

Municipal Separate Storm Sewer System (MS4) Program Plan

In Compliance with
MS4 Permit VAR040039

Prepared by:

**The College of William & Mary
Department of Facilities Management**



WILLIAM & MARY

CHARTERED 1693

Revised September 15, 2023

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Table of Contents

Table of Contents.....	1
Acronyms and Abbreviations.....	3
Background.....	4
Introduction.....	4
Roles and Responsibilities.....	6
Minimum Control Measures (MCMs).....	8
MCM-1 – Public Education and Outreach.....	8
MCM-2 – Public Involvement and Participation.....	10
MCM-3 – Illicit Discharge Detection and Elimination (IDDE).....	13
MCM-4 – Construction Site Stormwater Runoff Control.....	14
MCM-5 – Post-Construction Stormwater Management in New Development and Redevelopment.....	17
MCM-6 – Pollution Prevention/Good Housekeeping For Municipal Operations.....	19
Annual Report and Program Evaluation.....	22
TMDL Special Conditions.....	22
Chesapeake Bay TMDL Action Plan.....	22
Local TMDL Action Plans.....	23

Appendix A

- Outfall Tables
- BMP Tables
- Directive 762 - Illicit Discharge Detection and Elimination (IDDE) procedure
- Physical Interconnections with Adjacent MS4s

Appendix B

- Annual Standard & Specifications (AS&S)
- AS&S DEQ Approval Letter and Correspondences with DEQ

Appendix C

- Dry Weather Screening Checklist
- Operation, Inspection & Maintenance Manual for Stormwater Management Facilities

Appendix D

- Directive 763 - Pollution Prevention/Good Housekeeping Procedures to Protect the Stormwater System
- Turf and Landscape Nutrient Management Plan along with Approval Letter

Acronyms And Abbreviations

Abbreviation/ Acronym	Term
AS&S	Annual Standards and Specifications
BMP	Best Management Practice
CWA	Clean Water Act
DEQ	Virginia Department of Environmental Quality
EHS	Environmental, Health, & Safety
EPA	Environmental Protection Agency
ESC	Erosion and Sediment Control
FM	Facilities Management
GIS	Geographic Information System
GPS	Global Positioning System
HUC	Hydrologic Unit Code
IDDE	Illicit Discharge Detection and Elimination
CWM	College of William and Mary
CWM FM	College of William and Mary – Facilities Management
FM-PFDC	Facilities Management - Facilities Planning, Design & Construction
FM – O&M	Facilities Management – Operation and Maintenance
FM - DCM	Facilities Management – Design and Construction Manual
MCM	Minimum Control Measure
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
VPDES	Virginia Pollutant Discharge Elimination System
POC	Pollutants of Concern
PSA	Public Service Announcement
P&TS	Parking and Transportation Services
R&WM	Recycling and Waste Management
SWPPP	Stormwater Pollution Prevention Plan
SWM	Stormwater Management
TMDL	Total Maximum Daily Load
TSS	Total Suspended Solids
VDOT	Virginia Department of Transportation
VESCL&R	Virginia Erosion and Sediment Control Law and Regulations
VESCP	Virginia Erosion and Sediment Control Program
VSMP	Virginia Stormwater Management Program
CBPA	Chesapeake Bay Preservation Act
MEP	Maximum Extent Practicable
TLNMP	Turf and Landscape Nutrient Management Plans
SPCC	Spill Prevention Control and Countermeasures

Background

Controlling the quality and quantity of stormwater in urbanized areas has become of greater concern since the passage of the Clean Water Act (CWA) in 1972. Despite earlier attempts to address water pollution, it was not until 1972 that the Environmental Protection Agency (EPA) was given the authority to develop and implement a stormwater management program, which regulates the amount of pollutants being discharged in U.S. water bodies. In response to amendments to the CWA, in 1990 the EPA created an enforcement management mechanism called the National Pollutant Discharge Elimination System (NPDES). With the implementation of the NPDES, it became obligatory for all operators of a Municipal Separate Storm Sewer System (MS4) who intend to discharge stormwater into surface waters to obtain a NPDES permit. Depending on the size of the municipality, the NPDES issued Phase I – Individual Permit, and Phase II – General Permit. Phase I requires a NPDES permit for medium and large cities or municipalities with populations greater than 100,000, industrial activities, and construction activities that disturb 5 or more acres. And phase II requires a NPDES permit holder to implement programs and practices to control and minimize polluted runoff for small MS4s and small construction sites. The EPA delegated the regulatory authority and oversight of the NPDES programs to the State governments. As authorized under the State Water Control Law and the federal Clean Water Act, the Virginia Pollutant Discharge Elimination System (VPDES) permitting program regulates point source pollution, which is administered by Virginia Department of Environmental Quality (DEQ). College of William & Mary (CWM) has a current phase II permit (VAR040039).

Introduction

Stormwater Management has become a particularly critical issue for urban communities. With the adoption of the Chesapeake Bay Preservation Act in 1989, the Commonwealth of Virginia began the first step of protecting urban streams and waterways from the erosion and pollutants created by urbanization. Discharges from municipal separate storm sewer systems (MS4s) are regulated under the Virginia Stormwater Management Act, the Virginia Stormwater Management Program (VSMP) Permit regulations, and the Clean Water Act as point source discharges. The permits are administered and issued by the Virginia Department of Environmental Quality.

College of William & Mary – September 2023 MS4 Program Plan

MS4 regulations were developed and implemented in two phases. Implementation of the first phase began in the early 1990s and required that operators of MS4s serving populations of greater than 100,000 people apply for and obtain a permit to discharge stormwater from their outfalls. Currently 11 localities in Virginia are Phase I MS4s, including the Hampton Roads, Cities of Norfolk, Virginia Beach, Portsmouth, Chesapeake, Newport News, and Hampton.

The second phase of MS4 regulations became effective March 23, 2003, and required that operators of small MS4s in "urbanized areas" (as defined by the latest decennial census) must obtain a permit to discharge stormwater from their outfalls. Stormwater discharges from Phase II (small) MS4s are regulated under the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems. In Virginia, small MS4s include 90 different storm sewer systems operated by cities, counties, towns, federal facilities such as military bases, Veteran's Affairs hospitals and research facilities, Department of Defense facilities and parkways, and state facilities such as community Colleges and public universities.

The College of William and Mary (CWM) has operated an MS4 program since initially registering under the General Permit in 2003. The College has since renewed its permit (VAR040039). The program is administered by the Department of Facilities Management at CWM. Under the general permit, small MS4s are required to develop, implement, and enforce a program that encompasses the following six minimum control measures (MCMs):

1. Public education and outreach on stormwater impacts
2. Public involvement and participation
3. Illicit discharge detection and elimination
4. Construction site stormwater runoff control
5. Post-construction stormwater management in new development and redevelopment
6. Pollution prevention/good housekeeping for municipal operations

MS4 programs must be designed and implemented to control the discharge of pollutants from their storm sewer system to the maximum extent practicable (MEP) in a manner that protects the water quality in nearby streams, rivers, wetlands, bays, lakes, and other water bodies.

The College of William and Mary renewed its MS4 permit (VAR040039) in November 2018 for a fourth 5-year cycle through October 31, 2023. Since the commencement of the permit

College of William & Mary – September 2023 MS4 Program Plan

coverage, the College has begun implementing permit requirements and continues to work on improving existing control measures developed to reduce the discharges of pollutants into the MS4.

In addition, since 2013, the MS4 General Permit also included special conditions to address impaired waters with a Total Maximum Daily Load (TMDL) including the Chesapeake Bay TMDL and Local Streams TMDLs. This document outlines the plan for the College of William and Mary MS4 program to comply with the 2018- 2023 VPDES General Permit for the Discharge of Stormwater from Small MS4s. The College is required to develop and implement a TMDL Action Plan for the second phase Chesapeake Bay TMDL to achieve the approved pollutant reduction goals through implementations of best management practices (BMPs).

In compliance with the provisions of the Clean Water Act, as amended and pursuant to the State Water Control laws and regulations adopted pursuant thereto, College of William and Mary as per permit number VAR040039 is authorized to discharge to surface waters within the boundaries of the Commonwealth of Virginia, except those waters specifically named in State Water Control Board regulations which prohibit such discharges. The authorized discharge shall be in accordance with the registration statement filed with the Department of Environmental Quality (DEQ) and Part I - Discharge Authorization and Special Conditions, Part II - TMDL Special Conditions, and Part III – Conditions Applicable to All State and VPDES Permits, of general permit (VAR040039).

Therefore, it is the intent of this document to establish and define the College's MS4 program and demonstrate the College's plan to meet the permit requirements through October 31, 2023. Due to the extent and scale of the new permit requirement and DEQ's audit of MS4 program in June 2023, the permit requires the College to update its MS4 Program Plan. The Program Plan will be a "living" document, with the major updates corresponding with the annual report submittals.

Roles and Responsibilities

The College of William and Mary administers four separate programs related to Stormwater in compliance with the Code of Virginia. These programs are under the Virginia Erosion and Sediment Control Program (VESCP), the Chesapeake Bay Preservation Act (CBPA), the Municipal Separate Storm Sewer System (MS4) permit, and the Virginia Stormwater Management Program Construction General Permit (VSMP- CGP).

College of William & Mary – September 2023 MS4 Program Plan

The College is maintaining an [Annual Standards and Specifications](#) (AS&S) document prepared in March 2018 for Erosion and Sediment Control and Stormwater Management. Furthermore, the College is within Tidewater Virginia as defined in the Chesapeake Bay Preservation Act. The current AS&S is in consistent with [§62.1-44.15:54.D](#). The Chesapeake Bay Preservation Act, ESC, and SWM ordinances can be found in section [3.6 of the AS&S](#).

The College of William and Mary has been a Phase II Municipal Separate Storm Sewer System (small MS4) locality since 2003 and has consistently maintained its registration under the general permit. The current MS4 Permit # VAR040039 will remain valid until October 31, 2023. In June 2023, the MS4 program underwent an audit conducted by the DEQ. It was determined that a revision to the program plan is necessary after the audit.

The College is a VSMP Authority and has been administering the review and issuance of VSMP Construction General Permit registrations for land disturbing activities one acre and larger since the program was delegated to local authorities in 2014.

For the College’s overall stormwater management program, the roles & responsibilities are defined as follows:

- MS4 Program Admin: CWM – Facilities Management (FM)
- VESCP Program Admin: CWM - FM
- VSMP Program Admin: CWM - FM
- CBPA Program Admin: CWM - FM
- Plan Review: CWM - FM
- Permit Issuance: CWM - FM
- Construction Inspection: CWM - FM – Operation & Maintenance (O&M)
- Post-Construction Inspection: CWM - FM – O&M

Minimum Control Measures (MCMs)

The following sections describe the best management practices (BMPs) that CWM plans to utilize and implement to meet each of the six minimum control measures.

MCM-1, Public Education and Outreach

The MS4 program at the College seeks to alert students, faculty, and staff on the impacts of stormwater runoff on water quality through free training sessions, workshops, and the distribution of educational materials. The public outreach program at the College also provides guidance on how the community can help in minimizing adverse impacts of urban runoff in waterways.

The College utilizes existing programs, organizations, boards, and committees within the community to implement public education activities. The Public Education and Outreach program at the College uses existing forums and outreach materials established by the EPA and other agencies, in addition to educational brochures and materials developed by the College staff. These materials are widely distributed by the College staff members at various events and meetings.

High Priority Stormwater Issues

CWM has identified three high-priority issues and target audiences within the College's limits in the Public Education and Outreach Plan. The intent is to provide a more definitive metric in the permit while continuing the more generalized public education and outreach efforts. The three high-priority stormwater issues along are identified below:

1. Nutrient Management
2. Erosion Control
3. Plastics Diversions

Audience, Strategies, and measurable goals for each High Priority Issue with Rationale for Selection

The above high-priority issues were selected because they have most directly impacted stormwater quality in the College and can be effective by actions of CWM's students, faculty, and staff. The College students, faculty, staff, and contractors comprise the public and target audience at the College.

The existing program utilizes the following strategies from Table 1 of the permit (VAR040039) to communicate to the College's public the high-priority stormwater issues mentioned above: Media Materials, Speaking Engagement, curriculum materials, and training materials. The program will continue to evaluate additional strategies from Table 1 during each academic year.

Nutrient Management

Nutrients including phosphorus and nitrogen from various sources, such as fertilizers, animal waste, and urban runoff, can contribute to water pollution when they are carried by stormwater into nearby water bodies. CWM will endeavor to reach its audience (students, faculty, staff, and contractors) through the following strategies.

- CWM staff will hold a minimum of two "nutrient management 101" courses per year for anyone interested from the College's audience.
- CWM conducts educational programs and outreach campaigns at least two times per year to inform the College's staff, crew, and students about the importance of proper nutrient management practices and proper fertilizing.
- CWM distribute training materials, which are developed by EPA and the College, in workshops, seminars, email, and post them on billboards inside buildings and public areas within the College's campus. This is anticipated to reach at least 100% of its audience.

Erosion Control

Erosion control is a high-priority issue within CWM MS4 as it directly affects the management of stormwater runoff and the protection of water quality. CWM department of Grounds & Gardens (CWM G&G) is responsible for maintaining 1,200 acres of land, gardens, and wooded areas that house over two hundred buildings. CWM G&G crews' plant and maintain turf, shrubs, and trees for the William & Mary. To minimize soil erosion and sedimentation in stormwater runoff, CWM use the following strategies to communicate erosion control with its audience.

- CWM G&G professionals will hold monthly training sessions and presentations for all ground & garden crew members on how to maintain vegetation and landscaping and enhancing vegetative cover, especially in erosion-prone areas.
- CWM FM will send two emails per academic year (once per semester) to all students and staff, educating them about the erosion control process and how to report any erosion control issues

College of William & Mary – September 2023 MS4 Program Plan

within the College's campus. The emails will include erosion control fact sheets, flyers, and brochures developed by the EPA and the College as attachments. With approximately 10,500 students and staff at the College, the emails are expected to reach and be read by 100% of its audience.

Plastics Diversions

The goal of CWM plastic diversion is to reduce the amount of plastic ending up in local natural resources such as streams, bays, rivers, and lakes. By implementing effective plastic diversion strategies, we can minimize plastic pollution. CWM use the following strategies to communicate plastic pollution with staff, students, and residents.

- CWM continuously raise awareness among the students, faculty, and staff about the importance of plastic waste reduction, recycling, and proper disposal practices through emailing and distributing of flyers published by EPA and the College and posting them on the College's stormwater management website, on billboards inside buildings, and on public areas within the College's campus. CWM anticipates that 100% of its audience (about 10,500 students and staff) will become aware of this issue.
- CWM FM collaborates with local recycling programs at least twice per year to ensure the effective collection and recycling of plastic waste.

To obtain more information or provide feedback on CWM's MS4 program and stormwater management, the public can contact the College's Facilities Management department using the following contact details:

Name: Brian Crystal, P.E.

Phone: 757-221-1205 or 221-2270

Email: facman@wm.edu

Website: [Stormwater Management | William & Mary \(wm.edu\)](#)

MCM-2 – Public Involvement and Participation

The College encourages residents, faculty, staff, and students to participate in volunteer programs hosted on campus for conservation and improvement of water resources.

Educational workshops and materials, offered by the College, provide information to the public about stormwater management practices implemented on campus and different sustainable practices that can help restore and protect surface waters. At the College, public

involvement is encouraged as the community can provide valuable input and assistance to CWM on improving the MS4 program. In many cases public opinion help identify problems promptly, and therefore, solutions can be accomplished in shorter time. Volunteer work may also offer a broader base of expertise to supplement limited resources of the College's Facilities Management, while shortening time of program implementation as well, due to a greater number of members.

CWM's procedures for Public Input

In accordance with the requirements of the permit, the public may report potential illicit discharges, improper disposal, or spills to the CWM MS4, complaints about land disturbing activities, or other potential stormwater pollution concerns to the College.

In addition, the public are welcome to comment on CWM's MS4 program plan and other stormwater related documents.

For either of the above, please contact the Facilities Management Department at 757-221-1205 or 221-2270 between 8:00 am to 4:30 pm Monday – Friday or email at facman@wm.edu.

Facilities Management will respond to public comments through email replies in a timely manner. Facilities Management will also maintain documentation of public comments and CWM's responses (if any) until the permit expires or for 5 years, whichever comes later. This information will be available upon request.

The above public comments procedure is also available on CWM's [Stormwater Management website](#).

MS4 Program Webpage

The College has developed a dedicated website on water quality, MS4 program, and stormwater management [Stormwater Management | William & Mary \(wm.edu\)](#). The site serves as a comprehensive resource providing information on the College's MS4 permit and coverage letter, the MS4 program plan, and annual reports. Additionally, it acts as a platform to distribute educational materials and provides guidance on reporting potential illicit discharges, im

proper disposal, spills, or complaints related to land disturbing activities and stormwater pollution concerns. The website also offers opportunities for public input on the College's MS4 program plan and delivers water quality and pollution prevention information in an easily accessible format. Furthermore, it grants public access to important documents such as the program plan, annual reports, and the TMDL action plan.

Proposed Activities & Period of Occurrence

Public involvement activities

The permit requires the College to implement no less than four activities per year from two or more of the following categories: monitoring, restoration, educational events, disposal or collection events, and pollution prevention. The College proposes the following public improvement activities to reduce stormwater pollutant loads, improve water quality, and support local restoration/clean-up efforts:

- Student Environmental Monitoring through Keck Environmental Lab -Students will take quarterly water samples each academic year from all 24 streams, ponds, and tidal creeks in the College Creek watershed, including College Creek, Tinkling Rill, and Lake Matoaka. At least 96 water samples will be collected annually for water quality testing.
- Earth Week Activities: Campus wide activities that involve various events and initiatives aimed at promoting environmental awareness, conservation, and sustainable practices. The activities will be done once per year during earth week (April 22 – 28, 2024) in spring semester by many students, faculty, and staff. The earth week activities include the followings:
 - Planting/weeding of trees, shrubs, and stormwater management BMPs. CWM keeps records on the number of participants and number of trees and shrubs planted or weeded and will be reported in the annual reports.
 - Campus wide cleanup activities around storm drains and along the College's streams and ponds. CWM will keep records on the number of participants and the weight of trash collected at each event in the annual reports.
 - Encouraging recycling by hosting collection drives for electronic waste, plastic, paper, and other recycle materials. The number of people visiting the collection drives will be counted and reported in the annual reports.
- Students will conduct field lab exercises in three stormwater ponds as part of Watershed Dynamics Course once per academic year. It is anticipated that there will

be 20-25 students in the class.

- The College students participates in “The Campus Race to Zero Waste” Annual 8-week Tournament in February-March. This helps CWM to advance its campus recycling and waste reduction efforts. This competition is a wonderful way for students to get involved with sustainability efforts. The number of participant students and weights of recyclables, food organics, reusable materials, and trash handled and collected will be reported in the annual reports.
- Hazardous Waste Pickup, for hazardous waste generated by the College facilities from maintenance, laboratory, and studio activities. The wastes are picked up daily by the College Waste & Recycling Management office and disposed of in accordance with the guidelines mandated by EPA and DEQ. The amount of hazardous waste collected and disposed during each year will be measured and reported in the annual reports.

MCM-3

Illicit Discharge Detection & Elimination (IDDE)

MS4 Service Area

The College publishes interactive stormwater maps using online GIS. The College's GIS system is maintained and continuously updated by the staff in the College’s GIS system. The College MS4 consists of 55 outfalls and 37 BMPs. The entire Collage is located within the urbanized area identified by the 2010 decennial census. The MS4 maps and tables can be found on Appendix A and are available upon request.

Interconnection Correspondence

Interconnection correspondences have been communicated with adjacent MS4s. The College has 8 interconnections with the city of Williamsburg. The College had a meeting with VDOT in 2014, there were no interconnections with VDOT. Interconnection information with adjacent MS4s can be found on Appendix A and table below.

MS4 Name	Permit #	Total # of Interconnection	Downstream Interconnection
James City County	VAR040037	0	0
York County	VAR040028	0	0
VDOT	VAR040115	0	0

City of Williamsburg	VAR040027	8	2
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IDDE Procedures

In order to detect and eliminate both direct and indirect illicit discharges, the College has developed an Illicit Discharge Detection and Elimination Program (IDDE), which relies on the College’s [Illicit Discharge Detection and Elimination Policy](#) (Appendix A) to prohibit any non-stormwater discharges into the storm sewer system or any receiving waterway. The policy is enforced by the College’s Facilities Management department, who relies strongly on regular inspections and public notification and address unauthorized non-stormwater discharges, including illegal dumping, to CMW MS4 to effectively eliminate the unauthorized discharge. Instructions on how to report concerns or potential illicit discharges are available online at the College’s [Stormwater Management Website](#) and the procedures stated under [MCM-2](#) above. The College encourages the community’s contribution in discovering and reporting possible polluted runoff and maintains appropriate staffing to address such reported concerns. The number of illicit discharges (if any) will be reported each year in the annual report. One illicit discharge incident was reported during FY22-23. The College’s FM has investigated and successfully resolved the incident. The incident will be included in the annual report ending on 6/30/2023.

In addition, dry weather screenings of all 55 outfalls and 37 BMPs at CWM are conducted annually using a checklist developed by the College’s consultant. The checklist is included on Appendix C. The dry weather screening/inspection is performed annually to identify possible illicit connections and discharges, as well as, to keep track of all existing stormwater management facilities and structures within the MS4. During the inspection, outfalls are also evaluated for structural damages or uncommon conditions that might indicate the present of pollutants. Outfalls are also inspected for maintenance necessity to avoid detrimental conditions on stream banks and bed. Completed inspection forms and reports will available upon request.

MCM-4

Construction Site Stormwater Runoff Control

Under the VSMP permit, the College is required to develop, implement, and enforce a program to reduce the discharge of pollutants associated with construction activities into the MS4. The College’s Annual Standards and Specifications (AS&S) for Erosion and Sediment Control and Stormwater Management is an integral component of all design, construction, inspection, enforcement, maintenance, and management of the College’s facilities and

campuses. It is enforced during the planning, permitting and construction phases by the College's Facilities Management (FM) staff.

The College personnel receive training by DEQ on ESC and SWM, to enforce such programs. Certified and professional staff of CWM or certified CWM's consultant staff are responsible for reviewing plans during the permitting process and conducting regular inspections of the site during construction. Inspection and plan review procedures are implemented in accordance with state laws and regulations and the College's AS&S. A copy of the College's AS&S is available at the [College website](#) and/or will be provided upon request.

Public concern and comments associated with runoff from construction activity is received via email at facman@wm.edu. Instructions on how to report concerns or potential illicit discharges are available online at the College's [stormwater management website](#).

After public comment is received, College's FM is responsible for investigating the incident and contacting the appropriate spill response coordinator.

Ordinances & Legal Authorities Employed

The College's most recent approved Annual Standards & Specifications (AS&S) can be found at the College's [stormwater management website](#) as well as included in Appendix B. Approval letter dated April 18, 2018 is also included in Appendix B. CWM AS&S defines the legal authority and procedures related to construction site stormwater as follows:

- Erosion and Sediment Control Requirements: Section 4.2
- Stormwater Management Requirements: Section 4.3
- SWPPP Requirements: Section 5.0
- Inspection and Enforcement Requirements: Section 6.0
- Variances, Deviations & Exceptions: Section 7.0
- VSMP Construction General Permit: Appendix F of AS&S

Roles and Responsibilities for MCM-4 Compliance

CWM personnel receive training by DEQ on ESC and SWM to implement ESC and SWM program. Certified staff of the Department of Facilities Management – Facilities Planning,

Design, and Construction (FM-FPDC) and/or certified consultants are responsible for reviewing plans during the permitting process and conducting regular inspections on project sites during construction. They also perform inspections for regulated land-disturbing activities; oversee the waiver and exception process for Chesapeake Bay Preservation; issue permits for land disturbances including VSMP Authority Permits; and oversee the administration of the VSMP Construction General Permits (CGP).

Procedures

Plan Review

The College reviews construction documents and specifications upon submission through the Department of FM-FPDC for compliance with the College's AS&S, current editions of the Virginia Erosion and Sediment Control Handbook (VESCH), and the Virginia Stormwater Management Handbook (VSWMH). Site plans follow erosion and sediment control checklist (Appendix A of AS&S) and SWM checklist (Appendix B of AS&S). The number of plans reviewed and approved each year will be reported in its annual report.

Inspection

Inspections are performed during construction by the College's FM-FPDC certified E&SC and SWM inspectors. Inspection procedures are documented on ESC inspection report form. These inspections follow the approved plan and the current editions of the Virginia Erosion and Sediment Control Handbook (VESCH), the Virginia Stormwater Management Handbook (VSWMH) including the Virginia DEQ Stormwater Design Specifications for specific stormwater management facilities, and Annual Standard & Specification. VSMP CGP inspections use the College Construction General Permit Site Inspection Report included in Appendix B as a procedure for those sites covered by the CGP. Inspections are conducted during or immediately following initial installation of erosion and sediment controls; at least once per every two-week period; within 48 hours following any runoff producing storm event; and at the completion of the project prior to the release of any performance bond. The number of construction site inspections will be reported to DEQ by CWM FM in each annual report.

Compliance and Enforcement

The College FM-FPDC performs two types of inspections: Land Disturbing permit inspection and VSMP CGP inspection. Land Disturbing permit inspections are performed for construction activities meeting criteria in the AS&S.

VSMP CGP inspections are performed by the College as a VSMP Authority for construction activities requiring registration under the VSMP Construction General Permit (VSMP CGP).

CWM applies enforcement actions for maintaining compliance with AS&S. If the Contractor fails to comply with the listed legal authorities, the College can take a variety of actions as per section 6.5 of AS&S.

The number of enforcement activities and number of complaints will be recorded in the annual report during each year.

MCM-5

Post-Construction Stormwater Management in New Development and Redevelopment

As a non-traditional small MS4, the College has direct control over planning, design, construction, and post-construction of stormwater management facilities, best management practices (BMPs), and outfalls. The MS4 program at CWM consists of minimizing the impacts of runoff associated with land disturbance such as flooding, erosion, and water pollution. Due to its current developmental expansion, the College's goal is to implement cost-effective measures that provide water quantity and quality control while complying with laws and regulations. Current practices implemented by the College in managing and controlling stormwater focus on promoting natural hydrologic processes as well as minimizing contact of pollutants with rainfall. As land disturbing activities take place, the College incorporates measures that protect and/or improve natural areas during and after construction. CWM strives to reduce impervious areas as much as possible and create more vegetated regions. Inspections of all 37 stormwater management/BMP facilities and 55 outfalls in College MS4 area are performed each year in accordance with state laws and regulations, the College's [AS&S](#) (Appendix B), the College's BMP Operation, Maintenance and Inspection Manual (Appendix C), and inspection checklists (Appendix C). Minor maintenance is conducted by FM-O&

M crews or by a contractor hired by FM-O&M annually. Major maintenance or modifications are designed and constructed by outside firms hired by FM-FPDC. The number of SWM/BMP facilities that are repaired each year will be reported in the annual reports.

The stormwater BMP map, table and/or database is incorporated into the College's GIS system, and shown in Appendix A. See below link for the College's GIS link. The College's GIS is not available for public, but we can give access to DEQ whenever is requested.

<https://sm-wm.maps.arcgis.com/apps/instant/basic/index.html?appid=3925866149354c7bbb3eb02ba6b90e77>

Ordinances & Legal Authorities Employed

The College's most recent approved Annual Standards & Specifications (AS&S) can be found at the College's [stormwater management website](#) as well as included in Appendix B. Approval letter dated April 18, 2018 is also included in Appendix B. CWM AS&S defines the legal authority and procedures related to post-construction site stormwater as follows:

- Stormwater Management Requirements: Section 4.3
- Inspection and Enforcement Requirements: Section 6.0

Post-Construction SWM/BMP Inspection Procedures

BMP Tracking

A spreadsheet table is maintained by CWM FM and is linked to the GIS system. A map showing the location of outfalls stormwater management facilities is found on the College's website at [Stormwater Management | William & Mary \(wm.edu\)](#), Appendix A, and College's GIS website. Annually, updates to the BMP database are uploaded to DEQ's BMP Warehouse although some BMPs are entered through the VSMP CGP database upon termination of CGP permit coverage.

BMP Inspection

Inspections are performed under a DEQ trained Stormwater Inspector. All SWM Facilities and BMPs (total 37) are inspected annually. Inspection sheets/checklists are provided in Appendix C for stormwater management facilities. Inspection procedures follow the DEQ training

materials Inspector for SWM Participant Guide, Module 8: Post-Construction Inspections, available from the DEQ Environmental Learning Management System (ELMS) site. BMPs and stormwater management facilities are maintained throughout the year by CWM FM. The number of SWM/BMP facilities that will be repaired or maintained will be added to the annual report. Normal maintenance activities include mowing, vacuum cleaning, sediment removal, and landscape maintenance.

Roles and Responsibilities for implementing post-construction stormwater runoff.

CWM personnel receive training by DEQ on ESC and SWM to implement ESC and SWM program. Certified staff of the Department of Facilities Management – Facilities Planning, Design, and Construction (FM-FPDC) and/or certified consultants are responsible for conducting post- construction inspections on CWM owned stormwater management facilities in accordance with state laws and regulations and CWM’s AS&S, which is available at the [Stormwater Management website](#) and provided upon request.

MCM-6

Pollution Prevention/Good Housekeeping For Municipal Operations

Written Procedure for the Operation & Maintenance Activities

Under the MS4 permit, the College of William & Mary is required to develop, maintain, and implement written procedures for activities at facilities owned or operated by the College. These written procedures aim to reduce and prevent the discharge of pollutants into the MS4. They encompass various aspects, including activities, schedules, inspection procedures, and corrective actions to ensure the proper performance of each facility.

CWM's written procedures consist of the "BMP Operation and Maintenance Manual" and "Directive 763 - Pollution Prevention/Good Housekeeping Procedures to Protect the Stormwater System." The responsibility for managing operation and maintenance activities lies with the College's Facilities Management - Operation & Maintenance (FM - O&M) department. The BMP O&M Manual can be found in Appendix C, while Directive 763 is included in Appendix D and on the [CWM Stormwater Management Website](#).

High-Priority Facilities

There are no high-priority facilities owned or operated by the College with a high potential of discharging pollutants.

Turf and Landscape Nutrient Management Plans

Turf and Landscape Nutrient Management Plans are strategies aimed at managing and reducing nutrient pollution in stormwater runoff from turf and landscape areas within urban environments. Nutrient pollution, primarily from fertilizers, can contribute to water quality issues, such as algal blooms and impaired aquatic ecosystems.

To address this issue, CWM has developed and implemented Turf and Landscape Nutrient Management Plans (TLNMP) and was approved on 05/21/2021 by Department of Conservation and Recreation (DCR). The TLNMP will expire on 05/21/2024. CWM TLNMP is available in FM-O&M and included in Appendix D. A total of 60.48 acres are covered by nutrient management plans in the College of William & Mary.

Contractor Compliance

The College's directive #763, titled the "W&M Pollution Prevention Plan," provides information and Pollution Prevention/Good Housekeeping Procedures. Its purpose is to ensure that College staff and contractors working on the College's properties adhere to MS4 regulations by minimizing and preventing the discharge of pollutants. The directive #763 is available on the College's [Stormwater Management website](#) and can also be found in Appendix D.

When the College hires contractors for construction projects, they are required to comply with MS4 regulations as specified in their individual contracts. These contracts include provisions that enforce the necessary good housekeeping and pollution prevention requirements.

Employee Training Plan

Multiple training documents are available for all the items mentioned. The following activities ensure that staff members are adequately trained:

College of William & Mary – September 2023 MS4 Program Plan

1. Field personnel in FM-O&M, responsible for streets, parking lots, landscape, parks, recreational facilities, vehicle maintenance, and public works facilities, receive training on pollution prevention, good housekeeping, and the recognition and reporting of illicit discharge. The types of trainings and schedule include:
 - a. **Online training Courses:** Web-based training modules or courses for staff to learn about recognizing and reporting illicit discharges, pollution prevention, and good housekeeping once per 24 months.
 - b. **Educational Materials:** Annually, brochures, flyers, pamphlets, or posters published by EPA, or the College will be distributed to field personnel with information on illicit discharge recognition and reporting, pollution prevention, and good housekeeping through email and/or hand delivery twice per year.
 - c. **In-person or Virtual Meetings:** Monthly training meetings with personnel where professionals present information and answer questions related to illicit discharge issues, pollution prevention and good housekeeping practices.
2. Employees and contractors involved in pesticide and herbicide application will receive training, certification, and continuous education in accordance with the Virginia Pesticide Control regulations and are VCACS certified applicators. They also obtain certification/recertification in nutrient management, pesticide and herbicide usage, and arborist training. Two employees got recertification in FY22-23.
3. Employees, contractors, and consultants serving as plan reviewers, inspectors, program administrators, and construction site operators obtain the appropriate certifications/recertifications as required under the Virginia Erosion and Sediment Control Law, the Virginia Stormwater Management law, and their attendant regulations as demonstrated in [MCM-4](#).
4. All ground crew members (about 20) receive monthly training sessions on spill response for illicit discharges.
5. CWM Environmental Health & Safety department is responsible for Spill Prevention Control and Countermeasures (SPCC) regulations, which are managed through the Environmental Protection Agency (EPA). Any individual on the CWM campus who manages oil, or any oil-related product receives annual training that includes a review

of the plan, inspection procedures, and spill response procedures. The training is conducted online through the University's Learning System, Cornerstone. SPCC regulations and the CWM SPCC Plan can be found on the College [SPCC Website](#).

Furthermore, emergency response personnel, including the CWM police force, receive monthly trainings for hazardous materials spill response. The College also relies on the local fire department for emergency spill responses, and they receive training in their respective academies.

CWM maintains documentation of each training event for a minimum of three years. Training documentation includes PowerPoint slides, recorded videos, brochures, flyers, books, handouts, and sign-in sheets. They are available upon request. The trainings are also recorded in the annual reports. CWM FM is responsible for tracking staff trainings to ensure everyone holds the appropriate certifications.

Annual Report and Program Evaluation

This program is to be evaluated annually by the College's FD-FPDC personnel to ensure compliance with all provision of the MS4 permit. Program plan revisions will take place as necessary or as required by DEQ.

An annual report is to be submitted for review to DEQ on MS4 Program Plan updates. The annual MS4 report is to be submitted by October 1st of each year. Copies of previously submitted Annual Reports can be reviewed on the College's stormwater management website: [Stormwater Management | William & Mary \(wm.edu\)](#).

TMDL Special Conditions

Chesapeake Bay TMDL Action Plan

In FY14, the College of William and Mary prepared a TMDL Action Plan for meeting the Special Condition for the Chesapeake Bay TMDL pursuant to Section II A-11 of the General Permit. The

College of William & Mary – September 2023 MS4 Program Plan

TMDL Action Plan was updated in FY19 in anticipation of the permit renewal for the second permit cycle of the Chesapeake Bay TMDL. The College's CB TMDL action plan will be updated once again in anticipation of the permit renewal for the third permit cycle. The current Chesapeake Bay TMDL action plan is found at the College's stormwater management website located at [Stormwater Management | William & Mary \(wm.edu\)](#).

Local TMDL Action Plans

In FY15, the College prepared TMDL Action Plans to meet bacterial Waste Load Allocations (WLAs) on Powhatan Creek and Mill Creek. No other TMDLs have been issued for waters in the jurisdiction. The Mill Creek and Powhatan Creek TMDL Action Plan can be found at [Stormwater Management | William & Mary \(wm.edu\)](#)