS: 3,457,949 lbs/yr
Matoaka	James River	Stream Stabilization	TP: 148 lbs/yr, TN: 134 lbs/yr, TSS: 463 tons/yr

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Appendix H: Local TMDL Action Plan Implementation Summary

BMP SC2(A) – Action Plans for Approved Local TMDLs

Description and Measurable Goal:	Develop and implement applicable TMDL Action Plans for approved TMDLs that have assigned VDOT's MS4 a wasteload allocation.
Lead Division:	Environmental
Reference Documents:	List of approved local TMDLs that have assigned VDOT's MS4 a WLA Local TMDL Action Plans (once developed)

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
Update Existing Local TMDL Action Plans (<i>TMDLs approved before July 2013</i>)* in accordance with Special Conditions of Permit.	Update Existing Local TMDL Action Plans within 12 months of receiving permit coverage.	Existing TMDL Action Plans were updated within 12 months of permit coverage.
Develop New Local TMDL Action Plans (<i>TMDLs approved between July 2013 and June 2017</i>)* in accordance with Special Conditions of Permit.	Develop Local TMDL Action Plans within 24 months of receiving permit coverage.	TMDL Action Plans were updated to include new TMDLs within 24 months of permit coverage.
Implement Local TMDL Action Plans.	Schedule to be identified during the development of the Local TMDL Action Plans.	Schedule of implementation identified in TMDL Action Plans.
Evaluate effectiveness of applicable local TMDL Action Plans	No later than 48 months from permit effective date (7/1/2021)	TMDL effectiveness evaluation was submitted 7/1/2021.

Action Plan Text:

VDOT will annually evaluate the implementation of the MS4 Program Plan as well as the BMPs identified in this Action Plan for effectiveness in addressing the bacteria WLAs.

The annual evaluation will include an assessment on the appropriateness and effectiveness of the identified BMPs in the MS4 Program Plan and the Action Plan to reduce bacteria discharges in the specific watershed. During this evaluation, VDOT will also determine if additional BMPs are necessary to demonstrate that adequate progress is being made to reduce the pollutant discharge.

VDOT will annually report its progress on implementation of the BMPs in the Local Bacteria TMDL Action Plan, other interim milestone activities, and applicable results from the evaluation. If, because of the annual evaluation, a Program Plan and/or Action Plan modification is appropriate, VDOT will perform the modification in accordance with its MS4 Program Plan procedures and in accordance with the MS4 Individual Permit.

Table 1: Local TMDL Action Plan Implementation Schedule

Milestones	Schedule
Update TMDL Action Plan	12 months after the permit effective date (July 1, 2018)
Submit TMDL Action Plan to DEQ	July 1, 2018
Begin Implementation of TMDL Action Plan	90 days after submittal of Action Plan to DEQ
Annual evaluations of Local Sediment TMDL Action Plan	July 1, 2019 July 1, 2020
Submit Assessment of Effectiveness to DEQ	48 months following issuance of permit (July 1, 2021)

Abrams and Opequon Bacteria and Sediment TMDLs	<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>
Lower Accotink Creek Bacteria TMDL	<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>
Bull Run Sediment TMDL	<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 79,156 pounds of sediment were removed from the watershed in FY2023.</p>
<p>Chickahominy River and Tributaries Bacteria TMDLs</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>
<p>Crab Creek Bacteria and Sediment TMDLs</p>	<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 sweeping in the Crab Creek watershed. 22,967 pounds of sediment were removed from the watershed in FY2023.</p>
<p>Difficult Run Bacteria and Sediment TMDLs</p>	<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>

	No additional BMPs are necessary at this time.
Four Mile Run Bacteria TMDLs	<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 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 TMDLs	<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 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>
Occoquan River and Tributaries Bacteria TMDLs	<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>
Popes Head Creek Sediment TMDL	<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>
Potomac River PCB TMDL Watershed	<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>

Rappahannock River Bacteria TMDL	<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>
Rivanna River Bacteria and Sediment TMDLs	<p>VDOT will address the Rivanna River Bacteria TMDL by continuing to implement programmatic BMPs effective in reducing bacteria discharges 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 is also coordinating with other MS4s in the watershed regarding street sweeping efforts.</p>
Roanoke River Bacteria and Sediment TMDLs	<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. 259,687 pounds of sediment were removed from the watershed in FY2023.</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>VDOT also conducted street sweeping in the Stroubles Creek watershed. 281 pounds of sediment were removed from the watershed in FY2022.</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 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>Back River in York County and Cities of Hampton, Poquoson, and Newport News</p>	<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>
<p>Mattaponi River Watershed</p>	<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>
<p>Pamunkey River and Tributaries</p>	<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</p>

	<p>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 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 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>
Sugarland Run, Mine Run, and Pimmit Run in Arlington, Fairfax, and Loudoun Counties	<p>VDOT will address the Sugarland Run, Mine Run, and Pimmit 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>
Tye River Watershed in Nelson and Amherst Counties	<p>VDOT will address the Tye River Watershed 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),</p>

	<p>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 Sediment TMDL	<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. 8,495 pounds of sediment were removed from the watershed in FY2022.</p>
Little Otter River, Johns Creek, Wells Creek, and Buffalo Creek	<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>No additional BMPs are necessary at this time.</p>
Moore's Creek, Lodge Creek, Meadow Creek, and Schenks Branch	<p>VDOT will address the Moore's 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 watershed. 396 pounds of sediment were removed from the watershed in FY2022.</p>

Date Installed	BMP Name	Practice Description	Impervious Acres Treated	Total Acres Treated	Runoff Captured (Ac-ft)	Measurement Unit	Amount Applied
1/31/2018	Lilitha Road (James)	Urban Stream Restoration	64.36	8957.54	N/A	linear feet	1436.00
1/31/2018	Lilitha Road (James)	Urban Stream Restoration	64.36	8957.54	N/A	lb TP/yr	93.70
1/31/2018	Lilitha Road (James)	Urban Stream Restoration	64.36	8957.54	N/A	lb TN/yr	103.3
1/31/2018	Lilitha Road (James)	Urban Stream Restoration	64.36	8957.54	N/A	lb TSS/yr	61812.40
12/15/2017	Skiffes Creek (James)	Urban Stream Restoration	8.66	23.5	N/A	linear feet	801.00
12/15/2017	Skiffes Creek (James)	Urban Stream Restoration	8.66	23.5	N/A	lb TP/yr	192.97
12/15/2017	Skiffes Creek (James)	Urban Stream Restoration	8.66	23.5	N/A	lb TN/yr	453.02
12/15/2017	Skiffes Creek (James)	Urban Stream Restoration	8.66	23.5	N/A	lb TSS/yr	367560.00
4/1/2018	Tinsbury Creek (James)	Urban Stream Restoration	509	4758	N/A	linear feet	3914.00
4/1/2018	Tinsbury Creek (James)	Urban Stream Restoration	509	4758	N/A	lb TP/yr	390.97
4/1/2018	Tinsbury Creek (James)	Urban Stream Restoration	509	4758	N/A	lb TN/yr	2690.29
4/1/2018	Tinsbury Creek (James)	Urban Stream Restoration	509	4758	N/A	lb TSS/yr	1865080.00
9/30/2017	Quarterpath Crossing (James)	Outfall Stabilization	0	3.65	N/A	linear feet	80.00
9/30/2017	Quarterpath Crossing (James)	Outfall Stabilization	0	3.65	N/A	lb TP/yr	5.44
9/30/2017	Quarterpath Crossing (James)	Outfall Stabilization	0	3.65	N/A	lb TN/yr	6.00
9/30/2017	Quarterpath Crossing (James)	Outfall Stabilization	0	3.65	N/A	lb TSS/yr	1210.40
10/1/2017	Seaford AHQ (York)	Infiltration Basin	1.8	0	0.18	Acres (Total Area Treated)	1.80
10/1/2017	Seaford AHQ (York)	Infiltration Basin	1.8	0	0.18	lb TP/yr	1.44
10/1/2017	Seaford AHQ (York)	Infiltration Basin	1.8	0	0.18	lb TN/yr	4.47
10/1/2017	Seaford AHQ (York)	Infiltration Basin	1.8	0	0.18	lb TSS/yr	558.98
12/15/2017	Skiffes Creek Dry Swale (James)	Dry Swale	0.64	0.82	N/A	linear feet	0.81
12/15/2017	Skiffes Creek Dry Swale (James)	Dry Swale	0.64	0.82	N/A	lb TP/yr	0.15
12/15/2017	Skiffes Creek Dry Swale (James)	Dry Swale	0.64	0.82	N/A	lb TN/yr	5.04
12/15/2017	Skiffes Creek Dry Swale (James)	Dry Swale	0.64	0.82	N/A	lb TSS/yr	294.72
12/15/2017	Skiffes LLC (James)	Land Cover Conversion	0	0.32	N/A	lb TP/yr	0.15
12/15/2017	Skiffes LLC (James)	Land Cover Conversion	0	0.32	N/A	lb TN/yr	1.81
12/15/2017	Skiffes LLC (James)	Land Cover Conversion	0	0.32	N/A	lb TSS/yr	18.50
6/30/2023	Street Sweeping and Catch Basin Cleanout (James)	Street Sweeping	0	N/A	N/A	lbs (total solids collected)	19044276
6/30/2023	Street Sweeping and Catch Basin Cleanout (James)	Street Sweeping	0	N/A	N/A	lb TP/yr	8433.57
6/30/2023	Street Sweeping and Catch Basin Cleanout (James)	Street Sweeping	0	N/A	N/A	lb TN/yr	21083.93
6/30/2023	Street Sweeping and Catch Basin Cleanout (James)	Street Sweeping	0	N/A	N/A	lb TSS/yr	2530072.00
6/30/2023	Street Sweeping and Catch Basin Cleanout (Polomac)	Street Sweeping	N/A	N/A	N/A	lbs (total solids collected)	6199516.40
6/30/2023	Street Sweeping and Catch Basin Cleanout (Polomac)	Street Sweeping	N/A	N/A	N/A	lb TN/yr	6279.39
6/30/2023	Street Sweeping and Catch Basin Cleanout (Polomac)	Street Sweeping	N/A	N/A	N/A	lb TP/yr	2511.76
6/30/2023	Street Sweeping and Catch Basin Cleanout (Polomac)	Street Sweeping	N/A	N/A	N/A	lb TSS/yr	753526.67
6/30/2023	Street Sweeping and Catch Basin Cleanout (York)	Street Sweeping	N/A	N/A	N/A	lbs (total solids collected)	704724.13
6/30/2023	Street Sweeping and Catch Basin Cleanout (York)	Street Sweeping	N/A	N/A	N/A	lb TN/yr	693.65
6/30/2023	Street Sweeping and Catch Basin Cleanout (York)	Street Sweeping	N/A	N/A	N/A	lb TP/yr	277.46
6/30/2023	Street Sweeping and Catch Basin Cleanout (York)	Street Sweeping	N/A	N/A	N/A	lb TSS/yr	83297.83
6/30/2023	York River State Park - Fossil Beach (Marsh Plantings)	Shoreline Stabilization	N/A	N/A	N/A	shoreline restored (feet)	789.00
6/30/2023	York River State Park - Fossil Beach (Marsh Plantings)	Shoreline Stabilization	N/A	N/A	N/A	lb TN/yr	2474.00
6/30/2023	York River State Park - Fossil Beach (Marsh Plantings)	Shoreline Stabilization	N/A	N/A	N/A	lb TP/yr	1728.00
6/30/2023	York River State Park - Fossil Beach (Marsh Plantings)	Shoreline Stabilization	N/A	N/A	N/A	lb TSS/yr	2839179.00
6/30/2023	Pipisco Scout Reservation	Shoreline Stabilization	N/A	N/A	N/A	shoreline restored (feet)	976.00
6/30/2023	Pipisco Scout Reservation	Shoreline Stabilization	N/A	N/A	N/A	lb TN/yr	753.00
6/30/2023	Pipisco Scout Reservation	Shoreline Stabilization	N/A	N/A	N/A	lb TP/yr	516.00
6/30/2023	Pipisco Scout Reservation	Shoreline Stabilization	N/A	N/A	N/A	lb TSS/yr	847684.00

