JAMES MADISON UNIVERSITY®

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MS4 Program Plan
2018 to 2023

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

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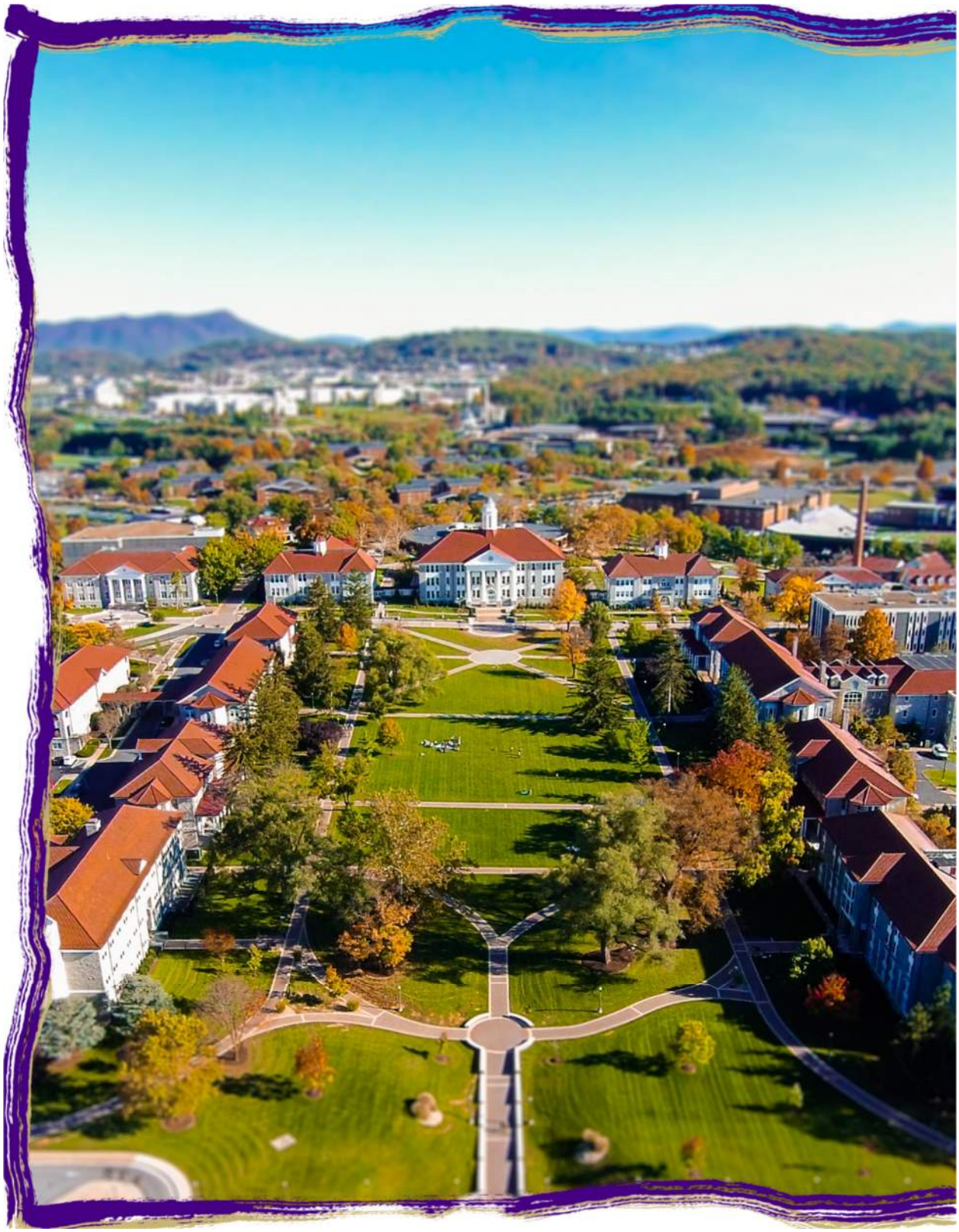
Acronyms and Abbreviations

Bay	Chesapeake Bay
BMP	Best Management Practice
CWA	Clean Water Act
CSS	Combined Sewer System
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
UA	Urbanized Area
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.

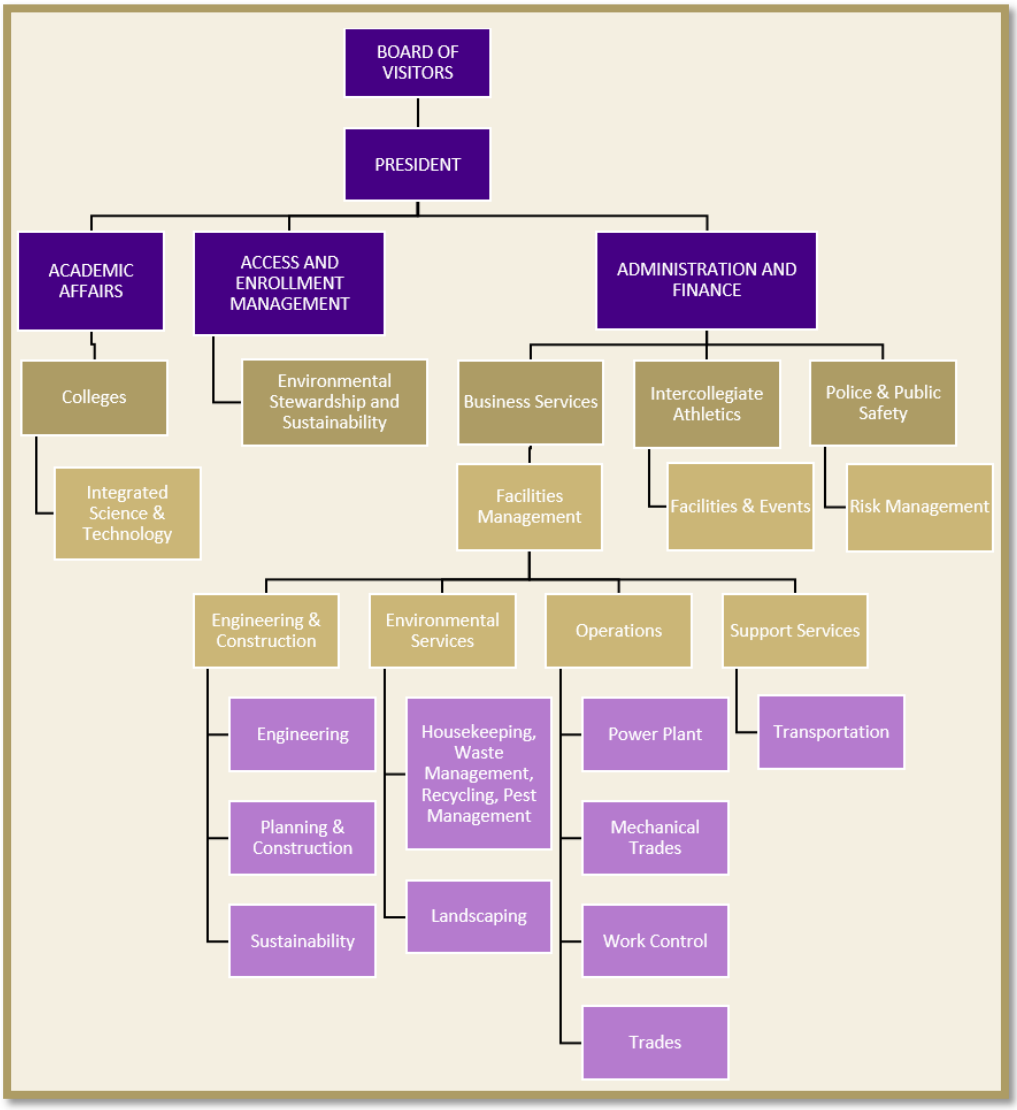


Figure 1. James Madison University Stormwater Management Organizational Structure

2.2 Responsible Party Contact Information

Principle Executive Officer:	Duly Authorized Representative:
Title: Senior Vice President	Title: Stormwater Coordinator
Name: Charles W. King, Jr.	Name: Dale Chestnut
Address: 91 Alumnae Drive, MSC 7606 Harrisonburg, VA 22807	Address: 181 Patterson St., MSC 7004 Harrisonburg, VA 22807
Phone: (540) 568-3400	Phone: (540) 568-7606
Email: kingcw@jmu.edu	Email: chestndl@jmu.edu

Division of Administration and Finance:	FM Engineering & Construction - Sustainability:
Title: Senior Vice President	Title: Stormwater Coordinator
Name: Charles W. King, Jr.	Name: Dale Chestnut
Phone: (540) 568-3400	Phone: (540) 568-7606
Email: kingcw@jmu.edu	Email: chestndl@jmu.edu
Office of Environmental Stewardship & Sustainability:	FM Environmental Services – Landscaping:
Title: Executive Director	Title: Manager
Name: C.J. Hartman	Name: Scott Jones
Phone: (540) 568-3202	Phone: (540) 568-7963
Email: brodricj@jmu.edu	Email: jonesrs@jmu.edu
Risk Management:	FM Operations:
Title: Environmental Health Coordinator	Title: Administrative Analyst
Name: Marcella Mullenax	Name: Gail Turnbull
Phone: (540) 568-4959	Phone: (540) 568-1773
Email: mullenmr@jmu.edu	Email: turnbugl@jmu.edu
Integrated Science & Technology:	FM Operations - Power Plant:
Title: Professor	Title: Manager
Name: Thomas Benzing	Name: Dennis Hart
Phone: (540) 568-2794	Phone: (540) 568-6235
Email: benzintr@jmu.edu	Email: hartdb@jmu.edu
Integrated Science & Technology:	FM Environmental Services - Recycling:
Title: Associate Professor	Title: Manager
Name: Wayne Teel	Name: Tony Smith
Phone: (540) 568-2798	Phone: (540) 568-8144
Email: teelws@jmu.edu	Email: smith2tr@jmu.edu
Integrated Science & Technology:	FM Support Services - Transportation:
Title: Assistant Professor	Title: Garage Supervisor
Name: Robert Brent	Name: Bennie Wheelbarger
Phone: (540) 568-2728	Phone: (540) 568-6364
Email: brentrn@jmu.edu	Email: wheel2bl@jmu.edu
Facilities & Events:	FM Engineering & Construction - Sustainability:
Title: Assistant Athletics Director	Title: GIS Coordinator
Name: Ty Phillips	Name: Sam Hottinger
Phone: (540) 568-8810	Phone: (540) 568-4029
Email: phillidt@jmu.edu	Email: andricba@jmu.edu

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.

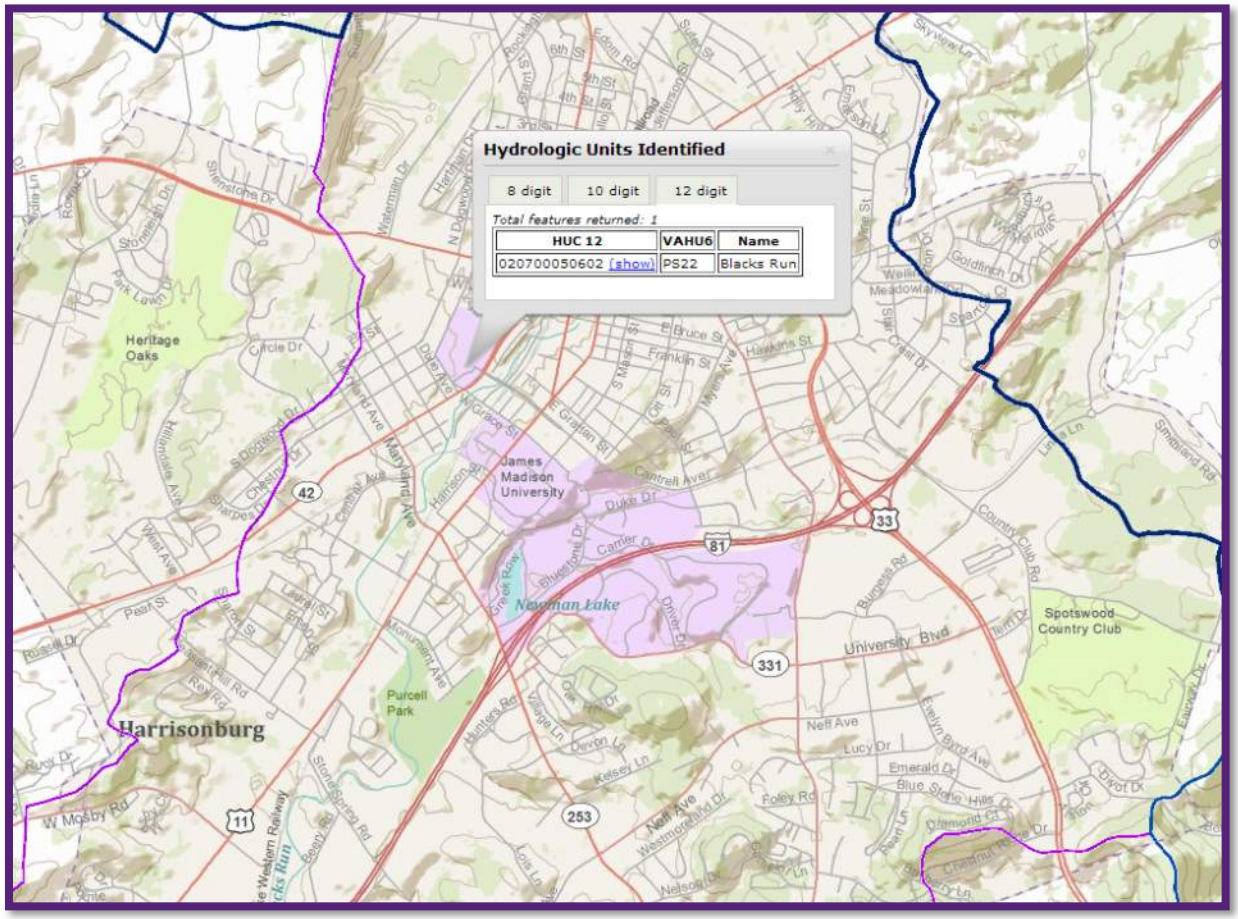
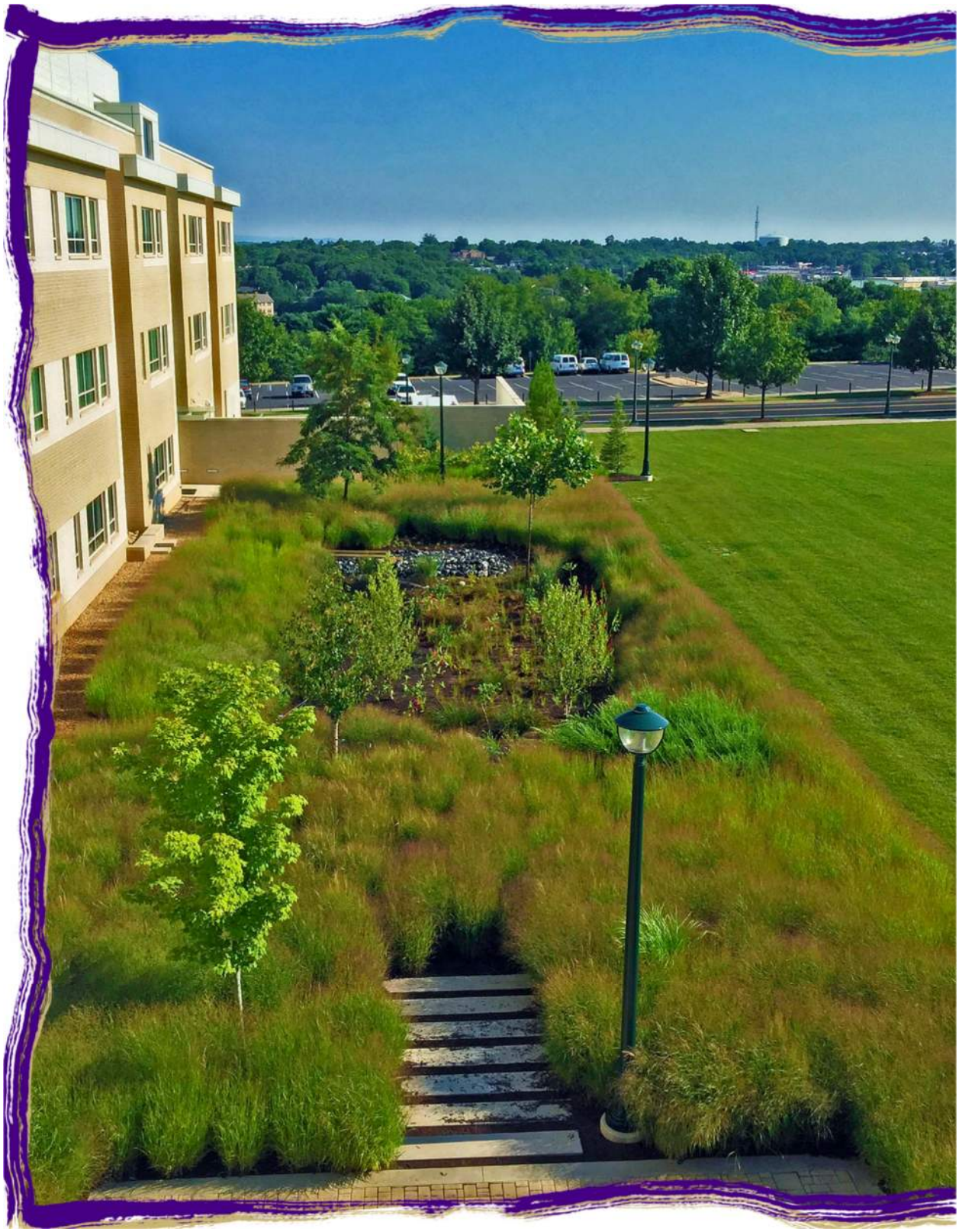


Figure 2. Hydrologic Unit Code (HUC), Source: Virginia Department of Conservation & Recreation

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 a MS4 program designed to reduce the discharge of pollutants from the small MS4 to the maximum extent practicable (MEP) in accordance with this permit, to protect water quality, and to satisfy the appropriate water quality requirements of the State Water Control Law and its attendant regulations. The permittee shall utilize the legal authority provided by the laws and regulations of the Commonwealth of Virginia to control discharges to and from the MS4. This legal authority may be a combination of statute, ordinance, permit, policy, specific contract language, order or interjurisdictional agreements.

A list of standard operating procedures, policies and other documents used in the implementation of the best management practices in the following minimum control measures can be found 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 less 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, 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 below per year to communicate to the public 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, or newspaper*
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*

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

f. The MS4 program plan shall include:

(1) A list of 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 and outreach strategy is intended to have a positive impact on stormwater discharges;

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

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

(5) 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 high-priority stormwater issues the permittee addressed in the public education and outreach program; and

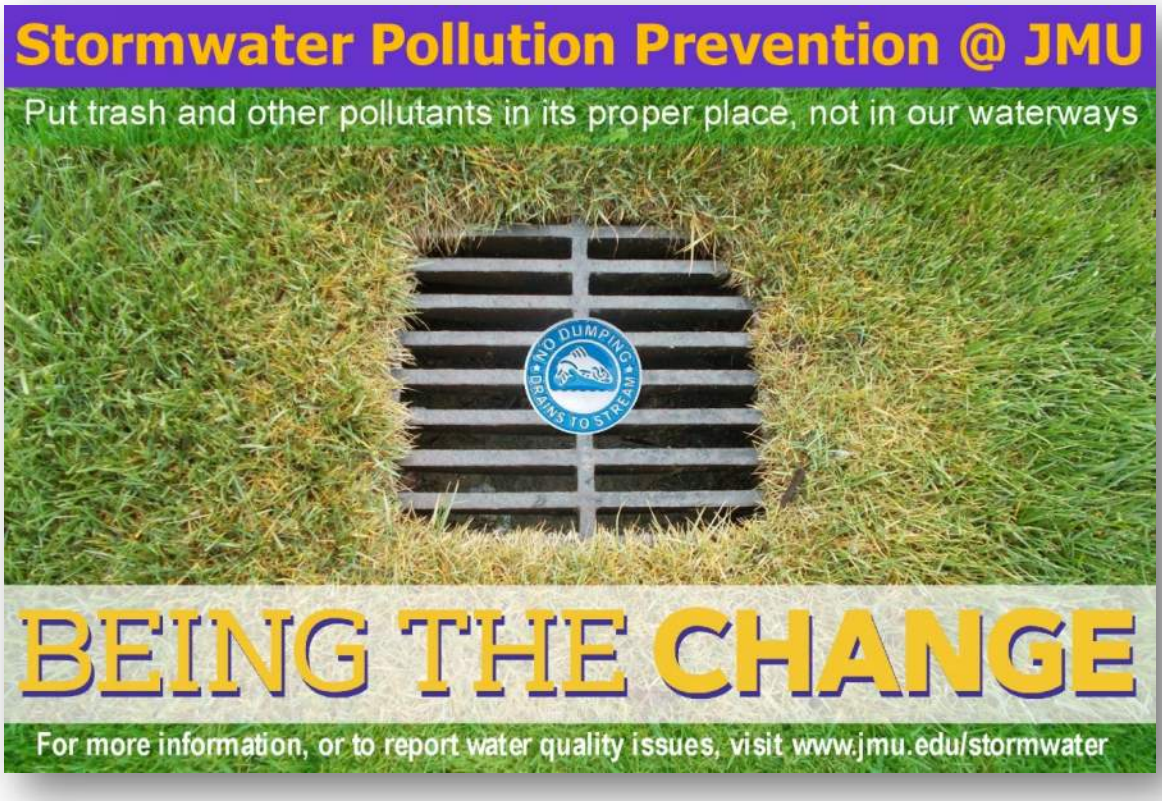
(2) A list of the strategies used to communicate each high-priority stormwater issue.

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 pollution prevention related to facilities management operations. 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 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.



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.

Pollution Prevention Related to Facilities Management Operations

Rationale: JMU manages a wide variety of land and infrastructure that allows each student to be well prepared in the educational process. These facilities require operation and maintenance using materials and methods that can pose a risk to water quality. Examples include housekeeping, fueling stations, solid waste facilities, energy generation, landscaping, and snow removal. These operations are likely the biggest threat to water quality on campus, qualifying them as a high priority issue on which to focus outreach activities. Risks to water quality will be minimized by performing outreach on basic watershed and stormwater literacy, laws and regulations, and appropriate management techniques to minimize stormwater pollution.

Target Audience: As a nontraditional MS4, one segment of JMU's public is its staff (2,600 total people). Facilities management (FM) staff (600 people) is the segment of the staff that is most likely to have an effect on water quality, as it is responsible for the operations described above. FM staff is the target audience for this high priority issue. Policies will be kept up to date and employee refresher training will be provided bi-annually, typically in the fall, through disseminating training material through email and management. Also, an overview of programs and policies will be provided to new FM employees during orientation which takes place monthly, as needed.

Measurable Goals: Methods used to educate the public will be documented and a list or summary will be provided in annual reports.

Responsible Department: FM Engineering & Construction – Sustainability

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.

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: FM Engineering & Construction – Sustainability

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.

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 with regard to 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: FM Engineering & Construction – Sustainability and Access & Enrollment Management – 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: Colleges – 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 input on the permittee's MS4 program;

(3) Receiving public input or complaints;

(4) Responding to public input or complaints; and

(5) Maintaining documentation of public input 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 permittee shall develop and maintain a 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) 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); and

(5) Methods for how the public can provide input on the permittee's MS4 program plan in accordance with Part 1 E 2 a (2).

c. The permittee shall implement no less than four activities per year from two or more of the categories listed

in Table 2 below 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 or watershed clean-up day, adopt-a-water way program*
Educational events	*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, watershed walks, participation on environmental advisory committees*
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*

d. 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 the permit requirements.

e. 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 weight of trash collected from a stream cleanup, the number of participants in a hazardous waste collection event, etc.

f. The annual report shall include the following information:

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

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

(3) A description of the public involvement activities implemented by the permittee;

(4) 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

(5) 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 is 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. The same contact information can also be used to provide input on the University's MS4 program plan.

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.

Responsible Department: FM Engineering & Construction – Sustainability

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: Colleges – 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: FM Engineering & Construction and FM Environmental Services

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: FM Engineering & Construction – Sustainability and Colleges – Integrated Science and Engineering

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) A map of the storm sewer system owned or operated by the permittee within the Census Urbanized Area identified by the 2010 decennial census 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 a outfall discharge location. If there are multiple outfalls discharging to an underground channelized receiving water, the map shall identify that the 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 1 E 3: and

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

(d) MS4 regulated service area;

(e) conveyances; and

(f) stormwater management facilities owned or operated by the permittee.

(2) The permittee shall maintain an information table associated with the storm sewer system map that includes the following information for each outfall or point discharge for those cases in which the permittee elects to map the known point of discharge in accordance with Part 1 E a (1) (a):

(a) A unique identifier as specified on the storm sewer system 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 2016 305(b)/303(d) Water Quality Assessment Integrated Report;

(g) The predominant land use for each outfall discharging to an impaired water.

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

(3) No later than July 1, 2019, the permittee shall submit to DEQ a GIS-compatible shapefile of the permittee's MS4 map as described in Part I E 3 a. If the permittee does not have an MS4 map in a GIS format, the permittee shall provide the map as a PDF document.

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

(5) 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 storm sewer system. 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; and

(d) A mechanism to track the following information:

(i) The unique outfall identifier;

(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) Whether or not a discharge was observed; and

(vi) If a discharge was observed, the estimated discharge rate (e.g., width and depth of discharge flow rate); and visual characteristics of the discharge (e.g., odor, color, clarity, floatables, deposits or stains, vegetation condition, structural condition, and biology).

(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 date or 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 information table required by Part I E 3 a. The map and 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 new 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 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 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 source of illicit discharge;

(b) The date or 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. Illicit discharge detection and elimination.

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

(1) A map of the storm sewer system owned or operated by the permittee within the Census Urbanized Area identified by the 2010 decennial census 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 a outfall discharge location. If there are multiple outfalls discharging to an underground channelized receiving water, the map shall identify that the 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 1 E 3: and

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

(d) MS4 regulated service area;

(e) conveyances; and

(f) stormwater management facilities owned or operated by the permittee.

(2) The permittee shall maintain an information table associated with the storm sewer system map that includes the following information for each outfall or point discharge for those cases in which the permittee elects to map the known point of discharge in accordance with Part 1 E a (1) (a):

(a) A unique identifier as specified on the storm sewer system 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 2016 305(b)/303(d) Water Quality Assessment Integrated Report;

(g) The predominant land use for each outfall discharging to an impaired water.

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

(3) No later than July 1, 2019, the permittee shall submit to DEQ a GIS-compatible shapefile of the permittee's MS4 map as described in Part I E 3 a. If the permittee does not have an MS4 map in a GIS format, the permittee shall provide the map as a PDF document.

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

(5) 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 storm sewer system. 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; and

(d) A mechanism to track the following information:

(i) The unique outfall identifier;

(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) Whether or not a discharge was observed; and

(vi) If a discharge was observed, the estimated discharge rate (e.g., width and depth of discharge flow rate); and visual characteristics of the discharge (e.g., odor, color, clarity, floatables, deposits or stains, vegetation condition, structural condition, and biology).

(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 date or 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 information table required by Part I E 3 a. The map and 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 new 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 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 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 source of illicit discharge;

(b) The date or 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: FM Engineering & Construction – Sustainability

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: FM Engineering & Construction – Sustainability

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.

Measurable Goals: The 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: FM Engineering & Construction – Sustainability

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 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 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 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 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 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 activities 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 permittee is a subdivision of a local government such as 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 of the MS4. 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. The permittee's MS4 program plan shall include:

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

(2) If the permittee implements a construction site stormwater runoff control program 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;

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

(4) Written inspection procedures to ensure the erosion and sediment controls are properly implemented and all associated documents utilized during inspection including the inspection schedule;

(5) Written procedures for requiring compliance through corrective action or enforcement action to the extent allowable under federal, state, or local law, regulation, ordinance, or other legal mechanisms; and

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

d. The annual report shall include the following:

(1) If the permittee implements a construction site stormwater runoff program in accordance with Part I E 4 a (3):

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

(b) If one or more of the land disturbing projects were not conducted with the department approved standards and specifications, an explanation as to why the projects did not conform to the approved standards and specifications.

(2) Total number of inspections conducted; and

(3) The total number and type of enforcement actions implemented and the type of enforcement actions.

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 Standards 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. 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: FM Engineering & Construction – Sustainability

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.

Measureable Goals: The 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: FM Engineering & Construction – Sustainability

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 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 develop an inspection and maintenance program in accordance with Parts I E 5 b and c;
      (2) If the 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 develop an inspection and maintenance program in accordance with Part I E 5 b and c;
      (3) If the 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 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 develop an inspection and maintenance

program in accordance with Part I E 5 b;

(4) If the 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 Virginia Stormwater Management 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; or

(5) If the permittee is a subdivision of a local government such as 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 that discharges to the MS4 as follows:

(1) 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;

(2) The permittee shall inspect stormwater management facilities owned or operated by the permittee no less 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 than once per five years; and

(3) 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 those permittees described in Part I E 5 a (1) or (2), 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 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 if maintenance is neglected by the owner; and

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

d. The permittee shall maintain an electronic database or spreadsheet of all known permittee-owned or permittee-operated and privately owned stormwater management facilities that discharge into the MS4. The database shall also include all BMPs implemented by the permittee to meet the Chesapeake Bay TMDL load reduction as required in Part II A. A database shall include the following information as applicable:

(1) The stormwater management facility or BMP type;

(2) The stormwater management facility or BMPs location as latitude and longitude;

(3) The acres treated by the stormwater management facility or BMP, including total acres, pervious acres, and impervious acres;

(4) The date the facility was brought online (MM/YYYY). If the date brought online is not known, the permittee shall use June 30, 2005;

(5) The 6th Order Hydrologic Unit Code in which the stormwater management facility is located;

(6) Whether the stormwater management facility or BMP is owned or operated by the permittee or privately owned;

(7) Whether or not the stormwater management facility or BMP is part of the permittee's Chesapeake Bay TMDL action plan required in Part II A or local TMDL action plan required in Part II B, or both;

(8) If the stormwater management facility or BMP is privately owned, whether a maintenance agreement exists; and

(9) The date of the permittee's most recent inspection of the stormwater management facility or BMP.

e. The electronic database or spreadsheet shall be updated no later than 30 days after a new stormwater management facility is brought online, a new BMP is implemented to meet a TMDL load reduction as required in Part II, or discovered if it is an existing stormwater management facility.

f. The permittee shall use the DEQ Construction Stormwater Database or other application as specified by the department to report each stormwater management facility installed after July 1, 2014, to address the control of post-construction runoff from land disturbing activities for which the permittee is required to obtain a General VPDES Permit for Discharges of Stormwater from Construction Activities.

g. No later than October 1 of each year, the permittee shall electronically report the stormwater management facilities and BMPs implemented between July 1 and June 30 of each year using the DEQ BMP Warehouse and associated reporting template for any practices not reported in accordance with Part I E 5 f including stormwater management facilities installed to control post-development stormwater runoff from land disturbing activities less than one acre in accordance with the Chesapeake Bay Preservation Act regulations (9VAC25-830) and for which a General VPDES Permit for Discharges of Stormwater from Construction Activities was not required.

h. The MS4 program plan shall include:

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

(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 BMPs.

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

(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 procedures and all associated documents utilized during inspection of stormwater management facilities owned or operated by the permittee;

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

(6) The stormwater management facility spreadsheet or database incorporated by reference and the location or webpage address where the spreadsheet or database can be reviewed.

i. The annual report shall include the following information:

(1) If the permittee implements a Virginia Stormwater Management Program in accordance with Part I E 5 a (1) and (2):

(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) 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 I E 5 f 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; and

(5) A confirmation statement that the permittee electronically reported BMPs using the DEQ BMP Warehouse in accordance with Part I E 5 g and the date on which the information was submitted.

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 for ESC and SWM* on May 28, 2014.

These Standards 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: FM Engineering & Construction – Sustainability

3.5.2 BMP: Stormwater Management Facilities Policy

BMP Description: JMU is required to operate a Virginia Stormwater Management Program (VSMP) 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.

Measureable Goals: The 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.

Responsible Department: FM Engineering & Construction – Sustainability

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 procedures for those activities at facilities owned or operated by the permittee, such as road, street, and parking lot maintenance; equipment maintenance; and the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers designed to:

(1) Prevent illicit discharges;

(2) Ensure the proper disposal of waste materials, including landscape wastes;

(3) Prevent the discharge of wastewater or permittee vehicle wash water or both into the MS4 without authorization under a separate VPDES permit;

(4) Require implementation of best management practices when discharging water pumped from utility construction and maintenance activities;

(5) Minimize the pollutants in stormwater runoff from bulk storage areas (e.g., salt storage, topsoil stockpiles) through the use of best management practices;

(6) Prevent pollutant discharge into the MS4 from leaking municipal automobiles and equipment; and

(7) Ensure that the application of materials, including fertilizers and pesticides, is conducted in accordance with the manufacturer's recommendations.

b. The written procedures established in accordance with Part I E 6 a shall be utilized as part of the employee training Program at Part I.E.6.m.

c. Within 12 months of state permit coverage, the permittee shall identify which of the [high-priority facilities have a high potential of discharging pollutants. The permittee shall maintain and implement a site specific stormwater pollution prevention plan (SWPPP) for each facility identified. High priority facilities that have a high potential for discharging pollutants are those facilities that are not covered under a separate VPDES permit 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.

d. Each SWPPP as required in Part I E 6 c 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) Written procedures designed to reduce and prevent pollutant discharge;

(5) A description of the applicable training as required in Part I E 6 m;

(6) Procedures to conduct an annual comprehensive site compliance evaluation;

(7) An inspection frequency of no less 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;

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

(a) Date of incident;

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

(c) Estimated quantity discharged, released or spilled;

e. 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 SWPPP has not been developed to determine if the facility has a high potential to discharge pollutants as described in Part I E 6 c. If the facility is determined to be a high-priority facility with a high potential to discharge pollutants, the permittee shall develop a SWPPP meeting the requirements of Part I E 6 d no later than December 31 of that same year.

f. 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 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.

g. The SWPPP shall be kept at the high-priority facility with a high potential to discharge and utilized as part of staff training required in Part I E 6 m. 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.

h. If activities change at a facility such that the facility no longer meets the criteria of a high-priority facility with a high potential to discharge pollutants as described in Part I E 6 c, the permittee may remove the facility from the list of high-priority facilities with a high potential to discharge pollutants.

i. 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.

j. 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.

k. The permittee shall not apply any deicing agent containing urea or other forms of nitrogen or phosphorus to parking lots, roadways, and sidewalks, or other paved surfaces.

l. The permittee shall require through the use of contract language, training, standard operating procedures, or other measures within the permittee's legal authority that contractors employed by the permittee and engaging in activities with the potential to discharge pollutants use appropriate control measures to minimize the discharge of pollutants to the MS4.

m. The permittee shall develop a training plan in writing for applicable staff that ensures the following:

(1) Field personnel receive training in the recognition and reporting of illicit discharges no less than once per 24 months;

(2) Employees performing road, street, and parking lot maintenance receive training in pollution prevention and good housekeeping associated with those activities no less than once per 24 months;

(3) Employees working in and around maintenance, public works, or recreational facilities receive training in good housekeeping and pollution prevention practices associated with those facilities no less than once per 24 months;

(4) Employees and contractors hired by the permittee who apply pesticides and herbicides are trained or 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 (VCACS) Pesticide and Herbicide Applicator program shall constitute compliance with this requirement.

(5) Employees and contractors serving as plan reviewers, inspectors, program administrators, and construction site operators obtain the appropriate certifications as required under the Virginia Erosion

and Sediment Control Law and its attendant regulations;

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

(7) Employees whose duties include emergency response have been trained in spill response. Training of emergency responders such as firefighters and law-enforcement officers on the handling of spill releases as part of a larger emergency response training shall satisfy this training requirement and be documented in the training plan.

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

(1) The date of the training event;

(2) The number of employees attending the training event; and

(3) The objective of the training event.

o. The permittee may fulfill the training requirements in Part I E 6 m, 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.

p. The MS4 program plan shall include:

(1) The written procedures for the operations and maintenance activities as required by Part I E 6 a;

(2) A list of all high-priority facilities owned or operated by the permittee required in accordance with Part I E 6 c, and whether or not the facility has a high potential to discharge;

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

(a) The total acreage on which nutrients are applied;

(b) The date of the most recently approved nutrient management plan for the property; and

(c) The location in which the individual turf and landscape nutrient management plan is located.

(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 m.

q. The annual report shall include the following:

(1) A summary of any operational procedures developed or modified in accordance with Part I E 6 a during the reporting period;

(2) A summary of any new SWPPPs developed in accordance Part I E 6 c during the reporting period;

(3) A summary of any SWPPPs modified in accordance with Part I E 6 f or the rationale of any high priority facilities delisted in accordance with Part I.E.6.h during the reporting period;

(4) A summary of any new turf and landscape nutrient management plans developed that includes:

(a) Location and the total acreage of each land area; and

(b) The date of the approved nutrient management plan; and

(5) A list of the training events conducted in accordance with Part I E 6 m, including the following information:

(a) The date of the training event;

(b) The number of employees who attended the training event; and

(c) The objective of the training event.

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.

Measurable Goals: The procedures 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: FM Engineering & Construction – Sustainability

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	Type of Facility
Arboretum Storage Yard	Materials storage.
Memorial Hall Maintenance Shop	Maintenance shop.
R2 Lot Storage Yard	Materials and salt storage.
South Main Street Facilities: HVAC	Maintenance shop.
South Main Street Facilities: Recycling	Recycling.
South Main Street Facilities: Salt & Other Material Storage	Materials and salt storage.
South Main Street Facilities: Transportation	Vehicle storage and maintenance.
South Main Street Maintenance Facility by K Lot	Equipment and mulch storage, maintenance shop.
University Park Maintenance Shop	Maintenance shop.
University Services Building & Annex	Equipment, vehicle and materials storage, and maintenance facilities.

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: FM Engineering & Construction, FM Environmental Services, FM Operations, and FM Support Services.

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, 2018	May 20, 2021
Forest Hills Off Campus Properties	4.55	December 4, 2018	December 4, 2021
Total	229.03		

A copy of the NMP's may be viewed by appointment in the FM Environmental Services – Landscaping office.

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 applicator will be provided in annual reports.

Responsible Department: FM Engineering & Construction - Sustainability and FM Environmental Services – Landscaping.

3.6.4 BMP: Facilities Management Training Plan

BMP Description: A "Stormwater Pollution Prevention/IDDE" presentation and guidebook 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 through the use of a presentation, guidebook, or other similar format. New FM employee training will be provided with FM orientation which typically occurs on a monthly basis.

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:

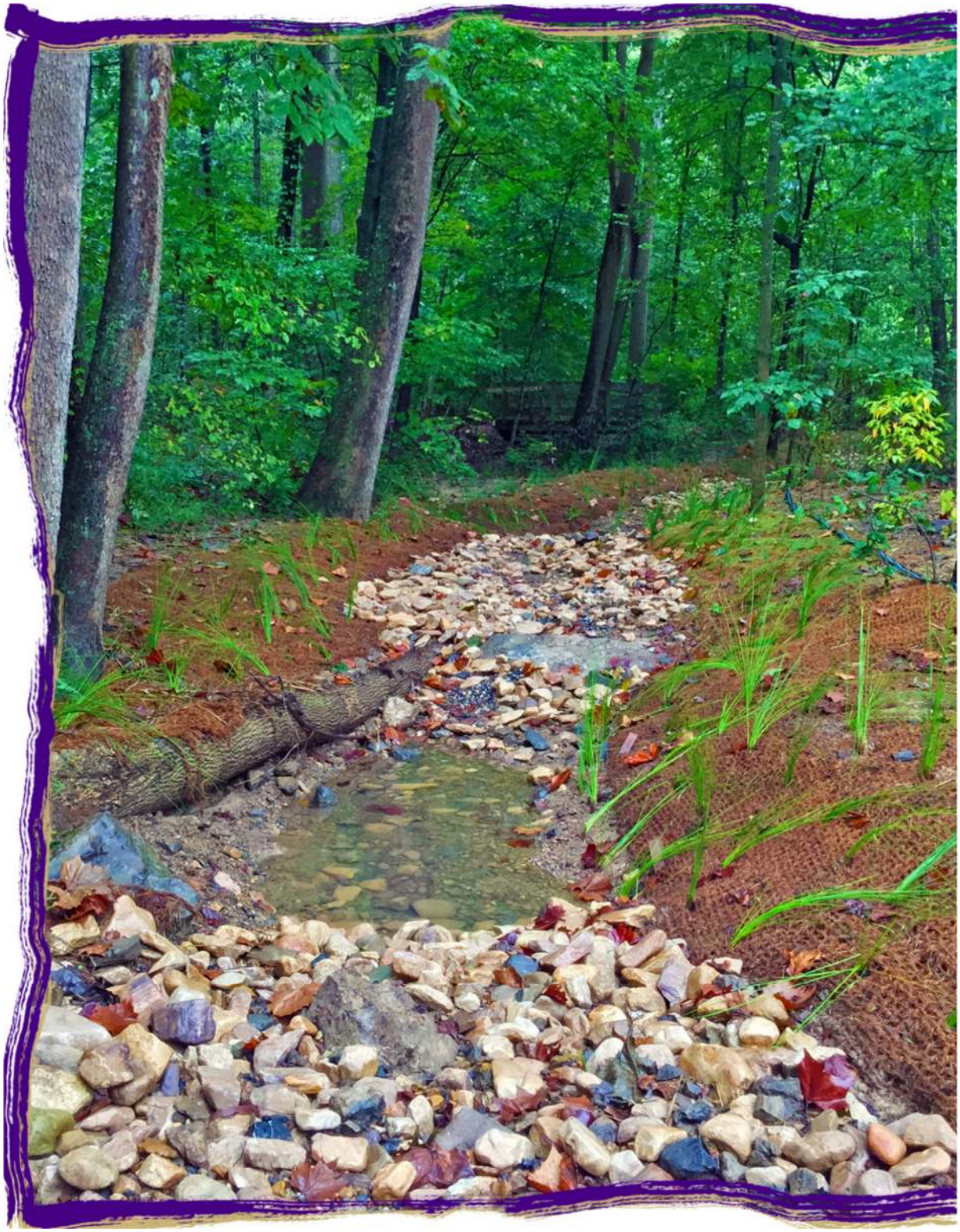
- Application of fertilizer and pesticides;
- Plan reviewers, inspectors, program administrators, and construction site operators as required under the Virginia Erosion and Sediment Control Law and its attendant regulations;
- Plan reviewers, inspectors, and program administrators implementing the stormwater program as required under the Virginia 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: FM Engineering & Construction - Sustainability

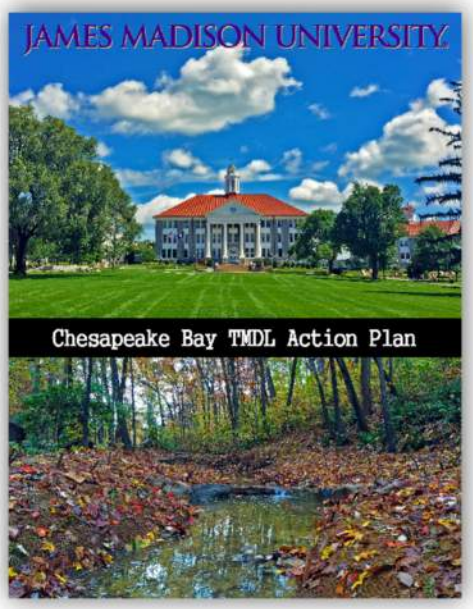
SECTION 4: TMDL ACTION PLANS



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, nitrogen and total suspended solids. 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.



As such, a combination of methods including stream restoration may be 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

Locally, Blacks Run has been listed as an impaired waterway and while a TMDL has been developed, there are currently no associated WLA's. The impairments include bacteria (fecal coliform and e. coli) and aquatic life (benthic-macroinvertebrate bioassessments) due to excess sediments. Existing BMP's such as construction site inspections, IDDE, stormwater facility maintenance, and the projects implemented as part of the Chesapeake Bay TMDL currently assist in efforts to clean up Blacks Run

Appendix A

Registration Statement

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 9VAC25-870-370 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: Charles W. King Jr.		
Title: Senior Vice President, Administration & Finance		
Mailing Address: MSC 7606		
City: Harrisonburg	State: VA	Zip Code: 22807
E-mail Address: kingcw@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 B. See attachment.

Name: Dale Chestnut		
Title: Stormwater Coordinator		
Mailing Address: 181 Patterson St., MSC 7004		
City: Harrisonburg	State: VA	Zip Code: 22807
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: 22807
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: 22807

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 2016 Virginia 303(d)/305(b) Water Quality Assessment Integrated Report.

Blacks Run (PS-22)

Section III. Storm Water 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
N/A		

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

Attach a copy of the draft second 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 July 1, 2013

See attachment.

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: Charles W. King Jr.

Title: Senior Vice President, Administration & Finance

Signature: C W King

Date: 5-11-18

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 should be sent to: **DEQ, 1111 E. Main Street, Suite 1400, Richmond VA 23219.** 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: **DEQ, 1111 E. Main Street, Suite 1400, Richmond VA 23219.**

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.

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 2016 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 Plan detailing the required 35% reductions (40% for those permittees that were initially provided coverage during the 2013-2018 permit cycle and chose to defer the 5% Chesapeake Bay Action Plan)

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.

FACILITIES MANAGEMENT ENGINEERING
181 Patterson St., MSC 7004
Harrisonburg, VA 22807
Phone: 540.568.7606
chestndl@jmu.edu

May 11, 2018

Jeffrey Selengut
MS4 Permit Writer
1111 E. Main Street, Suite 1400
Richmond, VA 23218

RE: MS4 Permit Duly Authorized Representative

Dear Mr. Selengut:

In compliance with 9VAC25-870 B, I would like to designate the Stormwater Coordinator position currently held by Dale Chestnut as a duly authorized representative for the MS4 General Permit. His signed certification statement is below.

"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."

Printed Name: Dale Chestnut Title: Stormwater Coordinator

Signature: Date: 5/11/18

Should you have any questions, please feel free to contact me.

Regards,

Charlie W. King Jr.
Senior Vice President, Administration & Finance

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. *Annual Standards & Specifications for ESC & SWM* (MCM 4 & 5)
http://www.jmu.edu/facmgt/sustainability/Stormwater/site-plan-review.shtml

James Madison University. *Annual 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)
http://www.jmu.edu/facmgt/sustainability/Stormwater/ms4.shtml

James Madison University. *Illicit Discharge Detection and Elimination (IDDE) Policy & Procedures* (MCM 3)
http://www.jmu.edu/facmgt/sustainability/Stormwater/ms4.shtml

James Madison University. *Land-Disturbing Activities Policy & Procedures* (MCM 4 & 5)
http://www.jmu.edu/facmgt/sustainability/Stormwater/ms4.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)
http://www.jmu.edu/facmgt/sustainability/Stormwater/ms4.shtml

James Madison University. *JMU Stormwater Program Guide* (MCM 3, 4 & 5) *

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 840. Erosion and Sediment Control Regulations*
https://law.lis.virginia.gov/admincode/title9/agency25/chapter840/

Virginia Administrative Code. Chapter 850. Erosion and Sediment Control and Stormwater Management Certification Regulations
https://law.lis.virginia.gov/admincode/title9/agency25/chapter850/

Virginia Administrative Code. *Chapter 870. Virginia Stormwater Management Program (VSMP) 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*