JAMES MADISON UNIVERSITY®

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MS4 Program Plan
2023 to 2028

James Madison University – Harrisonburg, Virginia
MS4 Program Plan

General VPDES Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems

Registration Number: VAR040112

In compliance with the Virginia Pollutant Discharge Elimination System (VPDES) Regulations

Last Updated August 2025

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Table of Contents

Appendices Index

Acronyms and Abbreviations

Bay	Chesapeake Bay
BMP	Best Management Practice
CWA	Clean Water Act
CGP	Construction General Permit
DCR	Department of Conservation and Recreation
DEQ	Department of Environmental Quality
EPA	Environmental Protection Agency
ESC	Erosion & Sediment Control
FM	Facilities Management
GIS	Geographic Information Systems
GPS	Global Positioning System
HUC	Hydrologic Unit Code
IDDE	Illicit Discharge Detection & Elimination
JMU	James Madison University
MEP	Maximum Extent Practicable
MCM	Minimum Control Measure
MS	Minimum Standard
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollution Discharge Elimination System
NOI	Notice of Intent
NOV	Notice of Violation
POC	Pollutants of Concern
RLD	Responsible Land Disturber
SOP	Standard Operating Procedures
SWM	Stormwater Management
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load
VPDES	Virginia Pollution Discharge Elimination System
VSMP	Virginia Stormwater Management Program
WLA	Waste Load Allocation

SECTION 1: INTRODUCTION

1.1 Plan Purpose

Stormwater runoff plays a critical role in the quality of water resources within the Commonwealth and regulatory language requires that Phase II municipalities develop a plan with the purpose of describing best management practices to be implemented in order to ensure their impact on the environment is minimal.

James Madison University (JMU) has been authorized to discharge stormwater from its municipal separate storm sewer system (MS4) by having coverage under the Virginia Pollutant Discharge Elimination System (VPDES) General Permit for Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems.

From the regulatory language, the permittee shall develop, implement, and enforce a MS4 program designed to reduce the discharge of pollutants from the small MS4 to the maximum extent practicable (MEP), to protect water quality, to ensure compliance by the permittee with water quality standards, and to satisfy the appropriate water quality requirements of the State Water Control Law and its attendant regulations.

James Madison University will annually evaluate the MS4 Plan for program compliance, the appropriateness of identified BMP's and the progress towards achieving the identified measurable goals. The information gathered for including in annual reports will determine if BMP's are effective as is, or if modifications are needed.

1.2 Regulatory Background

The 1972 amendments to the Federal Water Pollution Control Act, also known as the Clean Water Act or "CWA"; provide the statutory basis for the National Pollution Discharge Elimination System (NPDES) permit program and the basic structure for regulating the discharge of pollutants from point sources to waters of the United States. Under Section 402 of the CWA the Environmental Protection Agency is the authorized agency to develop and implement the NPDES program. Therefore, Congress amended the Federal Water Pollution Control Act to prohibit the discharge of any pollutant to waters of the United States from a point source unless the discharge is authorized by an NPDES permit. The NPDES program is designed to track point sources and require the implementation of the best management practices or controls necessary to minimize the discharge of pollutants. Initial efforts to improve water quality under the NPDES program primarily focused on reducing pollutants in industrial process wastewater and municipal sewage. These discharge sources were easily identified as responsible for poor water quality.

As pollution control measures for industrial process wastewater and municipal sewage were implemented and refined, it became increasingly evident that stormwater runoff was found to be a major cause of water quality impairment. In response to the 1987 Amendments to the Clean Water Act (CWA), the U.S. Environmental Protection Agency (EPA) developed Phase I of the NPDES Stormwater Program in 1990. The Phase I program addressed sources of stormwater runoff that had the greatest potential to impact water quality. Under Phase I, EPA required NPDES permit coverage for stormwater discharges from Medium and Large Municipal Separate Storm Sewer Systems with populations of 100,000 or more people, industrial activities, and construction activities that disturbed 5 or more acres.

In 1999, the EPA developed the Stormwater Phase II Final Rule which tightened the regulations that requires operators of regulated small municipal separate storm sewer systems (MS4s) to obtain a NPDES permit and develop a stormwater management program designed to prevent pollutants from being washed into the MS4 system during a storm event (or from being discharged directly into the MS4) and then discharged from the MS4 into local water bodies.

James Madison University falls under the Phase II regulations as a small municipal storm sewer system operator. Based on 40 CFR 122.26(b)(8), the definition of a "municipal separate storm sewer" means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

> (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law)...including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act that discharges into waters of the United States. (ii) Designed or used for collecting or conveying stormwater; (iii) Which is not a combined sewer; and (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2."

Also what defines James Madison University under the MS4 program is that the university is considered to be within an urbanized area. By definition, an urbanized area (UA) is a land area comprising one or more places – central place(s) – and the adjacent densely settled surrounding area – urban fringe – that together have a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile. It is a calculation used by the Bureau of the Census to determine the geographic boundaries of the most heavily developed and dense urban areas.

SECTION 2: ADMINISTRATION

2.1 Organizational Structure

The primary responsibility for coordinating, educating and reporting for compliance with the MS4 General Permit is held by the Stormwater Coordinator within Engineering & Construction of Facilities Management (FM). Many activities within the procedural best management practices (BMPs) provided in Section 3 are carried out by individuals within other departments as shown in the organizational structure chart below. Each best management practice described will identify the primary department, or departments, implementing the practice and/or providing information for reporting purposes. James Madison University does not rely on an outside entity to implement any of the program minimum control measures.

Also, as a state university, JMU is considered to be a non-traditional MS4. Due to this unique structure, some of the traditional program elements will need to be modified or may not be entirely applicable. Concerning the interpretation of "public" as it relates to the university for education, outreach and involvement, JMU considers its employees as part of the "public" for the purposes of compliance with this permit. This is in line with EPA's statement regarding "public" and its applicability to MS4 Programs administered by state entities as published in the Federal Register, Volume 64, No. 235 page 68,750 on December 8, 1999.

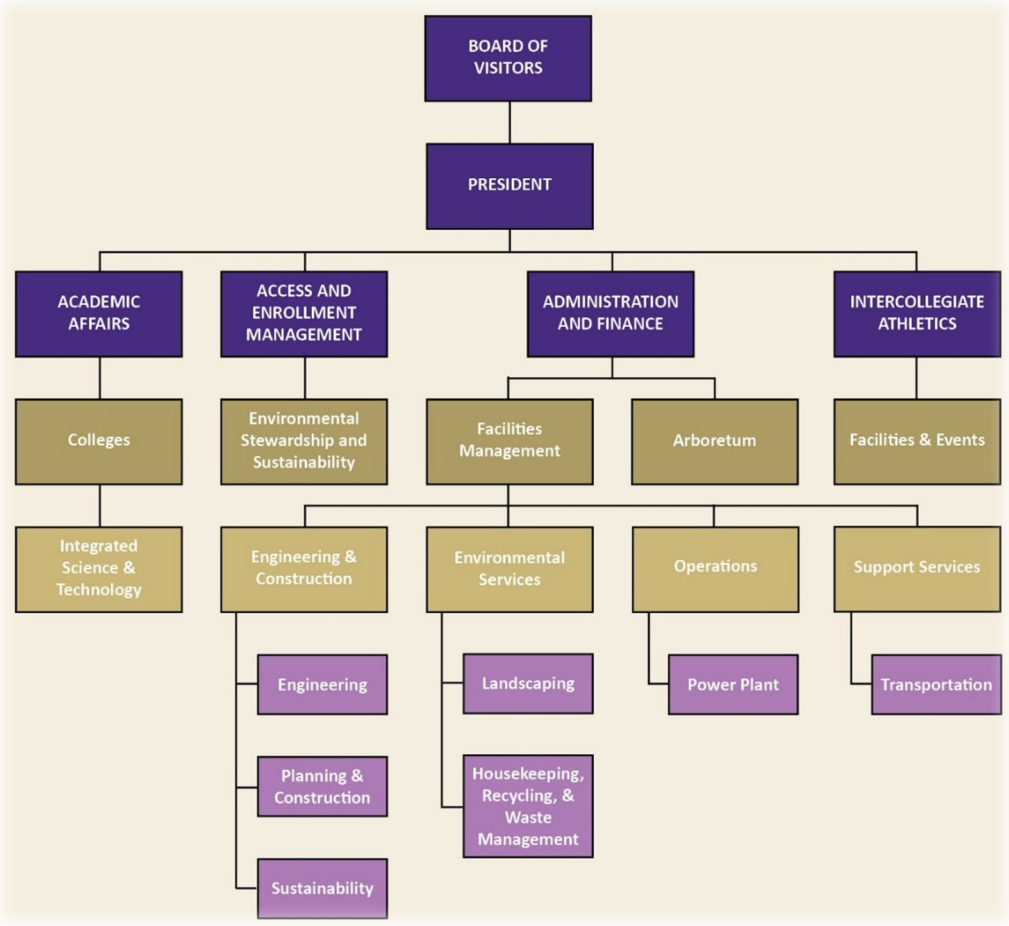


Figure 1. James Madison University Stormwater Management Organizational Structure

2.2 Roles & Responsibilities

The principle executive officer for the MS4 Program is the Associate Vice President of Administration & Finance, with the Stormwater Coordinator being a duly authorized representative.

Principle Executive Officer:

Title:	AVP Administration & Finance
Name:	Craig Short
Address:	JMAC 4 2000, MSC 5804 Harrisonburg, VA 22807
Phone:	(540) 568-2535
Email:	shortce@jmu.edu

Duly Authorized Representative:

Title:	Stormwater Coordinator
Name:	Alison (Ali) Sloop
Address:	181 Patterson St., MSC 7004 Harrisonburg, VA 22807
Phone:	(540) 568-3174
Email:	witmanad@jmu.edu

Permit requirements and responsibilities are shared among several different divisions and departments at JMU, with the primary responsibility for overall compliance managed by the Stormwater Coordinator within the Facilities Management Department. Specific departmental responsibilities are listed below by department:

- Facilities & Events under Intercollegiate Athletics
  - 3.1.1 BMP: Identification of High-Priority Stormwater Issues
- Facilities Management Department under the Division of Administration and Finance
  - 3.1.1 BMP: Identification of High-Priority Stormwater Issues
  - 3.1.2 BMP: Educational Signage and Storm Drain Marking
  - 3.1.3 BMP: Speaking Engagements
  - 3.2.1 BMP: Stormwater Management Website
  - 3.2.3 BMP: Stream Clean-Up Activities & Events
  - 3.2.4 BMP: Participation with Environmental Groups and Committees
  - 3.3.1 BMP: MS4 Map
  - 3.3.2 BMP: Notification of Interconnections with Adjacent MS4's
  - 3.3.3 BMP: IDDE Policy and Procedures
  - 3.4.1 BMP: Standards and Specifications for ESC and SWM
  - 3.4.2 BMP: Land Disturbing Activities Policy
  - 3.5.1 BMP: Standards and Specifications for ESC and SWM
  - 3.5.2 BMP: Stormwater Management Facilities Policy
  - 3.6.1 BMP: Daily Operational Procedures
  - 3.6.2 BMP: SWPPP's for High-Priority Facilities
  - 3.6.3 BMP: Nutrient Management Plan (NMP) & Integrated Pest Management (IPM)
  - 3.6.4 BMP: Facilities Management Training Plan
- Integrated Science & Technology under the Division of Academic Affairs
  - 3.1.4 BMP: Curriculum Materials
  - 3.2.2 BMP: Student Water Quality Testing
  - 3.2.4 BMP: Participation with Environmental Groups and Committees
- Office of Environmental Stewardship and Sustainability under the Division for Access and Enrollment
  - 3.1.3 BMP: Speaking Engagements

2.3 Description of Drainage Areas

James Madison University is located within the City of Harrisonburg and has approximately 20,000 students and 4,000 faculty and staff. The campus consists of approximately 775 acres of developed and undeveloped land comprising of academic buildings, student housing, recreation buildings, conference halls, parking areas, maintenance yards, athletic fields, a power plant and an arboretum.

Nearly 117 acres of the campus drains directly to Blacks Run while the remaining acreage drains to either Sibert Creek or Newman Lake. Sibert Creek then flows into Blacks Run directly adjacent to the campus. The hydrologic unit code (HUC) from Virginia's 6th Order National Watershed Boundary Dataset (NWBD) for this drainage area is PS-22. Blacks Run is included on the state's Draft 2016 305(b)/303(d) Integrated Report as a Category 4A water body. Category 4A waters are those that are impaired and have been assigned a TMDL to address the impairments. Blacks Run has been deemed to be impaired due to elevated levels of fecal coliform and escherichia coli, as well as benthic-macroinvertebrate bioassessments.

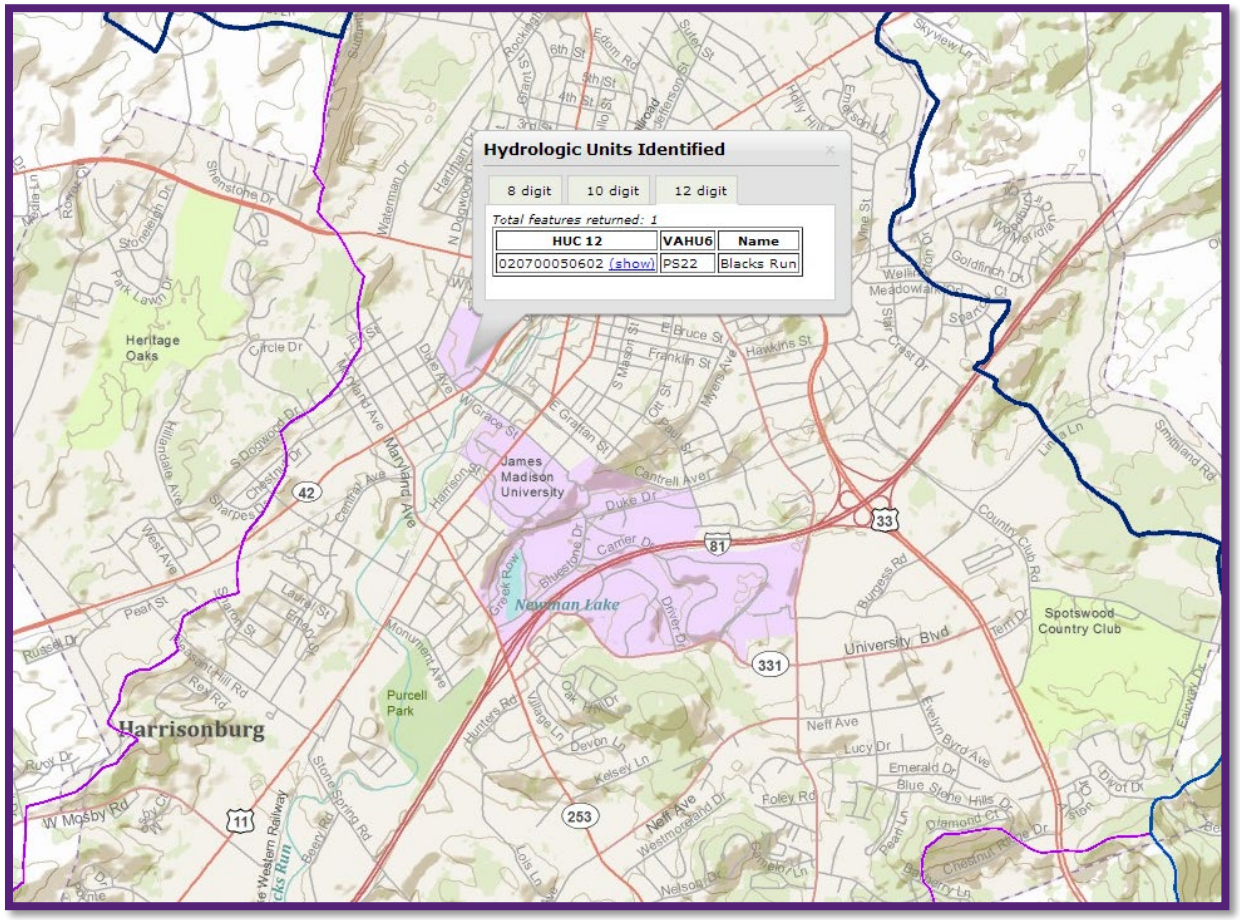


Figure 2. Hydrologic Unit Code (HUC), Source: Virginia Department of Conservation & Recreation

The University also owns a 30 acre tract of land located outside of the urbanized area, approximately 9 miles southeast of the main campus. This property consists primarily of wooded land and does not contain a storm sewer system.

SECTION 3: MINIMUM CONTROL MEASURES

The permittee shall develop, implement, and enforce an MS4 program designed to reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP)

A list of standard operating procedures or policies necessary to implement BMPs and documents incorporated by reference are provided in Appendix B.

3.1 MCM 1: Public Education and Outreach

This section describes the best management practices that will be implemented in order to meet regulatory requirements for public education and outreach as set forth in the General Permit found at 9VAC25-890-40 Part I E 1.

General Permit Requirement Reference

1. Public education and outreach.

a. The permittee shall implement a public education and outreach program designed to:

(1) Increase the public's knowledge of how to reduce stormwater pollution, placing priority on reducing impacts to impaired waters and other local water pollution concerns;

(2) Increase the public's knowledge of hazards associated with illegal discharges and improper disposal of waste, including pertinent legal implications; and

(3) Implement a diverse program with strategies that are targeted toward individuals or groups most likely to have significant stormwater impacts.

b. The permittee shall identify no fewer than three high-priority stormwater issues to meet the goal of educating the public in accordance with Part I E 1 a. High-priority issues may include the following examples: Chesapeake Bay nutrients, pet wastes, local receiving water impairments, TMDLs, high-quality receiving waters, litter control, BMP maintenance, anti-icing and deicing agent application, planned green infrastructure redevelopment, planned ecosystem restoration projects, and illicit discharges from commercial sites.

c. The high-priority public education and outreach program, as a whole, shall:

(1) Clearly identify the high-priority stormwater issues;

(2) Explain the importance of the high-priority stormwater issues;

(3) Include measures or actions the public can take to minimize the impact of the high-priority stormwater issues; and

(4) Provide a contact and telephone number, website, or location where the public can find out more information.

d. The permittee shall use two or more of the strategies listed in Table 1 per year to communicate to the target audience the high-priority stormwater issues identified in accordance with Part I E 1 b, including how to reduce stormwater pollution.

Table 1: Strategies for Public Education and Outreach	
Strategies	*Examples (provided as examples and are not meant to be all inclusive or limiting)*
Traditional written materials	*Informational brochures, newsletters, fact sheets, utility bill inserts, or recreational guides for targeted groups of citizens*
Alternative materials	*Bumper stickers, refrigerator magnets, t-shirts, or drink koozies*
Signage	*Temporary or permanent signage in public places or facilities, vehicle signage, bill boards, or storm drain stenciling*
Media materials	*Information disseminated through electronic media, radio, televisions, movie theater, newspaper, or GIS story maps*
Speaking engagements	*Presentations to school, church, industry, trade, special interest, or community groups*
Curriculum materials	*Materials developed for school-aged children, students at local colleges or universities, or extension classes offered to local citizens*
Training materials	*Materials developed to disseminate during workshops offered to local citizens, trade organization, or industrial officials*
Public education activities	*Booth at community fair, demonstration of stormwater control projects, presentation of stormwater materials to schools to meet applicable education Standards of Learning or curriculum requirements, or watershed walks*
Public meetings	*Public meetings on proposed community stormwater management retrofits, green infrastructure redevelopment, ecosystem restoration projects, TMDL development, [climate change's effects on stormwater management, voluntary residential low impact development, or other stormwater issues*

e. The permittee may coordinate its public education and outreach efforts with other MS4 permittees; however, each permittee shall be individually responsible for meeting all of its state permit requirements.

f. The MS4 program plan shall include:

(1) A list of the high-priority stormwater issues the permittee will communicate to the public as part of the public education and outreach program;

(2) The rationale for selection of each high-priority stormwater issue and an explanation of how each education or outreach strategy is intended to have a positive impact on stormwater discharges;

(3) Identification of the target audience to receive each high-priority stormwater message;

(4) Nontraditional permittees may identify staff, students, members of the general public, and other users of

facilities operated by the permittee as the target audience for education and outreach strategies;

(5) Traditional permittees may identify staff and students as part of the target audience for education and outreach strategies; however, staff shall not be the majority of the target audience;

(6) Staff training required in accordance with Part I E 6 d does not qualify as a strategy for public education and outreach;

(7) The strategies from Table 1 of Part I E 1 d to be used to communicate each high-priority stormwater message; and

(8) The anticipated time periods the messages will be communicated or made available to the public.

g. The annual report shall include the following information:

(1) A list of the high-priority stormwater issues the permittee addressed in the public education and outreach program;

(2) A summary of the public education and outreach activities conducted for the report year, including the strategies used to communicate the identified high-priority issues;

(3) A description of any changes in high-priority stormwater issues, including, strategies used to communicate high-priority stormwater issues or target audiences for the public education and outreach plan. The permittee shall provide a rationale for any of these changes ; and

(4) A description of public education and outreach activities conducted that included education regarding climate change.

3.1.1 BMP: Identification of High-Priority Stormwater Issues

BMP Description: In order to best identify the most efficient use of resources to distribute information related to stormwater impacts to the public, three main issues have been identified as; public awareness of pollution prevention and reporting of water quality issues, litter prevention at outdoor athletic events, and bacteria from animal wastes and sanitary sewer overflows. These three issues have been selected as they target audiences that are most likely to have significant impacts on stormwater quality within the University.

Possible strategies of increasing public knowledge include; printed materials (newspaper advertisements, brochures, flyers, etc.), signage, websites, social media, training (seminars, presentations, guidance booklets), and other activities deemed appropriate. As with most targeted audiences, there will be some overlap in promotion.

Several strategies listed above are ongoing and always available such as JMU's stormwater website, signage, and storm drain marking. Typically, advertisements and posters are promoted during the first semester of each school year, and speaking arrangements and curriculum materials are provided as requested or scheduled throughout the year. Pet waste stations are available year-round with bags for picking up droppings.

Public Awareness of Pollution Prevention and Reporting of Water Quality Issues

Rationale: Illicit discharges to the MS4 can be acutely harmful to aquatic life and pose a risk to health and safety on campus. These factors make it a critical issue of which the entire university community should be aware. The focus of this high priority issue is recognizing and reporting illicit discharges (water quality issues). While minimum control measure 3 requires JMU to "promote, publicize, and facilitate public reporting of illicit discharges into or

from" the MS4, the general public doesn't necessarily know how to identify or prevent such, or why. To maximize outreach effectiveness, this issue will combine education on general awareness with outreach on reporting water quality issues on campus.

Target Audience: Stormwater literacy and illicit discharges are general awareness issues, and thus affect everyone on campus. An illicit discharge could be noticed by anyone, at any time, necessitating broad outreach to the campus community. The target audiences for these issues include the faculty (1,400), staff (2,600), and students (20,000). Faculty and staff are considered long-term members of the university community, and as such, will receive outreach on this topic cumulatively over the years. Students are short-term members of the campus community but will carry these lessons with them when they move on. Together these groups are the eyes and ears of the stormwater management staff and play a critical role in addressing illicit discharges on campus. In general, bulletins or ads will be placed in the Breeze along with posting on bulletin boards such as at campus libraries during the first semester of each school year. Also speaking engagements will be provided as requested to classes.

Litter Prevention at Outdoor Athletic Events

Rationale: JMU welcomes a large number of visitors, in addition to faculty, staff, and students to events that take place on campus. While JMU hosts other outdoor events, there are none that are as numerous and regularly scheduled as athletic events. Athletic events are more prone to create litter than normal campus activities and events, as attendees often participate in tailgating and other activities, involving eating, drinking, and vending in outdoor areas for extended periods of time, and the use of disposable items is the norm. Various promotional debris related to these events can also be left behind at the facilities, in the parking lots, and on the roads. Thus, targeting outdoor athletic events maximizes the opportunity to reduce litter on campus.

By rain and wind, litter can end up in drainage ways, storm sewers, stormwater controls, and ultimately Sibert Creek and Blacks Run. While JMU's Landscaping Department is tasked with cleaning up the debris created by athletic events, there is the opportunity to reduce litter before it is created. Preventing litter from entering stormwater infrastructure is a priority.

Target Audience: JMU will focus on football game attendees. Football games account for approximately 94% of outdoor athletic event activity, accounting for the audience that is most likely to create the largest amount of litter and providing the best potential for litter prevention outreach. The population size of the target audience is approximately 22,000 people per game. All other outdoor athletic events combined attract only approximately 300 people per event. This includes seven additional sports team schedules including track, soccer, lacrosse, baseball, softball, field hockey and tennis. The Athletics Department has committed to making at least two public service announcements at each outdoor sporting event to promote pollution prevention requesting spectators to be responsible and discard all wastes in the trash and recycling receptacles located throughout the sports facility. With approximately 130,000 spectators at about 90 events, these targeted announcements are expected to reach more than 90% of the target audience.

Bacteria from Animal Wastes & Sanitary Sewer Overflows

Rationale: Sanitary sewer overflows, wildlife (i.e. Canada Geese), and pet waste can contribute bacteria (E.coli) to stormwater run-off. JMU's campus welcomes many visitors in addition to faculty, staff, and students, and many bring their pets for a walk-through campus or JMU's Arboretum.

With a lake and several wet ponds, excessive geese can be an issue with the amount of waste as each goose can leave up to 2 to 4 pounds of droppings a day. The goose population will be managed using non-lethal measures such as educational signs for the public to ensure they "Don't Feed the Geese", habitat modification by planting buffers and aquatic benches, and using other visual deterrents.

To assist in repair to damaged sewer manholes, during regular inspections of MS4 outfalls, JMU inspectors can take a quick look at nearby sewer manholes to ensure frame and covers are adequately attached and sealed. If loose covers are observed, the owner of the utility will be notified.

Target Audience: JMU will focus on education of pet owners through signage and access to pet waste stations. The year-round signage will serve as a reminder to pick up after pets.

Measurable Goals: Methods used for outreach will be documented and a list or summary will be provided in annual reports.

Responsible Department: Facilities & Events, and Facilities Management

3.1.2 BMP: Educational Signage and Storm Drain Marking

BMP Description: Signage along with storm drain marking will be conducted to assist in educating the public on the purpose of stormwater best management practices and to inform that what goes in a storm drain eventually makes it to our waterways. Staff will track construction of new storm drains and will attach storm drain markers to appropriate structures.

Measurable Goals: A list of the different types of BMP's that have educational signage will be provided along with the number of new storm drain markers installed in annual reports.

Responsible Department: Facilities Management

3.1.3 BMP: Speaking Engagements

BMP Description: The FM Engineering & Construction – Sustainability staff are available upon request to provide educational tours of JMU's many stormwater facilities, or for classroom presentations. Other ways to get involved or for ways to partner with stormwater staff are listed on our Education and Outreach webpage or you can contact stormwater staff at stormwater@jmu.edu or call 540-568-3174.

The Office of Environmental Stewardship and Sustainability (OESS) is responsible for facilitating implementation of JMU's 18th defining characteristic, "The University will be an environmentally literate community whose members think critically and act, individually and collectively, as model stewards of the natural world." OESS has a role in carrying out the mission and vision of the university regarding environmental stewardship.

The OESS coordinates the Institute for Stewardship of the Natural World (ISNW). The ISNW is currently divided into four committees with over 100 stakeholders who advance environmental stewardship via annual recommendations and programs that advocate for best environmental practices which improves coordination and communication between various departments within the University regarding their efforts towards environmental sustainability.

Measurable Goals: A list of tours, presentations and any other activities will be provided in annual reports.

Responsible Department: Facilities Management, and Office of Environmental Stewardship and Sustainability

3.1.4 BMP: Curriculum Materials

BMP Description: A variety of classes are offered at the University that cover issues related to the impact of urban stormwater runoff on the environment which will increase the overall awareness among students at the University.

Measurable Goals: A list of classes offered will be provided in annual reports.

Responsible Department: Integrated Science & Technology

3.2 MCM 2: Public Involvement and Participation

This section describes the best management practices that will be implemented in order to meet regulatory requirements for public involvement and participation as set forth in the General Permit found at 9VAC25-890-40 Part I E 2.

General Permit Requirement Reference

2. Public involvement and participation.
a. The permittee shall develop and implement procedures for the following:

(1) The public to report potential illicit discharges, improper disposal, or spills to the MS4, complaints regarding land disturbing activities, or other potential stormwater pollution concerns;

(2) The public to provide comments on the permittee's MS4 program plan;

(3) Responding to public comments received on the MS4 program plan; and

(4) Maintaining documentation of public comments received on the MS4 program and associated MS4 program plan and the permittee's response.

b. No later than three months after this permit's effective date, the existing permittee shall update and maintain the webpage dedicated to the MS4 program and stormwater pollution prevention. The following information shall be posted on this webpage:

(1) The effective MS4 permit and coverage letter;

(2) The most current MS4 program plan or location where the MS4 program plan can be obtained;

(3) The annual report for each year of the term covered by this permit no later than 30 days after submittal to the department;

(4) For permittees whose regulated MS4 is located partially or entirely in the Chesapeake Bay watershed, the most current Chesapeake Bay TMDL action plan or location where the Chesapeake Bay TMDL action plan can be obtained;

(5) For permittees whose regulated MS4 is located partially or entirely in the Chesapeake Bay watershed, the Chesapeake Bay TMDL implementation annual status reports for each year of the term covered by this permit no later than 30 days after submittal to the department;

(6) A mechanism for the public to report potential illicit discharges, improper disposal, or spills to the MS4, complaints regarding land disturbing activities, or other potential stormwater pollution concerns in accordance with Part I E 2 a (1);

(7) Methods for how the public can provide comments on the permittee's MS4 program plan in accordance with Part I E 2 a (2) and if applicable, the Chesapeake Bay TMDL action plan in accordance with Part II A 13; and

(8) Federal and state nontraditional permittees with security policies preventing a MS4 program and stormwater pollution prevention webpage from being publicly accessible may utilize an internal staff accessible webpage such as an intranet webpage to meet the requirements of Part 1 E 2 b.

c. Traditional permittees shall implement no fewer than four activities per year from two or more of the categories listed in Table 2 to provide an opportunity for public involvement to improve water quality and support local

restoration and clean-up projects.

d. Nontraditional permittees shall implement, promote, participate in, or coordinate on no fewer than four activities per year from two or more of the categories listed in Table 2 to provide an opportunity for public involvement to improve water quality and support local restoration and clean-up projects.

Table 2: Public Involvement Opportunities

Public involvement opportunities	*Examples (provided as example and are not meant to be all inclusive or limiting)*
Monitoring	*Establish or support citizen monitoring group*
Restoration	*Stream, watershed, shoreline, beach, or park clean-up day, adopt-a-waterway program, tree plantings, and riparian buffer plantings*
Public education activities	*Booth at community fair, demonstration of stormwater control projects, climate change's effects on stormwater management, presentation of stormwater materials to schools to meet applicable education Standards of Learning or curriculum requirements, or watershed walks*
Public meetings	*Public meetings on proposed community stormwater management retrofits, green infrastructure redevelopment, ecosystem restoration projects, TMDL development, voluntary residential low impact development, climate change's effects on stormwater management, or other stormwater issues*
Disposal or collection events	*Household hazardous chemicals collection, vehicle fluids collection*
Pollution prevention	*Adopt-a-storm drain program, implement a storm drain marking program, promote use of residential stormwater BMPs, implement pet waste stations in public areas, adopt-a-street program.*

e. The permittee may coordinate the public involvement opportunities listed in Table 2 with other MS4 permittees; however, each permittee shall be individually responsible for meeting all of the permit requirements.

f. The permittee may include staff and students in public participation events; however, the activity cannot solely include or be limited to staff participants with stormwater, groundskeeping, and maintenance duties in order for an event to qualify as a public participation event.

g. Staff training required in accordance with Part I E 6 d does not qualify as a public participation event unless the training activity solicits participation from target audiences beyond staff or contractors with stormwater, groundskeeping, and maintenance duties.

h. The MS4 program plan shall include:

(1) The webpage address where mechanisms for the public to report (i) potential illicit discharges, improper disposal, or spills to the MS4, (ii) complaints regarding land disturbing activities, or (iii) other potential stormwater pollution concerns;

(2) The webpage address that contains the methods for how the public can provide input on the permittee's MS4 program; and

(3) A description of the public involvement activities to be implemented by the permittee, the anticipated time period the activities will occur, and a metric for each activity to determine if the activity is beneficial to water quality. An example of metrics may include the weight of trash collected from a stream cleanup or the number of participants in a hazardous waste collection event.

i. The annual report shall include the following information:

(1) A summary of any public comments on the MS4 program received and how the permittee responded;

(2) A summary of stormwater pollution complaints received under the procedures established in Part I E 2 a (1), excluding natural flooding complaints, and how the permittee responded;

(3) A webpage address to the permittee's MS4 program and stormwater website;

(4) Federal and state nontraditional permittees with security policies preventing the MS4 program and stormwater pollution prevention webpage from being publicly accessible utilizing an internal staff accessible website, such as intranet, shall provide evidence of the current internal MS4 program and stormwater pollution prevention webpage;

(5) A description of the public involvement activities implemented by the permittee, including any efforts to reach out and engage all economic and ethnic groups;

(6) A description of public education and outreach activities conducted that also included education regarding climate change;

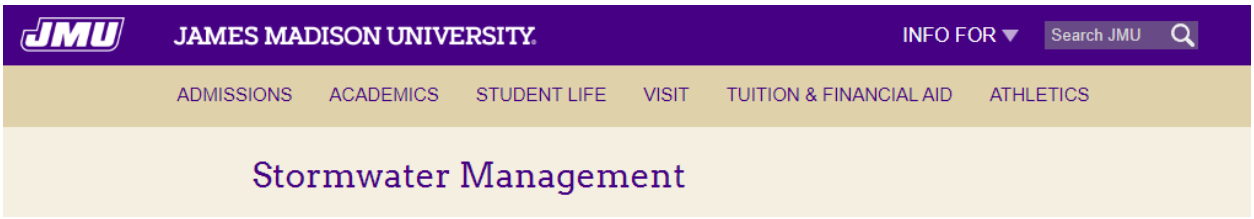
(7) A report of the metric as defined for each activity and an evaluation as to whether or not the activity is beneficial to improving water quality; and

(8) The name of other MS4 permittees with whom the permittee collaborated in the public involvement opportunities.

3.2.1 BMP: Stormwater Management Website

BMP Description: Through the FM Engineering and Constructions stormwater website, which can be found at www.jmu.edu/stormwater documents are available for access such as this MS4 Plan, TMDL Action Plans, stormwater related policies and procedures, and other relevant information. An email and phone number (stormwater@jmu.edu and 540-568-3174) are listed in order for the public to provide report potential illicit discharges, improper disposal or spills to the MS4, complaints regarding land disturbing activities, or other potential stormwater pollution concerns. Pollution reports received are responded to within 5 business days or less.

The same contact information can also be used to provide input or comments on the University's MS4 program plan, annual reports and TMDL action plans available for viewing on the stormwater website. Public comments on specific program plans are kept on file for the entirety of the applicable permit cycle. Public comments received on TMDL action plans are kept on file for the entirety of the action plan's timeline. Pollution reports resulting in an IDDE investigation are kept on file in perpetuity and these are reported in the university's MS4 annual reports. Public comments received are responded to by stormwater staff no later than 30 calendar days after comment is received.



Measurable Goals: Confirmation that information on the stormwater website is up to date along with pageviews for the stormwater related pages will be provided in annual reports. The procedures for how the University records and responds to public comments or pollution reports received is detailed in *JMU's Stormwater Program Guide* (available upon request).

Responsible Department: Facilities Management

Documents Referenced:

- *JMU Stormwater Program Guide* (available upon request)
- JMU Stormwater & MS4 webpages:
  - https://www.jmu.edu/facmgt/sustainability/stormwater/ms4.shtml
  - https://www.jmu.edu/facmgt/sustainability/stormwater/index.shtml

3.2.2 BMP: Student Water Quality Testing

BMP Description: Students from the ISAT 320 class (Fundamentals of Environmental Science and Technology I) perform water quality sampling of tributaries within the North River watershed, including Blacks Run. Parameters measured include specific conductivity, pH, dissolved oxygen, nitrogen, phosphorus, and fecal coliform / e. coli counts. In addition, students performed biological and physical habitat assessments of macro-invertebrates and fish communities. This class increases the awareness of local water quality issues within the student body, and any concerns observed during testing can be reported to Facilities Management for follow-up.

This water testing is not for monitoring of stormwater discharges or control measures, but for educational purposes of basic water quality and is to be considered as a "citizen monitoring group". Results may be requested from the responsible department.

Measurable Goals: The number of classes offered in this course along with the number of students will be provided in annual reports.

Responsible Department: Integrated Science & Technology

3.2.3 BMP: Stream Clean-Up Activities & Events

BMP Description: Newman Lake has a watershed of approximately 4 square miles and is fed by Siberts Creek, a tributary of Blacks Run. As part of JMU's efforts to keep the campus clean, JMU staff from the FM Environmental Services Department regularly pick up trash and debris within the heart of campus and also along the streams and lake.

In addition to the constant efforts on campus, JMU staff and students participate in Earth Day and provide a large group of volunteers to assist the City of Harrisonburg with their annual Blacks Run Clean-Up Day which is typically held in April. This event increases the awareness among students and staff of the opportunity to help improve local water quality and provides a large number of people along Blacks Run to pick up trash and to report possible illicit discharges for follow up with formal investigations.

Measurable Goals: Continue to provide staff time to clean up litter on campus and provide volunteers at local events. The estimated number of volunteers, and trash collected during stream clean-up events will be provided in annual reports.

Responsible Department: Facilities Management

3.2.4 BMP: Participation with Environmental Groups and Committees

BMP Description: Faculty and staff participate with local organizations and environmental advisory committees such as Soil & Water Conservation Districts, stormwater advisory committees, environmental performance standards advisory committees, Friends of the Shenandoah River, and the Shenandoah Valley Pure Water Forum. JMU also maintains membership in environmental organizations such as the Virginia Municipal Stormwater Association (VAMSA) and the Central Shenandoah Stormwater Network in order to network with other municipalities, engineers and regulatory agencies.

Organization or Committee name	Web Link
Central Shenandoah Stormwater Network	cleanstream.org
City of Harrisonburg Environmental Performance Standards Advisory Committee	harrisonburgva.gov/epsac
City of Harrisonburg Stormwater Advisory Committee	harrisonburgva.gov/swac
Friends of the Shenandoah River	fosr.org
Shenandoah Valley Pure Water Forum	purewaterforum.org
Shenandoah Valley Soil & Water Conservation District Chesapeake Bay Committee Education & Awards Committee Urban Committee	svswcd.org
Virginia Municipal Stormwater Association (VAMSA)	vamsa.org

Measurable Goals: Continued support and participation in local groups and committees will be expected and an updated list of the groups and committees will be provided in annual reports.

Responsible Department: Facilities Management, and Integrated Science & Technology

3.3 MCM 3: Illicit Discharge Detection and Elimination (IDDE)

This section describes the best management practices that will be implemented in order to meet regulatory requirements for illicit discharge detection and elimination as set forth in the General Permit found at 9VAC25-890-40 Part I E 3.

General Permit Requirement Reference

3. Illicit discharge detection and elimination.

a. The permittee shall develop and maintain an accurate MS4 map and information table as follows:

(1) An updated map of the MS4 owned or operated by the permittee within the MS4 regulated service area no later than 24 months after the permit effective date that includes, at a minimum:

(a) MS4 outfalls discharging to surface waters, except as follows:

(i) In cases where the outfall is located outside of the MS4 permittee's legal responsibility, the permittee may elect to map the known point of discharge location closest to the actual outfall; and

(ii) In cases where the MS4 outfall discharges to receiving water channelized underground, the permittee may elect to map the point downstream at which the receiving water emerges above ground as an outfall discharge location. If there are multiple outfalls discharging to an underground channelized receiving water, the map shall identify that an outfall discharge location represents more than one outfall. This is an option a permittee may choose to use and recognizes the difficulties in accessing outfalls to underground channelized stream conveyances for purposes of mapping, screening, or monitoring;

(b) A unique identifier for each mapped item required in Part I E 3;

(c) The name and location of receiving waters to which the MS4 outfall or point of discharge discharges;

(d) MS4 regulated service area; and

(e) Stormwater management facilities owned or operated by the permittee.

(2) The permittee shall maintain an outfall information table associated with the MS4 map that includes the following information for each outfall or point of discharge for those cases in which the permittee elects to map the known point of discharge in accordance with Part I E 3 a (1) (a). The outfall information table may be maintained as a shapefile attribute table. The outfall information table shall contain the following:

(a) A unique identifier as specified on the MS4 map;

(b) The latitude and longitude of the outfall or point of discharge;

(c) The estimated regulated acreage draining to the outfall or point of discharge;

(d) The name of the receiving water;

(e) The 6th Order Hydrologic Unit Code of the receiving water;

(f) An indication as to whether the receiving water is listed as impaired in the Virginia 2022 305(b)/303(d) Water Quality Assessment Integrated Report; and

(g) The name of any EPA approved TMDLs for which the permittee is assigned a wasteload allocation.

(3) No later than 24 months after permit issuance, the permittee shall submit to DEQ, a format file geodatabase or two shapefiles that contain at a minimum:

(a) A point feature class or shapefile for outfalls with an attribute table containing outfall data elements required in accordance with Part I E 3 a (2); and

(b) A polygon feature class or shapefile for the MS4 service area as required in accordance with Part I E 3 a (1) (d) with an attribute table containing the following information:

(i) MS4 operator name;

(ii) MS4 permit number (VAR04); and

(iii) MS4 service area total acreage rounded to the nearest hundredth.

(4) All file geodatabase feature classes or shapefiles shall be submitted in the following data format standards:

(a) Point data in NAD83 or WGS84 decimal degrees global positional system coordinates;

(b) Data projected in Virginia Lambert Conformal Conic format;

(c) Outfall location accuracy shall be represented in decimal degrees rounded to at least the fifth decimal place for latitude and longitude to ensure point location accuracy (e.g., 37.61741, -78.15279); and

(d) Metadata that shall provide a description of each feature class or shapefile dataset, units of measure as applicable, coordinate system, and projection.

(5) No later than October 1 of each year, the permittee shall update the MS4 map and outfall information table to include any new outfalls constructed or TMDLs approved or both during the immediate preceding reporting period.

~~(5)~~ (6) The permittee shall provide written notification to any downstream adjacent MS4 of any known physical interconnection established or discovered after the effective date of this permit.

b. The permittee shall prohibit, through ordinance, policy, standard operating procedures, or other legal mechanism, to the extent allowable under federal, state, or local law, regulations, or ordinances, unauthorized nonstormwater discharges into the MS4. Nonstormwater discharges or flows identified in 9VAC25-890-20 D 3 shall only be addressed if they are identified by the permittee as a significant contributor of pollutants discharging to the MS4. Flows that have been identified by the department as de minimis discharges are not significant sources of pollutants to surface water.

c. The permittee shall maintain, implement, and enforce illicit discharge detection and elimination (IDDE) written procedures designed to detect, identify, and address unauthorized nonstormwater discharges, including illegal dumping, to the ~~small~~ MS4 to effectively eliminate the unauthorized discharge. Written procedures shall include:

(1) A description of the legal authorities, policies, standard operating procedures, or other legal mechanisms available to the permittee to eliminate identified sources of ongoing illicit discharges, including procedures for using legal enforcement authorities.

(2) Dry weather field screening protocols to detect, identify, and eliminate illicit discharges to the MS4. The protocol shall include:

(a) A prioritized schedule of field screening activities and rationale for prioritization determined by the permittee based on such criteria as age of the infrastructure, land use, historical illegal discharges, dumping, or cross connections;

(b) If the total number of MS4 outfalls is equal to or less than 50, a schedule to screen all outfalls annually;

(c) If the total number of MS4 outfalls is greater than 50, a schedule to screen a minimum of 50 outfalls annually such that no more than 50% are screened in the previous 12-month period. The 50% criteria is not applicable if all outfalls have been screened in the previous three years;

(d) The permittee may adopt a risk-based approach to dry weather screening identifying observation points based upon illicit discharge risks upstream of an outfall. Observation points may include points of interconnection, manholes, points of discharge, conveyances, or inlets suspected to have a high likelihood of receiving illicit discharges;

(e) Each observation point screened may be counted as one outfall screening activity equivalent and counted towards the requirements of Part I E 3 c (2) (b) or (2) (c); however, at least 50% of the minimum annual screening events must include outfall screening;

(f) Illicit discharges reported by the public and subsequent investigations may not be counted as screening events; however once the resolution of the investigation and the date the investigation was closed has been documented, an observation point may be established for future screening events; and

(g) A checklist or mechanism to track the following information for dry weather screening events:

(i) The unique identifier for the outfall or observation point;

(ii) Time since the last precipitation event;

(iii) The estimated quantity of the last precipitation event;

(iv) Site descriptions (e.g., conveyance type and dominant watershed land uses);

(v) Observed indicators of possible illicit discharge events, such as floatables, deposits, stains, and vegetative conditions (e.g., dying or dead vegetation, excessive vegetative growth);

(vi) Whether or not a discharge was observed;

(vii) If a discharge was observed, the estimated discharge rate and visual characteristics of the discharge (e.g.,

odor, color, clarity and the physical condition of the outfall; and

(viii) For observation points, the location, downstream outfall unique identifier, and risk factors or rationale for establishing the observation point.

(3) A timeframe upon which to conduct an investigation to identify and locate the source of any observed unauthorized nonstormwater discharge. Priority of investigations shall be given to discharges of sanitary sewage and those believed to be a risk to human health and public safety. Discharges authorized under a separate VPDES or state permit require no further action under this permit.

(4) Methodologies to determine the source of all illicit discharges. If the permittee is unable to identify the source of an illicit discharge within six months of beginning the investigation then the permittee shall document that the source remains unidentified. If the observed discharge is intermittent, the permittee shall document that attempts to observe the discharge flowing were unsuccessful.

(5) Methodologies for conducting a follow-up investigation for illicit discharges that are continuous or that permittees expect to occur more frequently than a one-time discharge to verify that the discharge has been eliminated except as provided for in Part I E 3 c (4);

(6) A mechanism to track all illicit discharge investigations to document the following:

(a) The dates that the illicit discharge was initially observed, reported, or both;

(b) The results of the investigation, including the source, if identified;

(c) Any follow-up to the investigation;

(d) Resolution of the investigation; and

(e) The date that the investigation was closed.

d. The MS4 program plan shall include:

(1) The MS4 map and outfall information table required by Part I E 3 a. The map and outfall information table may be incorporated into the MS4 program plan by reference. The map shall be made available to the department within 14 days upon request;

(2) Copies of written notifications of physical interconnections given by the permittee to other MS4s; and

(3) The IDDE procedures described in Part I E 3 c.

e. The annual report shall include:

(1) A confirmation statement that the MS4 map and outfall information table have been updated to reflect any changes to the MS4 occurring on or before June 30 of the reporting year;

(2) The total number of outfalls and observation points screened during the reporting period as part of the dry weather screening program; and

(3) A list of illicit discharges to the MS4, including spills reaching the MS4 with information as follows:

(a) The location and source of illicit discharge;

(b) The dates that the discharge was observed, reported, or both;

(c) Whether the discharge was discovered by the permittee during dry weather screening, reported by the public, or other method (describe);

(d) How the investigation was resolved;

(e) A description of any follow-up activities; and

(f) The date the investigation was closed.

3.3.1 BMP: MS4 Map

BMP Description: JMU maintains a GIS map with a corresponding database that contains the locations and attributes of the storm sewer system, structural best management practices, and MS4 outfalls that the university is responsible for within their municipal jurisdiction. The GIS map will have unique ID's assigned for structures that will match ID's in the corresponding database.

Maps may be viewed by appointment within the FM Engineering & Construction office. Information will be made available to share with adjacent MS4's and the Department of Environmental Quality as requested.

Measurable Goals: Maps will be maintained as new construction is completed and additional information is received concerning existing infrastructure. A confirmation statement that the MS4 map and corresponding database (information table) have been updated to reflect any changes to the MS4 occurring on or before June 30 of the reporting year will be provided in annual reports.

Responsible Department: Facilities Management

3.3.2 BMP: Notification of Interconnections with Adjacent MS4's

BMP Description: James Madison University's MS4 system interconnects with the City of Harrisonburg, Rockingham County, and the Virginia Department of Transportation (VDOT). Both Harrisonburg and VDOT are MS4's and have previously been notified and are aware that our systems interconnect. JMU will continue to notify adjacent MS4's of any new interconnections established or discovered.

Measurable Goals: Knowledge of interconnections will assist with future IDDE investigations. A list of new interconnections communicated to adjacent MS4's or received will be provided in annual reports.

Responsible Department: Facilities Management

3.3.3 BMP: IDDE Policy and Procedures

BMP Description: The University has implemented a campus wide IDDE policy in order to establish methods for controlling the introduction of pollutants into the MS4. The policy includes procedures for field screening, notification of spills and illicit discharges, tracking, enforcement, and training with the goal of eliminating unauthorized discharges. The SOP for IDDE investigations and annual outfall inspections is included within the *JMU Stormwater Program Guide* (this document is available upon request). Dry weather screenings/outfall inspections are conducted annually by stormwater staff utilizing an online form via a FieldMaps ArcGIS application. The screenings/inspections observe outfalls for indicators of possible illicit discharge events, such as floatables, deposits, stains, and vegetative conditions (e.g., dying or dead vegetation, excessive vegetative growth). If a discharge is observed during an inspection the estimated discharge rate and visual characteristics are noted such as odor, clarity, color and physical condition of outfall).

Measurable Goals: The IDDE policy will be updated as needed and will be available within JMU's stormwater web pages as referenced in appendix B. Through annual MS4 outfall screening, prompt detection and elimination of illicit discharges can be achieved. The total number of MS4 outfall screenings along with a summary of findings will be provided with annual reports.

Responsible Department: Facilities Management

Documents Referenced:

- *JMU Stormwater Program Guide* (available upon request)
- Policy 4310: Illicit Discharge Detection and Elimination (IDDE): https://www.jmu.edu/jmu-policy/policies/4310.shtml

3.4 MCM 4: Construction Site Stormwater Runoff Control

This section describes the best management practices that will be implemented in order to meet regulatory requirements for construction site stormwater runoff control as set forth in the General Permit found at 9VAC25-890-40 Part I E 4.

General Permit Requirement Reference

4. Construction site stormwater runoff and erosion and sediment control.

a. The permittee shall utilize its legal authority, such as ordinances, permits, orders, specific contract language, and interjurisdictional agreements, to address discharges entering the MS4 from regulated construction site stormwater runoff. The permittee shall control construction site stormwater runoff as follows:

(1) If the traditional permittee is a city, county, or town that has adopted a Virginia Erosion and Sediment Control Program (VESCP), the permittee shall implement the VESCP consistent with the Virginia Erosion and Sediment Control Law (§ 62.1-44.15:51 et seq. of the Code of Virginia) and Virginia Erosion and Sediment Control Regulations (9VAC25-840);

(2) If the traditional permittee is a town that has not adopted a VESCP, implementation of a VESCP consistent with the Virginia Erosion and Sediment Control Law (§ 62.1-44:15:51 et seq. of the Code of Virginia) and Virginia Erosion and Sediment Control Regulations (9VAC25-840) by the surrounding county shall constitute compliance with Part I E 4 a; such town shall notify the surrounding county of erosion, sedimentation, or other construction stormwater runoff problems;

(3) If the nontraditional permittee is a state agency; public institution of higher education, including community colleges, colleges, and universities; or federal entity and has developed standards and specifications in accordance with the Virginia Erosion and Sediment Control Law (§ 62.1-44.15:51 et seq. of the Code of Virginia) and Virginia Erosion and Sediment Control Regulations (9VAC25-840), the permittee shall implement the most recent department approved standards and specifications; or

(4) If the nontraditional permittee is a state agency; public institution of higher education, including community colleges, colleges, and universities; or federal entity and has not developed standards and specifications in accordance with the Virginia Erosion and Sediment Control Law (§ 62.1-44.15:51 et seq. of the Code of Virginia) and Virginia Erosion and Sediment Control Regulations (9VAC25-840), the permittee shall inspect all land disturbing activities as defined in § 62.1-44.15:51 of the Code of Virginia that result in the disturbance of 10,000 square feet or greater, or 2,500 square feet or greater in accordance with areas designated under the Chesapeake Bay Preservation Act, as follows:

(a) During or immediately following initial installation of erosion and sediment controls;

(b) At least once per every two-week period;

(c) Within 48 hours following any runoff producing storm event; and

(d) At the completion of the project prior to the release of any performance bond.

(5) If the nontraditional permittee is a school board or other local government body, the permittee shall inspect those projects resulting in a land disturbance as defined in § 62.1-44.15.51 of the Code of Virginia occurring on lands owned or operated by the permittee that result in the disturbance of 10,000 square feet or greater, 2,500 square feet or greater in accordance with areas designated under the Chesapeake Bay Preservation Act, or in accordance with more stringent thresholds established by the local government, as follows:

(a) During or immediately following initial installation of erosion and sediment controls;

(b) At least once per every two-week period;

(c) Within 48 hours following any runoff producing storm event; and

(d) At the completion of the project prior to the release of any performance bond.

b. The permittee shall require implementation of appropriate controls to prevent nonstormwater discharges to the MS4, such as wastewater, concrete washout, fuels and oils, and other illicit discharges identified during land disturbing activity inspections. The discharge of nonstormwater discharges other than those identified in 9VAC25-890-20 D through the MS4 is not authorized by this state permit.

c. Employees and contractors serving as plan reviewers, inspectors, program administrators, and construction site operators shall obtain the appropriate certifications as required under the Virginia Erosion and Sediment Control Law and its attendant regulations;

d. The permittee's MS4 program plan shall include:

(1) If the permittee implements an erosion and sediment control program for construction site stormwater runoff in accordance with Part I E 4 a (1), the local ordinance citations for the VESCP program;

(2) If the permittee is a town that does not implement an erosion and sediment control program for construction site stormwater runoff in accordance with Part I E 4 a (2), the county ordinance citations for the VESCP program the town is subject to;

(3) If the permittee implements annual standards and specifications for erosion and sediment control and construction site stormwater runoff in accordance with Part I E 4 a (3):

(a) The most recently approved standards and specifications or if incorporated by reference, the location where the standards and specifications can be viewed; and

(b) A copy of the most recent standards and specifications approval letter from the department;

(4) A description of the legal authorities utilized to ensure compliance with Part I E 4 a for erosion and sediment control and construction site stormwater runoff control, such as ordinances, permits, orders, specific contract language, policies, and interjurisdictional agreements;

(5) For traditional permittees, written inspection procedures to ensure VESCP requirements are maintained in accordance with 9VAC25-840-90 A and onsite erosion and sediment controls are properly implemented in accordance with 9VAC25-840-60 B;

(6) For nontraditional permittees, erosion and sediment control plans or annual standards and specifications shall be approved by the department in accordance with § 62.1-44.15:55 of the Code of Virginia. Compliance with approved erosion and sediment control plans or annual standards and specifications shall be ensured by the permittee with written inspection procedures that at minimum include the following:

(a) An inspection checklist for documenting onsite erosion and sediment control structures and systems are properly maintained and repaired as needed to ensure continued performance of their intended function; and

(b) A list of all associated documents utilized for inspections, including checklists, department approved erosion and sediment control plans, or the most recently department approved annual standards and specifications, and any other documents utilized;

(7) Traditional permittees shall maintain written procedures for requiring VESCP compliance through corrective action or enforcement action in accordance with § 62.1-44.15:58 of the Code of Virginia;

(8) Nontraditional permittees shall maintain written procedures for requiring compliance with department approved erosion and sediment control plans and annual standards and specifications through corrective action or enforcement action to the extent allowable under federal, state, or local law, regulation, ordinance, or other legal mechanisms; and

(9) The roles and responsibilities of each of the permittee's departments, divisions, or subdivisions in implementing erosion and sediment control and construction site stormwater runoff control requirements in Part I E 4.

e. The annual report shall include the following:

(1) [Total number of erosion and sediment control inspections conducted;

(2) Total number of each type of compliance action and enforcement action implemented; and

(3) For nontraditional permittees:

(a) A confirmation statement that land disturbing projects that occurred during the reporting period have been conducted in accordance with the current department approved annual standards and specifications for erosion and sediment control; and

(b) If any land disturbing projects were conducted without department approved annual standards and specifications, a list of all land disturbing projects that occurred during the reporting period with erosion and sediment control plan approval dates for each project.

3.4.1 BMP: Standards and Specifications for ESC and SWM

BMP Description: JMU initially received approval from the Department of Conservation and Recreation (DCR) to operate its own erosion and sediment control (ESC) program under a set of annual standards and specifications on July 6, 2009. While the responsibility of the stormwater program has been transferred from the DCR to the Department of Environmental Quality (DEQ), JMU continues to maintain approved standards and specifications as requested by the Department. Responding to amendments to regulations, stormwater management was introduced into the standards and received combined approval from DEQ for *Standards and Specifications for ESC and SWM* on May 28, 2014.

These S&S, along with relevant policies and procedures (such as the *JMU Stormwater Program Guide* and the JMU Facilities Management Design and Construction Guidelines), layout the framework for the administration and implementation of projects within the university concerning erosion and sediment control, and stormwater management. Certification requirements are listed for appropriate personnel along with the structure for plan review and approvals, construction inspections, variances and exceptions, enforcement, and long-term maintenance.

Measurable Goals: JMU will continue to maintain Department approval of its Standards and Specifications for ESC and SWM and provide a copy on the FM website along with a copy of the Departments approval letter as referenced in appendix B. A listing of approved site plans along with a list of active construction projects will be provided along with the total number of construction inspections conducted with a summary of corrective actions and violations with annual reports.

Responsible Department: Facilities Management

Documents Referenced:

- *JMU Stormwater Program Guide* (available upon request)
- JMU Standards and Specifications for ESC & SWM: https://www.jmu.edu/facmgt/sustainability/stormwater/deq-approved-standards-and-specs.pdf
- JMU Facilities Management Design and Construction Guidelines: https://www.jmu.edu/facmgt/fm_resources/guidelines/index.shtml

3.4.2 BMP: Land Disturbing Activities Policy

BMP Description: JMU is responsible for ensuring all regulated land disturbing activities have adequate documentation before construction activity begins and that construction activities follow approved plans, JMU's Standards and Specifications for ESC and SWM, and regulatory requirements. The purpose of this policy is to layout the procedures for regulatory compliance concerning all regulated land-disturbing activities at the University.

The policy includes definitions of relevant terms, the individuals responsible for implementation of the policy, and procedures for both non-regulated and regulated activities. Inspections will be carried out according to 9VAC25-

875-140: an inspection immediately following initial installation of erosion and sediment controls, at least once in every two-week period, within 48 hours following any run-off producing storm event, and at the completion of the project. This policy is referenced in the JMU Facilities Management Design and Construction Guidelines which contractors must use when designing and implementing projects on campus and within the *JMU Stormwater Program Guide*.

Measurable Goals: The Land Disturbing Activities policy will continue to be updated as needed and made available on the FM website as referenced in appendix B. Any updates will be summarized with annual reports.

Responsible Department: Facilities Management

Documents Referenced:

- *JMU Stormwater Program Guide* (available upon request)
- JMU Facilities Management Policy IV 11: Land Disturbing Activities: https://www.jmu.edu/facmgt/fm_resources/policies/iv_11_land_disturbing_activities2.pdf
- JMU Standards and Specifications for ESC & SWM: https://www.jmu.edu/facmgt/sustainability/stormwater/deq-approved-standards-and-specs.pdf
- JMU Facilities Management Design and Construction Guidelines: https://www.jmu.edu/facmgt/fm_resources/guidelines/index.shtml

3.5 MCM 5: Post-Construction Stormwater Management

This section describes the best management practices that will be implemented in order to meet regulatory requirements for post-construction stormwater management for new development and development on prior developed lands as set forth in the General Permit found at 9VAC25-890-40 Part I E 5.

General Permit Requirement Reference

5. Post-construction stormwater management for new development and development on prior developed lands.

a. The permittee shall address post-construction stormwater runoff that enters the MS4 from the following land disturbing activities by implementing a post-construction stormwater runoff management program as follows:

(1) If the traditional permittee is a city, county, or town, with an approved Virginia Stormwater Management Program (VSMP), the permittee shall implement the VSMP consistent with the Virginia Stormwater Management Act (§ 62.1-44.15:24 et seq. of the Code of Virginia) and VSMP Regulations (9VAC25-870) as well as maintain an inspection and maintenance program in accordance with Part I E 5 b and c;

(2) If the traditional permittee is a town that has not adopted a VSMP, implementation of a VSMP consistent with the Virginia Stormwater Management Act (§ 62.1-44.15:24 et seq. of the Code of Virginia) and VSMP Regulations (9VAC25-870) by the surrounding county shall constitute compliance with Part I E 5 a; such town shall notify the surrounding county of erosion, sedimentation, or other post-construction stormwater runoff problems and maintain an inspection and maintenance program in accordance with Part I E 5 c and d;

(3) If the traditional permittee is a city, county, or town receiving initial permit coverage during the permit term and must obtain VSMP approval from the department, the permittee shall implement the VSMP consistent with the Virginia Stormwater Management Act (§ 62.1-44.15:24 et seq. of the Code of Virginia) and VSMP Regulations (9VAC25-870), as well as develop an inspection and maintenance program in accordance with Part I E 5 b and c no later than 60 months after receiving permit coverage;

(4) If the nontraditional permittee is a state agency; public institution of higher education, including community colleges, colleges, and universities; or federal entity and has not developed standards and specifications in accordance with the Virginia Stormwater Management Act (§ 62.1-44.15:24 et seq. of the Code of Virginia) and VSMP Regulations (9VAC25-870), the permittee shall implement the most recent department approved standards and specifications and maintain an inspection and maintenance program in accordance with Part I E 5 b;

(5) If the nontraditional permittee is a state agency; public institution of higher education, including community colleges, colleges, and universities; or federal entity, and has not developed standards and specifications in accordance with the Virginia Stormwater Management Act (§ 62.1-44.15:24 et seq. of the Code of Virginia) and VSMP Regulations (9VAC25-870), the permittee shall implement a post-construction stormwater runoff control program through compliance with 9VAC25-870 and with the implementation of a maintenance and inspection program consistent with Part I E 5 b no later than 60 months after receiving permit coverage ; or

(6) If the nontraditional permittee is a school board or other local government body, the permittee shall implement a post-construction stormwater runoff control program through compliance with 9VAC25-870 or in accordance with more stringent local requirements, if applicable, and with the implementation of a maintenance and inspection program consistent with Part I E 5 b.

b. The permittee shall implement an inspection and maintenance program for those stormwater management facilities owned or operated by the permittee as follows:

(1) Within six months of the permit effective date, the permittee shall develop and maintain written inspection and maintenance procedures in order to ensure adequate long-term operation and maintenance of its stormwater management facilities. The permittee may use inspection and maintenance specifications available from the

Virginia Stormwater BMP Clearinghouse or inspection and maintenance plans developed in accordance with the department's Stormwater Local Assistance Fund (SLAF) guidelines;

(2) Employees and contractors implementing the stormwater program shall obtain the appropriate certifications as required under the Virginia Stormwater Management Act and its attendant regulations;

(3) The permittee shall inspect stormwater management facilities owned or operated by the permittee no less frequently than once per year. The permittee may choose to implement an alternative schedule to inspect these stormwater management facilities based on facility type and expected maintenance needs provided that the alternative schedule and rationale is included in the MS4 program plan. The alternative inspection frequency shall be no less often than once per five years; and

(4) If during the inspection of the stormwater management facility conducted in accordance with Part I E 5 b (2), it is determined that maintenance is required, the permittee shall conduct the maintenance in accordance with the written procedures developed under Part I E 5 b (1).

c. For traditional permittees described in Part I E 5 a (1), (2), or (3), the permittee shall:

(1) Implement an inspection and enforcement program for stormwater management facilities not owned by the permittee (i.e., privately owned) that includes:

(a) An inspection frequency of no less often than once per five years for all privately owned stormwater management facilities that discharge into the MS4; and

(b) Adequate long-term operation and maintenance by the owner of the stormwater management facility by requiring the owner to develop and record a maintenance agreement, including an inspection schedule to the extent allowable under state or local law or other legal mechanism;

(2) Utilize its legal authority for enforcement of the maintenance responsibilities in accordance with 9VAC25-870-112 if maintenance is neglected by the owner;

(3) The permittee may develop and implement a progressive compliance and enforcement strategy provided that the strategy is included in the MS4 program plan;

(4) The permittee may utilize the inspection reports provided by the owner of a stormwater management facility as part of an inspection and enforcement program in accordance with 9VAC25-870-114 C.

d. The MS4 program plan shall include:

(1) If the permittee implements a VSMP in accordance with Part I E 5 a (1), (2), or (3):

(a) A copy of the VSMP approval letter issued by the department;

(b) Written inspection procedures and all associated documents utilized in the inspection of privately owned stormwater management facilities; and

(c) Written procedures for compliance and enforcement of inspection and maintenance requirements for privately owned stormwater management facilities;

(2) If the permittee implements a post-development stormwater runoff control program in accordance with Part I E 5 a (4):

(a) The most recently approved standards and specifications or if incorporated by reference, the location where the standards and specifications can be viewed; and

(b) A copy of the most recent standards and specifications approval letter from the department;

(3) A description of the legal authorities utilized to ensure compliance with Part I E 5 a for post-construction stormwater runoff control such as ordinances (provide citation as appropriate), permits, orders, specific contract language, and interjurisdictional agreements;

(4) Written inspection and maintenance procedures and other associated template documents utilized during inspection and maintenance of stormwater management facilities owned or operated by the permittee; and

(5) The roles and responsibilities of each of the permittee's departments, divisions, or subdivisions in implementing the post-construction stormwater runoff control program;

e. The annual report shall include the following information:

(1) If the traditional permittee implements a VSMP in accordance with Part I E 5 a (1), (2), or (3):

(a) The number of privately owned stormwater management facility inspections conducted; and

(b) The number of enforcement actions initiated by the permittee to ensure long-term maintenance of privately owned stormwater management facilities including the type of enforcement action;

(2) Total number of inspections conducted on stormwater management facilities owned or operated by the permittee;

(3) A description of the significant maintenance, repair, or retrofit activities performed on the stormwater management facilities owned or operated by the permittee to ensure it continues to perform as designed. This does not include routine activities such as grass mowing or trash collection;

(4) For traditional permittees as specified in Part I E 5 a (1), a confirmation statement that the permittee submitted stormwater management facility information through the Virginia Construction Stormwater General Permit database for those land disturbing activities for which the permittee was required to obtain coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities in accordance with Part III B 1 or a statement that the permittee did not complete any projects requiring coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities (9VAC25-880);

(5) A confirmation statement that the permittee electronically reported stormwater management facilities using the DEQ BMP Warehouse in accordance with Part III B 1 and 2; and

(6) A confirmation statement that the permittee electronically reported stormwater management facilities inspected using the DEQ BMP Warehouse in accordance with Part III B 5.

3.5.1 BMP: Standards and Specifications for ESC and SWM

BMP Description: JMU initially received approval from the Department of Conservation and Recreation (DCR) to operate its own Erosion and Sediment Control (ESC) program under a set of annual standards and specifications on July 6, 2009. While the responsibility of the stormwater program has been transferred from the DCR to the Department of Environmental Quality (DEQ), JMU continues to maintain approved standards and specifications as requested by the Department. Responding to amendments to regulations, stormwater management was introduced into the standards and received combined approval from DEQ for *Standards and Specifications (S&S) for ESC and SWM* on May 28, 2014.

These S&S and the *JMU Stormwater Program Guide* (available upon request) layout the framework for the administration and implementation of projects within the university concerning erosion and sediment control, and

stormwater management. Certification requirements are listed for appropriate personnel along with the structure for plan review and approvals, construction inspections, variances and exceptions and long-term maintenance.

Measurable Goals: JMU will continue to maintain Department approval of its Standards and Specifications for ESC and SWM and provide a copy on the FM website along with a copy of the Departments approval letter as referenced in appendix B.

Responsible Department: Facilities Management

Documents Referenced:

- *JMU Stormwater Program Guide* (available upon request)
- JMU ESC/SWM Plan Submitter's Checklist (available upon request)
- JMU FM Design and Construction Guidelines: https://www.jmu.edu/facmgt/fm_resources/guidelines/index.shtml
- JMU Standards and Specifications for ESC & SWM: https://www.jmu.edu/facmgt/sustainability/stormwater/deq-approved-standards-and-specs.pdf
- Approval letter for S&S: https://www.jmu.edu/facmgt/sustainability/stormwater/deq-approval-letter-standards-and-specs.pdf

3.5.2 BMP: Stormwater Management Facilities Policy

BMP Description: JMU is required to operate a Virginia Erosion and Stormwater Management Program (VESMP) as part of permit and legislative requirements. Structural stormwater best management practices (BMP's) are sometimes required to be installed for the mitigation of construction projects or for pollution reduction credits related to watershed clean-up efforts such as the Chesapeake Bay Total Maximum Daily Load (TMDL). These BMP's must remain in place as designed and be maintained in perpetuity to function as intended.

The purpose of the policy is to establish procedures for the design, installation, acceptance, inspections, and maintenance of stormwater facilities installed on campus. The *JMU Stormwater Program Guide* (available upon request) will keep SOPs related to stormwater BMPs updated and in compliance with applicable regulations.

Measurable Goals: The Stormwater Management Facilities policy will continue to be updated as needed and made available on the FM website as referenced in appendix B. Any updates will be summarized with annual reports. The total number of structural BMP's, number of inspections and a list of newly installed BMP's will be provided with annual reports. The JMU FM Design and Construction Guidelines and the Plan Submitter's Checklist will be reviewed annually and updated to ensure these align with our S&S, with permit requirements and MCM 5 compliance.

Responsible Department: Facilities Management

Documents Referenced:

- *JMU Stormwater Program Guide* (available upon request)
- JMU FM Policy IV: Stormwater Management Facilities https://www.jmu.edu/facmgt/fm_resources/policies/iv_10_stormwater_management_facilities.pdf
- JMU ESC/SWM Plan Submitter's Checklist (available upon request)
- JMU FM Design and Construction Guidelines: https://www.jmu.edu/facmgt/fm_resources/guidelines/index.shtml

3.6 MCM 6: Pollution Prevention and Good Housekeeping

This section describes the best management practices that will be implemented in order to meet regulatory requirements for pollution prevention and good housekeeping for facilities owned or operated by the permittee as set forth in the General Permit found at 9VAC25-890-40 Part I E 6.

General Permit Requirement Reference

6. Pollution prevention and good housekeeping for facilities owned or operated by the permittee within the MS4 service area.

a. The permittee shall maintain and implement written good housekeeping procedures for those activities listed in Part I E 6 b at facilities owned or operated by the permittee designed to meet the following objectives:

(1) Prevent illicit discharges;

(2) Ensure permittee staff or contractors properly dispose of waste materials, including landscape wastes and prevent waste materials from entering the MS4;

(3) Prevent the discharge of wastewater or wash water not authorized in accordance with 9VAC25-890-20 D 3 u, into the MS4 without authorization under a separate VPDES permit; and

(4) Minimize the pollutants in stormwater runoff.

b. The permittee shall develop and implement written good housekeeping procedures that meet the objectives

established in Part I E 6 a for the following activities:

(1) Road, street, sidewalk, and parking lot maintenance and cleaning:

(a) Within 24 months of permit issuance, permittees that apply anti-icing and deicing agents shall update and implement procedures in accordance with Part I E to include implementation of best management practices for anti-icing and deicing agent application, transport, and storage;

(b) Procedures developed in accordance with Part I E shall prohibit the application of any anti-icing or deicing agent containing urea or other forms of nitrogen or phosphorus;

(2) Renovation and significant exterior maintenance activities (e.g., painting, roof resealing, and HVAC coil cleaning) not covered under a separate VSMP construction general permit. The permittee shall develop and implement procedures no later than 36 months after permit issuance;

(3) Discharging water pumped from construction and maintenance activities [not covered by another permit covering such activities] ;

(4) Temporary storage of landscaping materials;

(5) Maintenance of permittee owned or operated vehicles and equipment (i.e., prevent pollutant discharges from leaking permittee vehicles and equipment);

(6) Application of materials, including pesticides and herbicides shall not exceed manufacturer's recommendations; and

(7) Application of fertilizer shall not exceed maximum application rates established by applicable nutrient management plans. For areas not covered under nutrient management plans where fertilizer is applied, application rates shall not exceed manufacturer's recommendations.

c. The permittee shall require through the use of contract language, training, written procedures, or other measures within the permittee's legal authority that contractors employed by the permittee and engaging in activities described in Part I E 6 b follow established good housekeeping procedures and use appropriate control measures to minimize the discharge of pollutants to the MS4.

d. The written procedures established in accordance with Part I E 6 a and b shall be utilized as part of the employee training program, and the permittee shall develop a written training plan for applicable field personnel that ensures the following:

(1) Applicable field personnel shall receive training in the prevention, recognition, and elimination of illicit discharges no less often than once per 24 months;

(2) Employees performing road, street, sidewalk, and parking lot maintenance shall receive training in good housekeeping procedures required under Part I E 6 b (1) no less often than once per 24 months;

(3) Employees working in and around facility maintenance, public works, or recreational facilities shall receive training in applicable Part I E 6 a and b good housekeeping procedures required no less often than once per 24 months;

(4) Employees working in and around high-priority facilities with a stormwater pollution prevention plan (SWPPP) shall receive training in applicable site specific SWPPP procedures no less often than once per 24 months;

(5) Employees whose duties include emergency spill control and response shall be trained in spill control and response. Emergency responders, such as firefighters and law-enforcement officers, trained on the handling of spill control and response as part of a larger emergency response training shall satisfy this training requirement and be documented in the training plan; and

(6) Employees and contractors hired by the permittee who apply pesticides and herbicides shall be trained and certified in accordance with the Virginia Pesticide Control Act (§ 3.2-3900 et seq. of the Code of Virginia). Certification by the Virginia Department of Agriculture and Consumer Services (VDACS) Pesticide and Herbicide Applicator program shall constitute compliance with this requirement. Contracts for the application of pesticide and herbicides executed after the effective date of this permit shall require contractor certification.

e. The permittee shall maintain documentation of each training activity conducted by the permittee to fulfill the requirements of Part I E 6 d for a minimum of three years after training activity completion. The documentation shall include the following information:

(1) The date when applicable employees have completed the training activity;

(2) The number of employees who have completed the training activity; and

(3) The training objectives and good housekeeping procedures required under Part I E 6 a covered by training activity.

f. The permittee may fulfill the training requirements in Part I E 6 d, in total or in part, through regional training programs involving two or more MS4 permittees; however, the permittee shall remain responsible for ensuring compliance with the training requirements.

g. Within 12 months of permit coverage, the permittee shall identify any new high-priority facilities located in expanded 2020 census urban areas with a population of at least 50,000.

h. Within 36 months of permit coverage, the permittee shall implement SWPPPs for high-priority facilities meeting the conditions of Part I E 6 i and which are located in expanded 2020 census urban areas with a population of at least 50,000.

i. The permittee shall maintain and implement a site specific SWPPP for each high-priority facility as defined in 9VAC25-890-1 that does not have or require separate VPDES permit coverage, and which any of the following materials or activities occur and are expected to have exposure to stormwater resulting from rain, snow, snowmelt or runoff:

(1) Areas where residuals from using, storing, or cleaning machinery or equipment remain and are exposed to stormwater;

(2) Materials or residuals on the ground or in stormwater inlets from spills or leaks;

(3) Material handling equipment;

(4) Materials or products that would be expected to be mobilized in stormwater runoff during loading or unloading or transporting activities (e.g., rock, salt, fill dirt);

(5) Materials or products stored outdoors (except final products intended for outside use where exposure to stormwater does not result in the discharge of pollutants);

(6) Materials or products that would be expected to be mobilized in stormwater runoff contained in open, deteriorated, or leaking storage drums, barrels, tanks, and similar containers;

(7) Waste material except waste in covered, nonleaking containers (e.g., dumpsters);

(8) Application or disposal of process wastewater (unless otherwise permitted); or

(9) Particulate matter or visible deposits of residuals from roof stacks, vents, or both not otherwise regulated (i.e., under an air quality control permit) and evident in the stormwater runoff.

j. Each SWPPP as required in Part I E 6 ~~c~~ g shall include the following:

(1) A site description that includes a site map identifying all outfalls, direction of stormwater flows, existing source controls, and receiving water bodies;

(2) A description and checklist of the potential pollutants and pollutant sources;

(3) A description of all potential nonstormwater discharges;

(4) A description of all structural control measures, such as stormwater management facilities and other pollutant source controls, applicable to SWPPP implementation (e.g., permeable pavement or oil-water separators that discharge to sanitary sewer are not applicable to the SWPPP), such as oil-water separators, and inlet protection designed to address potential pollutants and pollutant sources at risk of being discharged to the MS4;

(5) A maintenance schedule for all stormwater management facilities and other pollutant source controls applicable to SWPPP implementation described in Part I E 6 h (4);

(6) Site specific written procedures designed to reduce and prevent pollutant discharge that incorporate by reference applicable good housekeeping procedures required under Part I E 6 a and b;

(7) A description of the applicable training as required in Part I E 6 d (4);

(8) An inspection frequency of no less often than once per year and maintenance requirements for site specific source controls. The date of each inspection and associated findings and follow-up shall be logged in each SWPPP;

(9) A log of each unauthorized discharge, release, or spill incident reported in accordance with Part IV G including the following information:

(a) Date of incident;

(b) Material discharged, released, or spilled; and

(c) Estimated quantity discharged, released, or spilled;

(10) A log of modifications to the SWPPP made as the result of any unauthorized discharge, release, or spill in accordance Part I E 6 j or changes in facility activities and operation requiring SWPPP modification; and

(11) The point of contact for SWPPP implementation.

k. No later than June 30 of each year, the permittee shall annually review any high-priority facility owned or operated by the permittee for which ~~a~~ an SWPPP has not been developed to determine if the facility meets any of the conditions described in Part I E 6 ~~c~~ g. If the facility is determined to need an SWPPP, the permittee shall develop an SWPPP meeting the requirements of Part I E 6 h no later than December 31 of that same year. The permittee shall maintain a list of all high-priority facilities owned or operated by the permittee not required to maintain an SWPPP in accordance with Part I E 6 g and this list shall be available upon request.

l. The permittee shall review the contents of any site specific SWPPP no later than 30 days after any unauthorized discharge, release, or spill reported in accordance with Part ~~III~~ IV G to determine if additional measures are necessary to prevent future unauthorized discharges, releases, or spills. If necessary, the SWPPP shall be updated no later than 90 days after the unauthorized discharge.

m. The SWPPP shall be kept at the high-priority facility and utilized as part of employee SWPPP training required in Part I E 6 d (4). The SWPPP and associated documents may be maintained as a hard copy or electronically as long as the documents are available to employees at the applicable site.

n. If activities change at a facility such that the facility no longer meets the definition of a high-priority facility the permittee may remove the facility from the list of high-priority facilities with a high potential to discharge

pollutants.

o. If activities change at a facility such that the facility no longer meets the criteria requiring SWPPP coverage as described in Part I E 6 g, the permittee may remove the facility from the list of high-priority facilities that require SWPPP coverage.

p. The permittee shall maintain and implement turf and landscape nutrient management plans that have been developed by a certified turf and landscape nutrient management planner in accordance with § 10.1-104.2 of the Code of Virginia on all lands owned or operated by the permittee where nutrients are applied to a contiguous area greater than one acre. If nutrients are being applied to achieve final stabilization of a land disturbance project, application shall follow the manufacturer's recommendations.

q. Within 12 months of permit coverage, the permittee shall identify contiguous areas greater than one acre located in expanded 2020 census urban areas with population of at least 50,000 and within the permittee's MS4 service area requiring turf and landscape nutrient management plans.

r. Within 36 months of permit coverage, the permittee shall implement turf and landscape nutrient management plans on contiguous areas greater than one acre located in expanded 2020 Census urban areas with a population of least 50,000 and within the permittee's MS4 service area.

s. If nutrients are being applied to achieve final stabilization of a land disturbance project, application shall follow the manufacturer's recommendations. For newly established turf where nutrients are applied to a contiguous area greater than one acre, the permittee shall implement a nutrient management plan no later than six months after the site achieves final stabilization.

t. Nutrient management plans developed in accordance with Part I E 6 n shall be submitted to the Department of Conservation and Recreation (DCR) for approval.

u. Nutrient management plans that are expired as of the effective date of this permit shall be submitted to DCR for renewal within six months after the effective date of this permit. Thereafter, all nutrient management plans shall be submitted to DCR at least 30 days prior to nutrient management plan expiration. Within 36 months of permit coverage, no nutrient management plans maintained by the permittee in accordance with Part I E 6 n shall be expired due to DCR documented noncompliance with 4VAC50-85-130 provided to the permittee.

v. Nutrient management plans may be maintained as a hard copy or electronically as long as the documents are available to employees at the applicable site.

w. Nontraditional permittees with lands regulated under § 10.1-104.4 of the Code of Virginia, including state agencies, state colleges and universities, and other state government entities, shall continue to implement turf and landscape nutrient management plans in accordance with this statutory requirement.

x. The MS4 program plan shall include:

(1) A list of written good housekeeping procedures for the operations and maintenance activities as required by Part I E 6 a and b;

(2) A list of all high-priority facilities owned or operated by the permittee required to maintain an SWPPP in accordance with Part I E 6 g that includes the facility name, facility location, and the location of the SWPPP hardcopy or electronic document being maintained. The SWPPP for each high-priority facility shall be incorporated by reference;

(3) A list of locations for which turf and landscape nutrient management plans are required in accordance with Part I E 6 n and s, including the following information:

(a) The total acreage covered by each nutrient management plan;

(b) The DCR approval date and expiration date for each nutrient management plan;

(c) The location of the nutrient management plan hardcopy or electronic document being maintained;

(4) A summary of mechanisms the permittee uses to ensure contractors working on behalf of the permittees implement the necessary good housekeeping and pollution prevention procedures, and stormwater pollution plans as appropriate; and

(5) The written training plan as required in Part I E 6 d.

y. The annual report shall include the following:

(1) A summary of any written procedures developed or modified in accordance with Part I E 6 a and b during the reporting period.

(2) A confirmation statement that all high-priority facilities were reviewed to determine if SWPPP coverage is needed during the reporting period;

(3) A list of any new SWPPPs developed in accordance Part I E 6 i during the reporting period;

(4) A summary of any SWPPPs modified in accordance with Part I E 6 j, 6 l, or 6 m;

(5) The rationale of any high-priority facilities delisted in accordance with Part I E 6 l or m during the reporting period;

(6) The status of each nutrient management plan as of June 30 of the reporting year (e.g., approved, submitted and pending approval, and expired);

(7) A list of the training activities conducted in accordance with Part I E 6 ~~m~~ d, including the following information:

(a) The completion date for the training activity;

(b) The number of employees who completed the training activity; and

(c) The objectives and good housekeeping procedures covered by the training activity.

3.6.1 BMP: Daily Operational Procedures

BMP Description: As a MS4 permittee, JMU is responsible for preventing, or minimizing to the maximum extent practicable, any discharges to the storm sewer system, or waterways, that is not entirely composed of stormwater run-off. This policy was created to implement written procedures for activities such as road, street, and parking lot maintenance; equipment maintenance; and the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers.

These procedures will be utilized as part of FM employee training and will be an effective way to ensure that employees are aware of proper procedures associated with typical operations and the possible impacts on local waterways. These procedures also apply to contractors and sub-contractors working for the University. Enforcement of this policy for contractors on campus is implemented by the JMU project manager assigned to the project.

Measurable Goals: The Daily Operational Procedures for Stormwater Best Practices Policy will continue to be updated as needed and made available on the FM website as referenced in appendix B. Any updates will be summarized with annual reports. The number of individuals receiving training will be provided along with the reason for the training (e.g., new employee training, refresher training, etc.) in annual reports.

Responsible Department: Facilities Management

Documents Referenced:

- Policy IV 12: Daily Operational Procedures for Stormwater Control Best Management Practices
- MS4 Annual Reports (available on our MS4 webpage)

3.6.2 BMP: SWPPP's for High-Priority Facilities

BMP Description: Several facilities at JMU meet the criteria listed in the general permit as high-priority facilities and are considered to have a high potential for discharging pollutants. These facilities are required to maintain and implement a stormwater pollution prevention plan (SWPPP) to provide a summary description of the facility and activities, description of potential pollutants and sources, procedures for reducing and preventing pollutant discharges and procedures for inspections and maintenance. Following is a list of facilities that have been identified as high-priority facilities with a high potential for discharging pollutants:

Facility Name & Location	SWPPP Hardcopy Location
Arboretum Storage Yard 780 University Blvd., Harrisonburg, VA 22807	USB Annex 543 Chesapeake Ave., Harrisonburg, VA 22807
East Campus Landscape Storage Building 1640 Driver Dr., Harrisonburg, VA 22807	USB Annex 543 Chesapeake Ave., Harrisonburg, VA 22807
Memorial Hall Maintenance Shop 220 Veterans Memorial Dr., Harrisonburg, VA 22807	USB Annex 543 Chesapeake Ave., Harrisonburg, VA 22807
R2 Lot Storage Yard 1380 Hillside Ave., Harrisonburg, VA 22807	USB Annex 543 Chesapeake Ave., Harrisonburg, VA 22807
South Main Street Facilities: HVAC 1599 S. Main St., Harrisonburg, VA 22807	Stored at facility location.
South Main Street Facilities: Recycling 1597 S. Main St., Harrisonburg, VA 22807	Stored at facility location.
South Main Street Facilities: Salt & Other Material Storage	USB Annex

1609 S. Main St., Harrisonburg, VA 22807	543 Chesapeake Ave., Harrisonburg, VA 22807
South Main Street Facilities: Transportation 1603 S. Main St., Harrisonburg, VA 22807	Stored at facility location.
South Main Street Maintenance Facility by K Lot 1046 S. Main St., Harrisonburg, VA 22807	USB Annex 543 Chesapeake Ave., Harrisonburg, VA 22807
University Park Maintenance Shop 1285 Kelsey Ln., Harrisonburg, VA 22807	USB Annex 543 Chesapeake Ave., Harrisonburg, VA 22807
University Services Building (USB) & Annex 543 Chesapeake Ave., Harrisonburg, VA 22807	Stored at facility location.

Measurable Goals: SWPPP's will continue to be maintained and implemented, and facilities inspected on a regular basis. Newly constructed facilities or facilities with updated activities meeting the criteria for a high-priority facility will have SWPPP's developed and implemented and added to the list in annual reports.

Responsible Department: Facilities Management

Documents Referenced:

- SWPPPs for Facilities (available upon request)
- MS4 Annual Reports (available on our MS4 webpage)

3.6.3 BMP: Nutrient Management Plan (NMP) & Integrated Pest Management (IPM)

BMP Description: The University currently implements several Nutrient Management Plans that cover the lawn and landscaped areas of the University that receives nutrient applications. The plans outline the rates and frequencies that nutrients may be applied and covers best management practices to follow regarding the application of these nutrients. By following this plan, it can be ensured that nutrients are applied in a manner that will minimize their impact on stormwater quality. Following is a list of NMP's active at the University:

Plan Name	Acreage	Approval Date	Expiration Date
Main Campus	224.48	May 20, 2021	May 20, 2024
Forest Hills Off Campus Properties	4.55	December 4, 2021	December 4, 2024
Total	229.03		

A copy of the NMP's may be viewed by appointment in the FM Environmental Services – Landscaping office located at the USB Annex Building at 543 Chesapeake Avenue, Harrisonburg, VA 22807.

The University also has an Integrated Pest Management (IPM) program which seeks to control pests with a minimal use of pesticide while maximizing effectiveness and cost efficiency. The application of all fertilizers and pesticides will be conducted in accordance with the Virginia Department of Agriculture and Consumer Services (VDACS) rules and regulations for agricultural chemical operations and only properly trained and/or certified employees or contractors will apply fertilizer or pesticides on campus.

Measurable Goals: NMP's will continue to be updated and implemented as required and new plans created as the University grows and re-develops. Updates and additions will be provided in annual reports. The number of certified applicators will be provided in annual reports.

Responsible Department: Facilities Management

Documents Referenced:

- Nutrient Management Plans (available upon request)
- MS4 Annual Reports (available on our MS4 webpage)

3.6.4 BMP: Facilities Management Training Plan

BMP Description: A "Stormwater Pollution Prevention/IDDE" presentation and guidebook (this document is available upon request) has been developed for use with Facilities Management employee training. During new employee orientation for FM personnel, a presentation is given introducing them to basic stormwater information, pollution prevention, good housekeeping measures, related policies and procedures, and how to recognize and report illicit discharges. Refresher training will be provided no less than once per 24 months with a presentation, guidebook, or other similar format. New FM employee training will be provided with FM orientation which typically occurs on a monthly basis. This written training plan is also detailed in the *JMU Stormwater Program Guide* (this is available upon request).

In addition to regular stormwater training at the university, any individuals performing activities listed on the following list have obtained and maintained their needed certification:

- Application of fertilizer, herbicides, and pesticides;
- Plan reviewers, inspectors, and program administrators implementing the Virginia Erosion and Stormwater Management Program (VESMP) as required under the Virginia Erosion and Stormwater Management Act and its attendant regulations;
- And individuals whose duties include emergency response have been trained in spill response.

Through these training and certification activities, an increase of the overall awareness of stormwater impacts and the measures that the University is undertaking to improve stormwater quality by prevention pollution in the area can be observed.

Measurable Goals: The number of individuals receiving training will be provided along with the reason for the training (e.g., new employee training, refresher training, etc.). A listing will also be provided listing the number of individuals certified for the application of fertilizers and pesticides, ESC and VSMP activities, and spill response in annual reports.

Responsible Departments: Facilities Management

Documents Referenced:

- Stormwater Pollution Prevention/IDDE presentation and guidebook (available upon request)
- JMU Stormwater Program Guide (available upon request)
- MS4 Annual Reports (available on our MS4 webpage)

SECTION 4: TMDL ACTION PLANS

There are times when water quality impairments require additional measures to be implemented as part of action plans due to waste load allocations (WLA) being assigned to the locality in order to conform to total maximum daily loads (TMDL). This section highlights the action plans implemented for WLA's assigned to James Madison University as part of TMDL's.

4.1 Chesapeake Bay TMDL Special Condition

The Chesapeake Bay TMDL has listed pollutants of concern as phosphorus, and nitrogen. Prior to action plan guidance being circulated for the Chesapeake Bay TMDL, two studies had been completed to assist in determining the best way to meet the Bay TMDL. One study, completed by Vanasse Hangen Brustlin, Inc. (VHB) looked at two options: (1) constructing a series of stand-alone stormwater improvement projects; and (2) requiring all capital improvement projects to reduce post-construction pollutant loading by roughly 2.25 times the required amount. The second study, completed by the Center for Watershed Protection (CWP), looked at meeting the required reductions through stormwater retrofits.

For a summary of JMU's reduction requirements and BMP's implemented, the tables below are provided for reference.

Table 1. Estimated Existing Source Loads and Reduction Requirements

Pollutant	**Loading Rate (lbs/ac/yr)**	**Regulated MS4 Acreage**	**Loading (lbs/ac/yr)**	**L2 Loading Rate Reduction**	**100% Cumulative reduction required**	**Sum of 100% cumulative reduction (lbs/yr)**
Total Nitrogen	16.86	243.00	4,096.98	9%	368.73	569.30
	10.07	331.97	3,342.94	6%	200.58	
Total Phosphorus	1.62	243.00	393.66	16%	62.99	72.85
	0.41	331.97	136.11	7.25%	9.87	

Table 2. Pollutant reductions required versus planned.

	TP	**TN**
Required by 2018, lbs. (5%)	3.72	30.15
Required by 2023, lbs. (40%)	31.56	250.73
Required by 2028, lbs. (100%)	78.90	626.82
Completed by 2018, lbs.	342.79	835.03

Table 3. Projects completed since 2009.

ID	**Project Name/Description**	**BMP Total Removed TP**	**TN**
ST1	SRP: East Campus (1031')	69.74	71.03
ST1a	SRP: East Campus Land Use Change - Pervious to Grass		2.75
ST2	SRP: Siberts Creek - Segment 'A' (407')	27.63	29.47
ST3	SRP: Siberts Creek - Segment 'B' (498')	33.80	36.09
ST4	SRP: Siberts Creek - Segment 'C' (711')	47.91	47.45
ST4a	SRP: Siberts Creek Land Use Change - Pervious to Grass		4.31
S4	SRP: Siberts Creek Bioretention	1.87	13.02

ST5	SRP: Arboretum w/ Constructed Wetlands (1050')	161.84	630.91

As such, a combination of methods including stream restoration were used in JMU's action plans to meet reduction goals. The Chesapeake Bay TMDL Action Plan is available for viewing as referenced in appendix B.

4.2 Local TMDL Special Condition

Blacks Run has been listed as an impaired waterway, and on July 10, 2019 the EPA approved a revision to the TMDL developed for the Blacks Run and Cooks Creek watershed. This revision allocated a WLA of 78 lb/yr of phosphorus for JMU. No sediment allocation was proposed for the university.

Planning for the Blacks Run TMDL has already begun, and an Action Plan will be developed no later than 30 months after this permit effective date and referenced in the associated annual report.

Appendix A

Registration Statement

Commonwealth of Virginia
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
1111 E. Main Street, Suite 1400, Richmond, Virginia 23219
P.O. Box 1105, Richmond, Virginia 23218
(800) 592-5482
www.deq.virginia.gov

Travis A. Voyles
Secretary of Natural and Historic Resources

Michael S. Rolband, PE, PWD. PWS Emeritus
Director

November 1, 2023

Towana Moore
Vice President Administration and Finance
Alumnae Hall 107 MSC 7606
Harrisonburg, VA 22807

Transmitted electronically: mooreth@jmu.edu

Re: General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems General Permit Number VAR040112, James Madison University

Dear Ms. Moore:

Department staff has reviewed your Registration Statement and determined that the referenced Municipal Storm Sewer System (MS4) is hereby covered under the General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems. The effective date of your coverage under this general permit is November 1, 2023, or the date of this letter, whichever is later. You may obtain a copy of the general permit from https://law.lis.virginia.gov/admincode/title9/agency25/chapter890/section40/.

Please submit future permit correspondence and your annual MS4 program reports to Megan O'Gorek of the DEQ Valley Regional Office at megan.ogorek@deq.virgnia.gov. The general permit will expire on October 31, 2028. The conditions of the permit require that you submit a new registration statement on or before August 3, 2028, if you wish to have continued coverage under the general permit.

If you have any questions about this letter or the general permit, please contact Megan O'Gorek at 540-217-7155 or megan.ogorek@deq.virginia.gov.

Sincerely,

Meghan M. Mayfield
Director, Water Permitting

Cc: Dale Chestnut, Stormwater Coordinator, chestndl@jmu.edu

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY GENERAL PERMIT REGISTRATION STATEMENT FOR STORMWATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (VAR04)

Section I. General Information

A. Owner/Operator Information:

Name of Owner Applying for Permit Coverage:	**James Madison University**		
Mailing Address:	**181 Patterson St., MSC 7004**		
City: **Harrisonburg**		State: **VA**	Zip Code: **22807**
Phone Number:	**(540) 568-7606**		

B. Responsible Official: (Please note that for municipality, state, federal, and other public agencies, the responsible official is defined in 9 VAC25-870-370 A.3 as either a principal executive officer or ranking elected official. A principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency)

Name:	**Towana Moore**		
Title:	**Vice President Administration and Finance**		
Mailing Address:	**Alumnae Hall 107 MSC 7606**		
City: **Harrisonburg**		State: **VA**	Zip Code: **22807**
E-mail Address:	**mooreth@jmu.edu**		
Phone Number:	**(540) 568-6434**		

C. MS4 Permit Contact: **Please note that this Stormwater Coordinator position will be considered a duly authorized representative as defined in 9VAC25-870-370 B. See attachment.**

Name:	**Dale Chestnut**		
Title:	**Stormwater Coordinator**		
Mailing Address:	**181 Patterson St., MSC 7004**		
City:	**Harrisonburg**	State: **VA**	Zip Code: **22801**
E-mail Address:	**chestndl@jmu.edu**		
Phone Number:	**(540) 568-7606**		

D. MS4 Maintenance Fee Contact:

Name:	**Dale Chestnut**		
Title:	**Stormwater Coordinator**		
Mailing Address:	**181 Patterson St., MSC 7004**		
City:	**Harrisonburg**	State: **VA**	Zip Code: **22801**
E-mail Address:	**chestndl@jmu.edu**		
Phone Number:	**(540) 568-7606**		

E. Small MS4 Information:

Name:	**James Madison University**		
MS4 Ownership Type: ☐ City ☐ County ☐ Incorporated Town ☐ Unincorporated Town			
☒ College or University ☐ Local School Board ☐ Military Installation			
☐ Transportation System ☐ Federal Facility ☐ State Facility			
☐ Other ( )			
Facility Address (applicable to state and federal entities only):			
Street:	**181 Patterson St., MSC 7004**		
City:	**Harrisonburg**	State: **VA**	Zip Code: **22801**
Is the owner/operator taking responsibility for any Public School MS4s? ☐ Yes ☐ No (applicable to entities under the authority of a city council or a county board of supervisors only)			

F. List the Names of any Physically Interconnected MS4s to Which the Small MS4 Discharges:

City of Harrisonburg
Virginia Department of Transportation (VDOT)

Section II. Stormwater Discharge Information (attach additional sheets as necessary. Permittees may attach alternative tables or spreadsheets in lieu of completing the tables below, as long as all information required below is included)

A. Receiving Water Information: Provide a list of all surface waters receiving discharges from the MS4

Blacks Run (PS-22)

B. Impaired Waters Information: List all surface waters receiving direct discharges from the MS4, that are listed in the 2022 Virginia 303(d)/305(b) Water Quality Assessment Integrated Report

Blacks Run (PS-22)

Section III. Stormwater Management Program Agreements (please attach additional sheets as necessary)

Agreements: *Attach a list of all existing signed agreements between the operator and any applicable third parties where the operator has entered into an agreement in order to implement minimum control measures or portions of minimum control measures*

Description of Agreement	Permit Requirement(s) Covered by the Agreement	Third Parties Participating in Agreement

Section IV. Draft Chesapeake Bay Total Maximum Daily Load (TMDL) Action Plan

Attach a copy of the draft third phase Chesapeake Bay TMDL Action Plan in accordance with Section I. C. 5 of the General VPDES Permit for discharges of Stormwater from Small Municipal Separate Storm Sewer Systems effective November 1, 2023

Section V. Certification Statement and Signature

Read and sign the following certification statement below that is in accordance with 9 VAC 25-870-370 D:

"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."

Print Name: **Towana Moore** Title: **VP Administration & Finance**

Signature: Date:

For Department of Environmental Quality Use Only

Accepted **Not Accepted**

DEQ Reviewer: **Date:**

Comments:

INSTRUCTIONS FOR FORM DEQ 199-148
GENERAL PERMIT REGISTRATION STATEMENT FOR STORMWATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (VAR04)

WHO MUST FILE THE REGISTRATION STATEMENT This registration statement must be completed and submitted by the Operator of any Small MS4 requesting coverage under the above general permit for stormwater discharges.

1. Operators are regulated if they operate a Small MS4, including but not limited to systems owned by federal, state, and local governments:
   a. The small MS4 is located in an urbanized area as determined by the latest Decennial Census by the U.S. Census Bureau. If the Small MS4 is not located entirely within an urbanized area, only the portion that is within the urbanized area is regulated; or
   b. The Small MS4 is designated by the Board.
2. An MS4 may be the subject of a petition to the Board to require a permit for their stormwater discharges. If the Board determines that an MS4 needs a permit, the operator may use this registration statement to apply for coverage under the above general permit.

WHERE TO FILE THE REGISTRATION STATEMENT If this is the first time the MS4 has applied for Permit coverage, the completed registration statement (with all attachments) along with a copy of the fee form and a copy of your check sho uld be sent to the appropriate DEQ regional office**.** The original fee form, application fee (as specified by Form DEQ 199-145), and a copy of the registration statement (without attachments) should be sent to**: Virginia Department of Environmental Quality, Receipts Control, PO Box 1004, Richmond, VA 23218.** For those submitting for re-issuance the completed registration statement (with all attachments) along with the draft Chesapeake Bay TMDL action plan should be sent to the appro priate DEQ regional office**.**

COMPLETENESS
Complete all items except where indicated in order for your registration statement to be accepted. Attach separate sheets of paper, alternative tables or spreadsheets for any item in Section II of the registration statement as necessary.

Definitions
"Interconnected" means that an MS4 is connected to a second (or several) MS4(s) in such a manner that it allows for direct discharges to the second (or several) systems.

"Small MS4" means all separate storm sewers that are: (1) Owned or operated by the United States, a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control district, or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under subsection 208 of the CWA that discharges to surface waters; and (2) Not defined as "large" or "medium" municipal storm sewer systems, or designated under 9VAC25-870-380 A 1. This term includes systems similar to separate sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

LINE BY LINE INSTRUCTIONS

SECTION I General Information
Item A. Owner/Operator Information
Provide the name, mailing address and phone number of the owner of the Small MS4.

Item B. Responsible Official
Provide the name, title, mailing address, e-mail address, and phone number for the responsible official as defined in 9VAC25-870-370 A 3.

Item C. MS4 Permit Contact
Provide the name, title, mailing address, e-mail address, and phone number for anyone designated as an MS4 Permit contact.

Item D. MS4 Maintenance Fee Contact
Provide the name, title, mailing address, e-mail address and phone number for anyone designated as an MS4 maintenance fee contact.

Item E. Small MS4 Information
Provide the name, facility address (if a state or federal MS4), and check the appropriate ownership box for the MS4. Indicate whether or not the applicant is taking responsibility for any Public School MS4s.

Item F. List the names of all regulated MS4s to which the MS4 is physically interconnected
Provide the names of all interconnected regulated MS4s.

SECTON II Stormwater Discharge Information
Item A. Receiving Water Information
List the names of all surface waters receiving a discharge from the MS4.

Item B. Impaired Waters Information
Provide the name of any surface waters receiving a direct discharge from the MS4 that is listed in the 2022 Virginia 303(d)/305(b) Water Quality Assessment Integrated Report.

Section III Stormwater Management Program Agreements
Provide a description, permit requirements covered and third parties participating for each existing agreement between the operator and any third parties.

Section IV Draft Chesapeake Bay Total Maximum Daily Load (TMDL) Action Plan
Provide a copy of the draft Chesapeake Bay TMDL Action Pl an detailing the required 60% reductions (100% cumulative)

Section V Certification Statement and Signature
State law provides for severe penalties for submitting false information on this Registration Statement. State regulations require this Registration Statement to be signed by either a

principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a public agency includes:

(a) The chief executive officer of the agency, or

(b) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

Appendix B

Document References

The following list of referenced material provides James Madison University's standard operating procedures, policies and other plans used in the implementation of the stormwater program along with references to the relevant laws and regulations.

Code of Virginia. *Chapter 3.1 State Water Control Law*
https://law.lis.virginia.gov/vacode/title62.1/chapter3.1/

James Madison University. *Standards & Specifications for ESC & SWM* (MCM 4 & 5)
https://www.jmu.edu/facmgt/sustainability/stormwater/site-plan-review.shtml

James Madison University. *Standards & Specifications for ESC & SWM Approval Letter* (MCM 4 & 5)
http://www.jmu.edu/facmgt/sustainability/stormwater/site-plan-review.shtml

James Madison University. Chesapeake Bay TMDL Action Plan (Special Condition)
http://www.jmu.edu/facmgt/sustainability/stormwater/ms4.shtml

James Madison University. *Daily Operational Procedures for Stormwater Control Best Management Practices* (MCM 6)
https://www.jmu.edu/facmgt/fm_resources/policies/index.shtml

James Madison University. *Illicit Discharge Detection and Elimination (IDDE) Policy & Procedures* (MCM 3)
https://www.jmu.edu/jmu-policy/policies/4310.pdf

James Madison University. *Land-Disturbing Activities Policy & Procedures* (MCM 4 & 5)
https://www.jmu.edu/facmgt/fm_resources/policies/index.shtml

James Madison University. *MS4 Program Plan*
http://www.jmu.edu/facmgt/sustainability/stormwater/ms4.shtml

James Madison University. *Nutrient Management Plans* (MCM 6) *

James Madison University. *Spill Prevention Control and Countermeasure (SPCC) Plan* (MCM 3) *

James Madison University. *Stormwater Management Facilities Policy & Procedures* (MCM 5)
https://www.jmu.edu/facmgt/fm_resources/policies/index.shtml

James Madison University. *JMU Stormwater Program Guide* (MCM 1-6) *

James Madison University. ESC/SWM Plan Submitter's Checklist (MCM 4 & 5) *

James Madison University. Facilities Management Design and Construction Guidelines
https://www.jmu.edu/facmgt/fm_resources/guidelines/index.shtml

Virginia Administrative Code. *Chapter 31. Virginia Pollutant Discharge Elimination System (VPDES) Permit Regulation*
https://law.lis.virginia.gov/admincode/title9/agency25/chapter31/

Virginia Administrative Code. *Chapter 875. Virginia Erosion and Stormwater Management Program (VESMP) Regulation*
https://law.lis.virginia.gov/admincode/title9/agency25/chapter870/

Virginia Administrative Code. *Chapter 880. General VPDES Permit for Discharges of Stormwater from Construction Activities*
https://law.lis.virginia.gov/admincode/title9/agency25/chapter880/

Virginia Administrative Code. *Chapter 890. General VPDES Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems*
https://law.lis.virginia.gov/admincode/title9/agency25/chapter890/

**** Viewing of this document is available upon request at the Facilities Management Engineering & Construction Office***