MS4 PERMIT YEAR 2020 ANNUAL REPORT
JULY 1, 2019 TO JUNE 30, 2020

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, 2020

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, P.E. Digitally signed by Stephen C. Brich, P.E. Date: 2020.09.28 12:53:23 -04'00'

Name Stephen C. Brich, P.E.

Title Commonwealth Transportation Commissioner

Date

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

VDOT MS4 PROGRAM PLAN REVISION SUMMARY & ANNUAL REPORT BACKGROUND

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

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

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

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

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

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

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

ANNUAL REPORT ORGANIZATION

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

Permit Reference	Permit Description	MS4 Program Plan BMP
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)
Section I.C.4.d	Program Plan requirements	BMP 4(A), 4(B)
Section I.C.4.e	Annual Report requirements	BMP 4(B)*

Permit Reference	Permit Description	MS4 Program Plan BMP
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").

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

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

Description and Measurable Goal:	Provide informational signage at rest areas identified in permit.

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.	a. The pet waste stations maintenance andrestocking is part of VDOT's Monthly Quality Assessment Review/Safety Rest Area Inspection. This inspection reviews the Pet Stations for functionality and to assure they are being maintained and stocked. The pet waste stations are stocked with disposal bags as part of the normal maintenance operation. As part of the daily good housekeeping procedures for trash and debris removal, any pet waste discovered is picked up and placed in the appropriate trash receptacle. The number of pet stations remains the same as previously reported -- VDOT has them in all 42 Safety Reast Areas, 11 of which are within 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. b. VDOT has installed a total of 16 Litter Control signs at 11 Rest Safety Areas/Welcome Centers.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.

BMP 1(C) – Annual Reporting and Effectiveness Review

Description and Measurable Goal:	Provide annual reports and assess effectiveness of outreach efforts.

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: http://www.virginiadot.org/business/locdes/ms4sm_technical_resources.asp This past year represents the third 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. Minor updates to the Program Plan were made during PY20. This Annual Report is also the third to be submitted under the IP period of coverage versus the General Permit (GP) previously. It was revised in PY18 to reflect the updated IP and PP elements. 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.) Proper disposal of trash, debris, and litter. VDOT estimates that approximately 12,000,000 people visited the 11 Rest Areas/Welcome Centers where VDOT installed and had litter control signs posted and were exposed to that messaging. VDOT uses continuous vehicular monitoring equipment at some of its Rest Areas/Welcome Centers, and occasionally utilizes temporary counters at others, to provide a total count estimate of vehicular visits per day. The latest information for these areas is 2016, which was used by the Maintenance Division as the basis for approximating and estimating total visits by the public. 3.) Informational Signage for proper disposal of litter, debris and trash was installed at 11 Rest Areas/Welcome Centers as noted previously. VDOT estimates approximately 12,000,000 people visited these sites. For pet waste, VDOT estimates that approximately 35,000,000 people visited all Rest Area and Welcome Centers during the past year where pet waste messaging and facilities were installed. VDOT uses continuous vehicular monitoring equipment at some of its Rest Areas/Welcome Centers, and occasionally utilizes temporary counters at others, to provide a total count estimate of vehicular visits per day. The latest information for these areas is 2016, which was used by the Maintenance Division as the basis for approximating and estimating total visits by the public. 4.) Other Educational and Outreach Programs a.) Watershed Signs – During PY20, two (2) watershed signs were installed in Alleghany County along Route 64. To date, VDOT has installed approximately 144 watershed signs within the MS4 service area and plans to continue to maintain them. b.) Through annual coordination meetings, VDOT met with eleven Phase 1 MS4s to discuss and coordinate illicit discharge reporting procedures, Chesapeake Bay TMDL Action Plans and Implementation, points of contact, and other related topics to assist with achievement of this MCM. The Public Education and Outreach component has been successful, however VDOT anticipates continuing to enhance this aspect of the MCM. VDOT plans on communicating some of these program elements through a more user friendly centrally located web-based type platform, such as through ArcGIS Storymap. This may include, for example, the use of georeferenced events and interactive mapping to share with the public and staff activities that are underway or planned, and would allow for access to more information and the opportunity for more individuals, including the public, to increase their awareness of certain program elements (e.g. Pet Waste Stations at Rest Areas, etc).

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

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 timethat as of June 30, 2020: - The AAH program has a total of **8, 915 miles** of roadway adopted, including Interstate highways and interchanges, primary roads and secondary roads; - This is an increase of **331 adopted miles** over the number reported last year; - Our data shows that **23,383 individuals** participated in the program this past permit year; - This is an increase of **5,778** over the number reported for the previous permit year. 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 is still in the process of being updated. VDOT is aiming to collect this date 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. VDOT is assuming that with so many people isolating themselves at home and so much normal work interrupted, people decided to use some of their free time to do something positive for the environment and get some exercise at the same time. As well, we suspect that the usual participants may have recruited additional friends to help this past year in order to have some positive social interaction.

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

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.	VDOT issued two (2) storm drain stenciling permits during the PY. While few permits were issued, VDOT has determined this BMP is still appropriate to the program. During the updates to the stormwater webpage, VDOT included a link to the Land Use Permit program should individuals desire additional information. These include: - LUP-A: Land Use Permit Application for Storm Sewer Stenciling - LUP-SPG Permittee Agreement for Storm Sewer Stenciling

BMP 2(C) – Participation with Other Stakeholders

Description and Measurable Goal:	Track activities in which VDOT participated related to development of Local TMDLs.

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 1 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 15 local TMDL and watershed implementation plan meetings. A list of these meetings is provided in Appendix A.
Continue to participate in activities with goals to reduce stormwater pollutant loads; improving water quality, & supporting local water quality restoration.	Annually participate in activities, when applicable and appropriate.	VDOT participated in approximately 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

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. Renew the New Regional Cleanup, New River Valley Regional Commission, 8/31/2019 2. Shiver in the River Stream Cleanup, Richmond, 2/29/2020 3. Serling Stream Clean-up, 3/28/2020 4. Project Clean Stream – Beginning 4/18/2020 5. Potomac River Watershed Cleanup, 4/18/2020 6. Clean the Bay Day, 6/6/2020

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

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.) Other Public Involvement Activities: - Trash Cleanup and Adopt a Highway, VDOT employees, Richmond, September 2019 - Coordination with Fairfax County on county funded trash cleanup program in conjuction with Adopt a Highway for access, etc December 2019 - Keep Virginia Beautiful and Adopt a Highway Day to Serve (Dts) outreach, Sept 11-Oct 10, 2019. 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.
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. Stream cleanup events and the promotion of them represent a new IP element for PY18. VDOT L&D Division coordinated effectively with its Communications Division at both the Central Office and Districts to communicate through existing channels on social media. - Adopt-a-Highway Program represents a new IP element as of PY18. The agency began the process of updating the tracking and reporting database associated with this program in PY18 and PY19. VDOT is still in the process of creating a new, geo-referenced database, guidance, and associated map for its use. Pet Waste, Litter and Watershed Signage Mapping – The georeferenced locations of VDOT signage, which was previously available in the form of a list, has been transferred and made available in a format that is an interactive map and will become available to the public through a map on VDOT's website and/or in an ESRI ArcGIS Suite Storymap format in the very near future. 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 is an Access based system. VDOT is in the process of updating and converting this system to a new map based geo-referenced database available to the public, and anticipates that we should be able to better track and report information in the future. This includes conducting an analysis of whether there has been an increase or decrease in public participation over time. - The promotion of stream cleanup events and public participation and involvement may be enhanced with a new web based app that can

		be used by the public to submit events for broader awareness. This app has an interactive mapping interface and is part of the Storymap that VDOT anticpates completing and making public during the upcoming PY21 period.

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.

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 froman 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. 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.

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 discharges of pollutants from roads, streets and parking lot maintenance are being prevented or minimized. Maintenance Division is nearing completion of updates to the Manual, 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

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 2020) and no immediate updates were deemed necessary.
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.

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.

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 Program IDDE Manual no later than 01/2019.	Language was incorporated into the latest update of the updated IDDE Program Manual which was published in PY20 and in the latest update of the IDDE Field Guide published in PY19.
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 major revision in Permit Year 2019-2020. The guide was updated and streamlined to reflect processes implemented uner VDOT's Individual permit. The updated guide outlines the steps VDOT personnel and the public can use to report suspected illicit discharges, the steps VDOT Illicit Discharge Team members take in order to report or resolve illicit discharges, as well as describing the methods used to track illicit discharge reports in a geodatabase. In PY19, the IDDE Field Guide was streamlined and converted to a more handheld format for maintenance and field crews. The revised guide includes contact information for quick reporting of illicit discharges, as well as color photos and diagrams outlining the investigation and reporting process. In fall of 2019, rugged printed copies of the updated IDDE Field Guide were mailed out to all maintenance facilities in or within 3 miles of a Census Urban 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.
Develop, update, offer and deliver IDDE Training Materials for appropriate VDOT staff, maintenance operators, and contractors in how to identify and report illicit discharges.	This aspect of the BMP is currently implemented and is an ongoing effort. Appropriate VDOT maintenance operators and contractors will be offered IDDE training once every five years.	VDOT's Environmental Division developed an IDDE training module that has been made available through various digital platforms including YouTube, the internal VDOT Learning Management System, and the Electronic Bulletin Boards found at every VDOT facility.

<table>
<tr><td></td><td></td><td>An IDDE awareness campaign is planned for PY 21, to further encourage relevant VDOT staff to take IDDE training. , that will be deployed on multiple platforms for access by both VDOT employees and contractors.

Additionally, a chapter in VDOT's Stormwater Pollution Prevention Plan training covers IDDE, so those trained in SWPPP policies and procedures are also trained in illicit discharge. A total of 755 staff were trained in IDDE related information through VDOT Environmental Division's IDDE, SWPPP and Good Housekeeping and Pollution Prevention for Contractors MS4 Training modules.</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-seven (27) potential illicit discharges were reported during VDOT's IDDE program in Permit Year 2019-2020. Based on follow-up investigation, 12 reported discharges were determined not to be illicit discharges and the reports were closed. VDOT's effort to resolve the 15 confirmed discharges are summarized below. VDOT or VDOT contractors were the responsible party in three verified illicit discharges 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>0</td><td>0</td></tr>
<tr><td>Hampton Roads</td><td>3</td><td>2</td></tr>
<tr><td>Lynchburg</td><td>0</td><td>0</td></tr>
<tr><td>Northern Virginia</td><td>11</td><td>8</td></tr>
<tr><td>Richmond</td><td>12</td><td>5</td></tr>
<tr><td>Salem</td><td>0</td><td>0</td></tr>
<tr><td>Staunton</td><td>1</td><td>0</td></tr>
<tr><td>TOTAL</td><td>27</td><td>15</td></tr>
</table>
<u>Summary of IDDE's verified:</u>

Hampton Roads District

1. During a routine HRBT tunnel inspection in preparation for project work, a VDOT Inspector found a vac-truck operator was transporting vactored water away from the tunnel site and dumping it into a stormwater curb inlet near the intersection of Blades St. & Executive Drive with no sediment filtration. The contractor was ordered to cease all unfiltered discharges to</td></tr>
</table>

		stormwater inlets and educated on appropriate disposal procedures. The incident was reported to the IDDE program. As the the discharges had ceased and the contractor had been educated about proper procedures moving forward, the discharge report was closed. 2. An illicit connection to a VDOT-owned stormwater management facility was discovered from a laydown yard owned by IGL Property, LLC in the City of Portsmouth, underneath the MLK Bridge. The yard had previously been owned by Dominion and used during the construction of the MLK overpass. However, the connection from a grated drop inlet underneath a fence and to the nearby stormwater management facility was not recorded or allowed. The City of Portsmouth and VDOT legal counsel drafted letters compelling th/e removal of the connection by the current tenants. The owners complied, the connection was removed, and all surfaces returned to appropriate drainage gradients. Thus the illicit discharge report was closed. **Northern Virginia (NOVA) District** 3. Loudoun County notified the VDOT CO Illicit Discharge Team that a zoning inspector discovered the El Chef Latino food truck dumping used cooking oil down a stormwater inlet at 21575 Stonetree Ct. VDOT's Illicit Discharge Coordinator left a voicemail with the food truck owner notifying them that their activity consitituted an illicit discharge, they must immediately cease the discharge, clean up any recoverable oil and food items, and properly dispose of their waste oil. The same day the report was also forwarded to the local Fire Marshall and Health Dept. The following day, the food truck owner contacted the Illicit Discharge Coordinator to confirm that both the health inspector and fire marshall had been by to assess the situation. The food truck owner informed VDOT that the discharge was not, in fact, cooking oil, but graywater from washing dishes at the end of the day. The food truck owner was informed that

		graywater was still considered an illicit discharge and the activity must cease. The food truck owner agreed that the discharge would cease and she would educate her employees on proper dishwashing procedure and washwater disposal. The food truck owner also responded via email to provide documentation of the conversation and acknowledgement of the need to educate staff. The report was then closed. 4. Loudoun County informed the NOVA NPDES Coordinator and the Central Office Illicit Discharge Team of Rossen Landscaping Company tracking sediment off their lot and onto the roadway at 21558 Stonetree Ct. From photos, it appeared there was a lack of controls around piles of sand and mulch on the lot, which was being tracked by vehicles out on the roadway. As the facility does not operate under a VESCP or VSMP Permit, DEQ indicated they had limited authority to resolve the issue. Loudoun County also had limited authority to enforce a local ordinance since the issue did not interact with their own MS4, and VDOT Land User Permitting group currently has no mechanism to enforce based on sediment runoff. However, DEQ Prep agreed to stop by and ask that the business owner voluntarily implement controls to reduce sediment runoff off their lot and into the storm sewer system. The report was then closed. 5. NOVA NPDES Coordinator notified VDOT Central Office Illicit Discharge team of an illicit connection to VDOT's MS4 from the under-construction Lumens Building in Tysons Corner. During a construction inspection, the connection was discovered and was actively discharging. Construction managers explained that it was a sump pump discharge which was not included in their land use permit application. A cease and desist letter was drafted, as well as a sampling of the discharge ordered. Sampling results returned detectable levels of Acetone, Chloroform and MEK. The Central Office Environmental Compliance group determined that these were likely the result of laboratory contamination, but as no field blank had been tested, this could not be confirmed. Additionally,

		while there do not exist any surface water quality standards for those three constituents, the Compliance group determined that this constituted an unpermitted connection to the MS4, which is not allowed under VDOT's MS4 Permit. Therefore, as the connection had not been through the proper Land Use Permit application, the Cease-and-Desist letter was issued until proper application for the connection was made. In the interim, the Central Office Illicit Discharge team reached out to DEQ's Northern Virginia regional Water Quality group for interpretation of the sampling results. After review of the issue, DEQ determined the concentrations and constituents comprised a de minimus discharge, and it would not be a violation of VDOT's MS4 permit to accept the discharge into the system. This interpretation was communicated to the VDOT Land-Use Permit group and Fairfax County's stormwater group. Thus, VDOT accepted the discharge after the appropriate land-use permit application had been completed, and the report was closed. 6. An incident of a residential contractor dumping pool paint/plaster down a stormwater inlet in front of his yard was reported to the VDOT Customer Service Center. The report was originally made on April 8th and was mistakenly routed as a Routine Maintenance issue to the VDOT Highway Maintenance Management System. In August, the ticket was redirected to the District Environmental Manager who notified the Central Office IDDE Team. As significant time had passed, no responsible party could be determined. So a maintenance crew was dispatched to ensure no permanent damage had been done to the inlet. Once no damage was confirmed, the report was closed. 7. The NOVA NPDES Coordinator forwarded a report from Arlington County of a Virginia Department of Emergency Management response to a spill from underground storage tanks (USTs) at an Exxon gas station at the corner of Richmond Highway and 23rd St. Arlington county Fire and Emergency Services

		initially responded to the spill, and informed VDEM and VDEQ Prep. A cleanup contractor was called and initial cleanup undertaken immediately. The spill had entered a private storm sewer inlet, traveled into VDOT's MS4 and then Arlington County's MS4. Arlington County's Environmental Services took the lead as the storm sewer system outfall was under their jurisdiction. Approximately 60 gallons was spilled, but none made it to the outfall at Roaches Run. After the initial emergency cleanup and containment, a second contractor was called in to finish the cleanup effort. Once this was complete the report was closed. 8. In February of 2020, VDOT Maintenance staff noted concrete runoff traveling across Electronic Drive from the Titan America Concrete Facility and entering the VDOT MS4 ditch on the opposite side of the roadway. This was the second incident of this type noted in recent years. In PY 2018-2019 a similar issue was noted and passed to DEQ PReP for enforcement of the facility's VPDES/VSMP permit. This time, the report was forwarded by the NOVA NPDES Coordinator directly to the Water Quality group of the NOVA Regional Office of DEQ. No response was ever received, and as VDOT has no enforcement authority in this matter, the issue remains open. 9. Fairfax County Stormwater personnel forwarded a citizen complaint originally made to the Fairfax County Parks Association of a paving contractor washing equipment on a residential road. The citizen provided photos, and VDOT determined it was one of their pavement contractors working in that area. The VDOT Fairfax Residency Construction group was contacted and informed a contractor had been illegally washing equipment on residential roads. The contractor was contacted, informed that such action without the appropriate use of BMPs was in violation of their contract, and told that such BMPS must be in place to prevent wash water from entering the storm sewer system. The report was then closed.

		10. In May of 2020, another report from VDOT Maintenance staff was made of concrete runoff the Titan America Concrete Company. Turbid, sediment-laden runoff was crossing over Electronic Drive and entering the VDOT storm sewer system on the opposite side of the roadway. This marked the third such incident in two years. It was noted that runoff events did not directly correspond to rain events, and therefore likely result from site activities. This time, the report was sent directly to the DEQ Northern Regional Enforcement group for assessment and enforcement of the facility's VSMP permit. DEQ staff requested a site visit with VDOT staff to go over issues convey their stance, but due to current VDOT operating procedures as a result of COVID-19, a conference call was suggested as an alternative. DEQ staff then indicated they would determine appropriate next steps and contact VDOT with a follow-up plan. As of the time of this report, no formal response has been received from DEQ, so this issue remains open. **Richmond District** 11. Staff of Hanover County Public Works Department related a report from a citizen at 7035 Brooking Way that a neighbor dumped motor oil into the roadside ditch several weeks prior and, as a result, staining had now extended into the ditch in his own front yard. VDOT's Richmond District NPDES Coordinator responded that same day to survey the area and confirmed that it appeared a discharge had taken place and there was damage to the ditchline. VDOT Ashland Residency maintenance staff then dispatched to determine the extent of the damage and if repairs could safely be made by VDOT staff. After confirmation that there did appear to be petroleum staining and damage to approximately 90 linear feet of ditch, the report was forwarded to Piedmont Regional DEQ PreP for input. DEQ PReP visited the site, conferred with the responsible party, who agreed to undertake repairs themselves. After obtaining VDOT's permission to allow the homeowner to make necessary repairs while ensuring the

		integrity of the storm sewer system, DEQ Prep then agreed to follow up with the homeowner. The report was then closed. 12. The Richmond District NPDES Coordinator alerted the Central Office Illicit Discharge Team of a VDOT asphalt milling and overlay project along Buck Rub Drive that experienced a pop-up thunderstorm. As a result, asphalt tack that was not fully cured washed off the roadway and into a nearby stormwater inlet. The NPDES Coordinator responded and cleanup and containment efforts were implemented immediately. A vactor truck was brought in to vacuum any material that had made it's way into the storm sewer system. DEQ PReP was also notified, but found no remaining issues following cleanup and the report was closed. 13. The Richmond District NPDES Coordinator was notified by DEQ and Chesterfield County of possible tire shine chemicals flowing off of the Rio Car Wash facility at 11100 Hull Street. Chemicals may have washed into VDOT's MS4, but DEQ & Chesterfield Co. took the lead on the site investigation and corrective actions. As DEQ took the lead with the business owner in implementing controls and corrective actions, VDOT agreed to monitor the area to ensure the discharge did not continue, and the report was closed. 14. DEQ notified the Richmond District NPDES Coordinator of a potential sewage leak from the Casa Grande Mexican Food restaurant at 10291 Midlothian Turnpike. At the time DEQ visited the site and contacted the owner, they indicated that the problem had already been resolved and the discharge fixed. Follow up site visits confirmed that the issue had been resolved. As DEQ was the agency that informed VDOT of the discharge, a formal 24-hour notification to DEQ was unnecessary, and the report was closed. 15. Chesterfield County stormwater personnel forwarded a report of blue-dyed sediment found in the curb and gutter area, and possibly in the storm sewer, near 17010 North

		Swift Bluff Court. A work order had already been submitted through VDOT's Customer Service center, but notification was made to the Illicit Discharge Team in order to expedite cleanup. Chesterfield County removed some of the sediment, and requested VDOT to remove the rest. As the sediment was potentially contaminated with an unknown chemical, the VDOT Regional Hazmat Manager referred the case to the regional DEQ Prep group. After field reconnaissance by DEQ, it was indicated that the material did not pose a hazard to workers, but that imminent storms could lead to a discharge of blue dy into VDOT's MS4 and nearby waterways. A VDOT maintenance crew was deployed to clean up the sediment, and 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

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. - A major revision was made to the VDOT IDDE Field Guide in PY19 by the Environmental Division. The guide has been streamlined and converted to a handheld format for maintenance and field crews. The guide was published as described in the VDOT MS4 IP Fact Sheet. - Following the Field Guide update, the IDDE Program Manual underwent a major revision in Permit Year 2019-2020. The guide was updated to reflect processes implemented under VDOT's IP. - In PY20, a new IDDE ArcGIS Storymap module was developed as a way to increase awareness and as an educational and informational multi-media platform. It includes elements from the IDDE manual and videos from training content. It is anticipated that the storymap platform will be published and available in the very near future.

		- The IDDE ArcGIS application that was developed in PY 18 and refined in PY19 was utilized in PY20 for tracking and reporting of potential illicit discharges. The following are program elements that VDOT anticipates undertaking over the permit cycle including in part or in whole during the upcoming PY: - The Maintenance Division anticipates providing some updates to existing sections of the Maintenance Best Practices Manual, as well as adding a new "Environmental" chapter. - The L&D Division anticipates enhancing its Outfall and Storm Sewer Mapping systems through use of the ESRI ArcGIS Suite over the upcoming PY and beyond. This may include, for example, increased public education and outreach through the use of Storymaps, and leveraging data within VDOT Microstation project files and ProjectWise and partners existing datasets.

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.

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 VDOT Road and Bridge Specifications, Special Provisions, and Standards and updated Instructional and Informational Memorandums (IIMs) to address discharges entering the MS4 from land disturbing activities regulated by the VPDES and VSMP during the reporting year to maintain compliance with applicable regulatory and permit requirements. VDOT also updated SWPPP General Information Sheets and supporting forms/documents for new construction projects to reflect the 2019-2024 Construction General Permit (CGP). VDOT 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 submitted to DEQ on June 26, 2019. Comments from DEQ on the submittal were provided on January 29, 2020. VDOT responded to DEQ comments on April 16, 2020.
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.	ESC Plans for RLDAs were developed in accordance with VDOT's Annual Standards and Specifications for ESC.
Continue to require applicable RLDA to secure the necessary state permit authorizations from DEQ to discharge stormwater from construction sites.	This aspect of the BMP is currently implemented and is an ongoing annual effort.	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, 2019 to June 30, 2020, within the MS4 urbanized area there were: (1) Total number of regulated land-disturbing activities that required CGP coverage =44; and (2) Total number of acres disturbed that required CGP coverage = 1,146 acres.

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.

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 48 hours after any measurable storm event (or once every four business days) has been applied statewide regardless of whether or not Impaired, TMDL, or Exceptional waters are present. In addition, ESC Construction oversight compliance inspections have been conducted by District NPDES Coordinators in accordance with VDOT's Annual Standards and Specifications for Erosion and Sediment Control.
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 474 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. 3,430 erosion and sediment control and Construction Stormwater General Permit deficiencies were noted; and 2,868 corrective actions were executed. A summary of the most frequent types of deficiencies and associated corrective actions reported by NPDES Coordinators were: - Maintenance of ESC Controls - P2 requirements ranging from good housekeeping to performing complete and timely C-107 inspections - Temporary and Permanent Stabilization - Construction Entrances - Outfall – channel / ditch shape / erosion and lining. VDOT utilized enforcement measures, including stop work orders in certain cases, 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 draft IIM was included in VDOT's Annual Standards and Specifications for PY19. This IIM was updated based on feedback from Coordinators and DEQ to improve processes in PY19 and included with the recent Annual Standards and Specifications submittal.
Develop a mechanism to track ESC construction oversight inspections and associated deficiencies.	No later than June 30, 2019, VDOT must develop a mechanism for tracking of compliance inspections, deficiencies noted, corrective actions and nature of corrective actions.	VDOT had 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 Online cloud based database was migrated to an ArcGIS Portal on-premise system during PY20. The system includes information on the number of compliance inspections, deficiencies that were discovered, corrective actions required and nature of corrective actions, and a project color coding system to correspond with IIM-LD-256. The database system was first rolled out to District NPDES Coordinators in PY18, and VDOT has continued to work on its functionality to improve issues and address the reliability and capabilities. Following the migration of the database and system from an Online cloud based system to Portal, another round of training was held with District NPDES Coordinators in PY20, and the database has been utilized throughout the year to track inspections..

Expected Efforts and Results in Meeting Measurable Goal	**Implementation Schedule**	**Annual Report Information**
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: - - Received and addressed DEQ comments on VDOT's Annual Standards & Specifications for ESC & SWM in PY20. - Received reissuance of coverage under the 2019 CGP for VDOT projects requiring continued coverage after 6/30/2019. - Updating of SWPPP General Information Sheets to reflect new 2019-2024 CGP and outreach to various VDOT Divisions, Districts, and programs. - Advancing ESC aspects within the VDOT Drainage Manual edits, Chapter 10. - Additional resourcing for District NPDES Coordinators to support ESC construction periodic oversight inspections to facilitate compliance. - Held meetings bringing together District NPDES Coordinators and Central Office staff to discuss program implementation, share best practices, and to improve effectiveness. - Continued development of geospatial ArcGIS RLDA tracking software to track active/terminated VDOT projects and to generate Site Maps to be included with Registration Statements. - Further improvements to the relatively new ArcGIS Construction ESC Inspection tracking system that was first developed in PY18; system is used in the field with mobile tablets by Inspectors during construction inspections, or following site visits on a desktop computer. Training of staff in the use of forms and the tracking system.

Expected Efforts and Results in Meeting Measurable Goal	**Implementation Schedule**	**Annual Report Information**
		- 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. The following are program elements that VDOT anticipates undertaking over the permit cycle including in part or in whole during the upcoming PY: - VDOT anticipates continuing to enhance the tracking mechanism for NPDES Construction ESC Inspections to improve functionality and reliability. This would include addressing current issues such as generation of standard reports and full functionality. It would also include a greater ability to support annual reporting. - Several VDOT Districts have conducted testing of the Plan Grid software on periodic NPDES ESC Site Inspections to evaluate its usefulness and funcationality. The software can be utilized to conduct inspections with an ipad in the field and allows for immediate communication with VDOT inspectors and in some cases the Contractor, and allows site photos to be linked to where ESC issues are occurring on the plan sheets. This evaluation is planned for continuation into the upcoming permit year.

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.

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 were submitted to DEQ on June 26, 2019. Comments from DEQ on the submittal were provided on January 29, 2020. VDOT responded to DEQ comments on April 16, 2020. VDOT made continual modifications, revisions, and updates to VDOT Road and Bridge Specifications, Special Provisions, and Standards and updated Instructional and Informational Memorandums (IIMs) to address discharges entering the MS4 from land disturbing activities regulated by the VPDES and VSMP during the reporting year to maintain compliance with applicable regulatory and permit requirements. VDOT has continued coordination with DEQ during the reporting year to facilitate the approval process and to address comments and update various components. The Program Plan was updated and submitted in PY20.
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.	SWM Plans for RLDAs were developed in accordance with VDOT's Annual Standards and Specifications for ESC and SWM.

Expected Efforts and Results in Meeting Measurable Goal	**Implementation Schedule**	**Annual Report Information**
Continue to inventory post-construction SWM facilities and related hydraulic and design information.	VDOT has previously implemented this requirement and will continue to inventory new BMPs as they are brought online.	A summary table of new stormwater BMP facilities brought online during the PY18 period within the urbanized area is provided in Appendix B. Note that these BMPs do not include those 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 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.

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.	The stormwater facility BMPs within the urbanized area were inspected during the reporting year in accordance with VDOT's BMP Inspection Manual. Record inspections are located in VDOT's SWM BMP Inspection database. A summary of the total number of BMPs inspected and the number of inspections performed by each of the nine (9) Districts is provided in Appendix C.
Continue maintenance on its post-construction SWM facilities in accordance with the VDOT BMP Maintenance Manual	This aspect of the BMP is currently implemented and is an ongoing effort.	VDOT's permanent SWM BMPs/facilities continue to be maintained in accordance with the VDOT BMP Inspection and Maintenance Manuals, which are in the process of being updated and consolidated. VDOT's current BMP database is housed within an ArcGIS Portal system. It cannot currently produce a list of maintenance activities that were necessary to address structural deficiencies or other significant maintenance tasks at this time without some very time-consuming, BMP by BMP research into the annual inspection files to see what structural/significant maintenance was needed. VDOT is in the process of updating this system and plans to incorporate this capability in the future. See Section BMP 5(C) for additional information. While this limitation is a function of the current software application database and reporting inefficiencies, the physical stormwater BMP/facilities do continue to be inspected annually as noted in this section and Appendix C, and routine and corrective maintenance/repairs are made to VDOT BMP/facilities by District Maintenance staff and contractors over time.
Report BMP Data in a format acceptable to DEQ	VDOT has developed queries and reports from the current database in a specific tabular format such that BMPs can be reported in a format that is	VDOT reported to DEQ through its monthly CGP project termination process stormwater BMP facilities that were brought online during the reporting period. In addition, a summary table of other stormwater BMP facilities brought online during the PY20 reporting period within the urbanized area, not reported through this monthly

	compitable with DEQ systems.	permit termination process, is provided in Appendix B, in accordance with Part I.C.5.f-h .

BMP 5(C) – Annual Reporting and Effectiveness Review

Description and Measurable Goal:	Report efforts and results of Post-Construction Stormwater BMPs in the Annual Report and Monitor Effectiveness

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.Migration of BMP database from ArcGIS Online cloud based system to ArcGIS Portal, with training of District staff that conduct and complete BMP Inspections during PY20. • Significant industry research on inspections and associated maintenance activities for each individual stormwater BMP type was conducted in PY19 in order to inform the planned update to both the electronic inspection & maintenance form that will populate the BMP database, and the update to the Maintenance Division's BMP Inspection and Maintenance Manual. The industry research that was completed in PY19 led to a significant revamping of the Survey 123 electronic forms that are used in conjunction with the ArcGIS Portal database by District staff in the field for BMP Inspections. Training was conducted with District staff and the new format and migrated database were successfully used in PY20. • VTRC research and publications, continuing research into off-site trading and use of nutrient credits, as well as the initiation of a new research project on water quantity technical criteraia as it relates to sheet flow.

		• Updates and edits to VDM Chapter 6, 7, 9, 10, and 11 • Partnering meeting with DEQ periodically throughout the reporting year The following are program elements that VDOT anticipates undertaking over the permit cycle including in part or in whole during the upcoming PY: - Continue to update Maintenance Division's stormwater BMP Maintenance Manual to consolidate the Inspection and Maintenance Manuals into one, to update content informed by significant past industry research - Improve reporting capabilities of the ESRI ArcGIS Suite BMP database, both for annual reporting, as well as for District staff to facilitate Inspectors with their work. This includes 1.) Ability to generate 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.

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

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 dishcarges of pollutants from roads, streets and parking lot maintenance are being prevented or minimized. Maintenance Division is nearing completion of updates to this Manual, adding a new "Environmental" chapter and inserting references to Environmental Division policies and guidance documents related to various kinds of maintenance activities.
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) continue 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

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 year (January 2020) and no immediate updates were deemed necessary.
Prohibit vehicle washing except on approved wash pads.	This aspect of the BMP is currently implemented and is an ongoing effort.	VDOT's Waste Management and Pollution Prevention Guide, Guide 3.23 addresses vehicle and equipment washing at VDOT facilities. The Guide establishes approved areas for washing, as well as detailed un-approved washing activities. Compliance with the washing requirements is periodically evaluated through environmental compliance assessments.
Identify High Priority Facilities as defined by the Individual Permit	The effort has been completed. The list will be annually evaluated to determine if additional facilities are determined to be high priority.	VDOT maintains a list of high-priority facilities. Currently, there are 68 facilities identified as high-priority facilities in the MS4 area. SWPPPs for these sites were developed during previous reporting periods (initial SWPPPs developed May 2015 – February 2017). There are no new high priority facilities owned or operated by VDOT that were identified or for which SWPPPs were developed during the current reporting period.
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 to be reviewed at least annually by the SWPPP Facility Stormwater Coordinator. Minor SWPPP revisions are edited by SWPPP Facility Stormwater Coordinators whereas significant potential refinements/edits are managed by Central Office. During this permit year, 11 SWPPPs were formally updated due to significant site

Expected Efforts and Results in Meeting Measurable Goal	**Implementation Schedule**	**Annual Report Information**
		changes. One such significant improvement in development is a new SWPPP Monthly Inspection Checklist. The improved checklist is part of VDOT's update to our environmental database referred to as the Comprehensive Environmental Data and Reporting (CEDAR) system that includes a Facility Module. The new CEDAR Facility Module enables monthly SWPPP inspections to be performed electronically with corrective actions automatically uploaded to the CEDAR system for better tracking and program management. The module and new monthly checklist began partial deployment in the fall of 2019 and will continue into the next permit year.VDOT will continue to implement the SWPPPs, and will revise and modify SWPPPP as identified 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 2020. Due to COVID-19 safety concerns, the site assessment portion was conducted alone and the records review portion was conducted remotely. One aspect of the assessments is to evaluate and communicate 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 has updated our environmental database referred to the CEDAR system for better tracking and program management. The module is expected to be fully deployed in 2021.
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. Merrifield Area Headquarters' septic tank was pumped in 2017. Winchester Residency Complex's septic tank was pumped in 2016.

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

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 VDOT facilities (and no new lands exceeding one acre) where nutrients are applied; therefore, no new individual Nutrient Management Plans are needed.
Continue to develop and refine NMPs on all lands where nutrients are applied to a contiguous area of more than one acre.	This aspect of the BMP is currently implemented and is an ongoing effort.	VDOT cannot discretely estimate the acreage upon which nutrients are applied subject to VDOT's two DCR-approved Nutrient Management Plans: (1) one plan applicable to all new construction; (2) the other plan applicable to all roadside management activities
Continue to develop and refine Nutrient Management Standards & Specifications as approved by DCR for roadside development during construction and maintenance activities.	This aspect of the BMP is currently implemented with approved district specific NMPs and is an ongoing effort.	VDOT personnel continue to implement provisions of two DCR-approved Nutrient Management Plans: (1) *"Nutrient Management Plan for Turf Establishment on Construction Projects";* and (2) *"Nutrient Management Plan for Turf Establishment on Roadside Projects".*
Continue to specify criteria for managing yard waste and grass clippings in VDOT's Roadside Development Standards and Specifications.	This aspect of the BMP is currently implemented through the Road and Bridge Specifications (2016).	VDOT's Maintenance Best Practices Manual, Waste Management, Pollution Prevention Guide, and Roadeside Development Specifications do not currently include standards and specifications for handling yard waste and grass clippings. We do address tree trimming and brush disposal. However, Maintenance Division is nearing completion of an update of the Maintenance Best Practices Manual which will include guidance 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)

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 1620 attendees of MS4-related training during the reporting year. *Spill Prevention Control and Countermeasure (SPCC)* training is delivered at facilities that operate under an SPCC plan. Training can be taken through the VDOT Virtual Campus and accessed on Electronic Bulletin Boards (EBBs) found at every VDOT facility. It includes aspects of proper and improper disposal of materials in addition to Good Housekeeping and Pollution Prevention (GHPP). *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. The *Facility SWPPP* training module is distributed via the VDOT Virtual Campus and posted on EBBs. Additionally, in-person training is provided at the large District Complexes that have SWPPPs, as well as one-on-one training for new Facility SWPPP Coordinators. *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. The VDOT *Salt Infrastructure* and *Facility Leak and Spill Prevention* training modules were developed and released through the VDOT Virtual Campus and EBBs the previous permit year. These were developed based on particular aspects of GHPP VDOT Environmental staff identified as requiring

		special focus and are deployed at facilities with site-specific concerns. *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 related to stormwater pollution prevention. *Facility Erodibles Stockpile Management* is available on the EBBs and 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 and will be deployed at facilities with site-specific issues. *Illicit Discharge Detection and Elimination* training is new and available on VDOT's YouTube channel, as well as the virtual campus and EBBs. This training focuses on identifying an illicit discharge, appropriate processes for determining a source, and proper reporting procedures. A larger marketing/awareness effort for this module will be undertaken in PY21. VDOT also had a booth at the Statewide Roadeo in August 2019, and provided general awareness of pollution prevention/good housekeeping practices, and illicit discharges. Also available were printed copies of the illicit Discharge Detection and Evaluation Field Guide. Over 700 people attended this event. See Appendix D for a summary of 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)

Expected Efforts and Results in Meeting Measurable Goal	**Implementation Schedule**	**Annual Report Information**
Ensure that VDOT employees and contractors who apply pesticides and herbicides are properly trained or certified in accordance with the Virginia Pesticide Control Act.	This aspect of the BMP is currently implemented and is an ongoing effort.	VDOT has a partnership with Virginia Cooperative Extension (VCE) where by VCE agents provide 20 hours of Registered Technician (RT) classroom training. Topics included: Pesticide Use in Virginia, Principles of Pest Control, Pesticide Labeling, Pesticide Formulations, Pesticides in the Environment, Harmful Effects and Emergency Response, Personal Protective Equipment, Pesticide Handling Decisions, Application Equipment (Calibration and Methods), Calculating the Correct Amount to Apply, and Transportation, Storage, Containment, Disposal and Spill Management. VDOT also has a partnership with Virginia Tech Weed Science Department to administer 20 hours of hands on RT Training. The hands on RT training reiterates the classroom material and provides practical training using a backpack sprayer. In addition, it provides a weed identification laboratory exercise. The overall objective of the RT training is to train VDOT employees to become Registered Technician pesticide applicators per VDACS requirements. VDOT currently has 177 certified pesticide applicators. Training was planned for Spring of 2020 but was cancelled due to the Covid-19 Pandemic. Hopefully, courses will be offered in Spring 2021. VDOT continues to control the discharge of pollutants related to storage and application of pesticides, herbicides, and fertilizers applied to our rights of way and support facilities by those individual that are certified as Registered Technicians.
Ensure that VDOT employees and contractors are trained in good housekeeping and	This aspect of the BMP is currently implemented and is an ongoing effort	Currently, various kinds of MS4 related training are provided independently by VDOT Districts and Divisions. What tracking occurs is managed and monitored by VDOT's Worforce

<table>
<tr>
<td>pollution prevention practices and the IDDE Program.</td>
<td></td>
<td>Development/VDOT University staff. However, that does not capture all relevant participation at this time. VDOT's Maintenance Division has completed some updates to its MS4/Maintenance Training Plan and is working with the VDOT Workforce Development Team to make further improvements as they develop a more comprehensive training plan for the agency under the banner of the VDOT of Tomorrow.

The following is a summary of training provided during this permit reporting year

<table>
<tr><th>Type of Training</th><th># Employees Trained</th></tr>
<tr><td>Environmental Compliance for Maintenance Activities</td><td>56</td></tr>
<tr><td>MS4 Compliance for VDOT Facilities</td><td>21</td></tr>
<tr><td>Facility Stormwater Pollution Prevention Plan (SWPPP)</td><td>228</td></tr>
<tr><td>DEQ Inspector for Stormwater Management</td><td>31</td></tr>
<tr><td>DEQ Inspector for Erosion & Sediment Control</td><td>81</td></tr>
<tr><td>TOTAL</td><td>417</td></tr>
</table>
</td>
</tr>
</table>

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)

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 1,165VDOT 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 — Recertified SWM Program Administrator — 2 — 1 SWM Inspector — 33 — 7 SWM Plan Reviewer — 16 — 4 SWM Combined Administrator — 11 — 2 ESC Program Administrators — 4 — 3 ESC Inspector — 450 — 158 ESC Plan Reviewer — 16 — 6 ESC Combined Administrators — 47 — 19 Responsible Land Disturber — 318 — 86 Dual Combined Administrator — 33 — 12 Dual Inspector — 228 — 78 Dual Plan Reviewer — 7 — 0 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:	Workforce Development (for division specific elements of VDOT's 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 1,165VDOT 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 — Recertified SWM Program Administrator — 2 — 1 SWM Inspector — 33 — 7 SWM Plan Reviewer — 16 — 4 SWM Combined Administrator — 11 — 2 ESC Program Administrators — 4 — 3 ESC Inspector — 450 — 158 ESC Plan Reviewer — 16 — 6 ESC Combined Administrators — 47 — 19 Responsible Land Disturber — 318 — 86 Dual Combined Administrator — 33 — 12 Dual Inspector — 228 — 78 Dual Plan Reviewer — 7 — 0 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 423 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.

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 continue 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 dischards and preventiion 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

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 inline 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.

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 — 12/17/19 Arlington County — 12/17/19 Chesterfield County — 11/19/19 Henrico County — 11/19/19 Chesapeake — 05/07/20 Hampton — 05/13/20 Newport News — 05/07/20 Norfolk — 05/07/20 Virginia Beach — 05/07/20 Portsmouth — 05/07/20 Fairfax County — 012/17/19 *In person or via a conference call meeting 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 requirements; - 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 does not have any additional MS4 Infrastructure coordination meetings with small MS4s to report over the past permit year.

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

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

Special Condition #1 – Chesapeake BayTMDL

Description and Measurable Goal:	Develop and implement TMDL Action Plan for the Chesapeake Bay Watershed TMDL

<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>
<table>
<tr><th></th><th colspan="3">Parameter</th></tr>
<tr><th></th><th>TP (lb/yr)</th><th>TN (lb/yr)</th><th>TSS (lb/yr)</th></tr>
<tr><td>James</td><td>5,048.98</td><td>16,389.02</td><td>1,232,366.98</td></tr>
<tr><td>Potomac</td><td>8,067.72</td><td>37,364.87</td><td>1,851,043.50</td></tr>
<tr><td>Rappahannock</td><td>125.82</td><td>3,052.13</td><td>176,782.58</td></tr>
<tr><td>York</td><td>136.00</td><td>761.75</td><td>35,488.90</td></tr>
<tr><td>Total Reductions Reported to Date (all basins):</td><td>13,378.52</td><td>57,567.77</td><td>3,295,681.96</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 PY20 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.

Special Condition #2 – 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.

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.

*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 this 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

Local TMDL Technical Advisory Committee Meetings

Meeting Name/Venue	Date
Technical Advisory Committee Meeting: Water Quality Study (TMDL) for Lewis Creek	2/25/2020

Local TMDL & Watershed Implementation Plan Meetings

Meeting Name/Venue	Date
GWRC Regioinal Stormwater Managers Meeting	7/30/2019
CSPDC Chesapeake Bay TMDL WIP III	8/29/2019
Crater PDC Chesapeake Bay TMDL WIP III Meeting	8/29/2019
Mattaponi River Watershed- TMDL Implementation Plan	9/10/2019
GWRC meeting (Technical Committee)	9/13/2019
CVPDC Watershed Meeting	9/25/2019
Water Quality Study (TMDL) for Lewis Creek	1/15/2020
GWRC – Environmental Planners Meeting	1/23/2020
Crater PDC Environmental & WIPP III Groups	2/20/2020
GWRC Joint meeting on environmental projects	2/25/2020
CVPDC Area Watershed Group Meeting	2/26/2020
Crater PDC Environmental & WIPP III Groups	4/15/2020
GWRC Environmental Meeting - Online	4/17/2020
GWRC Environmental Meeting – WIP and strategic plan	5/14/2020
GWRC Environmental Meeting – CZM training and coordination	6/12/2020

Activities

Meeting Name/Venue	Date
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	7/19/19
MS4 and Accotink Creek TMDL	07/23/19
SaMS Government Workgroup	7/31/19
VDOT ROADeo TMDL Booth	08/01/19
Unregulated Roads Mapping with DEQ	08/05/19
VDOT/Isle of Wight County Site Opportunities	08/07/19
HRSD/VDOT Shoreline Opportunities	08/08/19
Newport News Shoreline Opportunities	08/09/19
StormCon	8/19-22/19
Richmond District VDOT Project Opportunities Related to TMDL Requirements	08/29/19
WaterJam 2019	09/11-12/2019
George Washington PDC Regional Stormwater Managers Technical Meeting	09/13/19
NoVA District VDOT Project Opportunities Related to TMDL Requirements	09/16/19
We Plant Trees.org Meeting	09/18/19
CB Outfall Restoration Expert Panel Meeting	09/18/19
Crater PDC Regional Stormwater Managers Technical Meeting	09/19/19
WEFTEC 2019	09/23-26/19
Lynchburg District VDOT Project Opportunities Related to TMDL Requirements	10/02/19

HRSD/VDOT Shoreline Opportunities	10/08/19
Culpeper District VDOT Project Opportunities Related to TMDL Requirements	10/16/19
Middle James Roundtable - "Restore. Explore. Reconnect. The River is Closer Than You Think".	10/1719
EPA Region III MS4 Forum	10/21-23/19
The Salt Conundrum	10/29/19
Fredericksburg District VDOT Project Opportunities Related to TMDL Requirements	10/30/19
Hampton Roads District VDOT Project Opportunities Related to TMDL Requirements	10/31/19
City of Norfolk Shoreline Opportunities	11/04/19
Ecotalk - Bioretention as a Stormwater BMP	11/13/19
DEQ/VDOT SaMS	11/15/19
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	11/19/19
VDOT Collaboration at Newport News' City Farm	11/26/19
Outfall & Gully Stabilization Practices Webcast	12/10/19
SaMS Government Workgroup	12/18/19
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	12/19/19
Pollinators/Monarch/Land Cover Conversion GIS Mapping	01/08/20
Acid Soils Seminar	01/24/20
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	01/28/20
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	2/18/20
ACEC Chesapeake Bay TMDL Symposium	2/19/20
VLWA	03/9-10/20
SaMS Government Workgroup	03/19/20
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	03/25/20
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	04/15/20
BSA Pipsico Shoreline Collaboration	05/16/20
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	05/13/20
Chesapeake Bay TMDL Phase III WIP Interagency Team Meeting	06/30/20

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

MS4 Reporting PY20 (July 1, 2019 through June 30, 2020) 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	Latitude	Longitude	Total Acres Treated	Pervious Acres Treated	Impervious Acres Treated	Date Brought Online	6th Order HUC	Date Last Inspected
Dry Detention Basin - IIC	37.1294	-76.5217	2.19	1.73	0.46	1/31/2020	JL38	1/31/2020

* Stormwater BMP facilities in this table represent those within the urbanized area brought online during the PY20 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

BMP Numbers – MS4 Annual Report (PY20)

District	Number of BMPs	Number of BMP Inspections*
Bristol	8	8
Culpeper	37	37
Fredericksburg	71	69 (1 removed, 1 under construction)
Hampton Roads	125	105 (20 new)
Lynchburg	15	15
Northern Virginia	596	559 (8 removed, 29 under construction)
Richmond	197	175 (13 removed, 9 new)
Salem	57	56 (1 new)
Staunton	45	44 (1 removed)
Rest Areas	17	17

* Inspections reported for BMPs in the Urbanized Area.

Appendix D
VDOT Environmental Employee Training Summary

MS4 Permit Year 2019 - 2020	
Type of Training	**Number of Employees Trained**
SPCC	776
Facility SWPPP	583
DOT Hazmat Awareness	22
VDOT Salt Infrastructure	9
Facility Leak & Spill Control	28
Facility Erodible Stockpile Management	30
Illicit Discharge Detection & Elimination	134
Good Housekeeping and Pollution Prevention for Contractors	38
Total	**1620**

Appendix E
MCM 7 Infrastructure Coordination Meetings

Infrastructure Coordination Meetings with Other MS4s

Meeting Name/Venue	Date	Anticipated Future Participation
Prince William County & VDOT Annual Infrastructure Coordination Meeting	12/17/19	Yes, anticipate Infrastructure Coordination meeting during PY21
Arlington County & VDOT Annual Infrastructure Coordination Meeting	12/17/19	Yes, anticipate Infrastructure Coordination meeting during PY21
Chesterfield County & VDOT Annual Infrastructure Coordination Meeting	11/19/19	Yes, anticipate Infrastructure Coordination meeting during PY21
Henrico County & VDOT Annual Infrastructure Coordination Meeting	11/19/19	Yes, anticipate Infrastructure Coordination meeting during PY21
Chesapeake & VDOT Annual Infrastructure Coordination Meeting	05/07/20	Yes, anticipate Infrastructure Coordination meeting during PY21
Hampton & VDOT Annual Infrastructure Coordination Meeting	05/13/20	Yes, anticipate Infrastructure Coordination meeting during PY21
Newport News & VDOT Annual Infrastructure Coordination Meeting	05/07/20	Yes, anticipate Infrastructure Coordination meeting during PY21
Norfolk & VDOT Annual Infrastructure Coordination Meeting	05/07/20	Yes, anticipate Infrastructure Coordination meeting during PY21
Virginia Beach & VDOT Annual Infrastructure Coordination Meeting	05/07/20	Yes, anticipate Infrastructure Coordination meeting during PY21
Portsmouth & VDOT Annual Infrastructure Coordination Meeting	05/07/20	Yes, anticipate Infrastructure Coordination meeting during PY21
Fairfax County & VDOT Annual Infrastructure Coordination Meeting	12/17/19	Yes, anticipate Infrastructure Coordination meeting during PY21

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

Appendix F –

1) CB TMDL Action Plan Implementation and Credits Achieved To-Date
2) FY20 Project Implementation Plan

TOTAL REDUCTIONS ACHIEVED TO-DATE IN CHESAPEAKE BAY WATERSHED

	Parameter		
	TP (lb/yr)	TN (lb/yr)	TSS (lb/yr)
James	5,048.98	16,389.02	1,232,366.98
Potomac	8,067.72	37,364.87	1,851,043.50
Rappahannock	125.82	3,052.13	176,782.58
York	136.00	761.75	35,488.90
Total Reductions Reported to Date (all basins):	**13,378.52**	**57,567.77**	**3,295,681.96**
Reduction Requirement (Special Condition D2- 36%)	5,227.00	27,581.00	3,551,947.00
% Complete to date (Special Condition D2- 36%)	255.95%	208.72%	92.79%

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	23000.00	<--Previously reported in 2018 MS4 Annual Report
Timsbury Creek Stream Restoration	985.00	2700.38	103800.00	<--Previously reported in 2018 MS4 Annual Report
Slatersville	**186.00**	**425.00**	**21585.00**	**<-- New for 2020 MS4 Annual Report**
Outfall and Channel Stabilization				
Route 60 (UPC 105139)	3.53	3.89	784.57	<--Previously reported in 2017 MS4 Annual Report. Verified 2/14/2019
Route 5 (UPC 106842)	1.22	1.35	272.34	<--Previously reported in 2017 MS4 Annual Report
Quarterpath Outfall	5.44	6.00	1210.40	<--Previously reported in 2018 MS4 Annual Report
Historical BMPs	3.00	22.00	3538.00	<--Previously reported in 2016 MS4 Annual Report
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**	**<-- New for 2020 MS4 Annual Report**
BMP Retrofit 20030 LCC	**0.50**	**5.40**	**62.40**	**<-- New for 2020 MS4 Annual Report**
BMP Retrofit 20046 LCC	**0.90**	**9.40**	**108.10**	**<-- New for 2020 MS4 Annual Report**
Street Sweeping and Catch Basin Cleanout	**3287.48**	**8218.71**	**986245.23**	**<-- New for 2020 MS4 Annual Report**
Nutrient Credit Purchase				
Swiss Dixie Nutrient Bank (6/21/16)	20.00	66.94	0.00	<--Previously reported in 2016 MS4 Annual Report
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	0.00	<--Previously reported in 2017 MS4 Annual Report
Swiss Dixie Nutrient Bank (6/2/17)	103.00	344.74	0.00	<--Previously reported in 2017 MS4 Annual Report
Hunts Creek Huntrient Bank (6/7/2018)	15.12	50.61	TBD	<--Previously reported in 2018 MS4 Annual Report
Namozine Nutrient Bank (6/7/2018)	0.90	3.01	TBD	<--Previously reported in 2018 MS4 Annual Report
Sams Nutrient Bank (6/7/18)	6.90	31.00	TBD	<--Previously reported in 2018 MS4 Annual Report
Potamoi Holdings (4/25/19)	13.14	100.00	0.00	<--Previously reported in 2019 MS4 Annual Report
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**	**<-- New for 2020 MS4 Annual Report**
BMP Retrofit 20046	**32.40**	**130.80**	**6660.00**	**<-- New for 2020 MS4 Annual Report**
Total Credit Reported	5,049	16,389	1,232,367	
Reduction Requirement (Special Condition D2- 36%)	1,948	7,007	904,473	
% Complete to date (Special Condition D2 36%)	259%	234%	136%	

Project Name: *Slatersville*

Location **UPC Code or BMP ID:** *50002*

Geographic (County/City):	*New Kent*	District:	*Richmond*	Residency:	*Ashland*	River Basin:	*James*
Inside Year 2000 Urbanized Area? (Y/N)	*No*	Latitude:	*37.486678*	Longitude:	*-76.909969*	Coastal/ Non-Coastal:	*Coastal*

BMP Type: *Stream Restoration*

Project Description:

The primary purpose of this project was to repair an existing eroded channel, and reduce the occurrence of erosion in the future at the Slatersville maintenance area in New Kent County. Additional goals of the project focused on resolving stream instabilities, reducing sediment, stabilizing areas of erosion, protecting surrounding infrastructure, and improving benthic habitat.

Project Drainage Area:

Inside CUA	*Impervious Area (ac.)*	*0.00*	*Pervious Area (ac.)*	*0.00*			
Outside CUA	*Impervious Area (ac.)*	*1.03*	*Pervious Area (ac.)*	*1.35*	*Forested Area (ac.)*	*1.08*	

Existing Conditions Proposed Improvements:

Compensatory? (Y/N)	*N*	Onsite stream relocation? (Y/N)	*N*
Condition of Existing Stream	*Large advancing headcut (12') and unstable toe.*		
Proposed Stream Designed using Natural Channel priniciples? (Y/N)	*Y*		
Linear Feet Restored (centerline)	*220.00*	Existing Avg Bank Height Restored (ft)	*12.00*
Method of Stabilization:	*Protocol 1, Protocol 2*	Existing Avg Channel Top Width (ft)	*45.00*

Qualifying Conditions:

Project primarily designed to protect public infrastructure by bank armoring or rip rap? (Y/N)	Yes
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	425.00	186.00	21,585.00	*SDR applied? (Y/N) Y

Discussion

Credited for Protocols 1 and 2. Reduction taken for watershed being out of drainage area. Coastal SDR applied.

Photos, Plans and/or Project graphics

Photos, Plans and/or Project graphics

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

Please include as attachments

Est. Implementation Date:	*5/1/2020*	**Project Contact Name:**	*Tracey Harmon*
Project Completed:	*Yes*	**Contact Information (email/phone):**	*(804) 371-6834*

Project Name: *I-295 LCC 2020*

Location **UPC Code or BMP ID:** *40003*

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

BMP Type: *Land Cover Conversion*

Project Description:

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

Land Cover Conversion:

		Edge of Stream Reductions by POC achieved by conversion			
Conversion Area	From / To	Acres	TN lbs/yr	TP lbs/yr	TSS lbs/yr
Area 1	Pervious to Forest	6.44	32.39	3.09	372.36
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
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

VA DEQ Guidance Memo No. 15-2005 Appendix V.H used to confirm reduction rates for pervious- to - forest conversion in the James River basin.

Date BMP Functional: *6/30/2020* **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) N

Please include as attachments

Project Name: *BMP Retrofit 20030 LCC*

Location **UPC Code or BMP ID:** *20030*

Geographic (County/City):	*Chesterfield*	District:	*Richmond*	Residency:	*Chesterfield*	River Basin:	*James*
Inside Year 2000 Urbanized Area? (Y/N)	*Yes*	Latitude:	*37.511458*	Longitude:	*-77.68568*		

BMP Type: *Land Cover Conversion*

Project Description:

Conversion of 1.08 acres.

Photos, Plans and/or Project graphics

Land Cover Conversion:

Edge of Stream Reductions by POC achieved by conversion

Conversion Area	From / To	Acres	TN lbs/yr	TP lbs/yr	TSS lbs/yr
Area 1	Pervious to Forest	1.08	5.43	0.52	62.45
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
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

VA DEQ Guidance Memo No. 15-2005 Appendix V.H used to confirm reduction rates for pervious- to - forest conversion in the James River basin.

Photos, Plans and/or Project graphics

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

Please include as attachments

Date BMP Functional:	*10/10/2019*	**Project Contact Name:**	*Tracey Harmon*
Project Completed:	*Yes*	**Contact Information (email/phone):**	*(804) 371-6834*

Project Name: *BMP Retrofit 20046 LCC*

Location **UPC Code or BMP ID:** *20046*

Geographic (County/City):	*Chesterfield*	District:	*Richmond*	Residency:	*Chesterfield*	River Basin:	*James*
Inside Year 2000 Urbanized Area? (Y/N)	*No*	Latitude:	*37.47659*	Longitude:	*-77.65922*		

BMP Type: *Land Cover Conversion*

Project Description:

Conversion of 1.87 acres from pervious to forest.

Land Cover Conversion:

Edge of Stream Reductions by POC achieved by conversion

Conversion Area	From / To	Acres	TN lbs/yr	TP lbs/yr	TSS lbs/yr
Area 1	Pervious to Forest	1.87	9.41	0.90	108.12
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
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

VA DEQ Guidance Memo No. 15-2005 Appendix V.H used to confirm reduction rates for pervious- to - forest conversion in the James River basin.

Photos, Plans and/or Project graphics

Date BMP Functional: *10/10/2019* **Project Contact Name:** *Tracey Harmon*

Project Completed: *Yes* **Contact Information (email/phone):** *(804) 371-6934*

Photos, Plans and/or Project graphics

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

Please include as attachments

FY 20 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
1035	2070000	0.7	0.0025	0.001	0.3	

James

TN Removed	**2041**	lbs
TP Removed	**816**	lbs
TSS Removed	**244946**	lbs

Before Discount

TN Removed	**3623**	lbs
TP Removed	**1449**	lbs
TSS Removed	**434700**	lbs

York

TN Removed	**46**	lbs
TP Removed	**18**	lbs
TSS Removed	**5483**	lbs

	Total	York (CUA)	James (CUA)
	443.19	5.59	249.73
Weighted		0.0126	0.5635

	Total	York (CUA)	James (CUA)
	443.19	5.59	249.73
Weighted		0.0126	0.5635

From: Jennings, Gary <gary.jennings@vdot.virginia.gov>
Sent: Wednesday, July 15, 2020 1:57 PM
To: Hall, Ashley <Ashley.Hall@stantec.com>
Subject: Re: Street sweeping data

Ashley - we swept 1080.3 shoulder lane miles last year which produced 3832.6 CY of sweepings (1035 tons).

Let me know if you need anything else. Thanks.

Work Safe - Work Smart - Work Hard

Gary Jennings

FY 20 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
205	410000	0.7	0.0025	0.001	0.3	0.06

Before Discount

TN Removed	**718**	lbs
TP Removed	**287**	lbs
TSS Removed	**86100**	lbs

CUA Discount

TN Removed	**40**	lbs
TP Removed	**16**	lbs
TSS Removed	**4825**	lbs

Per VDOT Implementation Plan, street sweeping as a BMP is needed to remove 136 tons/year

From: Kristen Williby <kristen.williby@vdot.virginia.gov>
Sent: Thursday, July 23, 2020 5:22 PM
To: Hall, Ashley <Ashley.Hall@stantec.com>; Ray Varney <ray.varney@vdot.virginia.gov>
Subject: RE: Street Sweeping Data

Good afternoon Ashley,

We swept 205 tons of material in the district in FY20. We don't have catch basin data recorded but we will begin tracking that info for FY21.

Thanks,
Kristen Williby
District Infrastructure Manager
VDOT—Salem District
Phone: 540-589-6306

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

(James River Basin)		
Salem roads in CUA in watershed	78.59	78.59
Total Salem roads in watershed	1402.42	1402.42
Discount	0.056038847	0.056038847

FY 20 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
1748	3496240	0.7	0.0025	0.001	0.3	0.978

Before Discount

TN Removed	**6118**	lbs
TP Removed	**2447**	lbs
TSS Removed	**734210**	lbs

CUA Discount

TN Removed	**5987**	lbs
TP Removed	**2395**	lbs
TSS Removed	**718383**	lbs

From: Christopher Perazzo <christopher.perazzo@dbiservices.com>
Sent: Friday, July 17, 2020 1:19 PM
To: Steven Stephenson <steven.stephenson@vdot.virginia.gov>
Cc: Michael W. Smith <Michael.w.Smith@dbiservices.com>
Subject: RE: Street sweeping data

Good Afternoon Steve,

I have compiled the data for the dumps and came up with 548 dumps @ 3.19 tons or 4.72 yrd per dump for the time frame of July 1, 2019 to June 30, 2020.

1748.12 tons for 548 dumps or
2586.56 yards for 548 dumps

I hope this helps. If you need any additional information please do not hesitate to ask.

Thanks,

DBi SERVICES

Christopher Perazzo
CM Operations Supervisor

4039 Buell Street
Chesapeake, Virginia 23324

e. Christopher.Perazzo@dbiservices.com
p. 1-757-466-8717 ext. 2104
m. 1-757-297-3807

	Total	CUA	317/467	204.25 Within CUA
	209	204		208.75 Interstate within Ches Bay in southside
Weighted		0.978		0.978443

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

FY 20 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
134	267960	0.7	0.0025	0.001	0.3	

	Total	York (CUA)	James (CU/
	125.32	36.18	40.29
Weighted		0.2887	0.3215

James

TN Removed	**151**	lbs
TP Removed	**60**	lbs
TSS Removed	**18091**	lbs

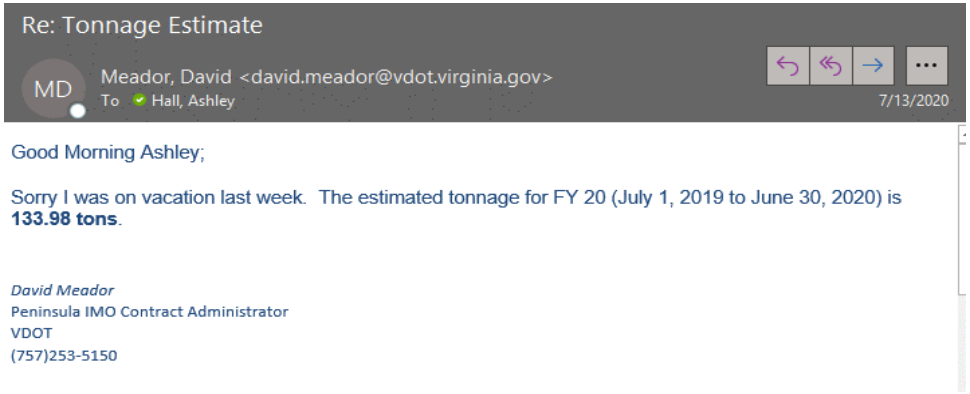
Before Discount

TN Removed	**469**	lbs
TP Removed	**188**	lbs
TSS Removed	**56272**	lbs

York

TN Removed	**135**	lbs
TP Removed	**54**	lbs
TSS Removed	**16246**	lbs

	York	James	
	36.18	40.29	Peninsula interstate w/in CUA by watershed
125.32	72.79	52.53	Peninsula Interstate (total)
	0.288700926	0.321496968	
	0.29	0.32	Weighted



Re: Tonnage Estimate

MD Meador, David <david.meador@vdot.virginia.gov>
To Hall, Ashley
7/13/2020

Good Morning Ashley;

Sorry I was on vacation last week. The estimated tonnage for FY 20 (July 1, 2019 to June 30, 2020) is **133.98 tons**.

David Meador
Peninsula IMO Contract Administrator
VDOT
(757)253-5150

Project Name: *BMP Retrofit 20030*

Location — **UPC Code or BMP ID:** *20030*

Geographic (County/City):	*Chesterfield*	District:	*Richmond*	Residency:	*Chesterfield*	River Basin:	*James*
Inside Year 2000 Urbanized Area? (Y/N)	*Yes*	Latitude:	*37.511458*	Longitude:	*-77.68568*		

BMP Type: *Extended Detention Basin*

Project Description:

Retrofit of existing dry extended detention basin into a constructed stormwater wetland.

Project Drainage Area:

Inside CUA	*Impervious Area (acres):*	*26.24*	*Pervious Area (acres):*	*47.40*
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 Clearinghous *Yes*

Method for Crediting

Methodology II - Chesapeake Bay Program Retrofit Curves/Equations

Estimated Credit:	TN	TP	TSS
lbs/yr	139.80	31.70	8,669.70

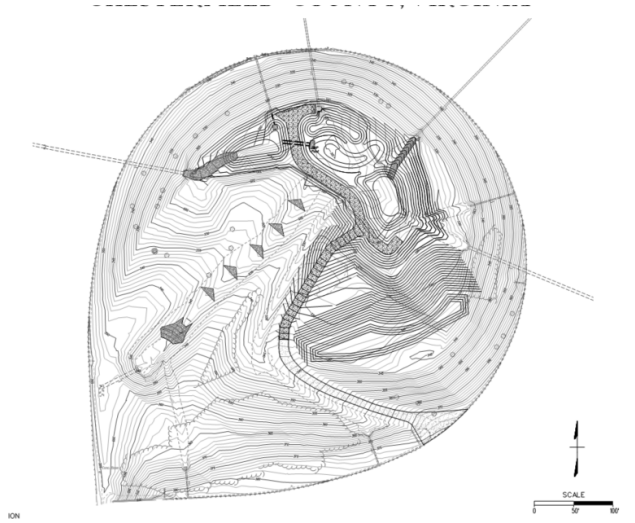
Discussion

Efficiency credits were calculated based on the volume from the basin bottom elevation to the top of riser (320.53'). An existing treatment volume of 1.71 acre-feet, a proposed treatment volume of 3.10 acre-feet and a constructed treatment volume of 2.93 acre-feet were used for credits

Implementation Date: *10/10/2019* **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) Yes

Please include as attachments

Project Name: *BMP Retrofit 20046*

Location | **UPC Code or BMP ID:** *20046*

Geographic (County/City):	*Chesterfield*	District:	*Richmond*	Residency:	*Chesterfield*	River Basin:	*James*
Inside Year 2000 Urbanized Area? (Y/N)	*Yes*	Latitude:	*37.47659*	Longitude:	*-77.65922*		

BMP Type: *Extended Dry Detention Pond*

Project Description:

Conversion of existing extended dry detention basin to a constructed wetland.

Project Drainage Area:

Inside CUA	*Impervious Area (acres):*	*29.47*	*Pervious Area (acres):*	*30.48*
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 Clearinghous *Yes*

Method for Crediting

Methodology II - Chesapeake Bay Program Retrofit Curves/Equations

Estimated Credit:	TN	TP	TSS
lbs/yr	130.80	32.40	6,660.00

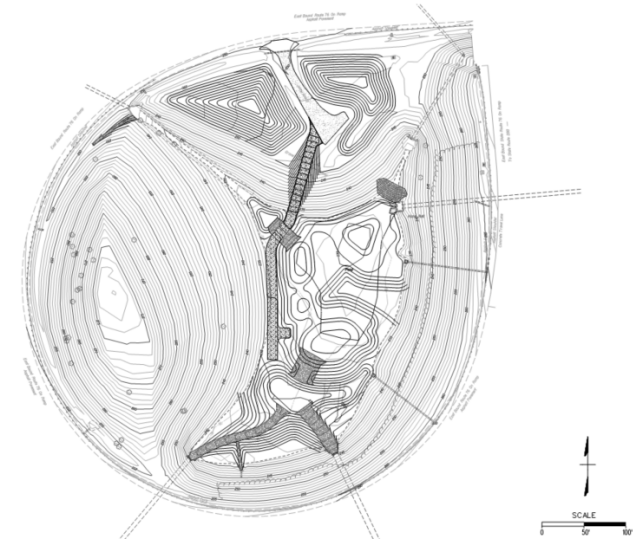
Discussion

Nutrient crediting followed the guidelines outlined in the Chesapeake Bay TMDL Special Condition Guidance. The established efficiencies with a downward modification due to the absence of forebays provided the basis for baseline pollutant reduction efficiencies. The Chesapeake Bay Program Retrofit Curves (ST) provided a basis for proposed conditions pollutant reduction efficiencies. The net pollution reduction is the difference between the baseline and proposed pollutant reductions.

Implementation Date: *10/10/2019* **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) Yes

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	96.64	103.99	36680.00	<--Previously reported in 2016 MS4 Annual Report
Harrisonburg Stream Restoration-Protocol 3	0.00	136.70	0.00	<--Previously reported in 2018 MS4 Annual Report
Lake Ridge AHQ Stream Restoration	178.34	494.89	61600.00	<--Previously reported in 2019 MS4 Annual Report
Wancopin	**2355.90**	**6609.50**	**812200.00**	**<-- New for 2020 MS4 Annual Report**
Pikes Branch	**3739.00**	**9195.00**	**434460.00**	**<-- New for 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
Land Cover Conversion				
Harrisonburg Land Cover Conversion	8.41	158.45	2942.40	<--Previously reported in 2017 MS4 Annual Report
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**	**<-- New for 2020 MS4 Annual Report**
NOVA LCC- Project 21	**0.75**	**14.11**	**261.93**	**<-- New for 2020 MS4 Annual Report**
Northern Virginia Pollinator Habitats	**0.00**	**20.29**	**0.00**	**<-- New for 2020 MS4 Annual Report**
Street Sweeping and Catch Basin Cleanout	**1363.73**	**3409.34**	**409120.37**	**<-- New for 2020 MS4 Annual Report**
Nutrient Credit Purchase				
Edgecliff Bank (1/31/17)	112.00	832.16	0.00	<--Previously reported in 2017 MS4 Annual Report
CBAY-VA LLC (11/15/2017)	150.00	1114.50	0.00	<--Previously reported in 2018 MS4 Annual Report
Potamoi Holdings (4/25/19)	9.54	150.00	0.00	<--Previously reported in 2019 MS4 Annual Report
RLP Investments, LC (4/25/19)	3.19	50.00	0.00	<--Previously reported in 2019 MS4 Annual Report
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**	**<-- New for 2020 MS4 Annual Report**
Total Credit Reported	8,068	37,365	1,851,044	
Reduction Requirement (Special Condition D2- 36%)	2,811	18,801	2,477,611	
% Complete to date (Special Condition D2- 36%)	287%	199%	75%	

Project Name: *Wancopin Stream Restoration- Achieved*

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

Geographic (County/City):	*Loudoun County*	District:	*Northern Virginia*	Residency:	*Leesburg*	River Basin:	*Potomac*
Inside Year 2000 Urbanized Area? (Y/N)	*Yes*	Latitude:	*39.00576*	Longitude:	*-77.693425*	Coastal/ Non-Coastal:	*Non-Coastal*

BMP Type: *Stream Restoration*

Project Description:

Stream restoration of approximately 2700 linear feet.

Project Drainage Area:

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

Existing Conditions Proposed Improvements:

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

Qualifying Conditions:

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

Method of Estimating Bank Erosion

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

Protocols applied:

Estimated Credit:	TN	TP	TSS	
lbs/yr	6,609.50	2,355.90	812,200.00	*SDR applied? (Y/N) Y

Discussion

Est. Implementation Date:	*6/30/2019*	**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) N

Please include as attachments

Project Name: *Pike Branch*

Location **UPC Code or BMP ID:** *90002*

Geographic (County/City):	*Fairfax*	District:	*Northern Virginia*	Residency:	*Fairfax*	River Basin:	*Potomac*
Inside Year 2000 Urbanized Area? (Y/N)	*Yes*	Latitude:	*38.785*	Longitude:	*-77.098*	Coastal/ Non-Coastal:	*Coastal*

BMP Type: *Stream Restoration*

Project Description:

Pike Branch is within a 22-acre VDOT owned parcel between Telegraph Road and Old Telegraph Road. Three perennial tributaries are also located within the project area. There have been historical efforts to stabilize the stream to protect infrastructure.

Project Drainage Area:

Inside CUA	*Impervious Area (ac.)*	*338.79*	*Pervious Area (ac.)*	*757.24*			
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	*Incised with extensively destabilized banks that are actively eroding.*		
Proposed Stream Designed using Natural Channel priniciples? (Y/N)	*Y*		
Linear Feet Restored (centerline)	*3,981.00*	Existing Avg Bank Height Restored (ft)	*15.00*
Method of Stabilization:	*Protocol 1, Protocol 2*	Existing Avg Channel Top Width (ft)	*70.00*

Qualifying Conditions:

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

Method of Estimating Bank Erosion

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

Protocols applied: Protocol 1, Protocol 2

Estimated Credit:	TN	TP	TSS	
lbs/yr	9,195.18	3,739.17	434,460.00	*SDR applied? (Y/N) Y

Discussion

Est. Implementation Date:	*6/1/2020*	**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) Y

Please include as attachments

Project Name: *NOVA LCC*

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

Geographic (County/City): *Fairfax* District: *Northern Virginia* Residency: *Fairfax* River Basin: *Potomac*

Inside Year 2000 Urbanized Area? (Y/N) *Yes* Latitude: *38.598* Longitude: *-77.252*

BMP Type: *Land Cover Conversion*

Project Description:

Mowing practices withing VDOT's Northern Virginia district provided by IMO. This area covers ROW along the Woodrow Wilson Bridge, Route 267, and Interstates 495, 95, 395, and 66.

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 Grass	441	2,306.00		
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 N

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

VA DEQ Guidance Memo No. 15-2005 Appendix V.H used to find reduction rates for pervious-to-forest conversion in the Potomac River basin. A 10% Margin of Safety was assumed.

Date BMP Functional: *6/1/2015* **Project Contact Name:** *Albert Rollins*

Project Completed: *Yes* **Contact Information (email/phone):** *(703) 366-1961*

Photos, Plans and/or Project graphics

Roadway	Available Acres for Conversion Credit	Total Nitrogen Credit (lbs/yr)
Woodrow Wilson Bridge	13	76
Beltway I495/I95	77.5	450
I95/I395	115	668
I66/I267	235.5	1,368
Total	**441**	**2,562**

Photos, Plans and/or Project graphics

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

Please include as attachments

Project Name: *NOVA LCC- Project 21*

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

Geographic (County/City): *Fairfax* District: *Northern Virginia* Residency: *Fairfax* River Basin: *Potomac*

Inside Year 2000 Urbanized Area? (Y/N) *Yes* Latitude: *38.803* Longitude: *-77.218*

BMP Type: *Land Cover Conversion*

Project Description:

Landscaping performed on 1-495/Little River turnpike for I-495 Express Lanes Project.

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	1.97	14.11	0.75	261.93
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 N

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.

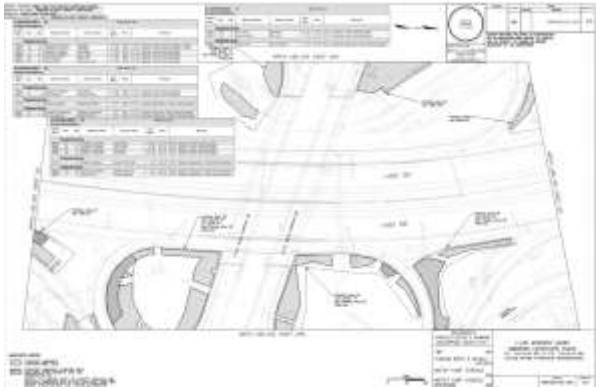
Discussion

VA DEQ Guidance Memo No. 15-2005 Appendix V.H used to find reduction rates for pervious-to-forest conversion in the Potomac River basin.

Date BMP Functional: *6/1/2016* **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: *Pollinator Habitats in Nova District*

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

Geographic (County/City): *Fairfax* | District: *Northern Virginia* | Residency: | River Basin: *Potomac*

Inside Year 2000 Urbanized Area? (Y/N) *Yes* | Latitude: *38.941* | Longitude: *-77.137*

BMP Type: *Land Cover Conversion*

Project Description:

Multiple pollinator habitats in NOVA district provided by maintenance and GIS staff.

Photos, Plans and/or Project graphics

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 Grass	3.88	20.29		
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 N

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

All conversion locations were located within the Potomac River basin. Conversion rates for turf to pervious land cover were taken from Appendix X.H of the TMDL Guidance Memo 2005-05. A 10% MOS was assumed for possible changes to land use areas.

Photos, Plans and/or Project graphics

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

Please include as attachments

Date BMP Functional: *1/1/2015* | **Project Contact Name:** *Tracey Harmon*

Project Completed: *Yes* | **Contact Information (email/phone):** *(804) 371-6834*

Date	Project Location	Where material originated from and Activity	Tons	Disposal Site (see list below)
	Woodrow Wilson Bridge	**Sweeping**	24	Alexandria Waste Recovery
	I-95/I-395	**Sweeping**	157	Potomac Landfill
	I-66	**Sweeping and DI/Drain Debris**	73	Broad Run
	I-495	**Sweeping and DI/Drain Debris**	479	Potomac Landfill/Contractor/Barret's Transfer Station

FY 20 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
733	1466400	0.7	0.0025	0.001	0.3	0.92354

For Ches Bay

TN Removed	**2370**	lbs
TP Removed	**948**	lbs
TSS Removed	**284398**	lbs

Before Discount

TN Removed	**2566**	lbs
TP Removed	**1026**	lbs
TSS Removed	**307944**	lbs

A discount factor of 0.9736 was used to account for areas outside of the CUA

Length of NOVA CUA Interstates	320.56 miles
Length of NOVA Interstates	347.1 miles
Discount Factor	0.923537885

Manassas AHQ FY 20

[f] Data collected from Manassas residency reflects street sweeping done in FY2020. Data does not represent street sweeping done within the CUA or watershed, so it was assumed to have been performed county-wide.

[g] To determine street sweeping performed within CUA and watershed, the ratio of roads within CUA and watershed and all roads in the county was calculated. For Ches Bay, ratio of CUA 0.82 was used to calculate credits

Prince William VDOT DCR Sweeping Report April-June

Date	County	Where material originated from and Activity	Cubic Yard Quantity (#	Tons	Disposal Site (see list below)	Sites
4/10/2020	Pr.Wm.	Rt.2550 Powell's Creek Blvd.sweeping	8	10.8	Pr. Wm.Co. Landfill	
4/30/2020	Pr.Wm.	Rt.1 Jeff Davis Hwy. sweeping	24	32.4	Pr. Wm.Co. Landfill	
5/15/2020	Pr.Wm.	Rt.640 Minnieville Rd.sweeping	20	27	King George Landfill	
6/3/2020	Pr.Wm.	Rt.738 Old Stage Rd.sweeping	4	5.4	King George Landfill	
6/19/2020	Pr.Wm.	Rt.234 Dumfries Rd.sweeping	20	27	King George Landfill	
6/30/2020	Pr.Wm.	Rt.640 Minnieville Rd.sweeping	28	37.8	King George Landfill	
4/8/2020	Prince William	Sweeping PW Pkwy (Minnieville Rd-Yates Ford Rd) Hauled Sweeping Debris	9	12.15	King George Landfill	
4/9/2020	Prince William	Sweeping Old Bridge (Minnieville Rd - PW Pkwy) Hauled Sweeping Debris	6	8.1	King George Landfill	
4/9/2020	Prince William	Sweeping Dale Blvd (Hoadly Rd - Minnieville) Hauled Sweeping Debris	4	5.4	King George Landfill	
4/10/2020	Prince William	Sweeping Hillendale Ave (Dale Blvd - (PW Pkwy) Hauled Sweeping Debris	2	2.7	King George Landfill	
4/10/2020	Prince William	Sweeping Ridgefield (PW Pkwy - Dale Blvd) Hauled Sweeping Debris	4	5.4	King George Landfill	
4/16/2020	Prince William	Sweeping Hoadly Rd (PW Pkwy - Dumfries Rd) Hauled Sweeping Debris	5	6.75	King George Landfill	
4/17/2020	Prince William	Sweeping Spriggs Rd (Hoadly - Minnieville Rd) Hauled Sweeping Debris	5	6.75	King George Landfill	
4/18/2020	Prince William	Sweeping Lindendale Rd (Dale Blvd - Spriggs Rd) Hauled Sweeping Debris	3	4.05	King George Landfill	
4/24/2020	Prince William	Sweeping Smoketown Rd (Old Bridge - Minnieville Rd) Hauled Sweeping Deb	2	2.7	King George Landfill	
4/24/2020	Prince William	Sweeping Princedale Dr (Dale Blvd - Lindendale Rd) Hauled Sweeping Debr	2	2.7	King George Landfill	

*Richmond County ditch cleaning was not included because Richmond County is outside of the CUA

FY 20 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	
197	394200	0.7	0.0025	0.001	0.3	

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

TN Removed	**564**	lbs
TP Removed	**226**	lbs
TSS Removed	**67667**	lbs

For Bull Run, discounted by 0.16 (Manassas residency is 230960, Bull Run CUA in Manassas Residency is 2019)

TN Removed	**110**	lbs
TP Removed	**44**	lbs
TSS Removed	**13225**	lbs

Before discount

TN Removed	**690**	lbs
TP Removed	**276**	lbs
TSS Removed	**82782**	lbs

Chesepeake Bay Discount

Length of Roads in Manassas Res CUA	1891.87	miles
Length of Roads in Manassas Res	2314.45	miles
Discount Factor	0.82	

Bull Run Discount

Length of Roads in Manassas CUA in E	369.75	miles
Length of roads in Manassas Res	2314.45	miles
Discount Factor	0.1598	

FY 20 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
845	1690000	0.7	0.0025	0.001	0.3	0.14

Before Discount

TN Removed	**2958**	lbs
TP Removed	**1183**	lbs
TSS Removed	**354900**	lbs

Cbay Discount

TN Removed	**406**	lbs
TP Removed	**162**	lbs
TSS Removed	**48690**	lbs

Per VDOT Implementation Plan, street sweeping as a BMP is needed to remove 136 tons/year

From: Mitchell, Michael <michael.mitchell@vdot.virginia.gov>
Sent: Tuesday, July 21, 2020 1:31 PM
To: Hall, Ashley <Ashley.Hall@stantec.com>
Cc: Stacy Sager <stacy.sager@vdot.virginia.gov>; Elwood Waller <brett.waller@vdot.virginia.gov>; Joel Denunzio <joel.denunzio@vdot.virginia.gov>
Subject: Re: Street Sweeping Data

Hi Ashley:

Staunton District's FY20 estimated Street Sweeping quantities are 845 Tons.

Please advise if you have questions.

Thanks

Mike Mitchell
Staunton District Maintenance
Performance Reporting Mgr.
Phone: 540-332-9200

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

(Potomac River Basin)			
Staunton roads in CUA in watershed	1164.28	1164.28	NOTE: NO VDOT MAINTAINED ROADS IN CUA WITHIN JAMES RIVER
Total Staunton roads in watershed	8486.44	8486.44	
Discount	0.137192981	0.137192981	

From Fairfax tickets:

Date	Tons
9/30/2019	3.22
9/30/2019	3.54
9/30/2019	3.8
10/4/2019	2.94
10/4/2019	4.53
10/1/2019	3.01

FY 20 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	
21	42080	0.7	0.0025	0.001	0.3	

For Ches Bay, discounted by 0.95 to account for roads not in the CUA

TN Removed	**70**	lbs
TP Removed	**28**	lbs
TSS Removed	**8365**	lbs

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

TN Removed	**9**	lbs
TP Removed	**4**	lbs
TSS Removed	**1074**	lbs

Before discount

TN Removed	**74**	lbs
TP Removed	**29**	lbs
TSS Removed	**8837**	lbs

Chesepeake Bay Discount

Length of Roads in FFX CUA	5351.18	
Length of Roads in FFX District	5652.83	
Discount Factor	0.946637348	

Bull Run Discount

Length of Roads in Manassas CUA	686.88	miles
Length of roads in Manassas Res	5652.83	miles
Discount Factor	0.121510818	

Project Name: *BMP 34029*

Location						**UPC Code or BMP ID:**	*34029*
Geographic (County/City):	*Frederick*	District:	*Staunton*	Residency:	*Edinburg*	River Basin:	*Potomac*
Inside Year 2000 Urbanized Area? (Y/N)	*Yes*	Latitude:	*39.089*	Longitude:	*-78.002*		

BMP Type: *Dry Detention Basin*

Project Description:

The basin was originally a dry detention basin, however it is effectively serving as a shallow marsh/wetland BMP. Staunton District reviewed the current status of the basin and deemed it acceptable to convert the facility maintenance and status to a wetland basin, rather than importing fill material to remove the volunteer wetland feature.

Project Drainage Area:

Inside CUA	*Impervious Area (acres):*	*3.50*	*Pervious Area (acres):*	*0.00*
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 Clearinghous *Yes*

Method for Crediting

Methodology II - Chesapeake Bay Program Retrofit Curves/Equations

Estimated Credit:	TN	TP	TSS
lbs/yr	15.61	2.72	999.50

Discussion

Based on the established CBPO efficiencies, the existing removal rates for an extended detention facility were downward adjusted by 10% for missing water quality features. The adjusted efficiencies for a constructed stormwater wetland were estimated conservatively. This yielded estimated removal for the wetland, using the retrofit adjustor curves at 55%, 35% and 70% efficiency for TP, TN and TSS respectively.

Implementation Date: *6/30/2020* **Project Contact Name:** *Tracey Harmon*

Project Completed: *No* **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) 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	176378.35	<--Previously reported in 2016 MS4 Annual Report
Industrial Drive Stream Restoration-Protocol 3	0.00	36.70	0.00	<--Previously reported in 2018 MS4 Annual Report
Outfall and Channel Stabilization	0.00	0.00	0.00	
Historical BMPs	0.00	0.00	0.00	
Forest Buffers	0.00	0.00	0.00	
Land Cover Conversion	0.00	0.00	0.00	
Culpeper District	0.00	2379.90	0.00	<--Previously reported in 2019 MS4 Annual Report addendum
Chatham Heights	**0.90**	**12.44**	**124.41**	**<-- New for 2020 MS4 Annual Report**
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	0.00	<--Previously reported in 2019 MS4 Annual Report
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
Total Credit Reported	126	3,052	176,783	
Reduction Requirement (Special Condition D2- 36%)	213	905	77,268	
% Complete to date (Special Condition D2- 36%)	59%	337%	229%	

Project Name: *Chatham Heights*

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

Geographic (County/City): *Stafford* | District: *Fredericksburg* | Residency: *Fredericksburg* | River Basin: *Rappahannock*

Inside Year 2000 Urbanized Area? (Y/N) *Yes* | Latitude: *38.31* | Longitude: *-77.45*

BMP Type: *Land Cover Conversion*

Project Description:

1.7 acres of pervious area converted to forest.

Photos, Plans and/or Project graphics

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	1.7	12.44	0.90	124.41
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 N

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

VA DEQ Guidance Memo No. 15-2005 Appendix V.H used to find reduction rates for pervious-to-forest conversion in the Rappahannock River basin.

Date BMP Functional: *3/13/2020* | **Project Contact Name:** *Carolyn Keeler*

Project Completed: *Yes* | **Contact Information (email/phone):** *(804) 912-3042*

Photos, Plans and/or Project graphics

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

Please include as attachments

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)	1.71	1.88	379.68	<--Previously reported in 2017 MS4 Annual Report. Verified 2/14/2019
Route 199 (UPC 106844)	5.44	6.00	1210.40	<--Previously reported in 2017 MS4 Annual Report
Pasture Circle (UPC 106845)	0.71	0.78	157.62	<--Previously reported in 2017 MS4 Annual Report
Historical BMPs	9.00	55.00	2631.00	<--Previously reported in 2016 MS4 Annual Report
Forest Buffers	0.00	0.00	0.00	
Land Cover Conversion	0.00	0.00	0.00	
Culpeper District	4.50	250.50	0.00	<--Previously reported in 2019 MS4 Annual Report addendum
Street Sweeping and Catch Basin Cleanout	**72.43**	**181.07**	**21728.58**	**<-- New for 2020 MS4 Annual Report**
Nutrient Credit Purchase	0.00	0.00	0.00	
Healy's Pond (4/25/19)	9.54	100.00	0.00	<--Previously reported in 2019 MS4 Annual Report
Healy's Pond (6/30/2020)	**12.10**	**100.00**	**0.00**	**<-- New for 2020 MS4 Annual Report**
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
Total Credit Reported	136	762	35489	
Reduction Requirement (Special Condition D2- 36%)	255	868	92595	
% Complete to date (Special Condition D2- 36%)	53%	88%	38%	

FY 20 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
134	267960	0.7	0.0025	0.001	0.3	

	Total	York (CUA)	James (CU/
	125.32	36.18	40.29
Weighted		0.2887	0.3215

James

TN Removed	**151**	lbs
TP Removed	**60**	lbs
TSS Removed	**18091**	lbs

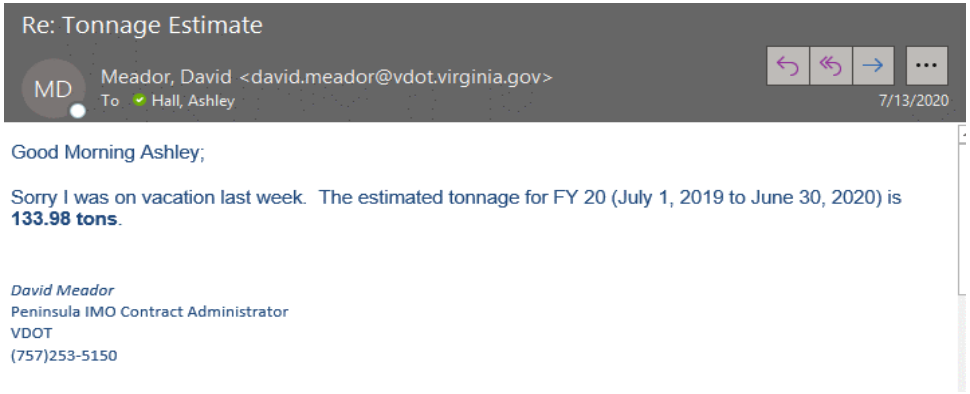
Before Discount

TN Removed	**469**	lbs
TP Removed	**188**	lbs
TSS Removed	**56272**	lbs

York

TN Removed	**135**	lbs
TP Removed	**54**	lbs
TSS Removed	**16246**	lbs

	York	James	
	36.18	40.29	Peninsula interstate w/in CUA by watershed
125.32	72.79	52.53	Peninsula Interstate (total)
	0.288700926	0.321496968	
	0.29	0.32	Weighted



Re: Tonnage Estimate

MD Meador, David <david.meador@vdot.virginia.gov>
To Hall, Ashley
7/13/2020

Good Morning Ashley;

Sorry I was on vacation last week. The estimated tonnage for FY 20 (July 1, 2019 to June 30, 2020) is **133.98 tons**.

David Meador
Peninsula IMO Contract Administrator
VDOT
(757)253-5150

Project Name: *Healys Pond NC Purchase 2020*

Location				**VDOT Project #:**	*47541*
Bank Name:	*Healy's Pond*	PO #	*50100-0001209163*	River Basin:	*York*
HUC (if provided):	*020801070204*	Contract #:	*47541*		

BMP Type: *Nutrient Credit*

Project Description:

Nutrient credits were purchased in 2/24/2020.

Qualifying Criteria:		**Affidavit and/or Supporting Documents:**	
Were the credits purchased and retired for Chesapeake Bay TMDL Purpose	*Yes*	Affidavit/Supporting Documents available? (Y/N)	Y
Are the credits Perpetual Nutrient Credits (not term	*Yes*	Please include as attachments	
Has the transaction been completed	*Yes*		

Estimated Credit:	TN	TP	TSS
lbs/yr	100.00	12.10	

Discussion

Nutrient credits were purchased in 2/24/2020.

Purchase Date:	*2/24/2020*	**Project Contact Name:**	*Tracey Harmon*
Project Completed:	*Yes*	**Contact Information (email/phone):**	*(804) 371-6834*

HEALY'S POND NUTRIENT OFFSET TRADING BANK, LLC

AFFIDAVIT OF NUTRIENT CREDIT SALE

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

1. Pursuant to that certain **Contract #47541** ("Contract") and **Purchase Order #50100-0001209163** ("Purchase Order"), between the Company (as Seller) and **The Commonwealth of Virginia, Department of Transportation** ("Purchaser"), the Company, for the benefit of the Purchaser, agreed to sell **100** pounds of nonpoint source nutrient Credits to Purchaser and retire the associated ratio of nonpoint source phosphorus Credits at the credit generating facility in the amount of **12.10** pounds of phosphorus Credits;

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

WITNESS the following signature:

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

Oscar M. Barber

By: _____
Manager or Authorized Representative

Date: 2-4-2020

Sworn to and subscribed before me this 4TH day of FEBRUARY, 2020, by OSCAR M. BARBER, Manager, on behalf of Healy's Pond Nutrient Offset Trading Bank, LLC, a Virginia limited liability company.

My commission expires: 1/31/2024 City / County of: MIDDLESEX

_____
Notary Public

DENISE HALEY
NOTARY PUBLIC
REG. # 239318
COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES JANUARY 31, 2024

DEQ Permit #: Pending
Permittee: The Commonwealth of Virginia, Department of Transportation
Nitrogen Credits: 100 pounds
Associated Phosphorus Credits: 12.10 pounds
District: York Watershed
Sediment Credits: TBD pending DEQ release of credits

FY21 Project Implementation Schedule

Project Name	River Basin	Project Description	Estimated Credits
Proctors Creek	James River	Stream restoration	TN: 100; TP: 46; TSS: 15,916
Harbor Pointe Outfall Stabilization	James River	Outfall Stabilization	TN: 122; TP: 56; TSS: 107100
Richmond District Land Cover Conversion	James River	Land Cover Conversion	TN: TBD; TP: TBD; TSS: TBD
Hampton Roads District Land Cover Conversion	James River	Land Cover Conversion	TN: TBD; TP: TBD; TSS: TBD
Wancopin Creek Stream Restoration	Potomac River	Stream Restoration	TN: TBD; TP: 1780.1; TSS: TBD
Culpeper District Land Cover Conversion	Potomac River	Land Cover Conversion	TN: TBD; TP: TBD; TSS: TBD
Northern Virginia District Land Cover Conversion	Potomac River	Land Cover Conversion	TN: TBD; TP: TBD; TSS: TBD
Belle Isle State Park	Rappahannock River	Shoreline Stabilization	TN: 835; TP: 531; TSS: 870862
Fredericksburg District Land Cover Conversion	Rappahannock River	Land Cover Conversion	TN: TBD; TP: TBD; TSS: TBD
Culpeper District Land Cover Conversion	Rappahannock River	Land Cover Conversion	TN: TBD; TP: TBD; TSS: TBD
Fredericksburg District Land Cover Conversion	York River	Land Cover Conversion	TN: TBD; TP: TBD; TSS: TBD
Richmond District Land Cover Conversion	York River	Land Cover Conversion	TN: TBD; TP: TBD; TSS: TBD
Hampton Roads District Land Cover Conversion	York River	Land Cover Conversion	TN: TBD; TP: TBD; TSS: TBD

Appendix G
Local TMDL Action Plan Implementation Summary

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 58,796 pounds of sediment were removed from the watershed in FY2020.
Chickahominy River and Tributaries Bacteria TMDL	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 TMDL	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. 330 pounds of sediment were removed from the watershed in FY2020.
Difficult Run Bacteria and Sediment TMDL	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 TMDL	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 TMDL	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 TMDL	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 TMDL	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 will also be conducting street sweeping in the upcoming fiscal year.
Roanoke River Bacteria and Sediment TMDL	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. 3,262 pounds of sediment were removed from the watershed in FY2020.
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. 145 pounds of sediment were removed from the watershed in FY2020.
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 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.
Sugarland Run, Mine Run, and Pimmit Run in Arlington, Fairfax, and Loudoun Counties	VDOT will address the Back Bay, North Landing River, and Tributaries Bacteria TMDL by continuing to implement programmatic BMPs effective in reducing bacteria discharges from VDOT's MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation. No additional BMPs are necessary at this time.
Tye River Watershed in Nelson and Amherst Counties	VDOT will address the Tye River Watershed Bacteria TMDL by continuing to implement programmatic BMPs effective in reducing bacteria discharges from VDOT's MS4. Refer to BMPs 1(A), 1(B), 2(C), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 6(A), 6(B), 6(C), 6(D) and SC2(A) for further information on implementation. No additional BMPs are necessary at this time.
Chickahominy River	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. 7,513 pounds of sediment were removed from the watershed in FY2020.
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. VDOT has no street sweeping data for Upper Buffalo Creek.
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 will also be conducting street sweeping in the upcoming fiscal year.