MS4 PERMIT YEAR 2022 ANNUAL REPORT
JULY 1, 2021 TO JUNE 30, 2022

FOR URBANIZED AREAS OF VIRGINIA
Virginia Department of Transportation Small Municipal Separate Storm Sewer System (MS4)

Registration # VA0092975
Coverage from July 1, 2017 to June 30, 2022
October 1, 2022

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

CERTIFICATION

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

Signature	Stephen C. Brich
Name	Stephen C. Brich, P.E.
Title	Commissioner of Highways
Organization	Commonwealth of Virginia, Department of Transportation
Date	9/28/2022

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APPENDICES

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

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

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)

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)

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

MCM#1:
PUBLIC EDUCATION AND OUTREACH ON STORMWATER IMPACTS[1]

[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.

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.	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. https://www.virginiadot.org/business/locdes/water_resources_program.asp This webpage includes the MS4 Program Plan, annual reports, other program documents, contact information, announcements, and other useful resources.
Provide instructions for the public on how to report illicit discharges, improper disposal, or spills to the MS4 or other potential stormwater pollution concerns	Webpage was previously developed. VDOT will update webpage with necessary information as discussed in other parts of this Program Plan.	VDOT has maintained its link for the public to report illicit discharges, improper disposal. IDDEReports@VDOT.Virginia.gov.

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.	The pet waste station maintenance and restocking 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, 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 last year. During the last year deteriorated or damaged pet stations were replaced as needed. The latest figures we have, for 2018, indicate that 35,200,900 people visited VDOT Rest Areas and Welcome Centers across the state and were exposed to our Pet Waste messaging and facilities. However, VDOT believes that due to the Covid-19 pandemic during the past two permit years, substantially fewer people drove on Virginia interstate highways and took advantage of our pet waste stations at VDOT Safety Rest Areas and Welcome Centers. We believe that traffic is increasing since Covid protocols have been relaxed in recent months. 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 2018, indicated that 12,012,200 people visited the 11 MS4 area Rest Areas/Welcome Centers where VDOT had litter control signs posted and were exposed to that messaging. However, VDOT believes that due to the Covid-19 pandemic during the past two permit years,

		substantially fewer people drove on Virginia interstate highways and visited VDOT Safety Rest Areas and Welcome Centers. We believe traffic is increasing since Covid protocols have been relaxed in recent months.

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 1st of each year.	VDOT has continued to post its MS4 Program Plan and Annual Reports on its stormwater webpage located at: https://www.virginiadot.org/business/locdes/water_resources_program.asp This past year represents the fifth 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. This Annual Report is also the fifth to be submitted under the IP period of coverage versus the General Permit (GP) previously. The reporting structure was revised in PY18 to reflect the updated IP and PP elements. This Annual Report will be posted within 30 days of final submittal to DEQ.
Assessment of the effectiveness of the outreach program.	Annually.	VDOT has evaluated each of the practices and we believe that the BMPs are appropriate and effective. Per Section I.C.1.e of the IP and in regards to Educational and Outreach Programs: 1.) Illicit discharge 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

		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. 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 2018, indicated that 12,012,200 people visited the 11 MS4 area Rest Areas/Welcome Centers where VDOT had litter control signs posted and were exposed to that messaging. VDOT believes that due to the Covid-19 pandemic during the past two permit years, substantially fewer people drove on Virginia interstate highways and took advantage of our pet waste stations at VDOT Safety Rest Areas and Welcome Centers. We do believe that traffic is now increasing since Covid protocols have been relaxed in recent months. 3.) Other Educational and Outreach Programs: – Watershed Signs – During PY22, VDOT installed 1 watershed sign for the James River crossing of I-95 in Richmond (Exit 74A). To date, VDOT has installed approximately 145 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/ 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.).

MCM#2:
PUBLIC INVOLVEMENT/PARTICIPATION

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*.	VDOT estimates at this time that as of June 30, 2022: – The most current estimates available report that the AAH program has a total of approximately 9534.59 miles of roadway adopted; an increase of approximately 619.59 adopted miles over the number reported in the last two years; – The most current estimates available report that approximately 12,864 individuals participated in the program in the last two permit years, a decrease of 10,519 compared to approximately two permit years prior. VDOT attributes the increased trend in mileage and the declining trend in participation to the Covid-19 pandemic. Adoption of highway segments gave people something they could do safely alone outdoors and Covid-related considerations kept the size of the pickup groups small. The above information is VDOT's current best estimate based on available reported information and existing AAH Access database that is currently in use at this time. However, it is currently difficult for VDOT to report precisely regarding the Adopt-a-Highway (AAH) program. VDOT's AAH database updates and improvements have still not yet been completed, so the system's availability and accuracy at this time is not reliable. VDOT is aiming to collect this data in the future using a new geo-referenced GIS database, updated guidance, and associated interactive mapping tool, which VDOT believes will improve accuracy and reporting. The update process has been interrupted by the Covid-19 pandemic, so we still have some data reporting inconsistencies within our old data system for the program.

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.	Storm sewer stenciling is promoted through VDOT's stormwater webpage. 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: – 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

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 2 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 45 activities. VDOT will participate in similar activities in subsequent permit years, when applicable and appropriate. A list of these meetings is provided in Appendix A.

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

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.	VDOT promoted several Stream Cleanup Events during the reporting year including: 1.) Chesapeake Bay Foundation – Clean the Bay Day 2.) Accotink Creek Cleanup Calendar 3.) Friends of Accotink Creek Adopt-A-Stream Cleanup Project 4.) Riverrock James River Cleanup 5.) Renew the New - New River Valley Local Authority Trash Pickup

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.	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: 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 of these meetings is provided under Annual Report Information in MCM 7. 3.) VDOT participated in several HRPDC meetings with a focus on coastal resilience, adaptation and stormwater design standards, as well as in Fairfax County meetings to participate on Resilient Fairfax Infrastructure Advisory Group. The meetings focused on resilience; as a part of this they covered flooding and stormwawater related topics. 4.) Urban Stormwater Workgroup (USWG) participation. 5.) VDOT participated on several TACs, SAGs, and RAPs organized by DEQ including MS4 GP, Consolidation of VSMP and VESCP regulations, Proposed permit fees. 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.

Identify Partners.	Annually.	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.
Evaluate and describe effectiveness of each strategy and practice.	Annually.	VDOT has evaluated each of the practices and we believe that the BMPs are appropriate and effective. Notable achievements and potential future activities leading to increased effectiveness are described below. VDOT made a number of advancements and achievements over past reporting year including: – 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 L&D Division coordinated effectively with its Communications Division at both the Central Office and Districts. – VDOT began the process of updating the tracking and reporting database associated with the Adopt-A-Highway program in PY18 and PY19. VDOT is still developing a new, geo-referenced database, guidance, and associated map for its use. It is currently in the final testing phase. – The georeferenced locations of VDOT Pet Waste, Litter and Watershed Signage is now publically available in an interactive map on VDOT's website through an ESRI ArcGIS Suite Storymap. The following are program elements that VDOT anticipates undertaking over the permit cycle including in part or in whole during the upcoming PY: Adopt-a-Highway (AAH) Program – The legacy AAH database was an Access-based system. VDOT is finalizing updates and conversion of this system to

		a new map-based geo-referenced database which will be available to the public. VDOT anticipates improved ability to track and report information in the future. This includes conducting an analysis of increases or decreases in public participation over time. The first phase planned is a roll out to District Adopt A Highway Coordinators. The second phase is evaluating the potential to allow for direct inputs by the pubic directly with review by Adopt A Highway Coordinators.

MCM#3:
ILLICIT DISCHARGE DETECTION AND ELIMINATION[2]

[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.

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: – 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.	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. 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

		BMPs as they come online through project delivery and inspection/acceptance procedures throughout the year. A major undertaking in PY20 and PY21 through PY22 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. These updates are anticipate to result in a more comprehensive and better end product to align District efforts and better ensure data consistency statewide VDOT's storm sewer mapping GIS components are continually reviewed by VDOT and improved over time to maintain the mapping database.

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. VDOT's Maintenance Division completed an update of the Manual during the previous permit year, adding a new "Environmental" chapter and inserting references to Environmental Division policies and guidance documents related to various kinds of maintenance activities.

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.

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.

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.	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. 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. 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. Also, this permit year Maintenance Division published an updated Stormwater BMP Inspection-Maintenance Manual and also updated VDOT's ESRI-Survey123 BMP Inspection App. Included in the updates of both were inspection questions related to whether Illicit

<table>
<tr><td></td><td></td><td>Discharges were identified in the vicinity of VDOT stormwater BMPs and information about how and where to report such discharges.</td></tr>
<tr><td>Develop, update, offer and deliver IDDE Training Materials for appropriate VDOT staff, maintenance operators, and contractors in how to identify and report illicit discharges.</td><td>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.</td><td>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.

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.

During PY22, VDOT provided IDDE-related training to approximately 2,443 employees and contractors. For a further breakdown of training numbers, see BMP 6(C)1.</td></tr>
<tr><td>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.</td><td>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.</td><td>Twenty-eight (28) potential illicit discharges were reported to VDOT’s IDDE program in PY 2022. Based on follow-up investigation, 15 reported discharges were determined not to qualify as illicit discharges and the reports were closed. VDOT’s effort to resolve the 13 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.

VDOT or VDOT contractors were the responsible party in one confirmed illicit discharge within MS4 areas.

<table>
<tr><th>District</th><th>Reported</th><th>Confirmed</th></tr>
<tr><td>Bristol</td><td>0</td><td>0</td></tr>
<tr><td>Culpeper</td><td>0</td><td>0</td></tr>
<tr><td>Fredericksburg</td><td>1</td><td>0</td></tr>
<tr><td>Hampton Roads</td><td>2</td><td>2</td></tr>
</table></td></tr>
</table>

		Lynchburg **0** **0** **Northern Virginia** **15** **8** **Richmond** **7** **3** **Salem** **3** **0** **Staunton** **0** **0** **TOTAL** **28** **13** **<u>Summary of IDDE's confirmed:</u>** **Hampton Roads District** 1.) In October 2021, the Hampton Roads NPDES Coordinator responded to requests from the City of Newport News to address automotive fluids leaking into a drop inlet from crashed vehicles towed and stored on a lot adjacent to the Monitor Merrimac Bridge-Tunnel. Newport News also looped regional DEQ staff into the conversation. VDOT and DEQ staff met onsite to look at the issues. A number of BMPS (absorbent booms around drop inlet, parking vehicles under cover, away from stormwater) were agreed upon, and all parties were satisfied with the results. Follow-up from City of Newport news at the Annual MS4 Coordination Meeting indicated that BMPs were in place and working as intended. 2.) In February 2022, Hampton Roads NPDES Coordinator forwarded a report from the Interstate Maintenance Group regarding a discharge of concrete from the Branscome Concrete plant into a VDOT-owned stormwater ditch adjacent to I-664. VDOT contacted both Branscome Plant officials. Additionally, the Regional Hazardous Materials Manager notified DEQ Regional PReP program staff to report the issue. DEQ's PReP program forwarded the issue to their Water Quality (WQ) section, who coordinated with both VDOT and Branscome on cleanup efforts. On March 2nd, VDOT's Interstate Maintenance Operations group received a phone call that Branscome had completed all cleanup efforts. Documentation was provided to the DEQ WQ group sufficient for them to close their

		report, and VDOT's IDDE report was also closed. **Northern Virginia (NOVA) District** 1.) In July 2021, NOVA NPDES Coordinator forwarded a report from Fairfax County of dust and gravel entering stormwater inlets along Industrial Drive as a result of activities at the Vulcan Materials facility at 5640 Industrial Drive. Fairfax County also notified DEQ who conducted an incident investigation onsite and determined a course of corrective action that included twice weekly street sweeping by Vulcan, and cleaning out of existing materials within the manholes. Follow-up at the site confirmed that BMPs were being implemented, and the report was closed. 2.) In December 2021, NOVA NPDES Coordinator copied the CO Illicit Discharge team on a message to the locality of Herndon regarding an illicit discharge witnessed by a VDOT contractor during the course of work. The VDOT utility contractor witnessed an individual exit the Boeing Building at Spring Street and Herndon Parkway and dump black material down a storm drain. The discharge did not affect VDOT's MS4, but Herndon's. Herndon responded to the incident and spoke with those onsite and discovered the discharge was material from elevator repairs. They requested the contractor to clean up the material from their MS4, and VDOT's report was closed. 3.) In December 2021, Fairfax County Stormwater forwarded a report from a local HOA member on Heritage Hill Drive who noted black substance sprayed onto a culvert wingwall and staining of a nearby ditch. Fairfax was the affected MS4, and had already conducted a field investigation but was unable to determine a source for the discharge, and asked VDOT to determine whether this was the result of any VDOT work within the area. VDOT performed an

		internal investigation and determined that, while paving had taken place nearby within the last year, give the location and orientation of the staining, and the age of the discharge vs. the timing of the paving activities, and that the paving activities had been conducted while a VDOT inspector was onsite, VDOT ruled it highly unlikely the discharge was the result of paving activities. As VDOT responded to the request, and was not the affected MS4, the report was then closed. 4.) In January 2022, NOVA NPDES forwarded a notification of a sediment complaint from a construction project near the intersection of Hickory Hill Road and Annandale Road in Falls Church. The incident appeared to be the result of utility work within the area, and sediment had discharged to a nearby stream. After confirming with the Land Use Group and Fairfax County, it was determined the incident was the result of a water main break by Fairfax County. As there was no visible accumulation, the discharge was not the result of VDOT or a VDOT contractor, and Fairfax County/Fairfax Water was aware of the discharge, the report was closed. 5.) In February 2022, NOVA NPDES coped CO IDDE on a notification to the VDOT LUP group of a sediment discharge at 4331 Andes Drive. A citizen had filed a complaint with Fairfax County, which was forwarded to VDOT for follow-up on a Land Use Permittee in the area. The LUP group determined that Fairfax Water had been performing maintenance in the area and they were the RP. It was recommended to Fairfax County and Fairfax Water that Gutter Buddies be installed at all nearby storm drains and, once dry, any remaining sediment on pavement be scooped up and bare soils stabilized and the report was closed. 6.) In April of 2022, NOVA NPDES forwarded a report from Fairfax County of a home heating oil tank leak into a VDOT ditch at

		6433 8th Street in Falls Church. The report from Fairfax County showed the leak had been occurring for over a month already, and the homeowner had been instructed of their responsibility to contact DEQ and being remediation work. The tank was pumped, DEQ contacted, and the removal process initiated. The report indicated that a seep of heating oil continued to enter the ditch, and DEQ suggested the remediation contactor deploy more booms and absorbents to cease the discharge. On April 28th, the heating oil tank was removed, thus eliminating the discharge and its source. Further remediation and enforcement would be handled by DEQ's LUST program, and VDOT's IDDE report was closed. 7.) At the end of April 2022, Fairfax County notified VDOT of an incident involving a leaking boom truck at the intersection of Monument Drive and Route 29. Small amounts of fuel had leaked into a nearby stormwater inlet from the roadway, and a NOV was issued by Fairfax County to the RP. Upon inspection, no recoverable material was identified in the stormwater system, and the IDDE report was closed. 8.) In May 0f 2022, Fairfax County notified VDOT that a VDOT sidewalk contractor was discovered dumping concrete slurry down a stormwater inlet near 15016 Kamputa Drive. Fairfax County asked for VDOT assistance in determining who the contract was, in order for them to be referred for enforcement and required remediation. NOVA NPDES worked with the VDOT LUP/Maintenance groups to determine the contractor responsible, and within hours they were ordered to return to the site and clean up the inlet. Fairfax County accepted the results of the cleanup effort and issued a completed Corrective Action Notice. Following the event, Fairfax also issued a NOV. As the illicit discharge resolved, and enforcement handled by Fairfax County, the VDOT illicit discharge report was closed.

		Richmond District 1.) In October of 2021, Richmond RHMM received a report from Chesterfield County Environmental of 5-10 gallons of hydraulic fluid leaked from a trash vehicle at 5030 Sagamore Drive. The report was a courtesy notification from Chesterfield County, as they had already visited the site and determined no recoverable material remained, and no RP could be identified. Thus, with no impact to the storm sewer system, and the discharge ceased, the IDDE report was closed. 2.) In February of 2022, Chesterfield County notified VDOT of a used motor oil spill at 2604 Whitehouse Road. A tank had leaked motor oil. Chesterfield Fire deployed booms an absorbents, and the Fire Marshal issued a notice to the RP to remediate the issue. The five-day follow-up from the Fire Marshal indicated that the tank had been removed and the area remediated, so the report was closed. 3.) In February of 2022, Chesterfield County provided a courtesy notification to VDOT of a bag of used oil filters discovered at the intersection of Brad McNeer Parkway and Hull Street. Approximately 1-5 gallons of used oil had discharged into a VDOT ditch. The local fire marshal was notified and responded, deploying booms and disposing of the filters. No RP could be determined, and the area was already remediated at the time of notification, so the report was closed.

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.	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. VDOT has made a number of advancements and achievements over the past reporting year including: – 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. – The previous permit year, 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 was developed in PY 18 and refined in PY19. – The Maintenance Division completed updates to existing sections of the Maintenance Best Practices Manual, as well as adding a new "Environmental" chapter.

		– In PY22, a mapping initiative to map VDOT's Right of Way (ROW) statewide was undertaken in coordination with Districts. It is anticipated to have a number of potential beneficial uses for MS4 and beyond. It is anticipated for completion in PY23. The following are program elements that VDOT anticipates undertaking over the permit cycle including in part or in whole during the upcoming PY: The L&D Division anticipates enhancing its Storm Sewer Mapping systems through use of the ESRI ArcGIS Suite over the upcoming PY and beyond. This includes completing the VDOT ROW mapping statewide effort and rolling it out, as well as including an embedded widget that will enables feedback through the app to be communicated for future refinements and corrections which are expected to be needed for continual improvement over time. This may also include, for example leveraging and using VDOT Microstation project design files, ProjectWise, and other partner existing datasets to inform and populate GIS datasets that meet MS4 and design needs and as possible. L&D anticipates continuing to follow and evaluate technological advances that may better enable connetions from Microstation design files to GIS to populate asset and inventory datasets, including to update outfall and storm sewer mapping systems.

MCM#4:
CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

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.	VDOT made continual modifications, revisions, and updates to Special Provisions 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 supporting forms/documents for new construction projects to reflect the 2019-2024 Construction General Permit (CGP). VDOT continued coordination with DEQ during the reporting year to facilitate the approval process and to address comments and update various components. The last annual update of the VDOT ESC and SWM Standards & Specifications was dated July 1, 2022 and submitted shortly thereafter to DEQ. VDOT is coordinating on follow up related responses and approval from DEQ.
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 stormwater from construction sites.	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, 2021 to June 30, 2022, within the MS4 urbanized area there were approximately : 1.) Total number of regulated land-disturbing activities that required new or modified CGP coverage during PY22 = 33; and

		2.) Total number of acres disturbed that required new CGP coverage during PY22 = 377 acres. Note: This number is an estimate and includes CGP coverages submitted to DEQ during the permit year only, and may not include CGP projects initiated in prior permit years, including permit modifications, and those that are outside of the MS4 area.

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.	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. In addition, ESC periodic 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.
Require compliance with SWPPP plans including the ESC Plan, and require changes/ modifications to SWPPPs, as necessary, to maintain compliance with applicable regulations. Also, utilize enforcement authority if necessary.	This aspect of the BMP is currently implemented and is an ongoing effort.	VDOT estimates a total of 651 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. 6,402 erosion and sediment control and Construction Stormwater General Permit deficiencies were noted; and 5,982 corrective actions were executed. A summary of the most frequent types of deficiencies and associated corrective actions reported by NPDES Coordinators were: – Temporary and Permanent Stabilization – Maintenance of ESC Controls – Outfall – channel / ditch shape / erosion and lining – Construction Entrances – Inlet protection, installation and maintenance VDOT utilized enforcement measures to address insufficient ESC measures and to correct deficiencies.

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 for PY22. This IIM was updated to address regulatory changes over the past two years and to improve processes.
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 periodic compliance oversight 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 in PY21, another round of training was held with District NPDES Coordinators in PY22, and the database has been utilized throughout the PY22 year to track inspections.
Evaluate and describe effectiveness of each strategy and practice.	Annually.	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. VDOT made a number of advancements and achievements over past reporting year: – Developed the EPP Award Program (Environmental Performance Program), a VDOT district-based state-wide

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
		performance award program for private contractors and awarded Saffo Contractors, Inc., and the VDOT Staunton District for the "Paint I-64 Delta Frame Bridges over Maury River & Kerrs Creek, Rockbridge Co". – Developed a universal NPDES inspection form in PY22 and electronic version for ArcGIS is to be implemented state-wide for PY23. – Continued use of PlanGrid throughout the state with all construction Inspectors and District NPDES Coordinators has allowed construction project teams to communicate ESC and SWM issues immediately for correction. This has allowed for faster, more efficient and more accurate project communication. – Provided regular ESC Inspector training to VDOT staff throughout the year to educate and enable staff to sit for tests and become DEQ certified. – Received and addressed DEQ comments on VDOT's PY21 Annual Standards & Specifications for ESC & SWM and submitted revised AS&S at end of PY22. – Continued updating LD-445 and associated permitting forms to reflect the 2019-2024 CGP and more recent regulatory change; outreach to various VDOT Divisions, Districts, and programs. – Hired additional NPDES staff designees – Developed an Offsite Excavated Fill Disposal guidance and revised related forms with new regulatory requirements. – Additional resourcing for District NPDES Coordinators to support ESC construction periodic oversight inspections to facilitate compliance. – Held quarterly meetings 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 tracking software to track

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
		active/terminated VDOT projects and to generate Site Maps to be included with Registration Statements. – Further refinements to the ArcGIS Construction ESC Inspection tracking system are in development. The system may be used in the field with mobile tablets by Inspectors during construction inspections, or following site visits on a desktop computer. – Reviewed and updated VDOT's Road and Bridge Standards and Specifications associated with EC and associated Approved Product Lists (APLs), and Special Products Evaluation List (SPEL). – Participation in DEQ MS4 GP RAP – Research in coordination with the Research Council (VTRC) on ESC sediment filter bags completed. The following are program elements that VDOT anticipates undertaking over the permit cycle including in part or in whole during the upcoming PY: – Finalize and implement updated standardized electronic NPDES inspection form in ArcGIS. – VDOT continues to enhance the tracking mechanism for NPDES Construction ESC Inspections to improve functionality and reliability. This may include additional Survey 123 electronic forms that may be identified as a need for logging certain information. This may also include addressing current issues such as generation/printing of standard reports from the database, greater ability to support annual reporting. – VDOT Districts utilize the PlanGrid software on periodic NPDES ESC oversight Site Inspections and evaluate ways to integrate the best functionality of the software with that of the ArcGIS platform. The Plan-Grid software can be utilized to conduct inspections with an iPad in the

Expected Efforts and Results in Meeting Measurable Goal	Implementation Schedule	Annual Report Information
		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 and evaluated. – Research in coordination with the Research Council (VTRC) is anticipated in the upcoming PY on sediment basins and potential design adapations that can lead to better performance considering the current 1992 Va Green Book and other state standards for the practice. – 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.

MCM#5: POST-CONSTRUCTION STORMWATER MANAGEMENT

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.	Update components of the Standards & Specifications as regulations and operations warrant. Incorporate most current DEQ approved standards and specifications for post-construction SWM. Update the approval dates for standards and specifications within the program plan within 30 days of DEQ approval for any changes.	The VDOT ESC and SWM Standards and Specifications, dated July 1, 2022, were submitted. VDOT is coordinating on follow up related responses and for approval from DEQ. VDOT made continual modifications, revisions, and updates to VDOT Special Provisions and updated Instructional and Informational Memorandums (IIMs) to address discharges entering the MS4 from land disturbing activities regulated by the VPDES and VSMP during the reporting year to maintain compliance with applicable regulatory and permit requirements. VDOT has continued coordination with DEQ during the reporting year to facilitate the approval process and to address comments and update various components.
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.

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 PY22 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.

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: – 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 Manual which were updated and consolidated into a single Manual. See Section BMP 5(C) for additional information. Stormwater BMP/facilities continue to be inspected annually as noted in this section and Appendix C. Additionally, improvements to the BMP Inspection forms allow for better on-the-ground reporting and associated maintenance.
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.

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 are itemized in BMPs 5A-5B above.
Evaluate and describe effectiveness of each strategy and practice.	Annually.	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. VDOT made a number of advancements and achievements over past reporting year: – Continued collaboration with DEQ on Annual Standards and Specifications for ESC and SWM during the permit year. – VDOT's Maintenance Division published a comprehensive update to the Stormwater BMP Inspection and Maintenance Manual, combining two separate manuals into a single, consolidated manual. – 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. – A comprehensive BMP maintenance training was conducted with District staff on June 23rd, 2022. – UVA/VTRC research and publications, continuing research into off-site trading and use of nutrient credits, and the continued research project on water quantity technical criteria as it relates to sheet flow and level spreaders. – UVA grad students also reviewed Maintenance Division's HMMS Database and provided comments for improvements. – Quarterly partnering meetings held with DEQ.

		The following are program elements that VDOT anticipates undertaking over the permit cycle including in part or in whole during the upcoming PY: – Continued effort to update electronic Survey 123 forms in PY23 again to reflect recent comprehensive update to stormwater BMP Inspection and Maintenance Manual in PY22. – 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: 1.) Ability to research the possibility of generating automated reports of structural deficiencies for annual reporting. 2.) Ability to generate reports useful to Districts such as pulling requests for remaining BMPs that need to be inspected for the PY. - Participation on One Stormwater Manual Stakeholder Advisory Group (SAG) hosted by DEQ.

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

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. VDOT's Maintenance Division completed an update of this Manual during the previous permit year and, in fact, the Manual is continually being updated as needed.
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.

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 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.
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. Two prior sites are no longer VDOT high-priority facilities as VDOT has ceased operations and transferred ownership (Old Cave Spring Road lot and the Manassas Storage Area).
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 (latest updates in 2020) for continued refinement. To keep the SWPPPs updated, amendments were implemented in 2020 and are in

Expected Efforts and Results in Meeting Measurable Goal	**Implementation Schedule**	**Annual Report Information**
		progress for 2022. VDOT will continue to implement the SWPPPs, and will revise and modify SWPPPs as appropriate.
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.	VDOT performed annual MS4 compliance assessments for all high-priority facilities within the MS4 areas in the spring of 2022. 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. Additionally, VDOT continues to implement our new facility environmental database referred to as the Comprehensive Environmental Data and Reporting (CEDAR) Facility Module (FM). The CEDAR FM enables annual MS4 compliance assessments (along with the monthly SWPPP inspections) to be performed electronically with corrective actions automatically uploaded to the CEDAR system for better tracking and program management.
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.	There are three VDOT Facilities with on-site septic systems in local watersheds with a bacteria TMDL and VDOT WLA. Chester Area Headquarters' septic tank was pumped in May 2018 and will be planned for another pump out by March 2023. Merrifield Area Headquarters' septic tank was pumped in March 2021. Winchester Residency Complex's septic tank was pumped in September 2021.

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; therefore, no new individual Nutrient Management Plans are needed.
Continue to develop and refine NMPs on all lands where nutrients are applied to a contiguous area of more than one acre.	This aspect of the BMP is currently implemented and is an ongoing effort.	VDOT cannot discretely estimate the acreage upon which nutrients are applied subject to VDOT's two DCR-approved Nutrient Management Plans: (1) one plan applicable to all new construction; (2) the other plan applicable to all roadside management activities. These current plans are valid until June 30, 2023.
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.

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**
Deliver a training plan to include, but not limited to, training on the IDDE program, Good Housekeeping/Pollution Prevention, SWPPP and appropriate spill prevention and responses.	This aspect of the BMP is currently implemented and is an ongoing effort.	The following is a summary of training provided by the Environmental Division for the reporting year. There were over 14,000 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 D. *Spill Prevention Control and Countermeasure* (SPCC) training is delivered at facilities that operate under an SPCC plan, and includes spill prevention and good housekeeping elements. Recently, a number of Environmental trainings underwent re-development as part of the larger department-wide VDOT of Tomorrow program. The SPCC training was re-developed and distributed through the VDOT Virtual Campus and the Electronic Bulletin Boards (EBBs) found at every VDOT facility. In addition to re-development, a statewide VDOT of Tomorrow awareness campaign, in conjunction with the VDOT Human Resources and Maintenance Divisions, greatly increased the number of participants in all re-developed trainings, as all maintenance employees statewide were encouraged to participate in training activities, regardless of facility status or job duties. *Facility Storm Water Pollution Prevention Plan* (SWPPP) 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. Recently, the Facility SWPPP training module was re-developed, and a separate Facility SWPPP Coordinator Training

		module added, all as part of the larger department-wide VDOT of Tomorrow program. This program encouraged all VDOT maintenance personnel to take SWPPP training, regardless of whether they were based at a SWPPP facility. This resulted in a large, atypical increase in the number of participants this permit year. DOT Hazardous Materials Awareness training is delivered to VDOT staff that are involved in the shipment and signing of manifests for hazardous materials and includes elements of GHPP. This training was redesigned at the end of PY22, and will be deployed in the latter half of 2022/early 2023. The VDOT *Salt Infrastructure* training was another training that was re-developed and promoted as part of the VDOT of Tomorrow program and is available through the VDOT Virtual Campus. This training is based on a particular aspect of the Facility GHPP program that VDOT Environmental staff identified as requiring special focus. The Facility Leak and Spill Prevention training was re-developed and promoted through the VDOT of Tomorrow Program and is available on the VDOT Virtual Campus. Like the Salt Infrastructure training, it is based on a particular aspect of GHPP that VDOT Environmental staff identified as requiring special focus. *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. Additionally, this permit year, language requiring the viewing of this and the Illicit Discharge Detection and Elimination training video was inserted into various new/renewed maintenance contracts (i.e. mowing contracts, salt distribution contracts, etc.). 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. This contract requirement saw greater

		adoption in the latter half of 2021, as contracts were renewed and awarded. *Facility Erodibles Stockpile Management* training was re-developed and promoted as part of the VDOT of Tomorrow program, and is available on VDOT's Virtual Campus. 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. *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. This requirement saw greater adoption in PY22. See Appendix D for a summary of training numbers in the VDOT Employee Training Summary.

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

<table>
<tr><th>Expected Efforts and Results in Meeting Measurable Goal</th><th>Implementation Schedule</th><th>Annual Report Information</th></tr>
<tr><td>Ensure that VDOT employees and contractors who apply pesticides and herbicides are properly trained or certified in accordance with the Virginia Pesticide Control Act.</td><td>This aspect of the BMP is currently implemented and is an ongoing effort.</td><td>VDOT currently has 140 certified pesticide applicators (many of whom do not apply pesticides). Training has been accomplished through Virginia Cooperative Extension Offices and online events since the Covid pandemic began. VDOT-specific Virginia Cooperative Extension courses may be restored in Fall 2022 and Spring 2023.

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.</td></tr>
<tr><td>Ensure that VDOT employees and contractors are trained in good housekeeping and pollution prevention practices and the IDDE Program.</td><td>This aspect of the BMP is currently implemented and is an ongoing effort</td><td>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.

The following is a summary of training classes/modules attended during this permit reporting year:

<table>
<tr><th>Type of Training</th><th># Employees Trained</th></tr>
<tr><td>Spill Prevention, Control, & Countermeasure</td><td>1,533</td></tr>
<tr><td>DOT Hazmat Awareness</td><td>30</td></tr>
<tr><td>Facility SWPPP Coordinator & Inspector</td><td>1415</td></tr>
</table>
</td></tr>
</table>

		Facility Stormwater Pollution Prevention Plan (SWPPP)	1,227
		VDOT Salt Infrastructure: Good Housekeeping & Pollution Prevention	1,550
		Facility Leak & Spill Control	1,336
		Facility Erodible Stockpile Management	1,548
		Illicit Discharge Detection & Elimination (IDDE) Online Training	136
		Illicit Discharge Detection & Elimination for Contractors	2,443
		Good Housekeeping & Pollution Prevention for Contractors	2,307
		DEQ Inspector for Stormwater Management	48
		DEQ Inspector for Erosion & Sediment Control	134
		Stormwater BMP Crews Training (6-23-2022) - BMP maintenance	17
		TOTAL	**13,724**

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.	A total of 1,288 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: DEQ ESC/SWM Certifications — Certified SWM Program Administrator — 2 SWM Inspector — 65 SWM Plan Reviewer — 12 SWM Combined Administrator — 9 ESC Program Administrator — 4 ESC Inspector — 497 ESC Plan Reviewer — 14 ESC Combined Administrator — 44 Responsible Land Disturber — 344 Dual Combined Administrator — 27 Dual Inspector — 255 Dual Plan Reviewer — 4 This relates only to the certifications awarded by DEQ.

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:	Location and Design 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.	A total of 1,288 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: DEQ ESC/SWM Certifications — Certified SWM Program Administrator — 2 SWM Inspector — 65 SWM Plan Reviewer — 12 SWM Combined Administrator — 9 ESC Program Administrator — 4 ESC Inspector — 497 ESC Plan Reviewer — 14 ESC Combined Administrator — 44 Responsible Land Disturber — 344 Dual Combined Administrator — 27 Dual Inspector — 255 Dual Plan Reviewer — 4 This relates only to the certifications awarded by DEQ.
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 440 individuals trained during this reporting year.

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 documentation providing stipulations regarding use of appropriate control measures for stormwater discharges and prevention of non-stormwater discharges from the VDOT MS4 system.

BMP 6(E) – Annual Reporting and Effectiveness Review

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.	VDOT maintains design criteria for infrastructure related to the storage of deicing materials. The infrastructure and guidance detailed in the waste management and pollution prevention guide are designed to control and minimize pollutant discharge. Compliance with the guidance are periodically assessed during facility compliance assessments. As part of the Department's New Product Review process for chemicals proposed to be used within the Department or applied to Department Right of Way, no deicing chemicals containing urea or other forms of nitrogen or phosphorus were reviewed for use by VDOT during the reporting year. These written procedures together with the *Procedures for Operation and Maintenance Activities* outlined in BMP 6(A)2 Environmental, and the *Annual Standards and Specifications for ESC* 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. 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.
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.

MCM#7:
INFRASTRUCTURE COORDINATION

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**
Meet* annually with each Phase 1 MS4 permittee for the purpose of coordination on priority issues for the Program Plan and TMDL Action Planning relevant to interconnectivity.	This aspect of the BMP is currently being implemented and is an ongoing effort.	VDOT coordinated and met with the following Phase 1 MS4 localities during the reporting year: **Locality** — **Date** Prince William County — 01/25/22 Arlington County — 01/25/22 Chesterfield County — 12/01/21 Henrico County — 12/01/21 Chesapeake — 05/05/22 Hampton — 05/05/22 Newport News — 05/05/22 Norfolk — 05/05/22 Virginia Beach — 05/05/22 Portsmouth — 05/05/22 Fairfax County — 01/25/22 The primary issues discussed during the meetings with each Phase 1 permittee included: – 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 reqmts. – Data Management system approaches and software utilized to facilitate – IDDE – Coordination on high risk industrial facilities, contact information and process
Participate in coordination efforts initiated by Phase 1 MS4 and Small MS4 operators when the VDOT MS4 is physically-interconnected.	Engage and participate with Phase 1 and Small MS4s as requested.	VDOT coordinated and met with among others: - HRPDC Coastal Resilience Committee on topics focused on resiliency, including flooding and design standards; - Fairfax County to participate on Infrastructure Advisory Group - VDOT MS4 small GP TAC participation

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

SC#1:
SPECIAL CONDITIONS FOR CHESAPEAKE BAY TMDL[3]

[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.

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

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

<table>
<tr><th>Expected Efforts and Results in Meeting Measurable Goal</th><th>Implementation Schedule</th><th>Annual Report Information</th></tr>
<tr><td>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.</td><td>Report annually.</td><td>See Appendix F for details on BMP implementation, credits achieved to-date and the Urban BMP Reporting Spreadsheet.</td></tr>
<tr><td>The progress toward meeting the required cumulative reductions for total nitrogen, total phosphorus, and total suspended solids.</td><td>Report annually.</td><td>Parameter
<table>
<tr><th></th><th>TP (lb/yr)</th><th>TN (lb/yr)</th><th>TSS (lb/yr)</th></tr>
<tr><td>James</td><td>11151.70</td><td>39473.37</td><td>10,956,174.55</td></tr>
<tr><td>Potomac</td><td>11354.21</td><td>49236.21</td><td>23,686,246.48</td></tr>
<tr><td>Rappahannock</td><td>645.82</td><td>4,650.58</td><td>1,841,196.16</td></tr>
<tr><td>York</td><td>707.62</td><td>3,406.84</td><td>1,106,880.53</td></tr>
</table>
Total Reductions Reported to Date (all basins):
<table>
<tr><td>23,859.35</td><td>96,767.00</td><td>37,590,497.72</td></tr>
</table></td></tr>
<tr><td>A list of control measures that are planned to be implemented during the next reporting period.</td><td>Report annually</td><td>See Appendix F for details on the proposed PY23 implementation schedule.</td></tr>
</table>

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

SC#2:
SPECIAL CONDITIONS FOR APPROVED LOCAL TMDLS[4]

[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.

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 G.
Update Existing Local TMDL Action Plans *(TMDLs approved before July 2013)** 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 *(TMDLs approved between July 2013 and June 2017)** 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 G.
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.

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.

PROGRAM EVALUATION, MODIFICATION, AND REPORTING

Through the MS4 Steering Committee meetings, VDOT will annually evaluate the effectiveness of each strategy or practice. VDOT routinely evaluates specific standards and specifications, schedules, manuals, checklists, and other documents. Revisions to the MS4 Program Plan are expected throughout the life of this permit as part of the iterative process to reduce pollutant loading and protect water quality. As such, revisions made in accordance with this permit as a result of the iterative process do not require modification of this permit. VDOT will document revisions to the MS4 Program Plan as part of the Annual Report, including an explanation as to why a specific BMP was replaced or eliminated. 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).

Appendix A
List of TMDL Committees, Meetings & Activities

October 2022

Local TMDL Technical Advisory Committee Meetings

Meeting Name/Venue	Date
Sand Branch Benthic TMDL Public Meeting and Technical Advisory Committee (TAC) 5th Meeting	4/20/2022
James River Tributaries Benthic TMDL TAC Meeting	5/9/2022

Local TMDL & Watershed Implementation Plan Meetings

Meeting Name/Venue	Date

Activities

Meeting Name/Venue	Date
VWEA Stormwater Committee Meeting	07/22/2021
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	07/29/2021
CCRM Shoreline Management Webinar. Tidal Marsh Ecology	08/11/2021
CCRM Shoreline Management Webinar. Integrated Shoreline Management	08/25/2021
Stormwater Webinar: Erosion & Sediment – A Dirty Mess or Opportunity for Thoughtful Management	09/10/2021
WaterJam 2021	09/15-16/2021
DEQ State Lands WIP Meeting	09/13/2021
NCHRP Synthesis Topic 53-05: Practices for Stormwater Bioretention	09/17/2021
Middle Peninsula Restoration Workshop	09/21-23/2021
Virginia Water Monitoring Council Conference	09/30/2021
DEQ State Lands WIP Meeting	10/13/2021
Living Shoreline Collaborative Summit	10/13/2021
Middle James River Roundtable Annual Meeting	10/14/2021
Bioretention Design as Green Infrastructure	10/15/2021
National Stormwater Practitioners' Virtual Forum	10/18-19/2021
Using Fluvial Geomorphology to Improve Stream Restoration in the Chesapeake Bay	10/18-21/2021
NCHRP Synthesis Topic 53-05: Practices for Stormwater Bioretention	10/20/2021
GI & Nature-Based Solutions for Economic Recovery in NE	10/27/2021
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	10/28/2021
Chesapeake Bay SAG Meeting	11/03/2021
Coastal Partners Workshop	11/16/2021
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	11/30/2021
Soil Health in the Urban Context: Panel Discussion	12/03/2021
DEQ State Lands WIP Meeting	12/08/2021
DEQ MS4 TAC General Permit TAC	12/13/2021
Hydrologic Innovations in USGS StreamStats App	12/14/2021
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	12/16/2021
Leading Practices in Climate Adaptation	01/06/2022

CB Webinar Series: A Planner's Guide to the Chesapeake Bay	01/20/2022
Leading Practices in Climate Adaptation: Greenhouse Gas Energy in the Water Sector	01/20/2022
ICPRB-Winter Salt Management in Potomac Basin	01/21/2022
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	02/23/2022
VLWA	03/7-8/2022
DEQ State Lands WIP Meeting	03/22/2022
DEWQ SWM for Inspectors prep class	03/29/2022
Environment Virginia	03/29-31/2022
National Stormwater Practitioners' Forum	04/12-14/2022
James City Co. Wetland Board	04/13/2022
DEQ MS4 TAC General Permit TAC	04/18/2022
VWEA – Stormwater Seminar	04/21/2022
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	04/28/2022
DEQ MS4 TAC General Permit TAC	06/13/2022
Pooled Monitoring Restoration Research Forum	06/16/2022
WEF Stormwater Summit	06/28-29/2022

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

October 2022

MS4 Reporting PY21 (July 1, 2021 through June 30, 2022) New SWM Facilities brought online within the Census Urban Areas that were not reported at construction general permit termination; MCM #5/BMP 5(B)*

VDOT Facility Type	DEQ Facility Type (Water Quality)	Latitude	Longitude	Total Acres Treated	Pervious Acres Treated	Impervious Acres Treated	Date Brought Online	6th Order HUC	Date Last Inspected
Extended Detention Basin	n/a	37.1165	-80.4229	4.11	3.31	0.80	01/14/22	RU04	01/14/22
Bioretention Basin	Bioretention Basin	37.3344	-80.0160	1.93	1.07	0.86	02/08/22	RU14	02/08/22
Bioretention 1 CH	Bioretention 1	37.3320	-80.0223	1.39	0.32	1.07	06/30/22	RU14	06/30/22
Dry Swale 1 CH	Dry Swale 1	37.3348	-80.0155	1.04	0.6	0.54	06/30/22	RU14	06/30/22
Dry Swale 1 CH	Dry Swale 1	37.3373	-80.0081	4.94	3.48	1.46	06/30/22	RU14	06/30/22
Dry Swale 1 CH	Dry Swale 1	37.3352	-80.0149	1.39	0.56	0.83	06/30/22	RU14	06/30/22
Dry Swale 1 CH	Dry Swale 1	37.3360	-80.0136	2.47	1.85	0.63	06/30/22	RU14	06/30/22
Dry Swale 1 CH	Dry Swale 1	37.3357	-80.0134	2.36	1.22	1.03	06/30/22	RU14	06/30/22
Dry Swale 1 CH	Dry Swale 1	37.3370	-80.0096	0.87	0.48	0.39	06/30/22	RU14	06/30/22
Bioretention Basin	Bioretention Basin	37.3400	-79.9987	2.55	2.08	0.47	02/08/22	RU12	02/08/22

* Stormwater BMP facilities in this table represent those within the urbanized area brought online during the PY22 period and that are maintained by VDOT. Excluded here are those BMPs that were already reported to DEQ through VDOT's monthly CGP permit termination process, or those where the project and CGP permit was administered by others such as a locality (e.g. LAP or LUP project) in accordance with Part I.C.5.f-h

Appendix C
BMP Inspections Performed during the Reporting Year

October 2022

BMP Numbers – MS4 Annual Report (PY22)

District	Number of BMPs	Number of BMP Inspections*
Bristol	8	8
Culpeper	40	40
Fredericksburg	75	69 (2 removed, 1 under construction, 3 new)
Hampton Roads	165	123 (42 new)
Lynchburg	13	13
Northern Virginia	604	552 (10 removed, 40 under construction, 2 new)
Richmond	211	191 (18 removed, 2 new)
Salem	72	58 (13 under construction, 1 new)
Staunton	45	43 (2 removed)
Rest Areas	17	16 (1 under construction)

* Inspections reported for BMPs in the Urbanized Area.

Appendix D
VDOT Environmental Employee Training Summary

October 2022

MS4 Permit Year 2021 - 2022	
Type of Training	**Number of Employees Trained**
SPCC	2166
Facility SWPPP	3293
DOT Hazmat Awareness	30
VDOT Salt Infrastructure	1727
Facility Leak & Spill Control	1336
Facility Erodible Stockpile Management	1641
Illicit Discharge Detection & Elimination	2443*
Good Housekeeping and Pollution Prevention for Contractors	2307*
Total	**14,943**

*sum of the number of YouTube views in PY22, number of trainees via VDOT's Virtual Campus, and contractor trainees indicated in notification letters

Appendix E
MCM 7 Infrastructure Coordination Meetings

October 2022

Infrastructure Coordination Meetings with Other MS4s

Meeting Name/Venue	Date	Anticipated Future Participation
Prince William County & VDOT Annual Infrastructure Coordination Meeting	1/25/2022	Yes, anticipate Infrastructure Coordination meeting during PY23
Arlington County & VDOT Annual Infrastructure Coordination Meeting	1/25/2022	Yes, anticipate Infrastructure Coordination meeting during PY23
Chesterfield County & VDOT Annual Infrastructure Coordination Meeting	12/1/2021	Yes, anticipate Infrastructure Coordination meeting during PY23
Henrico County & VDOT Annual Infrastructure Coordination Meeting	12/1/2022	Yes, anticipate Infrastructure Coordination meeting during PY23
Chesapeake & VDOT Annual Infrastructure Coordination Meeting	5/5/2022	Yes, anticipate Infrastructure Coordination meeting during PY23
Hampton & VDOT Annual Infrastructure Coordination Meeting	5/5/2022	Yes, anticipate Infrastructure Coordination meeting during PY23
Newport News & VDOT Annual Infrastructure Coordination Meeting	5/5/2022	Yes, anticipate Infrastructure Coordination meeting during PY23
Norfolk & VDOT Annual Infrastructure Coordination Meeting	5/5/2022	Yes, anticipate Infrastructure Coordination meeting during PY23
Virginia Beach & VDOT Annual Infrastructure Coordination Meeting	5/5/2022	Yes, anticipate Infrastructure Coordination meeting during PY23
Portsmouth & VDOT Annual Infrastructure Coordination Meeting	5/5/2022	Yes, anticipate Infrastructure Coordination meeting during PY23
Fairfax County & VDOT Annual Infrastructure Coordination Meeting	1/25/2022	Yes, anticipate Infrastructure Coordination meeting during PY23

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

October 2022

	Parameter		
	TP (lb/yr)	TN (lb/yr)	TSS (lb/yr)
James	11151.70	39473.37	10956174.55
Potomac	11354.21	49236.21	23686246.48
Rappahannock	645.82	4650.58	1841196.16
York	707.62	3406.84	1106880.53
Total Reductions Reported to Date (all basins):	**23859.35**	**96767.002**	**37590497.73**
Reduction Requirement (Special Condition D2- 36%)	5227.00	27581.00	3551947.00
% Complete to date (Special Condition D2- 36%)	456.46%	350.85%	1058.31%

Reduction Requirement (100%)	14519.44	76613.89	9866519.44
% Complete to date (100%)	164.33%	126.30%	380.99%

James River Basin

	Reductions			
	TP (lb/yr)	TN (lb/yr)	TSS (lb/yr)	
Redevelopment				
Jamestown-Scotland Ferry (UPC 102110)	1.83	14.09	894.20	<--Previously reported in 2016 MS4 Annual Report
Rt. 264 (UPC 104331)	6.35	45.76	3465.59	<--Previously reported in 2016 MS4 Annual Report
Stream Restoration and Stabilization				
Lithia Road Stream Restoration	93.70	103.30	61812.40	<--Previously reported in 2018 MS4 Annual Report
Skiffes Creek Stream Restoration	199.00	469.00	377049.18	<--Previously reported in 2018 MS4 Annual Report
Timsbury Creek Stream Restoration	985.00	2700.38	573480.66	<--Previously reported in 2018 MS4 Annual Report
Slatersville AHQ Stream Restoration	186.00	425.00	353852.46	<--Previously reported in 2020 MS4 Annual Report
Proctors Creek Stream Restoration	**528.27**	**1373.33**	**1036000.00**	**<--- New for 2022 MS4 Annual Report**
Randolph Creek Stream Restoration	**3461.70**	**7516.82**	**6593700.00**	**<--- New for 2022 MS4 Annual Report**
Outfall and Channel Stabilization				
Route 60 (UPC 105139)- Installed 6/30/2014	3.53	3.89	784.57	<--Previously reported in 2017 MS4 Annual Report. Verified 2/14/2019
Route 5 (UPC 106842) - Installed 6/24/2016-2/28/2017	1.22	1.35	272.34	<--Previously reported in 2017 MS4 Annual Report. Verified 7/7/2021
Quarterpath Outfall - Installed 7/16/2016-9/30/2017	5.44	6.00	1210.40	<--Previously reported in 2018 MS4 Annual Report. Verified 7/7/2021
Harbor Pointe Outfall Stabilization	**27.40**	**59.50**	**52200.00**	**<--- New for 2022 MS4 Annual Report**
RDC Grass Channel/Gully	**37.82**	**84.07**	**262500.00**	**<--- New for 2022 MS4 Annual Report**
Historical BMPs	3.00	22.00	3538.00	<--Previously reported in 2016 MS4 Annual Report
Land Cover Conversion				
Skiffes Land Cover Conversion	0.15	1.61	20.00	<--Previously reported in 2018 MS4 Annual Report
RDC Land Cover Conversion	1.76	18.46	**212.20**	<--Previously reported in 2018 MS4 Annual Report
I-295 Plantings 2019	11.25	117.79	1400.83	<--Previously reported in 2019 MS4 Annual Report
Culpeper District	0.00	857.00	0.00	<--Previously reported in 2019 MS4 Annual Report Addendum
Staunton District	0.00	1997.90	0.00	<--Previously reported in 2019 MS4 Annual Report Addendum
Lynchburg District Pollinator Areas	0.00	354.90	0.00	<--Previously reported in 2019 MS4 Annual Report Addendum
I-295 Plantings 2020	3.09	32.39	372.36	<--Previously reported in 2020 MS4 Annual Report
BMP Retrofit 20030	0.50	5.40	62.40	<--Previously reported in 2020 MS4 Annual Report
BMP Retrofit 20046	0.90	9.40	108.10	<--Previously reported in 2020 MS4 Annual Report
Mowing Practices	0.00	8820.63	0.00	<--Previously reported in 2020 MS4 Annual Report Addendum
Land Conversion I-64 Interchanges, VA-288 Interchange, & Galts Mill Road Weigh Station Henrico County & Amherst County, Virginia	**37.25**	**171.66**	**12408.01**	**<--New for 2022 MS4 Annual Report**
Street Sweeping and Catch Basin Cleanout	**5286.62**	**13216.55**	**1585762.00**	**<--New for 2022 MS4 Annual Report**
Nutrient Credit Purchase				
Swiss Dixie Nutrient Bank (6/21/16)	20.00	66.94	574.60	<--Previously reported in 2016 MS4 Annual Report. TSS Updated 2021
Cranston's Mill Pond Bank (5/19/15)	15.00	33.00	0.00	<--Previously reported in 2016 MS4 Annual Report.
Swiss Dixie Nutrient Bank (6/2/17)	2.00	6.69	57.46	<--Previously reported in 2017 MS4 Annual Report. TSS Updated 2021
Swiss Dixie Nutrient Bank (6/2/17)	103.00	344.74	2959.19	<--Previously reported in 2017 MS4 Annual Report. TSS Updated 2021
Hunts Creek Huntrient Bank (6/7/2018)	15.12	50.61	1302.13	<--Previously reported in 2018 MS4 Annual Report. TSS Updated 2021
Namozine Nutrient Bank (6/7/2018)	0.90	3.01	25.86	<--Previously reported in 2018 MS4 Annual Report. TSS Updated 2021

Sams Nutrient Bank (6/7/18)	6.90	31.00	1138.22	<--Previously reported in 2018 MS4 Annual Report. TSS Updated 2021
Potamoi Holdings (4/25/19)	13.14	100.00	262.29	<--Previously reported in 2019 MS4 Annual Report. TSS Updated 2021
Structural BMP Enhancement and Retrofit				
Lynchburg District Stormwater Pond	11.89	37.29	5708.01	<--Previously reported in 2017 MS4 Annual Report
VDOT Richmond District Outfall Retrofit	2.49	17.80	1160.00	<--Previously reported in 2017 MS4 Annual Report
Pine Chapel	2.22	8.27	1005.65	<--Previously reported in 2017 MS4 Annual Report
Skiffes Upland Dry Swale	0.77	5.85	380.00	<--Previously reported in 2018 MS4 Annual Report
RDC Level Spreader	1.25	8.89	0.00	<--Previously reported in 2018 MS4 Annual Report
BMP Retrofit 20030	31.70	139.80	8669.70	<--Previously reported in 2020 MS4 Annual Report
BMP Retrofit 20046	32.40	130.80	6660.00	<--Previously reported in 2020 MS4 Annual Report
RDC Sediment Forebay	**6.07**	**32.98**	**3178.87**	**<--New for 2022 MS4 Annual Report**
RDC Bioretention Basin	**4.55**	**24.97**	**1749.64**	**<--New for 2022 MS4 Annual Report**
RDC BioSwale	**0.52**	**2.55**	**237.22**	**<--New for 2022 MS4 Annual Report**
Total Credit Reported	11,152	39,473	10,956,175	
Reduction Requirement (Special Condition D2- 36%)	1,948	7,007	904,473	
% Complete to date (Special Condition D2 36%)	572%	563%	1211%	

Project Name: *Proctors Creek*

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

Geographic (County/City):	*Chesterfield Cou*	District:	*Richmond*	Residency:	*Chesterfield*	River Basin:	*James*
Inside Year 2000 Urbanized Area? (Y/N)	*Yes*	Latitude:	*37.39*	Longitude:	*-77.45*	Coastal/ Non-Coastal:	*Coastal*

BMP Type: *Stream Restoration*

Project Description:

Proctors Creek is approximately 1,500 linear feet. This project used natural channel design for stabilization and restored the channel connection to the floodplain.

Project Drainage Area:

Inside CUA	*Impervious Area (ac.)*	*902.46*	*Pervious Area (ac.)*	*3,084.48*			
Outside CUA	*Impervious Area (ac.)*	*0*	*Pervious Area (ac.)*	*0*	*Forested Area (ac.)*	*1.00*	

Existing Conditions Proposed Improvements:

Compensatory? (Y/N)	*N*	Onsite stream relocation? (Y/N)	*N*
Condition of Existing Stream	*Eroding banks*		
Proposed Stream Designed using Natural Channel priniciples? (Y/N)	*Y*		
Linear Feet Restored (centerline)	*1,500.00*	Existing Avg Bank Height Restored (ft)	*3.00*
Method of Stabilization:	*Protocol 1, Protocol 2*	Existing Avg Channel Top Width (ft)	

Qualifying Conditions:

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

Method of Estimating Bank Erosion

1.) Measured in-field pre-restoration	N	2.) BANCS Method	Y	3.) Interim Rate	N

Protocols applied: Protocol 1, Protocol 2

Estimated Credit	TN	TP	TSS	
lbs/yr	1,373.33	528.27	1,036,000.00	*SDR applied? (Y/N) N

Discussion

Protocol 1 and 2 were used for crediting. Load reductions were determined by subtracting the post-restoration loads from pre-restoration loads.

Est. Implementation Date:	*11/30/2020*	**Project Contact Name:**	*Carolyn Keeler*
Project Completed:	*Yes*	**Contact Information (email/phone):**	*(804) 267-3474*

Photos, Plans and/or Project graphics

Photos, Plans and/or Project graphics

Plans, Profile sheets available? (Y/N) Y

Please include as attachments

Project Name: *Randolph Creek*

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

Geographic (County/City):	*Buckingham Co*	District:	*Lynchburg*	Residency:	*Farmville*	River Basin:	*James*
Inside Year 2000 Urbanized Area? (Y/N)	*No*	Latitude:	*37.616106*	Longitude:	*-78.334789*	Coastal/ Non-Coastal:	*Non-Coastal*

BMP Type: *Stream Restoration*

Project Description:

Randolph Creek is 9,826 linear feet. This project used natural channel design for stabilization. It includes in-stream restoration, riparian buffer planting, stream and riparian buffer preservation, and reconnection to the floodplain.

Project Drainage Area:

Inside CUA	*Impervious Area (ac.)*	*0.00*	*Pervious Area (ac.)*	*0.00*			
Outside CUA	*Impervious Area (ac.)*	*95.08*	*Pervious Area (ac.)*	*7079.34*	*Forested Area (ac.)*	*0.00*	

Existing Conditions Proposed Improvements:

Compensatory? (Y/N)	*N*	Onsite stream relocation? (Y/N)	*N*
Condition of Existing Stream	*Severe degradation and loss of riparian buffers and floodplain connection*		
Proposed Stream Designed using Natural Channel priniciples? (Y/N)	*Y*		
Linear Feet Restored (centerline)	*9,826.00*	Existing Avg Bank Height Restored (ft)	*3.00*
Method of Stabilization:	*Protocol 1*	Existing Avg Channel Top Width (ft)	*0.00*

Qualifying Conditions:

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

Method of Estimating Bank Erosion

1.) Measured in-field pre-restoration	N	2.) BANCS Method	Y	3.) Interim Rate	N

Protocols applied: Protocol 1

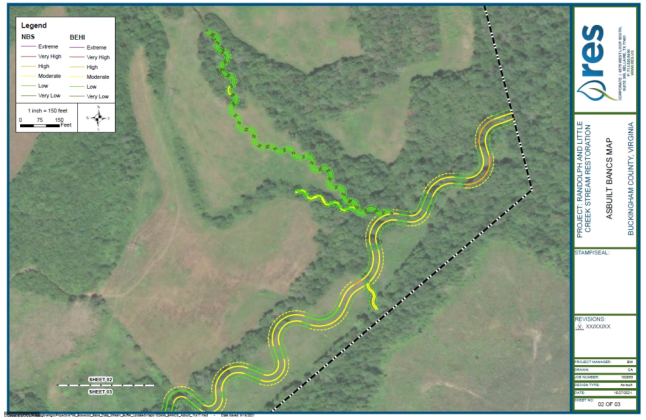
Estimated Credit	TN	TP	TSS		
lbs/yr	7,516.82	3,461.70	6,593,700.00	*SDR applied? (Y/N)	N

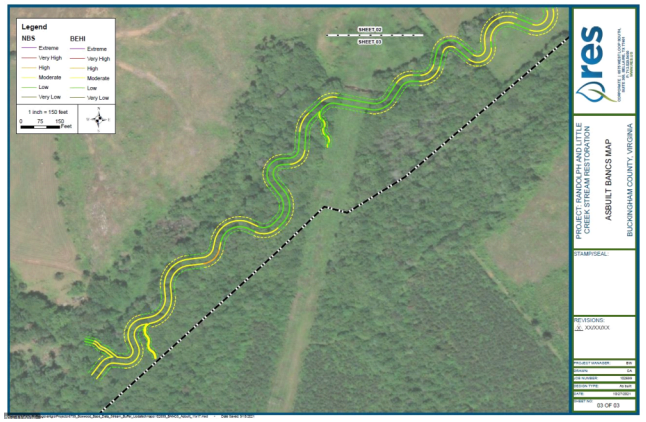
Discussion

Protocol 1 is used for crediting.

Est. Implementation Date:	*9/1/2021*	**Project Contact Name:**	*Tracey Harmon*
Project Completed:	*Yes*	**Contact Information (email/phone):**	*(804) 371-6834*

Photos, Plans and/or Project graphics





Photos, Plans and/or Project graphics

Plans, Profile sheets available? (Y/N) Y

Please include as attachments

Project Name: *Harbour Pointe Parkway*

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

Geographic (County/City):	*Chesterfield Cou*	District:	*Richmond*	Residency:	*Chesterfield*	River Basin:	*James*
Inside Year 2000 Urbanized Area? (Y/N)	*Yes*	Latitude:	*37.411678*	Longitude:	*-77.650741*	Coastal/ Non-Coastal:	*No*

BMP Type: *Outfall Stabilization*

Project Description:

This project repaired VDOT Outfall RC-AB-5-008, that carries flow from residential and commercial areas under Private Drive,by fixing the undercut and to stabilizing the channel to the downstream culvert that crosses under Harbour Pointe Parkway. The undercut was filled and a series of step-pool structures was installed to dissipate energy from flow.

Project Drainage Area:

Inside CUA	*Impervious Acres:*	*29.41*	*Pervious Acres:*	*15.38*			
Outside CUA	*Impervious Acres:*	*0*	*Pervious Acres:*	*0*	*Forested Acres:*	*0.00*	

Existing Conditions Proposed Improvements:

Linear Feet Restored (centerline)	*40.00*	Existing Avg Bank Height Restored (ft)	*4.00*
Method of Stabilization:	*Step Pools*	Existing Avg Channel Top Width (ft)	*15.00*
Proposed Channel Geometry:	*Step Pools*		

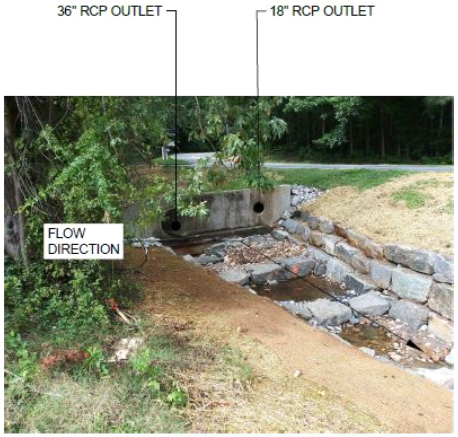
Estimated Credit	TN	TP	TSS
lbs/yr	59.50	27.40	52,200.00

Discussion

This project used Protocol 1 for crediting. Load reductions were determined by subtracting the post-restoration loads from pre-restoration loads. There was approximately a 98% reduction.

Implementation Date	*6/30/2021*	**Project Contact Name:**	*Joseph Parfitt*
Project Completed:	*Yes*	**Contact Information (email/phone):**	*(804) 339-4365*

Photos, Plans and/or Project graphics



CONCRETE HEADWALL WITH 18" & 36" RCP OUTLETS

Photos, Plans and/or Project graphics

Plans, Profile sheets available? (Y/N) Y

Please include as attachments

Project Name: *Gully Repair/Grass Channel*

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

Geographic (County/City):	*Chesterfield Cou*	District:	*Richmond*	Residency:	*Chesterfield*	River Basin:	*James*
Inside Year 2000 Urbanized Area? (Y/N)	*Yes*	Latitude:	*37.291*	Longitude:	*-77.401*	Coastal/ Non-Coastal:	*No*

BMP Type: *Outfall Stabilization*

Project Description:

This project rerouted overland flow into a new grass channel and stabilized an eroding gully.

Project Drainage Area:

Inside CUA	*Impervious Acres:*	*0.39*	*Pervious Acres:*	*1.17*			
Outside CUA	*Impervious Acres:*	*0*	*Pervious Acres:*	*0*	*Forested Acres:*	*0.00*	

Existing Conditions Proposed Improvements:

Linear Feet Restored (centerline)	*65.00*	Existing Avg Bank Height Restored (ft)	*2.00*
Method of Stabilization:	*P5*	Existing Avg Channel Top Width (ft)	*6.00*
Proposed Channel Geometry:	*P5*		

Estimated Credit	TN	TP	TSS
lbs/yr	84.07	37.82	131.25

Discussion

This project rerouted overland flow into a new grass channel and stabilized an eroding gully. P5 was used for crediting the outfall.

Implementation Date	*1/1/2022*	**Project Contact Name:**	*Joseph Parfitt*
Project Completed:	*Yes*	**Contact Information (email/phone):**	*(804) 339-4365*

Photos, Plans and/or Project graphics

Photos, Plans and/or Project graphics

Plans, Profile sheets available? (Y/N) Y

Please include as attachments

Project Name: Land Conversion I-64 Interchanges, VA-288 Interchange, & Galts Mill Road Weigh Station Henrico County & Amherst County, Virginia

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

Geographic (County/City):	*Goochland County*	District:	*Richmond*	Residency:	*Ashland*	River Basin:	*James*
Inside Year 2000 Urbanized Area? (Y/N)	*Yes*	Latitude:	*37.291*	Longitude:	*-77.401*		

BMP Type: *Land Cover Conversion*

Project Description:
The project is the land conversion of 22.40 acres of currently mowed interstate right of way to un-maintained forested areas through planting and changes in mowing practices. Three of the four project sites are in the vicinity of Richmond, VA. Two locations are along I-64; one at the interchange of Gaskins Road and the other at the interchange of I-295, to the east of Richmond. The other site is in Henrico County at the interchange of VA-288 and Broad Street. The fourth site is located Northeast of Lynchburg, off Galts mill Road and Rt.29 North. All the sites are in the James River watershed.

Land Cover Conversion:

Conversion Area	From / To	Acres	Edge of Stream Reductions by POC achieved by conversion TN lbs/yr	TP lbs/yr	TSS lbs/yr
Area 1	Pervious to Forest	25.8	163.77	35.81	11,955.15
Area 2					
Area 3					

Minimum Criteria for Forest Classification:

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

Forest Buffer (if applicable)

Converted riparian buffer (acres)	0.8
Upland area draining to forest buffer (acres):	1.60
Maximum upland acres creditable:	0.80

NOTE: Min. ratio of upland area to forest buffer is 2:1 (ex. 2 acres sheet flows to 1 acre of forest buffer).

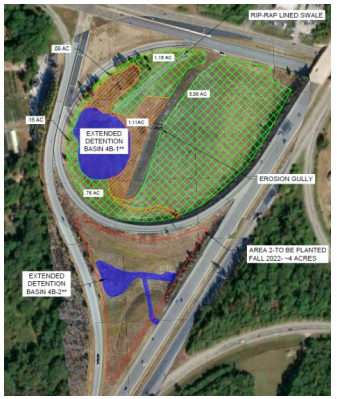
Credit Achieved by Forest Buffer:

	TN	TP	TSS
lbs/yr	7.89	1.51	452.86

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

Discussion
The credits for the land conversion were calculated from Table V.H.1 - Land Use Change Conversion Efficiency Table from the GM20-2003.

Photos, Plans and/or Project graphics



Date BMP Functional:	*9/22/2021*	**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

Free Union AHQ FY22

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	
10	20528	0.7	0.0025	0.001	0.233073355	

Before discount

TN Removed	**36**	lbs
TP Removed	**14**	lbs
TSS Removed	**3349**	lbs

For Ches Bay

TN Removed	**8**	lbs
TP Removed	**3**	lbs
TSS Removed	**781**	lbs

For Rivanna

TN Removed	**8**	lbs
TP Removed	**3**	lbs
TSS Removed	**781**	lbs

For Moore

TN Removed	**4**	lbs
TP Removed	**2**	lbs
TSS Removed	**396**	lbs

Discount Factor (Updated 2022)

Total state-maintained length	517.2202777	mi
Total state-maintained length in CUA	120.5502653	mi
James/Overall Discount Factor	0.233073355	

Rivanna Discount Factor (Updated 2022)

Total state-maintained length in Rivanna in CUA	120.5502653	mi
Rivanna Discount Factor	0.233073355	

Moore Discount Factor (Updated 2022)

Total state-maintained length in Moore in CUA	61.17444766	mi
Moore Discout Factor	0.118275424	

HR Peninsula 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)
89	177200	0.7	0.0025	0.001	0.3	

Before Discount

TN Removed	**310**	lbs
TP Removed	**124**	lbs
TSS Removed	**37212**	lbs

James

TN Removed	**101**	lbs
TP Removed	**40**	lbs
TSS Removed	**12121**	lbs

York

TN Removed	**93**	lbs
TP Removed	**37**	lbs
TSS Removed	**11150**	lbs

Discount Factor (Updated 2022)

Total interstate lengtl	37.55831586	mi
Total interstate lengtl	40.83092379	mi
Total interstate lengtl	125.3488906	mi
Total interstate lengtl	78.38923964	mi
Overall Discount Fact	0.625368436	
James Discount Facto	0.325738214	
York Discount Factor	0.299630222	

HR Southside 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 (lbs/yr)	TP Reduction Ratio (lbs/yr)	TSS Reduction Ratio (lbs/yr)	Discount Factor
3392	6784160	0.7	0.0025	0.001	0.3	0.978

Before Discount

TN Removed	**11872**	lbs
TP Removed	**4749**	lbs
TSS Removed	**1424674**	lbs

CUA Discount

TN Removed	**11617**	lbs
TP Removed	**4647**	lbs
TSS Removed	**1394003**	lbs

Discount Factor (Updated 2022)

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

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)
1068	2136000	0.7	0.0025	0.001	0.3	

Before Discount

TN Removed	**3738**	lbs
TP Removed	**1495**	lbs
TSS Removed	**448560**	lbs

James

TN Removed	**1488**	lbs
TP Removed	**595**	lbs
TSS Removed	**178570**	lbs

York

TN Removed	**33**	lbs
TP Removed	**13**	lbs
TSS Removed	**3948**	lbs

Chickahominy

TN Removed	**71**	lbs
TP Removed	**28**	lbs
TSS Removed	**8495**	lbs

Discount Factor (Updated 2022)

Total interstate lengtl	5.486712559	mi
Total interstate lengtl	248.1358923	mi
Total interstate lengtl	623.3068515	mi
Total interestate leng	253.6226049	mi
Overall Discount Factor	0.406898471	
James Discount Factor	0.398095884	
York Discount Factor	0.008802587	

Chickahominy Discount Factor (Updated 2022)

Total interstate lengtl	11.80437272	mi
Chickahominy Discount Factor	0.018938301	

Salem 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
117	233000	0.7	0.0025	0.001	0.3	0.01

Before Discount

TN Removed	**408**	lbs
TP Removed	**163**	lbs
TSS Removed	**48930**	lbs

For Ches Bay

TN Removed	**2**	lbs
TP Removed	**1**	lbs
TSS Removed	**287**	lbs

Crab Creek

TN Removed	**4**	lbs
TP Removed	**2**	lbs
TSS Removed	**459**	lbs

Stroubles

TN Removed	**2**	lbs
TP Removed	**1**	lbs
TSS Removed	**281**	lbs

Upper Roanoke

TN Removed	**43**	lbs
TP Removed	**17**	lbs
TSS Removed	**5158**	lbs

Discount Factor (Updated 2022)

Total state-maintaine	13534.40186	mi
Total state-maintaine	79.45685239	mi
James/ Overall Discount Factor	0.005870732	

Crab Creek Discount Factor (Updated 2022)

Total state-maintaine	126.9157995	mi
Crab Creek Discount Factor	0.009377274	

Stroubles Discount Factor (Updated 2022)

Total state-maintaine	77.71233632	mi
Stroubles Discount Factor	0.005741838	

Upper Roanoke (Updated 2022)

Total state-maintaine	1426.785039	mi
Upper Roanoke Disco	0.105419143	

Project Name: *RDC-Pond Sediment Forebay*

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

Geographic (County/City):	*Chesterfield Cou*	District:	*Richmond*	Residency:		River Basin:	*James*
Inside Year 2000 Urbanized Area? (Y/N)	*Yes*	Latitude:	*37.291*	Longitude:	*-77.401*		

BMP Type: *Pond*

Project Description:

This project designed a Wet Pond Forebay to treat runoff on the Richmond District Complex as part of a project with multiple BMPs.

Project Drainage Area:

Inside CUA	*Impervious Area (acres):*	*12.60*	*Pervious Area (acres):*	*5.80*
Outside CUA	*Impervious Area (acres):*	*0.00*	*Pervious Area (acres):*	*0.00*

Qualifying Criteria:

Does the BMP meet the design standards and specs in the Virginia Stormwater BMP Clearinghou *Yes*

Method for Crediting

Methodology II - Chesapeake Bay Program Retrofit Curves/Equations

Estimated Credit	TN	TP	TSS
lbs/yr	32.98	6.07	3,178.87

Discussion

This is a retrofit for the existing pond. The existing pond was not reported as a treatment facility and considered to provide no treatment. The Retrofit Curves and 2009 EOS Loading Rates from GM20-2003 were used to calculate pollutant removal.

Implementation Date *1/1/2021* **Project Contact Name:** *Joe Parfitt*

Project Completed: *Yes* **Contact Information (email/phone):** *(804) 339-4365*

Photos, Plans and/or Project graphics

Photos, Plans and/or Project graphics

Plans, Profile sheets available? (Y/N) Yes

Please include as attachments

Project Name: ***Bioretention at RDC***

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

Geographic (County/City):	*Chesterfield Cou*	District:	*Richmond*	Residency:	*Chesterfield*	River Basin:	*James*
Inside Year 2000 Urbanized Area? (Y/N)	*Yes*	Latitude:	*37.291*	Longitude:	*-77.401*		

BMP Type: *Bioretention*

Project Description:

This project designed a Bioretention Basin to treat runoff on the Richmond District Complex as part of a project with multiple BMPs.

Project Drainage Area:

Inside CUA	*Impervious Area (acres):*	*4.98*	*Pervious Area (acres):*	*2.71*
Outside CUA	*Impervious Area (acres):*	*0.00*	*Pervious Area (acres):*	*0.00*
			BMP runoff storage (acres feet)	*0.19*

Qualifying Criteria:

Does the BMP meet the design standards and specs in the Virginia Stormwater BMP Clearinghouse? *No*

Method for Crediting

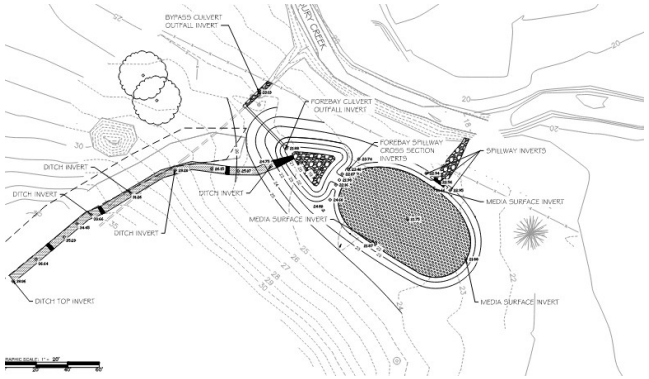
Methodology II - Chesapeake Bay Program Retrofit Curves/Equations

Estimated Credit	TN	TP	TSS
lbs/yr	24.97	4.55	1,749.64

Discussion

This is a New BMP that utilized the Clearinghouse for design as much as existing constraints allowed. The Retrofit Curves and 2009 EOS Loading Rates from GM20-2003 were used to calculate pollutant removal.

Photos, Plans and/or Project graphics



Photos, Plans and/or Project graphics

Plans, Profile sheets available? (Y/N) Y

Please include as attachments

Implementation Date	*1/1/2021*	**Project Contact Name:**	*Joseph Parfitt*
Project Completed:	*Yes*	**Contact Information (email/phone):**	*(804) 339-4365*

Project Name: *Bioswale at RDC*

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

Geographic (County/City):	*Chesterfield Cou*	District:	*Richmond*	Residency:	*Chesterfield*	River Basin:	*James*
Inside Year 2000 Urbanized Area? (Y/N)	*Yes*	Latitude:	*37.291*	Longitude:	*-77.401*		

BMP Type: *Bioswales*

Project Description:

This project designed a Bioswale to treat runoff on the Richmond District Complex as part of a project with multiple BMPs.

Project Drainage Area:

Inside CUA	*Impervious Area (acres):*	*0.80*	*Pervious Area (acres):*	*0.10*
Outside CUA	*Impervious Area (acres):*	*0.00*	*Pervious Area (acres):*	*0.00*
			BMP runoff storage (acres feet)	*0.02*

Qualifying Criteria:

Does the BMP meet the design standards and specs in the Virginia Stormwater BMP Clearinghouse? *No*

Method for Crediting

Methodology II - Chesapeake Bay Program Retrofit Curves/Equations

Estimated Credit	TN	TP	TSS
lbs/yr	2.55	0.52	237.22

Discussion

This is a New BMP that utilized the Clearinghouse for design as much as the existing constraints allowed. The Retrofit Curves and 2009 EOS Loading Rates from GM20-2003 were used to calculate pollutant removal.

Implementation Date	*1/1/2021*	**Project Contact Name:**	*Joseph Parfitt*
Project Completed:	*Yes*	**Contact Information (email/phone):**	*(804) 339-4365*

Photos, Plans and/or Project graphics

Photos, Plans and/or Project graphics

Plans, Profile sheets available? (Y/N) Y

Please include as attachments

Potomac River Basin

	Reductions			
	TP (lb/yr)	TN (lb/yr)	TSS (lb/yr)	
Redevelopment				
Gloucester Parkway (104418)	1.38	4.45	618.22	<--Previously reported in 2016 MS4 Annual Report
Stream Restoration and Stabilization				
Harrisonburg Stream Restoration	204.00	187.00	417348.00	<--Previously reported in 2016 MS4 Annual Report. Verified 5/11/2021. SDR Updated.
Harrisonburg Stream Restoration-Protocol 3	0.00	136.70	0.00	<--Previously reported in 2018 MS4 Annual Report. Verified 5/11/2021.
Lake Ridge AHQ Stream Restoration	178.34	494.89	340331.49	<--Previously reported in 2019 MS4 Annual Report
Wancopin	5759.90	15573.00	15301105.00	<--Previously reported in 2021 MS4 Annual Report
Pikes Branch	3739.00	9195.00	7122295.08	<--Previously reported in 2020 MS4 Annual Report
Outfall and Channel Stabilization	0.00	0.00	0.00	
Historical BMPs	45.00	569.00	90783.00	<--Previously reported in 2016 MS4 Annual Report
Forest Buffers				
Harrisonburg Land Cover Conversion	0.10	12.50	436.00	<--Previously reported in 2017 MS4 Annual Report, Verified 7/12/2022.
Land Cover Conversion				
Harrisonburg Land Cover Conversion	8.41	158.45	2942.40	<--Previously reported in 2017 MS4 Annual Report, Verified 7/12/2022.
Culpeper District	0.00	1510.70	0.00	<--Previously reported in 2019 MS4 Annual Report Addendum
Staunton District	0.00	9878.10	0.00	<--Previously reported in 2019 MS4 Annual Report Addendum
Loudoun Residency Pollinator Areas	0.00	772.80	0.00	<--Previously reported in 2019 MS4 Annual Report Addendum
Northern Virginia Mowing Practices	0.00	2306.00	0.00	<--Previously reported in 2020 MS4 Annual Report
NOVA LCC- Project 21	0.75	14.11	261.93	<--Previously reported in 2020 MS4 Annual Report
Northern Virginia Pollinator Habitats	0.00	20.29	0.00	<--Previously reported in 2020 MS4 Annual Report
Mowing Practices	0.00	3994.07	0.00	<--Previously reported in 2020 MS4 Annual Report Addendum
Culpeper District LCC	**3.42**	**64.51**	**1197.97**	**<--New for 2022 MS4 Annual Report**
Street Sweeping and Catch Basin Cleanout	**1,278.69**	**3,196.73**	**383,608.08**	**<--New for 2022 MS4 Annual Report**
Nutrient Credit Purchase				
Edgecliff Bank (1/31/17)	112.00	832.16	3205.44	<--Previously reported in 2017 MS4 Annual Report. TSS Updated 2021
Potamoi Holdings (4/25/19)	9.54	150.00	10888.50	<--Previously reported in 2019 MS4 Annual Report. TSS Updated 2021
RLP Investments, LC (Kinsales) (4/25/19)	3.19	50.00	3640.91	<--Previously reported in 2019 MS4 Annual Report. TSS Updated 2021
Structural BMP Enhancement and Retrofit	0.00	0.00	0.00	
Reston MTD	1.02	6.78	942.08	<--Previously reported in 2019 MS4 Annual Report
Staunton BMP Retrofit (34029)	2.72	15.61	999.50	<--Previously reported in 2020 MS4 Annual Report
Culpeper-Warrenton BMP Retrofit	**6.75**	**93.36**	**5642.88**	**<--New for 2022 MS4 Annual Report**
Total Credit Reported	11,354	49,236	23,686,246	
Reduction Requirement (Special Condition D2- 36%)	2,811	18,801	2,477,611	
% Complete to date (Special Condition D2- 36%)	404%	262%	956%	

Project Name: *Culpeper LCC*

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

Geographic (County/City):	*Fauquier*	District:	*Culpeper*	Residency:	*Warrenton*	River Basin:	*Potomac*
Inside Year 2000 Urbanized Area? (Y/N)	*No*	Latitude:	*38.909036*	Longitude:	*-77.959447*		

BMP Type: *Land Cover Conversion*

Project Description:

Culpeper LCC achieved land cover conversion through plantings to convert existing turf areas to forest areas.

Land Cover Conversion:

Conversion Area	From / To	Acres	Edge of Stream Reductions by POC achieved by conversion TN lbs/yr	TP lbs/yr	TSS lbs/yr
Area 1	Pervious to Forest	9.01	64.51	3.42	1,197.97
Area 2					
Area 3					

Minimum Criteria for Forest Classification:

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

Forest Buffer (if applicable)

Converted riparian buffer (acres)	0
Upland area draining to forest buffer (acres):	0.00
Maximum upland acres creditable:	0.00

NOTE: Min. ratio of upland area to forest buffer is 2:1 (ex. 2 acres sheet flows to 1 acre of forest buffer).

Credit Achieved by Forest Buffer:

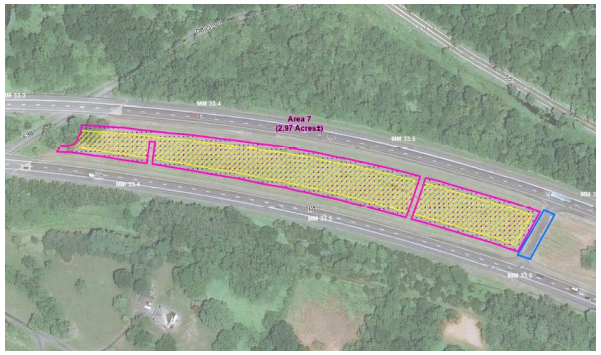
	TN	TP	TSS
lbs/yr			

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

Discussion

This project was part of the Statewide MS4/TMDL Planning and Implementation Services Contract. The task order was issued 8/13/2020, prior to the 2/6/2021 GM20-2003. Therefore, the crediting is based on the Guidance Memo 15-2005.

Photos, Plans and/or Project graphics



Photos, Plans and/or Project graphics

Plans, Profile sheets available? (Y/N) Y

Please include as attachments

Date BMP Functional:	*4/26/2021*	**Project Contact Name:**	*Joe Parfitt*
Project Completed:	*Yes*	**Contact Information (email/phone):**	*(804) 339-4365*

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
675	1349200	0.7	0.0025	0.001	0.3

Before Discount

TN Removed	**2361**	lbs
TP Removed	**944**	lbs
TSS Removed	**283332**	lbs

For Ches Bay

TN Removed	**2199**	lbs
TP Removed	**880**	lbs
TSS Removed	**263898**	lbs

For Bull Run

TN Removed	**247**	lbs
TP Removed	**99**	lbs
TSS Removed	**29649**	lbs

Discount Factor (Updated 2022)

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

Bull Run Discount Factor (Updated 2022)

Total interstate length	36.24201355	mi
Bull Run Discount Factor	0.104645063	

Manassas 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
152	304840.8	0.7	0.0025	0.001	0.3

Before discount

TN Removed	**533**	lbs
TP Removed	**213**	lbs
TSS Removed	**64017**	lbs

For Chesapeake Bay

TN Removed	**438**	lbs
TP Removed	**175**	lbs
TSS Removed	**52618**	lbs

For Bull Run

TN Removed	**86**	lbs
TP Removed	**34**	lbs
TSS Removed	**10319**	lbs

Discount Factor (Update 2022)

Total state-maintained length	2327.64098	mi
Total state-maintained length in CUA	1913.186917	mi
Potomac/Overall Discount Factor	0.821942444	

Bull Run Discount Factor (Update 2022)

Total state-maintained length in Bull Run in CUA	375.2055952	mi
Bull Run Discount Factor	0.161195648	

Project Name: *Culpeper-Warrenton BMP*

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

Geographic (County/City):	*Warrenton*	District:	*Culpeper*	Residency:		River Basin:	*Potomac*
Inside Year 2000 Urbanized Area? (Y/N)	*No*	Latitude:	*38.737941*	Longitude:	*-77.787536*		

BMP Type: *Dry detention basin*

Project Description:

Retrofit

Project Drainage Area:

Inside CUA	*Impervious Area (acres):*	*0.00*	*Pervious Area (acres):*	*0.00*
Outside CUA	*Impervious Area (acres):*	*3.96*	*Pervious Area (acres):*	*34.18*

Qualifying Criteria:

Does the BMP meet the design standards and specs in the Virginia Stormwater BMP Clearinghou *Yes*

Method for Crediting

Methodology II - Chesapeake Bay Program Retrofit Curves/Equations

Estimated Credit	TN	TP	TSS
lbs/yr	96.36	6.75	5,642.88

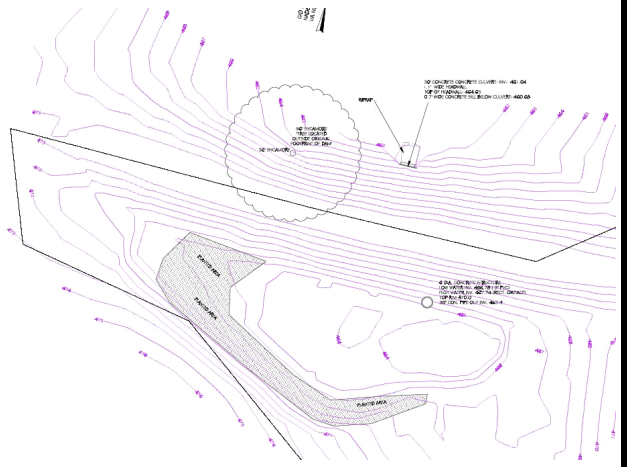
Discussion

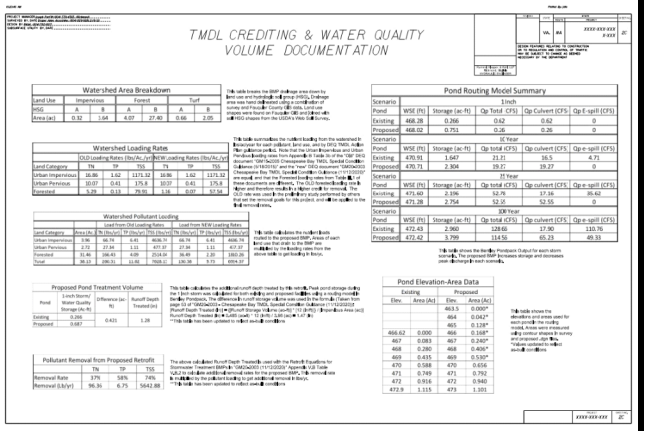
The Retrofit Equations for Stormwater Treatments BMPs in "GM20-2003 (11/12/2020)" Appendix V.B Table V.B.2 were used to calculate the additional removal rates for the proposed BMP.

Implementation Date *4/19/2022* **Project Contact Name:** *Joe Parfitt*

Project Completed: Yes **Contact Information (email/phone):** *(804) 339-4365*

Photos, Plans and/or Project graphics





Photos, Plans and/or Project graphics

Plans, Profile sheets available? (Y/N) Yes

Please include as attachments

Rappahannock Basin

	Reductions			
	TP (lb/yr)	TN (lb/yr)	TSS (lb/yr)	
Redevelopment	0.00	0.00	0.00	
Stream Restoration and Stabilization				
Industrial Drive Stream Restoration Project	110.00	475.00	974464.00	<--Previously reported in 2016 MS4 Annual Report. Verified 4/23/2021. SDR Updated
Industrial Drive Stream Restoration-Protocol 3	0.00	36.70	0.00	<--Previously reported in 2018 MS4 Annual Report. Verified 4/23/2021.
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	
Culpeper District	0.00	2379.90	0.00	<--Previously reported in 2019 MS4 Annual Report Addendum
Chatham Heights	0.90	12.44	124.41	<--Previously reported in 2020 MS4 Annual Report
Mowing Practices	0.00	813.45	0.00	<--Previously reported in 2020 MS4 Annual Report Addendum
Street Sweeping and Catch Basin Cleanout	0.00	0.00	0.00	
Nutrient Credit Purchase	0.00	0.00	0.00	
William Walker III (4/25/19).	13.83	145.17	13571.93	<--Previously reported in 2019 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	
Fredericksburg Filterras (89-062 and 89-063)	1.09	2.92	279.82	<--Previously reported in 2017 MS4 Annual Report
Shoreline Stabilization				
Belle Isle State Park	520.00	785.00	852756.00	<--Previously reported in 2021 MS4 Annual Report
Total Credit Reported	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%	

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
I-64 Outfall Stabilization at NPS (Colonial Parkway)	**437.10**	**941.70**	**822600.00**	**<--New for 2022 MS4 Annual Report**
I-64 Segment III Outfall Stabilization (ID#9)	**3.40**	**3.75**	**756.50**	**<--New for 2022 MS4 Annual Report**
I-64 Segment III Outfall Stabilization (ID#19)	**1.70**	**1.88**	**378.25**	**<--New for 2022 MS4 Annual Report**
I-64 Segment III Outfall Stabilization (ID#20)	**3.74**	**4.13**	**832.15**	**<--New for 2022 MS4 Annual Report**
I-64 Segment III Outfall Stabilization (ID#AO4)	**117.59**	**255.34**	**223984.26**	**<--New for 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	0.00	0.00	0.00	
Culpeper District	4.50	250.50	0.00	<--Previously reported in 2019 MS4 Annual Report addendum
Mowing Practices	26.95	1485.45	0.00	<--Previously reported in 2020 MS4 Annual Report addendum
Street Sweeping and Catch Basin Cleanout	**50.33**	**125.82**	**15,098.33**	**<--New for 2022 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
Shoreline Stabilization				
York River State Park	**1563.00**	**2228.00**	**2568288.00**	**<--New for 2022 MS4 Annual Report**
Total Credit Reported	704	3399	1105909	
Reduction Requirement (Special Condition D2- 36%)	255	868	92595	
% Complete to date (Special Condition D2- 36%)	276%	392%	1194%	

Project Name: *I-64 Colonial Parkway*

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

Geographic (County/City):	*York*	District:	*Hampton Roads*	Residency:	*Williamsburg*	River Basin:	*York*
Inside Year 2000 Urbanized Area? (Y/N)	*No*	Latitude:	*37.277945*	Longitude:	*-76.66295*	Coastal/ Non-Coastal:	*Coastal*

BMP Type: *Stream Restoration*

Project Description:

The reach begins south of Colonial National Historic Parkway and extends northwest towards Lakeshead Drive and is culverted underneath both roadways. The channel provides moderate structural instream habitat, with areas of significant erosion, typically occurring where headcuts are actively advancing upstream, with large vertical walls.

Project Drainage Area:

Inside CUA	*Impervious Area (ac.)*	*3.81*	*Pervious Area (ac.)*	*24.24*			
Outside CUA	*Impervious Area (ac.)*	*0*	*Pervious Area (ac.)*	*0*	*Forested Area (ac.)*	*0.00*	

Existing Conditions Proposed Improvements:

Compensatory? (Y/N)	*N*	Onsite stream relocation? (Y/N)	*N*
Condition of Existing Stream	*Areas of significant erosion, headcuts, and large vertical walls.*		
Proposed Stream Designed using Natural Channel priniciples? (Y/N)	*Y*		
Linear Feet Restored (centerline)	*431.00*	Existing Avg Bank Height Restored (ft)	*8.00*
Method of Stabilization:	*Protocol 1*	Existing Avg Channel Top Width (ft)	*30.00*

Qualifying Conditions:

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

Method of Estimating Bank Erosion

1.) Measured in-field pre-restoration	N	2.) BANCS Method	Y	3.) Interim Rate	N

Protocols applied: Protocol 1

Estimated Credit	TN	TP	TSS		
lbs/yr	941.70	437.10	822,600.00	*SDR applied? (Y/N)	N

Discussion

Due to the length and type of restoration (mainly rip rap) Reach 3 was not eligible for other crediting methods, therefore it was credited using the interim stream restoration rates. Default crediting values were used to assess the 89 linear feet of Reach 3.

Implementation Date:	*4/27/2022*	**Project Contact Name:**	*Joseph Parfitt*
Project Completed:	*Yes*	**Contact Information (email/phone):**	*(804) 339-4365*

Photos, Plans and/or Project graphics

Photos, Plans and/or Project graphics

Plans, Profile sheets available? (Y/N) Y

Please include as attachments

Project Name: *I-64 Outfall Crediting Site 9*

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

Geographic (County/City):	*York County*	District:	*Hampton Roads*	Residency:	*Williamsburg*	River Basin:	*York*
Inside Year 2000 Urbanized Area? (Y/N)	*Yes*	Latitude:	*37.291298*	Longitude:	*-76.674658*	Coastal/ Non-Coastal:	*Yes*

BMP Type: *Outfall Stabilization*

Project Description:

From the project I-64 Improvements – Segment III, VDOT identified 21 eroded outfalls to repair to earn pollutant removal credits in support of their Chesapeake Bay TMDL Action Plan. Pre-construction, Dewberry reviewed these locations along with some additional locations that they identified for crediting and determined that there are five outfalls that could be utilized for nutrient crediting. However, post-construction, only four meet criteria for stabilization and restoration per Dewberry's inspection on March 22, 2022. Site 9 is one of several eroded outfalls that was repaired to earn pollutant removal credits in support of VDOT's Chesapeake Bay TMDL Action Plan.

Project Drainage Area:

Inside CUA	*Impervious Acres:*	*2.36*	*Pervious Acres:*	*3.22*			
Outside CUA	*Impervious Acres:*	*0*	*Pervious Acres:*	*0*	*Forested Acres:*	*4.86*	

Existing Conditions Proposed Improvements:

Linear Feet Restored (centerline)	*50.00*	Existing Avg Bank Height Restored (ft)	*2.50*
Method of Stabilization:	*Stream Restorati*	Existing Avg Channel Top Width (ft)	*8.00*
Proposed Channel Geometry:			

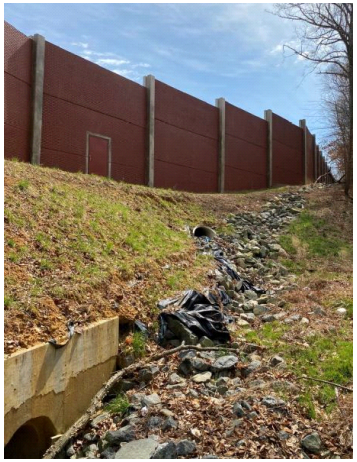
Estimated Credit:	TN	TP	TSS
lbs/yr	3.75	3.40	756.50

Discussion

The Interim Approved Removal Rates was used. The Stream Expert Panel Section 2.4 and Guidance Appendix V.J. provide the background and steps for this method. This method uses the default removal rates for TN, TP, and TSS per linear feet of stream restoration. These removal rates incorporate restoration efficiencies per research on the nutrient and sediment dynamic from urban restoration. To calculate the stream restoration pollutant reduction, these removal rates are multiplied by the length of restoration.

Implementation Date	*3/22/2022*	**Project Contact Name:**	*Tracey Harmon*
Project Completed:	*Yes*	**Contact Information (email/ phone):**	*(804) 371-6834*

Photos, Plans and/or Project graphics



Photos, Plans and/or Project graphics

Plans, Profile sheets available? (Y/N) Y

Please include as attachments

Project Name: *I-64 Outfall Crediting Site 19*

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

Geographic (County/City):	*York County*	District:	*Hampton Roads*	Residency:	*Williamsburg*	River Basin:	*York*
Inside Year 2000 Urbanized Area? (Y/N)	*Yes*	Latitude:	*37.280367*	Longitude:	*-76.665115*	Coastal/ Non-Coastal:	*Yes*

BMP Type: *Outfall Stabilization*

Project Description:

From the project I-64 Improvements – Segment III, VDOT identified 21 eroded outfalls to repair to earn pollutant removal credits in support of their Chesapeake Bay TMDL Action Plan. Pre-construction, Dewberry reviewed these locations along with some additional locations that they identified for crediting and determined that there are five outfalls that could be utilized for nutrient crediting. However, post-construction, only four meet criteria for stabilization and restoration per Dewberry's inspection on March 22, 2022. Site 19 is one of several eroded outfalls that was repaired to earn pollutant removal credits in support of VDOT's Chesapeake Bay TMDL Action Plan.

Project Drainage Area:

Inside CUA	*Impervious Acres:*	*0.33*	*Pervious Acres:*	*0.16*		
Outside CUA	*Impervious Acres:*	*0*	*Pervious Acres:*	*0*	*Forested Acres:*	*0.84*

Existing Conditions Proposed Improvements:

Linear Feet Restored (centerline)	*25.00*	Existing Avg Bank Height Restored (ft)	*1.00*
Method of Stabilization:	*Stream Restorati*	Existing Avg Channel Top Width (ft)	*3.00*
Proposed Channel Geometry:			

Estimated Credit:	TN	TP	TSS
lbs/yr	1.88	1.70	378.25

Discussion

The Interim Approved Removal Rates was used. The Stream Expert Panel Section 2.4 and Guidance Appendix V.J. provide the background and steps for this method. This method uses the default removal rates for TN, TP, and TSS per linear feet of stream restoration. These removal rates incorporate restoration efficiencies per research on the nutrient and sediment dynamic from urban restoration. To calculate the stream restoration pollutant reduction, these removal rates are multiplied by the length of restoration.

Photos, Plans and/or Project graphics

Implementation Date	*3/22/2022*	**Project Contact Name:**	*Tracey Harmon*
Project Completed:	*Yes*	**Contact Information (email/ phone):**	*(804) 371-6834*

Photos, Plans and/or Project graphics

Plans, Profile sheets available? (Y/N) Y

Please include as attachments

Project Name: *I-64 Outfall Crediting Site 20*

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

Geographic (County/City):	*York County*	District:	*Hampton Roads*	Residency:	*Williamsburg*	River Basin:	*York*
Inside Year 2000 Urbanized Area? (Y/N)	*Yes*	Latitude:	*37.278241*	Longitude:	*-76.662077*	Coastal/ Non-Coastal:	*Yes*

BMP Type: *Outfall Stabilization*

Project Description:

From the project I-64 Improvements – Segment III, VDOT identified 21 eroded outfalls to repair to earn pollutant removal credits in support of their Chesapeake Bay TMDL Action Plan. Pre-construction, Dewberry reviewed these locations along with some additional locations that they identified for crediting and determined that there are five outfalls that could be utilized for nutrient crediting. However, post-construction, only four meet criteria for stabilization and restoration per Dewberry's inspection on March 22, 2022. Site 20 is one of several eroded outfalls that was repaired to earn pollutant removal credits in support of VDOT's Chesapeake Bay TMDL Action Plan.

Project Drainage Area:

Inside CUA	*Impervious Acres:*	*0.61*	*Pervious Acres:*	*0.22*			
Outside CUA	*Impervious Acres:*	*0.14*	*Pervious Acres:*	*0.03*	*Forested Acres:*	*1.54*	

Existing Conditions Proposed Improvements:

Linear Feet Restored (centerline)	*55.00*	Existing Avg Bank Height Restored (ft)	*3.00*
Method of Stabilization:	*Stream Restorati*	Existing Avg Channel Top Width (ft)	*12.00*
Proposed Channel Geometry:			

Estimated Credit:	TN	TP	TSS
lbs/yr	4.13	3.74	832.15

Discussion

The Interim Approved Removal Rates was used. The Stream Expert Panel Section 2.4 and Guidance Appendix V.J. provide the background and steps for this method. This method uses the default removal rates for TN, TP, and TSS per linear feet of stream restoration. These removal rates incorporate restoration efficiencies per research on the nutrient and sediment dynamic from urban restoration. To calculate the stream restoration pollutant reduction, these removal rates are multiplied by the length of restoration.

Implementation Date	*3/22/2022*	**Project Contact Name:**	*Tracey Harmon*
Project Completed:	*Yes*	**Contact Information (email/ phone):**	*(804) 371-6834*

Photos, Plans and/or Project graphics

Photos, Plans and/or Project graphics

Plans, Profile sheets available? (Y/N) Y

Please include as attachments

Project Name: *I-64 Outfall Crediting Site AO 4*

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

Geographic (County/City):	*York County*	District:	*Hampton Roads*	Residency:	*Williamsburg*	River Basin:	*York*
Inside Year 2000 Urbanized Area? (Y/N)	*Yes*	Latitude:	*37.354756*	Longitude:	*-76.729911*	Coastal/ Non-Coastal:	*Yes*

BMP Type: *Outfall Stabilization*

Project Description:

From the project I-64 Improvements – Segment III, VDOT identified 21 eroded outfalls to repair to earn pollutant removal credits in support of their Chesapeake Bay TMDL Action Plan. Pre-construction, Dewberry reviewed these locations along with some additional locations that they identified for crediting and determined that there are five outfalls that could be utilized for nutrient crediting. However, post-construction, only four meet criteria for stabilization and restoration per Dewberry's inspection on March 22, 2022. Site AO 4 is one of several eroded outfalls that was repaired to earn pollutant removal credits in support of VDOT's Chesapeake Bay TMDL Action Plan.

Project Drainage Area:

Inside CUA	*Impervious Acres:*	*0.38*	*Pervious Acres:*	*0.45*		
Outside CUA	*Impervious Acres:*	*3.16*	*Pervious Acres:*	*2.4*	*Forested Acres:*	*9.02*

Existing Conditions Proposed Improvements:

Linear Feet Restored (centerline)	*200.00*	Existing Avg Bank Height Restored (ft)	*7.80*
Method of Stabilization:	*Stream Restorati*	Existing Avg Channel Top Width (ft)	*0.00*
Proposed Channel Geometry:			

Estimated Credit:	TN	TP	TSS
lbs/yr	255.34	117.59	223,984.26

Discussion

The site AO 4 outfall was analyzed per the Stream Expert Panel Protocol 1. Protocol 1 provides credit for reducing sediment during storm flows. The credits are calculated through a three step process. First the annual sediment loading is calculated from the Stream Expert Panel Equation. Second step takes the sediment load and multiplies it by the TN and TP concentration in the Stream Expert Panel. Third step is to incorporate the efficiency of the restoration. Due to the monitoring for this site, the efficiency is 98% based on Dewberry's pre- and post-analysis of Protocol 1.

Implementation Date	*3/22/2022*	**Project Contact Name:**	*Tracey Harmon*
Project Completed:	*Yes*	**Contact Information (email/ phone):**	*(804) 371-6834*

Photos, Plans and/or Project graphics

Photos, Plans and/or Project graphics

Plans, Profile sheets available? (Y/N) Y

Please include as attachments

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)
1068	2136000	0.7	0.0025	0.001	0.3	

Before Discount

TN Removed	**3738**	lbs
TP Removed	**1495**	lbs
TSS Removed	**448560**	lbs

James

TN Removed	**1488**	lbs
TP Removed	**595**	lbs
TSS Removed	**178570**	lbs

York

TN Removed	**33**	lbs
TP Removed	**13**	lbs
TSS Removed	**3948**	lbs

Chickahominy

TN Removed	**71**	lbs
TP Removed	**28**	lbs
TSS Removed	**8495**	lbs

Discount Factor (Updated 2022)

Total interstate lengtl	5.486712559	mi
Total interstate lengtl	248.1358923	mi
Total interstate lengtl	623.3068515	mi
Total interestate leng	253.6226049	mi
Overall Discount Factor	0.406898471	
James Discount Factor	0.398095884	
York Discount Factor	0.008802587	

Chickahominy Discount Factor (Updated 2022)

Total interstate lengtl	11.80437272	mi
Chickahominy Discount Factor	0.018938301	

HR Peninsula 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)
89	177200	0.7	0.0025	0.001	0.3	

Before Discount

TN Removed	**310**	lbs
TP Removed	**124**	lbs
TSS Removed	**37212**	lbs

James

TN Removed	**101**	lbs
TP Removed	**40**	lbs
TSS Removed	**12121**	lbs

York

TN Removed	**93**	lbs
TP Removed	**37**	lbs
TSS Removed	**11150**	lbs

Discount Factor (Updated 2022)

Total interstate lengtl	37.55831586	mi
Total interstate lengtl	40.83092379	mi
Total interstate lengtl	125.3488906	mi
Total interstate lengtl	78.38923964	mi
Overall Discount Fact	0.625368436	
James Discount Facto	0.325738214	
York Discount Factor	0.299630222	

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.

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-	
-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-	
-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-	
-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: ("x" applicable)	P1-Prevented Sediment	P2-Denitrification	P3-Sedimentation	P4-Marsh Redfield Ratio	
	x	x	x	x	

Estimated Credit:	TN	TP	TSS	Field-collected data and elevations (Y/N)?	Y
lbs/yr	2,228.00	1,563.00	2,568,288.00	Default rates applied (Y/N)?	N

Discussion

All Protocols were used for crediting.

Est. Implementation Date:	*6/30/2022*	**Project Contact Name:**	*Joseph Parfitt*
Project Completed:	*Yes*	**Contact Information (email/phone):**	*(804) 339-4365*

Photos, Plans and/or Project graphics

Photos, Plans and/or Project graphics

Plans, Profile sheets available? (Y/N) Y

Please include as attachments

FY23 Project Implementation Schedule

Project Name	River Basin	Project Description	Estimated Credits
Pipsico	James River	Shoreline Stabilization	TN: 718; TP: 495; TSS: 812,000
Waynesboro Turnkey Stream Restoration	James River	Stream Stabilization	TN: 4265; TP: 857; TSS: 2,009,250
Matoaka	James River	Stream Stabilization; Outfall stabilization	TN: 5595; TP: 27; TSS: 2,678,000

Appendix G
Local TMDL Action Plan Implementation Summary

October 2022

Abrams and Opequon Bacteria and Sediment TMDLs	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. 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. No additional BMPs are necessary at this time.
Lower Accotink Creek Bacteria TMDL	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. No additional BMPs are necessary at this time.
Bull Run Sediment TMDL	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. VDOT also conducted street sweeping in the Bull Run watershed. 39,968 pounds of sediment were removed from the watershed in FY2022.
Chickahominy River and Tributaries Bacteria TMDLs	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. No additional BMPs are necessary at this time.

Crab Creek Bacteria and Sediment TMDLs	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. 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. VDOT also conducted street sweeping in the Crab Creek watershed. 459 pounds of sediment were removed from the watershed in FY2022.
Difficult Run Bacteria and Sediment TMDLs	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. 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. No additional BMPs are necessary at this time.
Four Mile Run Bacteria TMDLs	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. No additional BMPs are necessary at this time.

Goose Creek Sediment TMDL	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. No additional BMPs are necessary at this time.
Hoffler Creek Bacteria TMDL	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. No additional BMPs are necessary at this time.
Hunting Creek, Cameron Run, and Holmes Run Bacteria TMDLs	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. No additional BMPs are necessary at this time.
James River (City of Lynchburg) Bacteria TMDL	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. No additional BMPs are necessary at this time.
James River (City of Richmond) Bacteria TMDL	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. No additional BMPs are necessary at this time.

Neabsco Creek Bacteria TMDL	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. No additional BMPs are necessary at this time.
Occoquan River and Tributaries Bacteria TMDLs	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. No additional BMPs are necessary at this time.
Popes Head Creek Sediment TMDL	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. No additional BMPs are necessary at this time.
Potomac River PCB TMDL Watershed	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. No additional BMPs are necessary at this time.
Rappahannock River Bacteria TMDL	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. No additional BMPs are necessary at this time.

Rivanna River Bacteria and Sediment TMDLs	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. 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. VDOT also conducted street sweeping in the Rivanna River watershed. 781 pounds of sediment were removed from the watershed in FY2022.
Roanoke River Bacteria and Sediment TMDLs	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. 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. VDOT also conducted street sweeping in the Roanoke River watershed. 5,158 pounds of sediment were removed from the watershed in FY2022.
Stroubles Creek Sediment TMDL Watershed	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. VDOT also conducted street sweeping in the Stroubles Creek watershed. 281 pounds of sediment were removed from the watershed in FY2022.

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

Potomac River Tributaries in Prince William and Stafford Counties	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. No additional BMPs are necessary at this time.
Shenandoah Tributaries	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. No additional BMPs are necessary at this time.
Sugarland Run, Mine Run, and Pimmit Run in Arlington, Fairfax, and Loudoun Counties	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. No additional BMPs are necessary at this time.
Tye River Watershed in Nelson and Amherst Counties	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), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation. No additional BMPs are necessary at this time.
Chickahominy River Sediment TMDL	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. VDOT also conducted street sweeping in the Chickahominy River watershed. 8,495 pounds of sediment were removed from the watershed in FY2022.

Little Otter River, Johns Creek, Wells Creek, and Buffalo Creek	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. No additional BMPs are necessary at this time.
Moores Creek, Lodge Creek, Meadow Creek, and Schenks Branch	VDOT will address the Moores Creek, Lodge Creek, Meadow Creek, and Schenks Branch sediment TMDLs by continuing to implement programmatic BMPs effective in reducing sediment discharges from VDOT's MS4. Refer to BMPs 1(A), 2(A), 2(B), 2(C), 2(D), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation. VDOT also conducted street sweeping in the watershed. 396 pounds of sediment were removed from the watershed in FY2022.

Date Installed	BMP Name	Practice Description	Impervious Acres Treated	Total Acres Treated	Runoff Captured (Ac-ft)	Measurement Unit
11/30/2020	Proctors Creek Stream Restoration	Stream Channel Stabilization	902.46	3986.94	N/A	linear feet
11/30/2020	Proctors Creek Stream Restoration	Stream Channel Stabilization	902.46	3986.94	N/A	lb TP/yr
11/30/2020	Proctors Creek Stream Restoration	Stream Channel Stabilization	902.46	3986.94	N/A	lb TN/yr
11/30/2020	Proctors Creek Stream Restoration	Stream Channel Stabilization	902.46	3986.94	N/A	lb TSS/yr
9/1/2021	Randolph Creek Stream Restoration	Stream Channel Stabilization	95.08	7174.41	N/A	linear feet
9/1/2021	Randolph Creek Stream Restoration	Stream Channel Stabilization	95.08	7174.41	N/A	lb TP/yr
9/1/2021	Randolph Creek Stream Restoration	Stream Channel Stabilization	95.08	7174.41	N/A	lb TN/yr
9/1/2021	Randolph Creek Stream Restoration	Stream Channel Stabilization	95.08	7174.41	N/A	lb TSS/yr
6/30/2021	Harbor Pointe Outfall Stabilization	Urban Stream Restoration	29.41	44.79	N/A	linear feet
6/30/2021	Harbor Pointe Outfall Stabilization	Urban Stream Restoration	29.41	44.79	N/A	lb. TP/yr
6/30/2021	Harbor Pointe Outfall Stabilization	Urban Stream Restoration	29.41	44.79	N/A	lb TN/yr
6/30/2021	Harbor Pointe Outfall Stabilization	Urban Stream Restoration	29.41	44.79	N/A	lb TSS/yr
9/22/2021	Richmond District Plantings	Tree Planting	0	22.4	N/A	acres treated
9/22/2021	Richmond District Plantings	Tree Planting	0	22.4	N/A	lb. TP/yr
9/22/2021	Richmond District Plantings	Tree Planting	0	22.4	N/A	lb TN/yr
9/22/2021	Richmond District Plantings	Tree Planting	0	22.4	N/A	lb TSS/yr
1/1/2021	RDC BioSwale	Bioswale	0.8	0.9	0.02	acres treated
1/1/2021	RDC BioSwale	Bioswale	0.8	0.9	0.02	lb TP/yr
1/1/2021	RDC BioSwale	Bioswale	0.8	0.9	0.02	lb TN/yr
1/1/2021	RDC BioSwale	Bioswale	0.8	0.9	0.02	lb TSS/yr
1/1/2021	RDC Sediment Forebay	BMP Retrofit	12.6	18.4	N/A	acres treated
1/1/2021	RDC Sediment Forebay	BMP Retrofit	12.6	18.4	N/A	lb TP/yr
1/1/2021	RDC Sediment Forebay	BMP Retrofit	12.6	18.4	N/A	lb TN/yr
1/1/2021	RDC Sediment Forebay	BMP Retrofit	12.6	18.4	N/A	lb TSS/yr
1/1/2021	RDC Grass Channel/Gully	Outfall Stabilization	0.39	1.56	0.01	linear feet
1/1/2021	RDC Grass Channel/Gully	Outfall Stabilization	0.39	1.56	0.01	lb TP/yr
1/1/2021	RDC Grass Channel/Gully	Outfall Stabilization	0.39	1.56	0.01	lb TN/yr
1/1/2021	RDC Grass Channel/Gully	Outfall Stabilization	0.39	1.56	0.01	lb TSS/yr
1/1/2021	RDC Bioretention Basin	Bioretention	4.98	7.69	0.19	acres treated
1/1/2021	RDC Bioretention Basin	Bioretention	4.98	7.69	0.19	lb TP/yr
1/1/2021	RDC Bioretention Basin	Bioretention	4.98	7.69	0.19	lb TN/yr
1/1/2021	RDC Bioretention Basin	Bioretention	4.98	7.69	0.19	lb TSS/yr
7/12/2022	Harrisonburg Land Cover Conversion	LCC	0	22.13	N/A	acres treated
7/12/2022	Harrisonburg Land Cover Conversion	LCC	0	22.13	N/A	lb TP/yr
7/12/2022	Harrisonburg Land Cover Conversion	LCC	0	22.13	N/A	lb TN/yr
7/12/2022	Harrisonburg Land Cover Conversion	LCC	0	22.13	N/A	lb TSS/yr
6/30/2022	Street Sweeping and Catch Basin Cleanout (James)	Street Sweeping	0	N/A	N/A	linear feet
6/30/2022	Street Sweeping and Catch Basin Cleanout (James)	Street Sweeping	0	N/A	N/A	lb TP/yr
6/30/2022	Street Sweeping and Catch Basin Cleanout (James)	Street Sweeping	0	N/A	N/A	lb TN/yr
6/30/2022	Street Sweeping and Catch Basin Cleanout (James)	Street Sweeping	0	N/A	N/A	lb TSS/yr
4/26/2021	Culpeper District LCC	Land Cover Conversion	0	9.01	N/A	acres treated
4/26/2021	Culpeper District LCC	Land Cover Conversion	0	9.01	N/A	lb TP/yr
4/26/2021	Culpeper District LCC	Land Cover Conversion	0	9.01	N/A	lb TN/yr

Amount Applied	Latitude	Longitude	HUC12	State FIPS	Lifespan	Inspect Date	Maint Date	Contact Name	Contact Phone	Contact Email	NOTES
1500.00	37.39	-77.45	Field not required if	51	5	11/30/2025		Carolyn Keeler	804-267-3474	carolyn.keeler@stantec.com	
528.27	37.39	-77.45	latitude and longitude	51	5	11/30/2025		Carolyn Keeler	804-267-3475	carolyn.keeler@stantec.com	
1373.33	37.39	-77.45	are provided	51	5	11/30/2025		Carolyn Keeler	804-267-3476	carolyn.keeler@stantec.com	
1036000.00	37.39	-77.45		51	5	11/30/2025		Carolyn Keeler	804-267-3477	carolyn.keeler@stantec.com	
9826.00	37.616106	-78.334789	Field not required if	51	5	9/1/2026		Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov	
3461.70	37.616106	-78.334789	latitude and longitude	51	5	9/1/2026		Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov	
7516.82	37.616106	-78.334789	are provided	51	5	9/1/2026		Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov	
6593700.00	37.616106	-78.334789		51	5	9/1/2026		Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov	
40.00	37.411678	-77.650741	Field not required if	51	5	6/30/2026		Joseph Parfitt	804-339-4365	joseph.parfitt@vdot.virginia.gov	
27.4	37.411678	-77.650741	latitude and longitude	51	5	6/30/2026		Joseph Parfitt	804-339-4366	joseph.parfitt@vdot.virginia.gov	
59.5	37.411678	-77.650741	are provided	51	5	6/30/2026		Joseph Parfitt	804-339-4367	joseph.parfitt@vdot.virginia.gov	
52200	37.411678	-77.650741		51	5	6/30/2026		Joseph Parfitt	804-339-4368	joseph.parfitt@vdot.virginia.gov	
22.40	37.291	-77.401	Field not required if	51	5	9/22/2026		Joseph Parfitt	804-339-4365	joseph.parfitt@vdot.virginia.gov	
37.25	37.291	-77.401	latitude and longitude	51	5	9/22/2026		Joseph Parfitt	804-339-4366	joseph.parfitt@vdot.virginia.gov	
171.66	37.291	-77.401	are provided	51	5	9/22/2026		Joseph Parfitt	804-339-4367	joseph.parfitt@vdot.virginia.gov	
12408.01	37.291	-77.401		51	5	9/22/2026		Joseph Parfitt	804-339-4368	joseph.parfitt@vdot.virginia.gov	
0.90	37.291	-77.401	Field not required if	51	5	1/1/2026		Joseph Parfitt	804-339-4365	joseph.parfitt@vdot.virginia.gov	
0.52	37.291	-77.401	latitude and longitude	51	5	1/1/2026		Joseph Parfitt	804-339-4366	joseph.parfitt@vdot.virginia.gov	
2.55	37.291	-77.401	are provided	51	5	1/1/2026		Joseph Parfitt	804-339-4367	joseph.parfitt@vdot.virginia.gov	
237.22	37.291	-77.401		51	5	1/1/2026		Joseph Parfitt	804-339-4368	joseph.parfitt@vdot.virginia.gov	
18.40	37.291	-77.401	Field not required if	51	5	1/1/2026		Joseph Parfitt	804-339-4365	joseph.parfitt@vdot.virginia.gov	
6.07	37.291	-77.401	latitude and longitude	51	5	1/1/2026		Joseph Parfitt	804-339-4366	joseph.parfitt@vdot.virginia.gov	
32.98	37.291	-77.401	are provided	51	5	1/1/2026		Joseph Parfitt	804-339-4367	joseph.parfitt@vdot.virginia.gov	
3178.87	37.291	-77.401		51	5	1/1/2026		Joseph Parfitt	804-339-4368	joseph.parfitt@vdot.virginia.gov	
65.00	37.291	-77.401	Field not required if	51	5	1/1/2026		Joseph Parfitt	804-339-4365	joseph.parfitt@vdot.virginia.gov	
37.82	37.291	-77.401	latitude and longitude	51	5	1/1/2026		Joseph Parfitt	804-339-4366	joseph.parfitt@vdot.virginia.gov	
84.07	37.291	-77.401	are provided	51	5	1/1/2026		Joseph Parfitt	804-339-4367	joseph.parfitt@vdot.virginia.gov	
262500	37.291	-77.401		51	5	1/1/2026		Joseph Parfitt	804-339-4368	joseph.parfitt@vdot.virginia.gov	
7.69	37.291	-77.401	Field not required if	51	5	1/1/2026		Joseph Parfitt	804-339-4365	joseph.parfitt@vdot.virginia.gov	
4.55	37.291	-77.401	latitude and longitude	51	5	1/1/2026		Joseph Parfitt	804-339-4366	joseph.parfitt@vdot.virginia.gov	
24.97	37.291	-77.401	are provided	51	5	1/1/2026		Joseph Parfitt	804-339-4367	joseph.parfitt@vdot.virginia.gov	
1749.64	37.291	-77.401		51	5	1/1/2026		Joseph Parfitt	804-339-4368	joseph.parfitt@vdot.virginia.gov	
22.13	38.48	-78.815	Field not required if	51	5	7/12/2027		Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov	This practice was verified on 7/12/22
8.51	38.48	-78.815	latitude and longitude	51	5	7/12/2027		Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov	This practice was verified on 7/12/22
170.95	38.48	-78.815	are provided	51	5	7/12/2027		Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov	This practice was verified on 7/12/22
3378.40	38.48	-78.815		51	5	7/12/2027		Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov	This practice was verified on 7/12/22
9219778.003	37 46' 56.85"	-76 34' 46.46"	Field not required if	51	5	6/30/2021		Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov	
5286.62	37 46' 56.85"	-76 34' 46.46"	latitude and longitude	51	5	6/30/2021		Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov	
13216.55	37 46' 56.85"	-76 34' 46.46"	are provided	51	5	6/30/2021		Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov	
1585762.00	37 46' 56.85"	-76 34' 46.46"		51	5	6/30/2021		Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov	
9.01	38.909036	-77.959447	Field not required if	51	5	4/26/2026		Joseph Parfitt	804-339-4365	joseph.parfitt@vdot.virginia.gov	
3.42	38.909036	-77.959447	latitude and longitude	51	5	4/26/2026		Joseph Parfitt	804-339-4366	joseph.parfitt@vdot.virginia.gov	
64.51	38.909036	-77.959447	are provided	51	5	4/26/2026		Joseph Parfitt	804-339-4367	joseph.parfitt@vdot.virginia.gov	

4/26/2021	Culpeper District LCC	Land Cover Conversion	0	9.01	N/A	lb TSS/yr
6/30/2022	Street Sweeping and Catch Basin Cleanout (Potomac)	Street Sweeping	N/A	N/A	N/A	lbs (total solids collected)
6/30/2022	Street Sweeping and Catch Basin Cleanout (Potomac)	Street Sweeping	N/A	N/A	N/A	lb TN/yr
6/30/2022	Street Sweeping and Catch Basin Cleanout (Potomac)	Street Sweeping	N/A	N/A	N/A	lb TP/yr
6/30/2022	Street Sweeping and Catch Basin Cleanout (Potomac)	Street Sweeping	N/A	N/A	N/A	lb TSS/yr
1/1/2022	Culpeper-Warrenton BMP Retrofit	BMP Retrofit	3.96	38.14	N/A	acres treated
1/1/2022	Culpeper-Warrenton BMP Retrofit	BMP Retrofit	3.96	38.14	N/A	lb TN/yr
1/1/2022	Culpeper-Warrenton BMP Retrofit	BMP Retrofit	3.96	38.14	N/A	lb TP/yr
1/1/2022	Culpeper-Warrenton BMP Retrofit	BMP Retrofit	3.96	38.14	N/A	lb TSS/yr
4/27/2022	I-64 Outfall Stabilization at NPS	Urban Stream Restoration	3.81	24.24	N/A	length restored
4/27/2022	I-64 Outfall Stabilization at NPS	Urban Stream Restoration	3.81	24.24	N/A	lb TN/yr
4/27/2022	I-64 Outfall Stabilization at NPS	Urban Stream Restoration	3.81	24.24	N/A	lb TP/yr
4/27/2022	I-64 Outfall Stabilization at NPS	Urban Stream Restoration	3.81	24.24	N/A	lb TSS/yr
3/22/2022	I-64 Segment III Outfall Stabilization (ID#9)	Outfall Stabilization	2.36	10.44	N/A	length restored (feet)
3/22/2022	I-64 Segment III Outfall Stabilization (ID#9)	Outfall Stabilization	2.36	10.44	N/A	lb TN/yr
3/22/2022	I-64 Segment III Outfall Stabilization (ID#9)	Outfall Stabilization	2.36	10.44	N/A	lb TP/yr
3/22/2022	I-64 Segment III Outfall Stabilization (ID#9)	Outfall Stabilization	2.36	10.44	N/A	lb TSS/yr
3/22/2022	I-64 Segment III Outfall Stabilization (ID#19)	Outfall Stabilization	0.33	1.33	N/A	length restored (feet)
3/22/2022	I-64 Segment III Outfall Stabilization (ID#19)	Outfall Stabilization	0.33	1.33	N/A	lb TN/yr
3/22/2022	I-64 Segment III Outfall Stabilization (ID#19)	Outfall Stabilization	0.33	1.33	N/A	lb TP/yr
3/22/2022	I-64 Segment III Outfall Stabilization (ID#19)	Outfall Stabilization	0.33	1.33	N/A	lb TSS/yr
3/22/2022	I-64 Segment III Outfall Stabilization (ID#20)	Outfall Stabilization	0.75	2.54	N/A	length restored (feet)
3/22/2022	I-64 Segment III Outfall Stabilization (ID#20)	Outfall Stabilization	0.75	2.54	N/A	lb TN/yr
3/22/2022	I-64 Segment III Outfall Stabilization (ID#20)	Outfall Stabilization	0.75	2.54	N/A	lb TP/yr
3/22/2022	I-64 Segment III Outfall Stabilization (ID#20)	Outfall Stabilization	0.75	2.54	N/A	lb TSS/yr
3/22/2022	I-64 Segment III Outfall Stabilization (ID#AO4)	Outfall Stabilization	3.54	15.41	N/A	length restored (feet)
3/22/2022	I-64 Segment III Outfall Stabilization (ID#AO4)	Outfall Stabilization	3.54	15.41	N/A	lb TN/yr
3/22/2022	I-64 Segment III Outfall Stabilization (ID#AO4)	Outfall Stabilization	3.54	15.41	N/A	lb TP/yr
3/22/2022	I-64 Segment III Outfall Stabilization (ID#AO4)	Outfall Stabilization	3.54	15.41	N/A	lb TSS/yr
6/30/2022	Street Sweeping and Catch Basin Cleanout (York)	Street Sweeping	N/A	N/A	N/A	lbs (total solids collected)
6/30/2022	Street Sweeping and Catch Basin Cleanout (York)	Street Sweeping	N/A	N/A	N/A	lb TN/yr
6/30/2022	Street Sweeping and Catch Basin Cleanout (York)	Street Sweeping	N/A	N/A	N/A	lb TP/yr
6/30/2022	Street Sweeping and Catch Basin Cleanout (York)	Street Sweeping	N/A	N/A	N/A	lb TSS/yr
6/30/2022	York River State Park - Fossil Beach	Shoreline Stabilization	N/A	N/A	N/A	shoreline restored (feet)
6/30/2022	York River State Park - Fossil Beach	Shoreline Stabilization	N/A	N/A	N/A	lb TN/yr
6/30/2022	York River State Park - Fossil Beach	Shoreline Stabilization	N/A	N/A	N/A	lb TP/yr
6/30/2022	York River State Park - Fossil Beach	Shoreline Stabilization	N/A	N/A	N/A	lb TSS/yr

1197.97	38.909036	-77.959447		51	5	4/26/2026	Joseph Parfitt	804-339-4368	joseph.parfitt@vdot.virginia.gov
4807440.80	36.85778	-77.28467	Field not required if	51	5	6/30/2021	Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov
3196.73	36.85778	-77.28467	latitude and longitude	51	5	6/30/2021	Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov
1278.69	36.85778	-77.28467	are provided	51	5	6/30/2021	Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov
383608.08	36.85778	-77.28467		51	5	6/30/2021	Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov
38.14	38.73794	-77.787536	Field not required if	51	5	1/1/2027	Joseph Parfitt	804-339-4365	joseph.parfitt@vdot.virginia.gov
96.36	37.34513	-76.741501	latitude and longitude	51	5	1/1/2027	Joseph Parfitt	804-339-4366	joseph.parfitt@vdot.virginia.gov
6.75	37.34513	-76.741501	are provided	51	5	1/1/2027	Joseph Parfitt	804-339-4367	joseph.parfitt@vdot.virginia.gov
5642.88	37.34513	-76.741501		51	5	1/1/2027	Joseph Parfitt	804-339-4368	joseph.parfitt@vdot.virginia.gov
431.00	37.27795	-76.66295	Field not required if	51	5	6/30/2026	Joseph Parfitt	804-339-4365	joseph.parfitt@vdot.virginia.gov
941.70	37.27795	-76.66295	latitude and longitude	51	5	6/30/2026	Joseph Parfitt	804-339-4366	joseph.parfitt@vdot.virginia.gov
437.10	37.27795	-76.66295	are provided	51	5	6/30/2026	Joseph Parfitt	804-339-4367	joseph.parfitt@vdot.virginia.gov
922600.00	37.27795	-76.66295		51	5	6/30/2026	Joseph Parfitt	804-339-4368	joseph.parfitt@vdot.virginia.gov
50.00	37.291298	-76.674658	Field not required if	51	5	1/1/2027	Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov
3.75	37.291298	-76.674658	latitude and longitude	51	5	1/1/2027	Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov
3.40	37.291298	-76.674658	are provided	51	5	1/1/2027	Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov
756.50	37.291298	-76.674658		51	5	1/1/2027	Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov
25.00	37.28037	-76.665115	Field not required if	51	5	1/1/2027	Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov
1.88	37.28037	-76.665115	latitude and longitude	51	5	1/1/2027	Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov
1.70	37.28037	-76.665115	are provided	51	5	1/1/2027	Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov
378.25	37.28037	-76.665115		51	5	1/1/2027	Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov
55.00	37.278241	-76.662077	Field not required if	51	5	1/1/2027	Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov
4.13	37.278241	-76.662077	latitude and longitude	51	5	1/1/2027	Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov
3.74	37.278241	-76.662077	are provided	51	5	1/1/2027	Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov
832.15	37.278241	-76.662077		51	5	1/1/2027	Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov
200.00	37.35476	-76.729911	Field not required if	51	5	1/1/2027	Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov
255.34	37.35476	-76.729911	latitude and longitude	51	5	1/1/2027	Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov
117.59	37.35476	-76.729911	are provided	51	5	1/1/2027	Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov
223987.26	37.35476	-76.729911		51	5	1/1/2027	Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov
131110.00	38.16057	-79.047756	Field not required if	51	5	6/30/2021	Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov
125.82	38.16057	-79.047756	latitude and longitude	51	5	6/30/2021	Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov
50.33	38.16057	-79.047756	are provided	51	5	6/30/2021	Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov
15098.33	38.16057	-79.047756		51	5	6/30/2021	Tracey Harmon	804-371-6834	tracey.harmon@vdot.virginia.gov
789.00	37.40981	-76.706326	Field not required if	51	5	6/30/2026	Joseph Parfitt	804-339-4365	joseph.parfitt@vdot.virginia.gov
2228.00	37.40981	-76.706326	latitude and longitude	51	5	6/30/2026	Joseph Parfitt	804-339-4365	joseph.parfitt@vdot.virginia.gov
1563.00	37.40981	-76.706326	are provided	51	5	6/30/2026	Joseph Parfitt	804-339-4365	joseph.parfitt@vdot.virginia.gov
2568288.00	37.40981	-76.706326		51	5	6/30/2026	Joseph Parfitt	804-339-4365	joseph.parfitt@vdot.virginia.gov