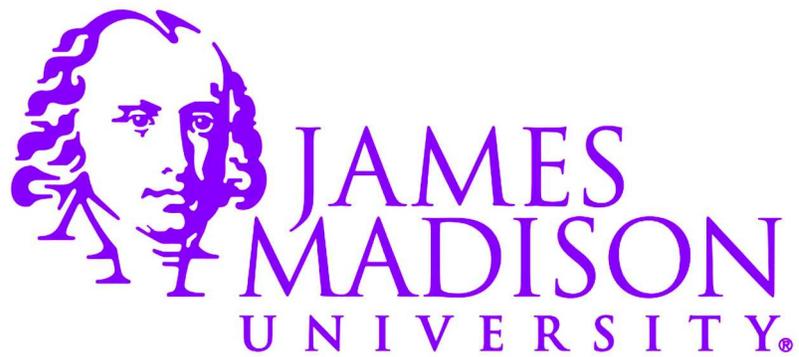


MS4 PROGRAM PLAN ANNUAL REPORT



Reporting Period: July 1, 2017 - June 30, 2018

James Madison University – Harrisonburg, Virginia
MS4 Program Plan Annual Report

Reporting Period: July 1, 2017 – June 30, 2018

Registration Number: VAR040112

In compliance with the Virginia Stormwater Management Program (VSMP) General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4)

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Acronyms and Abbreviations

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

Introduction

This document represents James Madison University’s plan to meet the requirements of 9VAC25-890 General Virginia Stormwater Management Program (VSMP) Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems.

Registration Statement



VSMP GENERAL PERMIT REGISTRATION STATEMENT FOR STORMWATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS [VAR04]

(Please Type or Print All Information)

(The applicable fee specified in Form DCR 199-145 must additionally be submitted to the address given in that form to obtain coverage)

1. Regulated Small MS4

Name: James Madison University

Type: City County Incorporated Town Unincorporated Town College or University
 Local School Board Military Installation Transport System Federal or State Facility Other

Location (County or City): City of Harrisonburg

2. Regulated Small MS4 Operator

Name: James Madison University

Address: 181 Patterson St., MSC 7004

City: Harrisonburg State: VA Zip: 22807

3. Hydrologic Unit Code(s) as identified in the most recent version of Virginia's 6th Order National Watershed Boundary Dataset currently receiving discharges or that have potential to receive discharges from the regulated small MS4:

020700050602 - PS22 - Blacks Run

4. Attach a description of the estimated drainage area, in acres, served by the regulated small MS4 discharging to any impaired receiving surface waters listed in the most recent Virginia 305(b)/303(d) Water Quality Assessment Integrated Report, and a description of the land use of each such drainage area.
 See Section 1.3 Description of Drainage Areas of plan.

5. Any TMDL waste loads allocated to the regulated small MS4 (this information may be found at <http://www.deq.state.va.us/tmdl/develop.html>):

None

6. The name(s) of any regulated physically interconnected MS4s to which the regulated small MS4 discharges.

City of Harrisonburg, Virginia Department of Transportation (VDOT)

7. A copy of the MS4 Program Plan that includes:

a. A list of BMPs that the operator proposes to implement for each of the stormwater minimum control measures and their associated measurable goals pursuant to 4VAC50-60-1240, Section II B; that includes:

i. A list of the existing policies, ordinances, schedules, inspection forms, written procedures, and other documents necessary for BMP implementation; and

ii. The individual, department, division, or unit responsible for implementing the BMP;

b. The objective and expected results of each BMP in meeting the measurable goals of the stormwater minimum control measures;

c. The implementation schedule including any interim milestones for the implementation of a proposed new BMP; and

(DCR 199-148) (07/08)

d. The method that will be utilized to determine the effectiveness of each BMP and the program as a whole.

8. List 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.

JMU does not have any signed agreements with other parties.

9. The name, address, telephone number and e-mail address of either the principal executive officer or ranking elected official as defined in 4VAC50-60-370.

Charles W. King, Jr., Senior Vice President, 91 Alumnae Drive MSC 7606, Harrisonburg, VA 22807
(540) 568-3400, kingcw@jmu.edu

10. The name, position title, address, telephone number and e-mail address of any duly authorized representative as defined in 4VAC50-60-370.

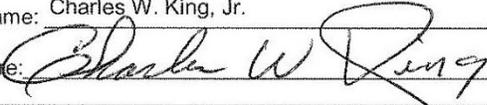
Dale Chestnut, Stormwater Coordinator, 181 Patterson St. MSC 7004, Harrisonburg, VA 22807, (540) 568-7606, chestndl@jmu.edu

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

Print Name: Charles W. King, Jr.

Title: Senior Vice President

Signature:



Date: 2-11-13

For Department of Conservation and Recreation Use Only

Accepted/Not Accepted by: _____ Date: _____

Basin _____ Stream Class _____ Section _____ Special Standards _____

SECTION 1: MS4 OVERVIEW



1.1 Organizational Structure

The Department of Sustainability is responsible for coordinating James Madison University’s VSMP Phase II permit and for implementing a majority of the permit requirements. Additional information is gathered from several other departments including: Grounds/Landscaping, Operations, Power Plant, Recycling/Waste Management, Transportation, Risk Management, Integrated Science & Engineering and the Office of Environmental Stewardship & Sustainability.

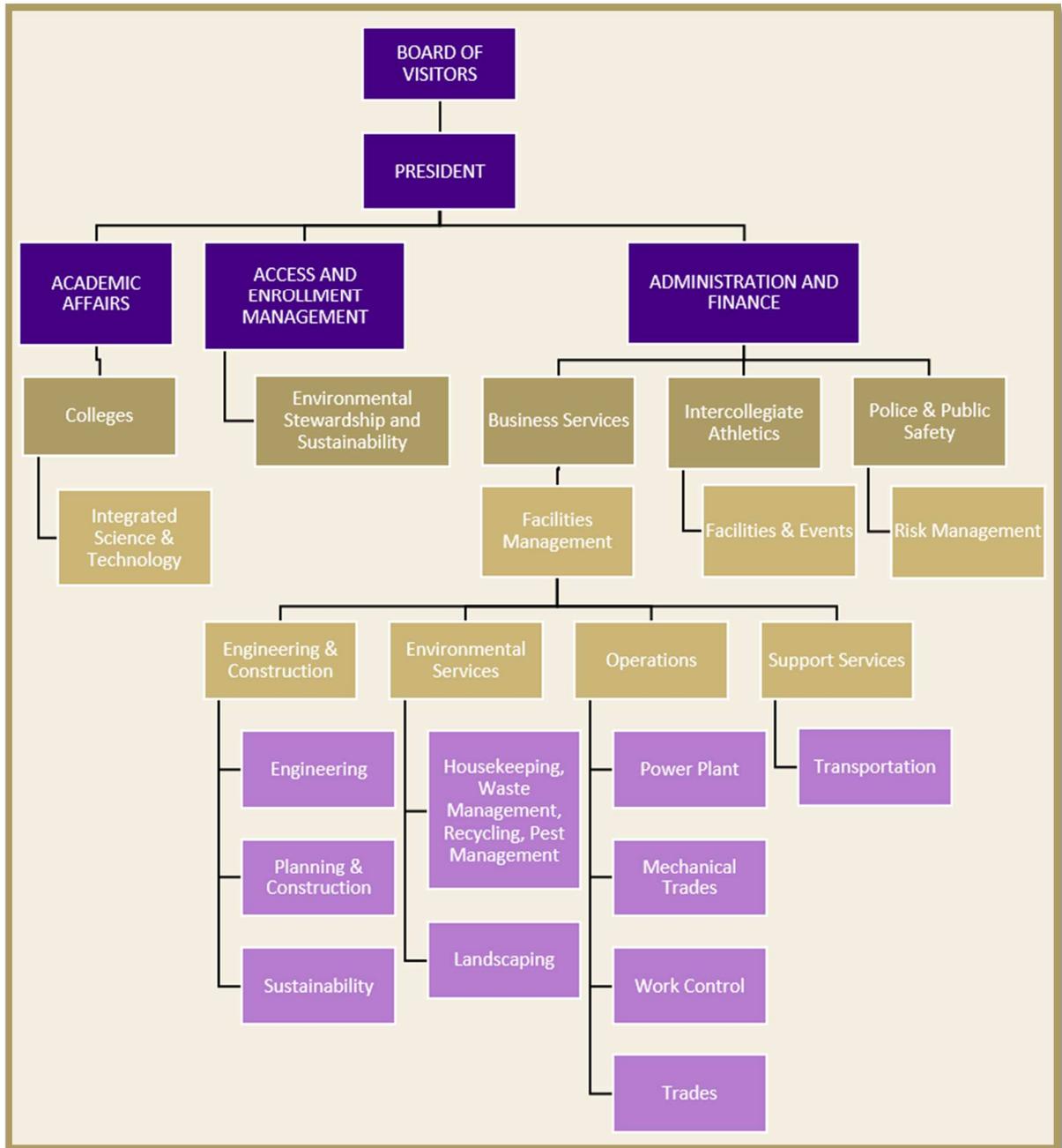


Figure 1. James Madison University Stormwater Management Organizational Structure

1.2 Contact Information

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

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

1.3 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 755 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.

Approximately 117 acres of the campus drain 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 2012 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.

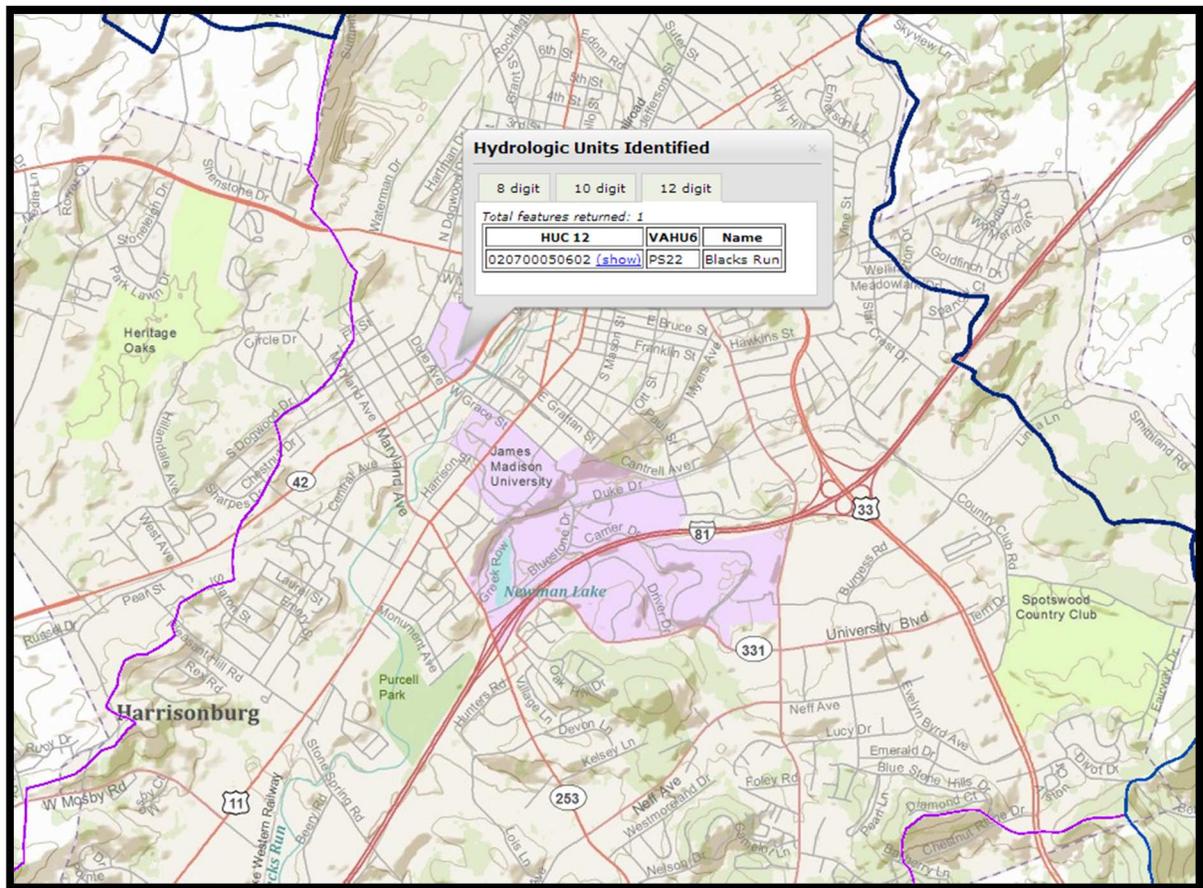


Figure 2. Hydrologic Unit Code (HUC), Source: Virginia Department of Conservation & Recreation

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 2: PROGRAM OVERVIEW



2.1 Program History

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 (CWA) 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.

2.2 Program Type

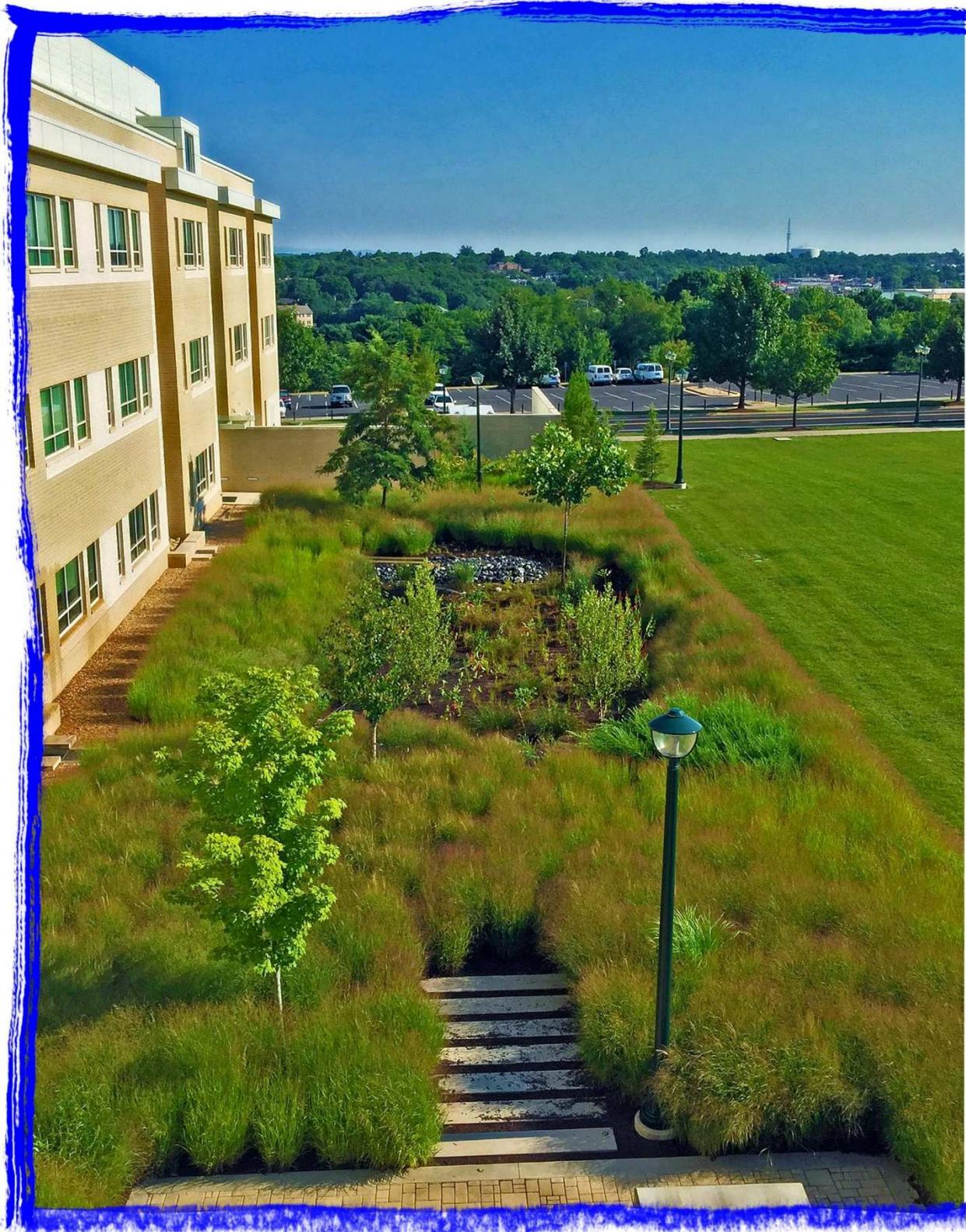
As a state university, JMU is considered to be a non-traditional MS4. Due to this unique structure, some of the traditional program elements will need to be modified or may not be entirely applicable. Concerning the interpretation of “public” as it relates to the university for education, outreach and 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.

2.3 Program Evaluation

In accordance with the provisions of 9VAC25-890-40 Section II.E, 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.

JMU’s MS4 Plan has been evaluated by staff and with the included annual report achievements and modifications listed in section 5.7 has been found to be compliant with the requirements of applicable regulations.

SECTION 3: MINIMUM CONTROL MEASURES



The Phase II MS4 Program requirement found in 9VAC25-890-40 Section II.A states:

“The operator of a small MS4 must 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 operator with water quality standards, and to satisfy the appropriate water quality requirements of the Clean Water Act and its attendant regulations. The MS4 Program must include the minimum control measures described in paragraph B of this section. Implementation of best management practices consistent with the provisions of an iterative MS4 Program required pursuant to this section constitutes compliance with the standard of reducing pollutants to the “maximum extent practicable,” protects water quality in the absence of a TMDL wasteload allocation, ensures compliance by the operator with water quality standards, and satisfies the appropriate water quality requirements of the Clean Water Act and regulations in the absence of a TMDL WLA.”

The six minimum control measures described in 9VAC25-890-40 Section II.B are:

1. Public Education and Outreach on Stormwater Impacts
2. Public Involvement/Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Runoff Control
5. Post-Construction Stormwater Management in New Development and Redevelopment
6. Pollution Prevention/Good Housekeeping for Municipal Operations

The following are James Madison University’s best management practices (BMPs) that have been developed in order to meet the minimum control measures.

3.1 MCM 1: Public Education and Outreach on Stormwater Impacts

This section describes the best management practices that will be implemented in order to meet regulatory requirements for public education and outreach on stormwater impacts as set forth by Section II.B.1 of the General Permit found in 9VAC25-890-40.

3.1.1 BMP: Stormwater Management Website

Program Description: Provide information on the JMU website regarding the impacts of stormwater runoff and steps people can take to reduce stormwater pollution. The website will also have information on the JMU MS4 plan and general information about illicit discharge detection and elimination. JMU’s stormwater information can be found on the web at <http://www.jmu.edu/stormwater>.

Measurable Goals / Expected Results: Record the number of pageviews to the Stormwater Management Website. Increase the overall awareness of the impacts of stormwater and the measures that the University is undertaking to improve stormwater quality.

Annual Report Achievements/Notes: The JMU Stormwater Management website (www.jmu.edu/stormwater) is reviewed/updated on a regular basis to ensure accurate and up-to-date information is available to the public. The following table shows Pageviews, using Google Analytics, for stormwater related web pages:

Page Description	Pageviews
Stormwater Main Page	469
IDDE Information	81
MS4 Information	225
Site Plan Review	291
FAQ	36
Total	1,102

Schedule of Activities: Evaluate website annually and update as necessary.

Responsible Department: Engineering and Construction - Sustainability

3.1.2 BMP: Classroom Education on Stormwater Impacts

Program Description: A variety of classes are offered at the University that cover issues related to the impact of urban stormwater runoff on the environment.

Measurable Goals / Expected Results: Record the number of classes that are offered at the University that cover stormwater impacts. Increase the overall awareness of the impacts of stormwater among the students at the University.

Annual Report Achievements/Notes: The Capstone Seminar in Environmental Problem Solving (ENVT 400) was taught in Fall 2017, with 12 students. This course serves as the capstone for the Environmental Science and Environmental Studies Minors. The topic was “Water Quality: from the Valley to the Bay”, and one component of the class was the effects of urban sources, including stormwater. The course included a weekend class field trip to the JMU house at Bluff Point (in the Northern Neck of the Bay), and chartered a restored oyster vessel from the Reedville Fishermen’s Museum to take us out on an educational sail out on the Bay. The students completed their studies with a presentation of a website they created which can be found at <https://chesapeakebaywater.wixsite.com/waterquality/about> .

In the core biology course Ecology and Evolution (BIO 250), a new laboratory exercise on water quality was written. Students visited seven locations on campus, collected water samples, and measured several water quality parameters, including turbidity and conductivity. This was accompanied by classroom material on water pollution, including stormwater. This began in the Spring of 2018 with 154 students, and will be taught every semester.

One section of GEOG 427 (Water Resources of the World) was taught in Fall 2017. Seventeen students in the Geographic Science Program completed this course which included a unit on stormwater management in the classroom and, on another occasion, a trip to the Arboretum to learn about JMU’s efforts to restore a section of East Campus Creek that flows through campus.



Three sections of ISAT 321 (Fundamentals of Environmental Science and Technology II) were taught in Spring 2018. These classes included a total of approximately 69 students. ISAT 321 specifically covers stormwater impacts and best management practices designed to reduce those impacts.

Schedule of Activities: Courses will be taught as scheduled by the academic departments.

Responsible Department: Various Academic Departments – Integrated Science & Technology

3.1.3 BMP: Recycling & Trash Management

Program Description: Provide information on JMU's website regarding recycling & trash management and work with the Office of Environmental Stewardship & Sustainability to promote recycling activities. The mission statement of the Recycling Department is "to reduce the flow of waste and materials into the landfill, educate the JMU community on the proper disposal of waste items as well as the future impact of global waste stream issues".

Measurable Goals / Expected Results: Record the participation and amount of material that is recycled annually. JMU currently recycles more than 25% of its waste materials which exceeds the state guideline. Continue to meet or exceed the state guideline for recycling and "keep resources out of our waste stream".

Annual Report Achievements/Notes: The University's recycling rate for calendar year 2017 was 43%. Approximately 6,594,086 pounds of waste was received and 2,546,414 pounds was recycled.

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Facilities Management – Recycling/Waste Management

3.1.4 BMP: Proper Disposal & Reduction of Hazardous Materials

Program Description: The University's Environmental Health Coordinator performs informal "area tours" to check for potential problems and assists in identifying hazardous materials which are no longer necessary and may be properly disposed of.

Measurable Goals / Expected Results: During area tours, ensure all safety and health issues, including improper storage and/or handling of hazardous materials, are noted and communicated to the responsible parties. Follow-up to verify that issues have been satisfactorily addressed and to facilitate on-going compliance and environmental stewardship. Assist all areas of the University in identifying, and determining proper disposal for unnecessary hazardous materials. Unnecessary hazardous materials will be identified and properly disposed of reducing their likelihood of polluting the environment. Report amount and type of hazardous materials disposed of during permit cycle.

Annual Report Achievements/Notes: There were 830 containers of hazardous waste that were disposed of from academic areas, studio spaces, support facilities, and the University Health Center Pharmacy. All waste was effectively managed to ensure that no Small Quantity Generator (SQG) limits were exceeded. JMU received an unannounced RCRA Hazardous Waste Inspection by the DEQ in February 2018. No citations or observations were issued.

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Police & Public Safety - Risk Management

3.1.5 BMP: Office of Environmental Stewardship and Sustainability

Program Description: 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.



Measurable Goals / Expected Results: Document the activities that the OESS is participating in that facilitate environmental stewardship as it relates to stormwater. Improved coordination and communication between various departments within the University regarding their efforts towards environmental sustainability.

Annual Report Achievements/Notes: During the weeks of September 25th and October 2nd, 2017, tours were given to a total of 302 students highlighting the sustainability and stormwater management practices used at Wayland Hall, East Campus Dining Hall and the Hillside project.

Also, during the weeks of March 19th and March 26th, 2018, tours were given to a total of 216 students highlighting the sustainability and stormwater management practices used at Wayland Hall, East Campus Dining Hall and the Hillside project.

Schedule of Activities: Activities will be coordinated by the OESS.

Responsible Department: Access and Enrollment Management - Office of Environmental Stewardship and Sustainability

3.1.6 BMP: Distribute Educational Materials/Promote Education

Program Description: Seek innovative methods to distribute information related to stormwater impacts to students and staff. Three main issues have been identified as; (i) public awareness and reporting of water quality issues, (ii) litter prevention at outdoor athletic events, and (iii) 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. Possible methods of increasing public knowledge include; printed materials (newspaper advertisements, brochures, flyers, etc.), signage, websites, social media, training (seminars, presentations), and other activities deemed appropriate. As with most targeted audiences, there will be some overlap in promotion.



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.

Annual Report Achievements/Notes: The following methods were utilized in efforts to reach the target audience for public awareness of pollution prevention and reporting of water quality issues.

Description	Estimated # of people reached	% of target audience
Stormwater Pollution Prevention ad in JMU’s “the Breeze” publication. With a circulation of 9,500 people, the Breeze serves a readership of more than 22,000 including more than 18,000 students, 3,000 faculty and staff and members of the Harrisonburg community. In addition, local businesses receive more than 1,000 free copies of the Breeze for their patrons. (October 5 th , 2017)	4,750	20%

Stormwater Pollution Prevention poster at Carrier and Rose Libraries. (Ongoing)	9,750	42%
Dining Hall Tumblr stormwater advertisement (replaced table tents at campus dining hall. (September 2017)	5,200	22%
Social media advertisement on JMU's Facebook/Twitter page. (September 2017)	5,200	22%
Storm drain markers. (Ongoing)	6,300	27%
FM training and class presentations.	1,187	5%

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.

Annual Report Achievements/Notes: The Athletics Department has committed to making at least two public service announcements at each outdoor event to promote pollution prevention by 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 (~1,530 total people). Facilities management (FM) staff (~593 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.

Measurable Goals / Expected Results: Record the number of methods utilized to distribute information to the target audiences described above. Increase the overall awareness of the impacts of stormwater and the measures that the University is undertaking to improve stormwater quality.

Annual Report Achievements/Notes: Facilities Management is primarily responsible for maintenance of buildings and grounds. Annual stormwater training was conducted in the month of March to 489 out of a total of 629 FM employees. The training provided basic information on stormwater management, pollution prevention, JMU's stormwater programs, policies & procedures, local waterways, IDDE and how to report, and best management practices for good housekeeping. The training provided was able to reach 78% of the target audience.

As part of FM's new employee orientation, 13 presentations with an introduction to the same material presented in the guidebook was given for 76 new employees.

Schedule of Activities: Utilize adequate and similar methods previously used aimed at reaching at least 20% of the estimated target audience for each priority issue annually.

Responsible Department: Engineering and Construction - Sustainability

3.1.7 BMP: Pollution Reporting Hotline

Program Description: Create and publicize a phone number and email that students and staff can call to report illicit discharges or other pollution issues. Use the creation of a pollution hotline to educate staff and students of the hazards of illicit discharges and improper waste disposal. The stormwater pollution hotline can be found on the main JMU stormwater web page and illicit discharge detection and elimination webpage.

Measurable Goals / Expected Results: Track the number of calls or emails received through the hotline. Increase the public knowledge of the implications of illicit discharges and improper waste disposal.

Annual Report Achievements/Notes: Three notifications of possible illicit discharges were reported through the pollution hotline.

On Thursday December 7, 2017 at 3:00pm a concern was received that a construction contractor was washing concrete wastes down a storm drain. After a site visit, a contractor was observed allowing concrete/saw-cutting wastes to flow down the curb into a storm drain. The incident was not in JMU's jurisdiction, so the City was notified of the issue at 3:30pm for their enforcement action. As the issue was transferred to the City of Harrisonburg, no further action was taken by JMU.

On Wednesday March 27, 2018 at 9:26am a phone message was left about an excavator doing work in a drainage ditch on Willow Street (between 341 and 358 Willow Street). After a site visit was made it was determined that the activity was not within JMU's jurisdiction and the issue was forwarded to the City of Harrisonburg for enforcement on March 28, 2018 at 9:40am. As the issue was forwarded to the City of Harrisonburg, no further action was taken by JMU.

On Wednesday June 20, 2018 at 10:00am a phone message was left by the City of Harrisonburg with a concern of tracking from a construction project on University Boulevard. The City representative was called back and informed that a corrective action had previously been issued to the project contractor for additional measures, and continued enforcement measures would continue through JMU's ESC Program.

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Engineering and Construction - Sustainability

3.1.8 BMP: Storm Drain Marking Campaign

Program Description: The University has purchased stainless steel storm drain markers which state "No Dumping - Drains to Stream". The markers will be installed on storm drain inlets across campus.

Measurable Goals / Expected Results: Document the number of inlets that are marked across campus on an annual basis. Increased public knowledge and awareness of the fact that stormwater drains to waterways and not a public treatment facility.

Annual Report Achievements/Notes: A total of 11 markers were installed on storm drains this permit cycle. These were placed on new inlets as part of completion of the Hotel Madison, USB Annex and Gibbons Hall projects.

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Engineering and Construction - Sustainability



3.2 MCM 2: Public Involvement/Participation

This section describes the best management practices that will be implemented in order to meet regulatory requirements for public involvement/participation as set forth by Section II.B.2 of the General Permit found in 9VAC25-890-40.

3.2.1 BMP: Forming Partnerships

Program Description: James Madison University seeks to build active partnerships with local groups and government agencies in respect to stormwater concerns to share information and resources whenever possible.

Measurable Goals / Expected Results: Record the partnership activities that JMU is involved in over the course of annual reporting period. The formation of partnerships will help to pool resources to complete shared objectives and provide for a consistent message to nearby municipalities.

Annual Report Achievements/Notes: JMU continues to partner with the City of Harrisonburg for the Annual Blacks Run CleanUp Day (See BMP 3.2.5). JMU also continues to have active membership in the Virginia Municipal Stormwater Association (VAMSA). Faculty/Staff are also involved in the Friends of the Shenandoah River, the Pure Water Forum and the Shenandoah Valley Soil & Water Conservation District. Refer to section 5.16 for additional information.

JMU is also a member of the Central Shenandoah Stormwater Network. This network is administered by the Central Shenandoah Planning District Commission and is made up of stormwater managers from the Cities of Harrisonburg, Staunton, and Waynesboro, Augusta and Rockingham Counties, James Madison University, and the Town of Bridgewater. The group meets quarterly to discuss matters related to the local stormwater programs.

Schedule of Activities: Continue involvement with partnerships as opportunities become available.

Responsible Department: Engineering and Construction - Sustainability

3.2.2 BMP: Promote Availability of MS4 Program Plan & Reports

Program Description: Publish MS4 Program Plan and annual reports on Facilities Management website. Also provide printed copies of the MS4 Program Plan and annual reports to interested parties. Public comment on the MS4 Program Plan is always available through the Stormwater Coordinator. Contact information is provided on the stormwater and MS4 web pages at <http://www.jmu.edu/sustainability/Stormwater>

Measurable Goals / Expected Results: Keep website up to date with stormwater related material. Increase the accessibility of the information regarding the efforts JMU is taking to improve stormwater quality.

Annual Report Achievements/Notes: An up-to-date copy of JMU's MS4 Program Plan is provided on the Facilities Management webpage at www.jmu.edu/stormwater. Copies of recent annual reports are also available.

Schedule of Activities: Update website as necessary to include program plan modifications

Responsible Department: Engineering and Construction - Sustainability

3.2.3 BMP: Encourage Student Efforts to Improve Stormwater Quality

Program Description: Continue to support student efforts to improve stormwater quality by providing information and materials whenever possible.

Measurable Goals / Expected Results: Record the number of student activities that occur each semester which relate to stormwater quality. Increase the effectiveness of student activities by providing assistance whenever possible.

Annual Report Achievements/Notes: The Capstone Seminar in Environmental Problem Solving (ENVT 400) was taught in Fall 2017, with 12 students. This course serves as the capstone for the Environmental Science and Environmental Studies Minors. The topic was "Water Quality: from the Valley to the Bay", and one component of the class was the effects of urban sources, including stormwater. The course included a weekend class field trip to the JMU house at Bluff Point (in the Northern Neck of the Bay), and chartered a restored oyster vessel from the Reedville Fishermen's Museum to take us out on an educational sail out on the Bay. The students completed their studies with a presentation of a website they created which can be found at <https://chesapeakebaywater.wixsite.com/waterquality/about>.

Schedule of Activities: Offer assistance to students when requested.

Responsible Department: Engineering and Construction - Sustainability, and Integrated Science & Technology

3.2.4 BMP: Student Water Quality Testing

Program 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.

Measurable Goals / Expected Results: Record the number of students and sections of this course that is offered each semester. Increase the awareness of local water quality issues within the student body.

Annual Report Achievements/Notes: The ISAT 320 (Fundamentals of Environmental Science and Technology I) course offered 4 sections in the fall with a total of approximately 75 students. This course included a 6-week water project that incorporated surveys of water quality, fish and macroinvertebrate communities, and physical habitat within the North River watershed. The ISAT 112 (Issues in Environmental Science and Technology) course offered 6 sections in the fall, 5 sections in the spring, and 2 sections in the summer for a total of 276 students. This course included water quality testing of water bodies on JMU's campus.

Students from the ISAT 112 class (Issues in Environmental Science and Technology) perform water quality sampling of on-campus waterbodies including the Arboretum Pond, ISAT Retention Ponds, Siebert Creek, and Newman Lake. Parameters measured include phosphorus, nitrate, pH, dissolved oxygen, and hardness.

In the core biology course Ecology and Evolution (BIO 250), a new laboratory exercise on water quality was written. Students visited seven locations on campus, collected water samples, and measured several water quality parameters, including turbidity and conductivity. This was accompanied by classroom material on water pollution, including stormwater. This began in the Spring of 2018 with 154 students, and will be taught every semester.

Schedule of Activities: This course is scheduled to be offered in the fall semester.

Responsible Department: Academic Department – Integrated Science & Technology

3.2.5 BMP: Stream Clean-up Events

Program Description: Participate with the City of Harrisonburg in stream clean-up events.

Measurable Goals / Expected Results: Document the activities that JMU students or staff participate in related to stream clean-ups. Increase the awareness among students and staff of the opportunity to help improve the local water quality through these events.

Annual Report Achievements/Notes: Approximately 600 volunteers collected about 4.12 tons of trash during the 21st Annual Blacks Run Clean-Up Day held on Saturday April 14th, 2018. Several JMU sororities, clubs and alumni participated in this event. A "Green Scene" was also available with many organizations, including JMU, provided information related to water quality and pollution prevention.

Schedule of Activities: Blacks Run/Downtown Clean-Up Day occurs annually in April.

Responsible Department: Engineering and Construction – Sustainability

3.3 MCM 3: Illicit Discharge Detection and Elimination

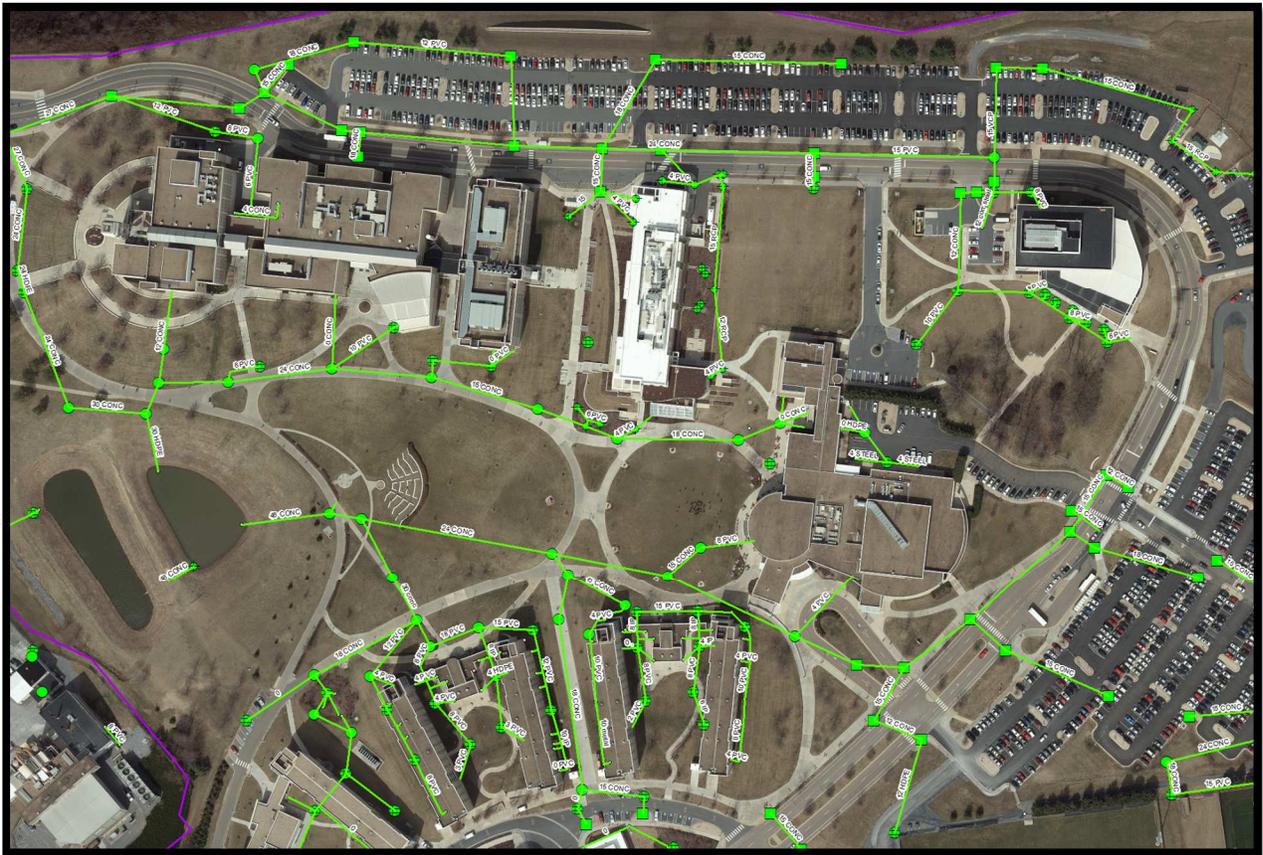
This section describes the best management practices that will be implemented in order to meet regulatory requirements for illicit discharge detection and elimination as set forth by Section II.B.3 of the General Permit found in 9VAC25-890-40.

3.3.1 BMP: Storm Drain System Map

Program Description: The University currently has a storm sewer system GIS map and corresponding database. This map contains locations and attributes of the entire storm sewer system maintained by JMU and includes culverts, pipes, inlets, catch basins, trench drains, and outfalls. MS4 outfalls are further identified to include receiving waters, HUC, a unique identifier, estimated MS4 acreage served and any applicable TMDL's. This GIS data is used for illicit discharge tracking and recording maintenance activities.

Measurable Goals / Expected Results: Continue to update and maintain GIS map to ensure all known structures are located. An accurate and up-to-date storm sewer system map will aid in illicit discharge detection and elimination.

Annual Report Achievements/Notes: JMU's GIS data is continually updated as new structures are built, located and/or removed. Refer to appendix D for JMU's stormwater outfall map and outfall ID list.



Schedule of Activities: GIS position will update map as new structures are completed. Report completed projects that are added to the storm sewer system.

Responsible Department: Engineering and Construction – Sustainability

3.3.2 BMP: Stormwater Outfall Inspections

Program Description: Conduct field investigations and inspections of MS4 stormwater outfalls. Monitor for dry weather discharges using visual observation, odor and other indicators to identify for possible illicit discharges.

Measurable Goals / Expected Results: Maintain records of outfalls that were inspected and number of illicit discharges detected. Prompt detection and elimination of illicit discharges.

Annual Report Achievements/Notes: A total of 112 inspections were conducted on the 110 outfalls within JMU's jurisdiction. No illicit discharge were noticed during annual outfall inspections.

Approximately \$1,280 was spent for inspections, maintenance and repairs related to stormwater outfalls.

Schedule of Activities: Continue current program and evaluate annually. At a minimum, inspect at least 50 of outfalls per year.

Responsible Department: Engineering and Construction - Sustainability

3.3.3 BMP: IDDE Policy & Procedures

Program Description: Being a non-traditional MS4, JMU will implement a campus wide IDDE policy which will include procedures for the detection and elimination of illicit discharges. Refer to appendix B for a copy of JMU's IDDE policy.

Measurable Goals / Expected Results: Policy will be updated as needed to remain compliant with applicable regulations. Students, faculty, staff, contractors, affiliates and visitors of JMU will have access to IDDE policy and procedures via JMU's website.

Annual Report Achievements/Notes: An IDDE Policy & Procedures document was created and approved campus wide in February 2014. No policy modifications were made this report period. An internal work flow document has been developed and is updated as needed explaining the processes for following aspects of the approved policy and procedures.

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Engineering and Construction - Sustainability

3.3.4 BMP: Spill Prevention Control & Countermeasure (SPCC) Plan

Program Description: A SPCC Plan was initially prepared for the University in 1975 to establish procedures to prevent discharges of oil from facilities and to contain such discharges should they occur. Continue to implement plan to reduce the risk of hazardous substances from entering the storm sewer system.

Measurable Goals / Expected Results: Maintain and update SPCC plan as needed. Reduce the risk of hazardous substances from entering the storm sewer system.

Annual Report Achievements/Notes: No changes were made to the JMU SPCC plan this reporting period. The SPCC was last updated in January 2015.

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Facilities Management – Power Plant

3.3.5 BMP: Trace and Remove Illicit Discharges

Program Description: Promptly address illicit discharges and utilize storm sewer system map to determine source of discharge. Determine best method of eliminating the discharge in a timely manner.

Measurable Goals / Expected Results: Track the number of illicit discharges detected and eliminated through a database. Timely removal of illicit discharge from storm sewer system.

Annual Report Achievements/Notes: See notes from BMP 3.1.7, 3.3.2 and 3.4.7.

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Engineering and Construction – Sustainability, FM - Operations

3.3.6 BMP: Illicit Discharge Detection & Elimination (IDDE) Education

Program Description: Refer to BMP 3.1.6, 3.1.7, 3.1.8 and 3.6.7. Establish pollution reporting hotline and storm drain marking campaign to increase awareness of what illicit discharges are.

Measurable Goals / Expected Results: Refer to BMP 3.1.6, 3.1.7, 3.1.8 and 3.6.7. Increase the awareness among students and staff that storm drains are only intended to receive stormwater.

Annual Report Achievements/Notes: Annual stormwater training was conducted in the month of March to 489 employees providing basic information on stormwater management, pollution prevention, JMU's stormwater programs, policies & procedures, local waterways, IDDE and how to report, and best management practices for good housekeeping. There were also 13 FM new employee orientations held throughout the year for 76 new hires providing similar information.

Schedule of Activities: Refer to BMP's 3.1.6, 3.1.7, 3.1.8 and 3.6.7.

Responsible Department: Engineering and Construction - Sustainability

3.3.7 BMP: Notification of Downstream MS4 Interconnections

Program Description: Notify downstream MS4's of known physical interconnections.

Measurable Goals / Expected Results: Record when notification was given to the City of Harrisonburg. The City of Harrisonburg and VDOT has been made aware of JMU's physical interconnection with their system.

Annual Report Achievements/Notes: In June of 2014, both the City of Harrisonburg and VDOT was informed of our continued interconnection with their stormwater conveyance systems. A meeting was later held with VDOT on October 3rd, 2014 and the City of Harrisonburg on March 4th, 2015 to further discuss interconnections, IDDE, and drainage areas. Following these meetings, an agreement was made with VDOT on October 9th, 2014 and a MOU with the City on June 26th, 2015 regarding how our municipalities would handle interconnections, IDDE and

drainage areas. Until notified otherwise, we have acknowledged that we will continue to have interconnections between our systems. Mapping data is available upon request.

Schedule of Activities: Notification of MS4 interconnection has been sent to MS4's downstream.

Responsible Department: Engineering and 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 by Section II.B.4 of the General Permit found in 9VAC25-890-40. Progressive compliance and enforcement shall be met through the use of the following BMP's.

3.4.1 BMP: ESC/SWM Annual Standards and Specifications

Program Description: JMU initially received approval from DCR to operate its own erosion and sediment control program under a set of annual standards and specifications on July 6, 2009. JMU continues to submit standards and specifications to DEQ on a regular basis to continue its program. JMU included stormwater management to its annual standards and specifications in response of amended stormwater regulations. Combined ESC/SWM Annual Standards and Specifications was originally approved by DEQ on May 28, 2014. Refer to Appendix A for a complete copy of the JMU Annual Standards and Specifications for ESC & SWM.

Measurable Goals / Expected Results: JMU's Annual Standards and Specifications for ESC & SWM shall be kept current. With annual submissions, standards will keep up to date with any changes DEQ implements into the Virginia Erosion and Sediment Control Laws and Regulations, and the Virginia Stormwater Management Laws and Regulations.

Annual Report Achievements/Notes: JMU's Annual Standards and Specifications for ESC & SWM is up to date and was last approved by the DEQ Central Office on July 26, 2017. An updated document was provided to DEQ on April 19, 2018 with an expected approval to be received by August 7, 2018. Staff and consultants with DEQ certifications can be found in the table below:

Certification	Person	Certificate Number	Expiration Date
Dual Combined Administrator	Dale Chestnut	DCA0106	10/15/2020
Dual Combined Administrator	Abe Kaufman	DCA0330	7/11/2020
SWM Plan Reviewer	Gil Colman	SWPR0264	2/22/2020
Responsible Land Disturber	Frankie Lucas	41740	4/7/2020
Responsible Land Disturber	Jack Losh	41742	4/7/2020
Responsible Land Disturber	Scott Jones	41745	4/7/2020

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Engineering and Construction – Sustainability

3.4.2 BMP: Requirement for ESC Plan and Review

Program Description: Site specific ESC plans shall be prepared for all JMU projects involving a regulated land-disturbing activity as defined in §62.1-44-15:51 of the Virginia Erosion and Sediment Control Law and submitted to JMU's Engineering and Construction department for review. Plans will be reviewed by a certified plan reviewer.

Measurable Goals / Expected Results: Plan review process will be able to be tracked through use of database and reports created as needed.

Annual Report Achievements/Notes: All JMU projects which disturb over 10,000 square feet, or are considered part of a larger common plan of development, were required to prepare and submit a plan for review with adequate erosion and sediment control (ESC) measures. Refer to section 5.12 for a list of active construction projects this reporting period. Following is a table showing site plans receiving ESC approvals this reporting period.

Project Name	Proposed Disturbed Acreage	Date Approved
Softball Practice Facility	2.26	7/11/17
Tennis Enclosure	0.95	9/11/17
Chesapeake Avenue Parking Dec	2.42	10/6/17
Godwin Field Parking Lot	3.15	11/17/17
East Campus Student Housing	11.75	11/21/17
Showker Hall Steam Line	0.45	1/5/18
West Grace Street Widening & Slip Lane	0.82	3/5/18
Convocation Center Sod Removal	0.90	3/22/18
Covered Athletic Practice Facility at Sentara Park	2.60	3/22/18
College of Business	3.70	3/28/18
Convocation Center & East Campus Parking Deck	19.90	3/28/18
Phillips Dining Hall	1.33	4/13/18
Gravel Parking Lot at 1170 S. Main St.	0.51	4/19/18
Gravel Parking Lot at 1210 S. Main St.	0.54	4/19/18
Gravel Parking Lot at Alumni Drive	0.94	4/27/18
Land Bridge	6.47	4/27/18
Retail Temporary Dining Demolition	0.44	5/25/18
Wilson Hall Renovation	0.82	5/31/18

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Engineering and Construction - Sustainability

3.4.3 BMP: Contract Language

Program Description: All contractors performing land disturbing activities on campus property are required through contract documents to follow existing ESC requirements and obtain all applicable permits before construction activity commences. The CO-7 General Conditions of the Construction Contract as issued by DGS is included in every contract and stipulates in Section 31(e) that:

"The Contractor shall have, On-Site, an employee certified by the Department as a Responsible Land Disturber who shall be responsible for the installation, inspection and maintenance of erosion control and stormwater management measures and devices. The Contractor shall prevent Site soil erosion, the runoff of silt and/or debris carrying water from the Site, and the blowing of debris off the Site in accordance with the applicable requirements and standards of the Contract and the Virginia Department of Conservation and Recreation's Erosion and Sediment Control Regulations and the Virginia Stormwater Management Regulations."

Measurable Goals / Expected Results: Ensure contractors comply with the Erosion and Sediment Control Law and attendant regulations and implement applicable ESC controls.

Annual Report Achievements/Notes: All site projects at JMU included contract language requiring certified personnel be on-site for land disturbing activities. Refer to section 5.12 for a list of projects requiring approved ESC plans for this permit cycle.

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Engineering and Construction - Sustainability

3.4.4 BMP: Construction and Professional Services Manual

Program Description: In addition to contract language, all work performed on University property is required to comply with the Construction and Professional Services Manual (CPSM) published by the Bureau of Capital Outlay Management. Furthermore, language is included in construction specifications for each project as required by CPSM 902.2.4 stating that contractors are responsible for satisfying any and all erosion control and stormwater management requirements for any land disturbing activities.

Measurable Goals / Expected Results: Ensure contractors obtain the necessary approval and applicable permits before any land disturbing activities begin.

Annual Report Achievements/Notes: All site projects at JMU received proper approval from local and state agencies before site work began. Refer to section 5.12 for a list of projects requiring and approved ESC and/or SWM plan for this permit cycle.

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Engineering and Construction - Sustainability

3.4.5 BMP: Requirement for Pre-Construction Meeting with Contractors

Program Description: Prior to the commencement of regulated land-disturbance, a pre-construction meeting shall be held in order to clarify ESC/SWM roles, responsibilities and obligations of all parties involved with the land-disturbing activity. The meeting will be attended by the JMU Project Manager, JMU Construction Inspector, JMU Stormwater Coordinator, general construction permit operator (if applicable), and the project RLD. The DEQ's Valley Regional Office will be notified of land-disturbing activities as outlined in Annual Standards and Specifications.

Measurable Goals / Expected Results: Approved plans will be able to be tracked through a database and reports created as needed. Ensure contractors fully understand the ESC and SWM measures shown in plans before construction begins.

Annual Report Achievements/Notes: Pre-construction meetings were held to discuss ESC measures and stormwater management facilities for all JMU site projects requiring an ESC and/or SWM plan. Refer to section 5.12 for a list of projects requiring ESC and/or SWM approval for this report year.

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Engineering and Construction - Sustainability

3.4.6 BMP: Requirement for Construction Site Inspections

Program Description: Projects approved for land-disturbance shall be inspected for compliance with the approved plan and other requirements related to ESC and the VSMP, as applicable. A database shall be used to record inspections and violations for each project. Site inspections will be conducted by certified personnel. During site visits, applicable measures will be visually assessed to ensure continued performance of their intended function. Any comments and/or violations noted in an inspection report will be forwarded to the project manager, RLD, and/or any other persons of interest involved in the project.

Site inspections will be made during or immediately following initial installation of erosion and sediment controls, at least once in every two-week period, within 48 hours following any runoff producing storm event, and at the completion of the project.

Measurable Goals / Expected Results: Track the number of inspections and noted violations through the use of a database. Routine site inspections can help identify problems sooner to reduce ESC and SWM related problems.

Annual Report Achievements/Notes: A total of 439 construction site inspections were conducted over the reporting period on 23 projects. Alleged deficiencies observed on-site were noted as comments or corrective actions in inspection reports and were addressed in an acceptable manor and time frame, thus requiring no further methods of enforcement. Notive of violations were submitted for projects not resolving non-compliance issues in the requested time frame. Those projects were brought into compliance without requiring further enforcement assistance from the DEQ. Copies of inspection reports are kept on file and are available upon request.

Number of Inspections	Corrective Actions Issued	Violations Issued
439	31	3

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Engineering and Construction - Sustainability

3.4.7 BMP: Pollution Reporting Hotline

Program Description: Establish a pollution reporting hotline and provide the public a method to share any information regarding stormwater runoff and construction activities. Any information submitted by the public concerning active construction projects will be reviewed by a JMU project manager.

Measurable Goals / Expected Results: Track the number of calls and emails received through the hotline number. Increase the public knowledge and awareness of issues regarding stormwater runoff from construction sites.

Annual Report Achievements/Notes: See BMP 3.1.7 for notifications of possible illicit discharges were reported through the pollution hotline.

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Engineering and 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 as set forth by Section II.B.5 of the General Permit found in 9VAC25-890-40.

Please note that as a non-traditional MS4, JMU has not created special criteria for stormwater facilities on individual residential lots as this is not applicable. All known structural BMPs are included in the University's stormwater facility database and will be inspected and maintained to meet compliance with the stormwater regulations.

3.5.1 BMP: Requirement for SWM Plan and Review

Program Description: Site specific SWM plans shall be prepared for all JMU projects involving regulated construction activity as defined in 9VAC25-870-10 of the Virginia Stormwater Management Program Regulations and submitted to JMU's Engineering and Construction department for review. Plans will be reviewed by a certified plan reviewer.

Measurable Goals / Expected Results: Track the number of regulated construction activities and report the total disturbed acreage. Ensure construction activity operators obtain the necessary approval from DEQ for land disturbing activities.

Annual Report Achievements/Notes: All JMU projects which disturbed an acre or more, or were considered to be part of a larger common plan of development, were required to prepare and submit a plan for review. Refer to section 5.12 for a list of active construction projects for this reporting period. Following is a table showing site plans receiving SWM approvals this reporting period.

Project Name	Proposed Disturbed Acreage	Date Approved
Softball Practice Facility	2.26	7/11/17
Chesapeake Avenue Parking Dec	2.42	10/6/17
Godwin Field Parking Lot	3.15	11/17/17
East Campus Student Housing	11.75	11/21/17
Covered Athletic Practice Facility at Sentara Park	2.60	3/22/18
College of Business	3.70	3/28/18
Convocation Center & East Campus Parking Deck	19.90	3/28/18
Phillips Dining Hall	1.33	4/13/18
Land Bridge	6.47	4/27/18

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Engineering and Construction - Sustainability

3.5.2 BMP: Stormwater Management Facilities Policy

Program Description: Continue to implement the University's Stormwater Management Facilities Policy which sets forth requirements and procedures for stormwater BMP design, plan review, installation and approval, inspections, maintenance and reporting. Refer to appendix B for a copy of the policy.

Measurable Goals / Expected Results: Record the number of structural management facilities that are added to the University's BMP inventory and the number of inspections performed each year. Ensure structural stormwater management facilities are maintained and operating properly.

Annual Report Achievements/Notes: The Stormwater Management Facilities Policy was developed in July of 2009 and was last updated in February of 2018 to include changes to applicable job titles. No additional modifications were made this report period. An internal work flow document has been developed and is updated as needed explaining the processes for following aspects of the approved policy and procedures. Refer to Appendix B to view the policy.

Five new BMPs have been brought on line and have been included in JMU's BMP database to ensure annual inspections and required maintenance. Two pre-existing BMP's associated with the Land Bridge project, which is currently under construction, have been removed. This brings JMU's total stormwater BMP inventory to 95. The additions to the BMP database are referenced in section 5.13.

A total of 126 inspections were performed on the structural BMP's. Several work orders were placed which included typical maintenance items. Major maintenance work included cleaning of three hydrodynamic separators and a 25,000 gallon oil/water separator.

Approximately \$68,900 was spent for inspections, maintenance and repairs of stormwater management facilities.



Schedule of Activities: Each stormwater management facility shall be inspected at least annually. Any required maintenance shall be documented and information forwarded for remedial work.

Responsible Department: Engineering and Construction - Sustainability

3.5.3 BMP: Map Structural BMP's

Program Description: Track all known permanent stormwater management facilities that discharge to the regulated small MS4.

Measurable Goals / Expected Results: Maintain list of facilities and other required information about facility. Report number of structural BMPs added to system. Comply with conditions of MS4 General Permit.

Annual Report Achievements/Notes: A GIS map and separate database continues to be updated with all known SWM facilities. See section 5.13 for a list of BMPs added this permit cycle.

Schedule of Activities: Map new structures as projects are completed.

Responsible Department: Engineering and Construction - Sustainability

3.6 MCM 6: Pollution Prevention/Good Housekeeping for Municipal Operations

This section describes the best management practices that will be implemented in order to meet regulatory requirements for pollution prevention/good housekeeping for municipal operations as set forth by Section II.B.6 of the General Permit found in 9VAC25-890-40.

3.6.1 BMP: Spill Prevention Control and Countermeasure (SPCC) Plan

Program Description: A SPCC Plan was initially prepared for the University in 1975 to establish procedures to prevent discharges of oil from facilities and to contain such discharges should they occur. Continue to implement plan to reduce the risk of hazardous substances from entering the storm sewer system.

Measurable Goals / Expected Results: Maintain and update SPCC plan as needed. Reduce the risk of hazardous substances from entering the storm sewer system.

Annual Report Achievements/Notes: No changes were made to the JMU SPCC plan this reporting period. The SPCC was last updated in January 2015.

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Facilities Management – Power Plant

3.6.2 BMP: Hazardous Materials and Chemical Storage

Program Description: Inspect and evaluate storage locations and method of storing hazardous materials and chemicals to ensure compliance with State and EPA regulations and ensure proper disposal of these materials. Continue to phase out the use of hazardous materials and chemicals whenever possible.

Measurable Goals / Expected Results: Perform periodic audits to verify accuracy of the records and monitor overall inventory for opportunities to reuse, recycle, or reduce the amount of hazardous materials at JMU. Ensure hazardous materials are properly stored. Report the number of spills. Reduction in the overall presence of hazardous materials on Campus.

Annual Report Achievements/Notes: There were a total of 4 outdoor incidents that required JMU's HAZWOPER team for cleanup. All clean-ups were contained before transporting into the storm sewer system.

Date	Description	Approximate Amount
9/8/17	Oil was dumped into dumpster.	4 gallons
9/8/17	Ruptured hose at gas pump.	3 gallons
9/26/17	Transmission fluid from City bus.	8 gallons
4/5/18	Transmission fluid from personal vehicle in parking deck	1 ½ pint

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Police and Public Safety - Risk Management

3.6.3 BMP: Oil & Antifreeze Recycling

Program Description: Continue to collect and recycle used oil and antifreeze.

Measurable Goals / Expected Results: Monitor the locations where vehicle maintenance operations take place. Document any incidents where waste materials were improperly disposed of. Ensure waste materials are properly disposed of.

Annual Report Achievements/Notes: There were no documented incidents of improper disposal of oil and antifreeze from activities involving the Recycling/Waste Management Department this reporting period. Approximately 1,850 pounds of oil was recycled in 2017.

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Facilities Management – Recycling/Waste Management

3.6.4 BMP: Storage of Erodible Materials

Program Description: Evaluate the storage of all soil, sand and other erodible materials on campus to ensure proper techniques are being utilized to minimize stormwater pollution.

Measurable Goals / Expected Results: Monitor the locations where erodible materials are being stored to check for the possibility of stormwater pollution. Prevent the storage of erodible materials on campus from causing stormwater pollution.

Annual Report Achievements/Notes: JMU has a soil stockpile location that is operating under a current general construction permit. The project is known as the South Main Spoils Site (Eby Property), and is listed in section 5.12. JMU's Daily Operational Procedures for Stormwater Control Best Management Practices also describes procedures for managing smaller erodible material storage.

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Engineering and Construction - Sustainability

3.6.5 BMP: Salt Storage, Application and Snow Removal

Program Description: Salt is currently stored in a shed on an impervious surface to minimize the amount of infiltration and runoff that leaves the site. The minimum amount of salt necessary is being used for deicing and more environmentally friendly alternatives are currently being evaluated by the Landscaping Department. Following a storm event where salt or other materials are applied, regularly scheduled street sweeping will occur to remove the materials from roadways and parking lots to prevent it from entering the storm sewer system. Also, whenever possible, snow stockpiles will be stored in a way that they do not block stormwater inlets and away from environmentally sensitive areas such as streams, lakes and swales.



Measurable Goals / Expected Results: Document the estimated amount of salt applied each winter and the other types of materials applied to aid in ice and snow removal. Ensure snow and ice removal on campus is done in a manner that minimizes stormwater pollution.

Annual Report Achievements/Notes: A salt shed continues to be used for mass storage. Approximately 300 tons of salt and 415 bags of purple heat were used this reporting period for snow/ice removal.

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Facilities Management – Operations

3.6.6 BMP: Vehicle and Equipment Washing

Program Description: The University has a contract with a car wash vendor where the majority of vehicles are washed. Equipment is washed at the Sports Park facility or the Main Street Landscaping facility or as outlined in

JMU's Daily Operational Procedures (Appendix B). Continue to work with the Landscaping Department to determine suitable locations to wash their equipment.

Measurable Goals / Expected Results: Monitor the locations where vehicles or equipment are washed and seek alternative washing practices to reduce stormwater pollution. Reduction in illicit discharges from vehicle and equipment washing operations.

Annual Report Achievements/Notes: Vehicle and equipment washing are done at approved locations. Approved locations for cleaning are mentioned during annual and new employee stormwater training.

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Facilities Management – Operations

3.6.7 BMP: Employee Training

Program Description: A "Stormwater Pollution Prevention/IDDE" presentation and guidebook has been developed for use with employee training. Training is offered once a year for Facilities Management (FM) staff and during FM new employee orientations. Material in these presentations teach basic stormwater information, stormwater pollution prevention, good housekeeping measures, and how to recognize and report illicit discharges.

Appropriate emergency response employees shall have training in spill response.

Measurable Goals / Expected Results: Document the number of individuals which receive training when it is offered. Increase the overall awareness of the impacts of stormwater and the measures that the University is undertaking to improve stormwater quality.

Annual Report Achievements/Notes: Annual stormwater training was conducted in the month of March to 489 out of a total of 629 FM employees. The training provided basic information on stormwater management, pollution prevention, JMU's stormwater programs, policies & procedures, local waterways, IDDE and how to report, and best management practices for good housekeeping.

As part of FM's new employee orientation, 13 presentations with an introduction to the same material presented in the guidebook was given for 76 new employees.

There are also a total of 25 team members on the HAZWOPER team that are certified in spill response.

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Engineering and Construction - Sustainability

3.6.8 BMP: Parking Lot and Street Sweeping

Program Description: The University owns and regularly operates a street sweeper to pick up litter and debris from parking lots and streets on campus. All campus parking lots and streets are scheduled to be swept three times each month, or on an as needed basis, with additional measures taken to address the cleanup of parking lots that are used during football games.

Measurable Goals / Expected Results: Record the number of times the street sweeper cleans campus streets and parking lots and/or hours spent street sweeping. Reduce the amount of sediment and debris that enters the storm sewer system from streets and parking lots.

Annual Report Achievements/Notes: The landscaping department spent approximately 295.5 hours on street and parking lot sweeping. Streets and parking lots are swept as needed, along with as needed due to weather related and special events. JMU now has two street sweepers and one smaller parking deck sweeper. There was 19.64 tons of materials taken to the landfill or Green Earth this reporting period.

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Facilities Management – Operations

3.6.9 BMP: Storm Structure Maintenance and Cleaning

Program Description: Storm structures are inspected and cleaned by Facilities Management staff to ensure they remain free of obstructions and to prevent sediment and other pollutants from entering the storm sewer system.

Measurable Goals / Expected Results: Record the number of structures cleaned and/or man-hours spent performing maintenance on storm structures. Reduce the amount of sediment and debris that enters the storm sewer system.

Annual Report Achievements/Notes: Landscaping spent approximately 61 man hours inspecting, cleaning and performing other needed maintenance to storm drains on campus during this reporting period.

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Facilities Management – Landscaping

3.6.10 BMP: Outdoor Trash, Ground Litter and Landscaping Debris Collection

Program Description: The Recycling Department oversees the collection of outdoor trash and ground litter. The mission statement of the Recycling Department is "to reduce the flow of waste and materials into the landfill, educate the JMU community on the proper disposal of waste items as well as the future impact of global waste stream issues. The Grounds Department is responsible for the collection of landscaping debris and performs this activity on a regular basis. During the fall there are up to 20 people performing leaf collection daily.

Measurable Goals / Expected Results: Record the activities that the Recycling and Landscaping Department undertakes regarding outdoor trash, litter and landscaping debris collection. Reduce the amount of trash, ground litter, and landscaping debris that enters the storm sewer system.

Annual Report Achievements/Notes: There was approximately 5,200 total hours dedicated to ground litter cleanup during this report period, with four part-time employees working during the schools regular sessions at a combined 116 hours per week, and approximately 60 hours per week during the summer months.

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: FM – Landscaping, and FM – Recycling/Waste Management

3.6.11 BMP: Fertilizer & Pesticide Application

Program Description: 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. The University currently has an Integrated Pest Management (IPM) program which seeks to control pests with a minimum of pesticide use while maximizing effectiveness and cost efficiency. The University also has a Nutrient Management Plan which outlines the proper application of fertilizer. Only property trained and/or certified employees or contractors will apply fertilizer or pesticides on campus.

Measurable Goals / Expected Results: Record the number of certified applicators for fertilizer and pesticides. Ensure the proper application of fertilizer and pesticides.

Annual Report Achievements/Notes: JMU has 16 Certified Fertilizer Applicators, 7 Certified Pesticide Applicators and 34 Registered Technicians.

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Facilities Management – Operations

3.6.12 BMP: Nutrient Management Plan

Program Description: The University is currently implementing a Nutrient Management Plan. The Nutrient Management Plan covers all lawn and landscaped areas of the University that receive nutrients and outlines the rates and frequencies that nutrients may be applied. The plan also covers best practices to follow regarding the application of these nutrients. A copy of this plan can be located in the office of the Landscape Manager and the Stormwater Coordinator.

Measurable Goals / Expected Results: Maintain records of nutrient applications per requirements outlined in Nutrient Management Plan. Ensure nutrients are applied in a manner that will minimize their impact on stormwater quality.

Annual Report Achievements/Notes: NMP's are up to date. The previous "Supplemental Plan" has been included as part of the "Main Campus" plan. Application records are kept on file with FM Operations and are available upon request.

Plan Name	Acreage	Expiration Date
Main Campus	224.48	May 20, 2021
Forest Hills Off Campus Properties	4.55	December 4, 2018
2868 S. Main St. Property	23.9	May 18, 2019
Total	255.07	

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Engineering and Construction - Sustainability, and FM – Operations

3.6.13 BMP: SWPPPs for High-Priority Facilities

Program Description: SWPPP's shall be developed and implemented (as scheduled in state permit) for all high-priority facilities identified as (i) composting facilities, (ii) equipment storage and maintenance facilities, (iii) materials storage yards, (iv) pesticide storage facilities, (v) public works yards, (vi) recycling facilities, (vii) salt storage facilities, (viii) solid waste handling and transfer facilities, and (ix) vehicle storage and maintenance yards.

Measurable Goals / Expected Results: List the number of facilities/groups of facilities that have SWPPP's or will require SWPPP's.

Annual Report Achievements/Notes: SWPPP's were developed and have been implemented at the following facilities since May 2017:

Facility/Group	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	Material storage.
South Main Street Facilities Transportation	Vehicle storage and maintenance.
South Main Street Maintenance Facility by K Lot	Equipment Storage, maintenance shop, mulch storage.
University Park Maintenance Shop	Maintenance shop.
University Services Building & Annex	Equipment, vehicle and materials storage. Maintenance facilities.

Schedule of Activities: Continue to update existing SWPPP's as needed, and identify additional high-priority facilities as new development is completed.

Responsible Department: Engineering and Construction – Sustainability

3.6.14 BMP: Daily Operational Procedures

Program Description: Implement a policy with procedures for daily operations and maintenance activities associated with facilities management. This policy shall include written procedures designed to minimize or prevent pollutant discharge from: (i) daily operations such as road, street and parking lot maintenance; (ii) equipment maintenance; and (iii) the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers. These procedures will be utilized as part of new FM employee orientation training.

Measurable Goals / Expected Results: Record the number of FM employees in attendance at FM new employee orientation and that receive annual stormwater training. FM employees will be made aware of proper procedures associated with daily operations and possible impacts on waterways. Policy will be updated as needed to remain compliant with applicable regulations.

Annual Report Achievements/Notes: The Daily Operational Procedures for Stormwater Control Best Practices Policy was developed in May of 2015 and was last updated in February 2018 to include changes to applicable job titles. No additional modifications were made this report period. An internal work flow document has been developed and is updated as needed explaining the processes for following aspects of the approved policy and procedures. Refer to Appendix B to view the policy.

Schedule of Activities: Continue current program and evaluate annually.

Responsible Department: Engineering and Construction – Sustainability

SECTION 4: TMDL ACTION PLANS



In order to meet pollutant reductions required for the Chesapeake Bay, an Action Plan has been developed using guidance materials from the DEQ to outline the means and methods to be implemented in order to meet the required goals.

Before action plan guidance was circulated, two studies were completed to assist in determining the best way to meet the Chesapeake 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.

A combination of methods may be used in JMU's action plans to meet reduction goals. Refer to Appendix C to view JMU's Chesapeake Bay TMDL Action Plan.

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 BMPs, such as construction site inspections, IDDE and stormwater facility maintenance, currently assist in efforts to clean up Blacks Run.

Annual Report Achievements/Notes: An updated Draft Chesapeake Bay TMDL Action Plan was submitted to DEQ on May 25, 2018.

Schedule of Activities: Continue current program and update as needed.

Responsible Department: Engineering and Construction – Sustainability

SECTION 5: ADDITIONAL INFORMATION



Following is additional information required as part of the annual report.

5.1 Modification to Operator's Department Roles & Responsibilities.

Gail Turnbull has taken over the role of Administrative Analyst as listed in section 1.2.

Scott Jones has taken over the role of FM Grounds/Landscaping Manager as listed in section 1.2.

Other than those changes, there were no modifications to the operator's department roles and responsibilities this report period.

5.2 New MS4 Outfalls

Five MS4 outfalls were added this reporting period.

An existing outfall (point of discharge ID# WC-0014) was identified as a point downstream at which receiving water emerges above ground from a piped section of stream as a point of discharge. This identified point is where West Campus Creek meets Blacks Run.

An existing outfall (point of discharge ID# SC-3392) was identified as an outlet point at which receiving water emerges from a piped section of stream in East Campus Creek.

An existing stream inlet (ID# EC-4538) and outlet (ID# EC-4320) was identified at which receiving water enters and emerges from underneath University Boulevard in East Campus Creek.

A new outfall (ID# WC-1530) was installed as part of a new construction project to update an existing softball field. The approximate drainage area to this new outfall is 0.47 acres. As part of this project, the drainage area to an existing outfall (ID# WC-1118) was increased from 4.61 acres to 6.06 acres.

Please note that all campus outfalls drain either directly into Blacks Run, or into tributaries to Blacks Run. Tributaries are Sibert Creek, East Campus Creek, and West Campus Creek.

5.3 Signed Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure 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 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: Dale Chestnut

Title: Stormwater Coordinator

Signature: 

Date: 8/13/18

5.4 Status of Compliance with Permit Conditions

A review of the MS4 Program Plan currently implemented at JMU has found that we are in compliance with all conditions of the permit. An assessment of the identified BMP's has determined that they are appropriately addressing the minimum control measures outlined in the MS4 General Permit. The progress towards achieving identified measurable goals for each of the minimum control measures is included in Section 3 of this report.

5.5 Results of Information Collected and Analyzed

The results of information collected by the students in the Environmental Instrumentation course (BMP 3.2.4) is used for reference purposes only and is not included in this report.

5.6 Summary of Future Stormwater Activities

A summary of future activities for each BMP is listed in Section 3 with each individual BMP measure.

5.7 Modifications to BMP's or Measurable Goals

No modifications to BMP's or measurable goals were made this report period.

5.8 Notice that the Operator is Relying on another Government Entity

The University currently is not relying on another government entity.

5.9 Approval Status of any Programs Pursuant to Section II C

Currently, no existing program has required the implementation of any minimum control measures pursuant to Section II C.

5.10 Information Required for any applicable TMDL special condition contained in Section I

Other than the Chesapeake Bay TMDL, there are currently no other TMDLs with WLAs assigned to JMU.

5.11 Illicit Discharges Identified

Possible illicit discharges are identified in BMP's 3.3.2 and 3.6.2.

5.12 Regulated Land-Disturbing Activities

During this permit year, 23 regulated land-disturbing activities were active.

Project	Disturbed Acreage
Bluestone Trail Extension	1.26
Chesapeake Avenue Parking Deck	2.42
College of Business	3.70
Convo & East Campus Parking Deck	19.94
Convo Sod Project	0.90
Covered Athletic Field at Sentara Park	2.60
East Campus Housing	11.75
East Grace Street Signal and Roadway Improvements	0.70
Farm Renovations	0.95
Gibbons Hall	3.70
Gibbons Hall Temporary Retail Building Demolition	0.44
Godwin Field Parking Lot	3.15
Gravel Parking Lot at 1210 S. Main St.	0.54
Gravel Parking Lot at Alumni Drive	0.94
Hotel Madison	2.53
Land Bridge	6.47
Madison Hall	1.90
Showker Hall Steam Line	0.45
Softball Practice Field at West Campus	2.26
South Main Spoils Site	6.20
Tennis Enclosure	0.95
USB Annex	3.64
West Grave Street Widening & Slip Lane	0.82
Wilson Hall Renovation	0.82
Total	79.03

5.13 New Stormwater Management Facility Data

During this permit year, 5 new BMPs were added to JMU's database and GIS. As all the BMP's listed below were installed as part of a project under a Construction General Permit, specific details have been, or will be, provided to DEQ along with the permit Notice of Termination.

BMP Type	HUC	Impaired Water	Acres Treated	Description
Manufactured BMP	PS22	Blacks Run	1.09	USB Annex Hydrodynamic Separator
Manufactured BMP	PS22	Blacks Run	0.31	Parking Lot A Pervious Pavers
Manufactured BMP	PS22	Blacks Run	2.24	Parking Lot A Hydrodynamic Separator
Manufactured BMP	PS22	Blacks Run	0.32	Hotel Madison Filterra
Manufactured BMP	PS22	Blacks Run	0.09	Madison Hall Filterra

5.14 Third Party Agreements

The University has an agreement with Colman Engineering for the purposes of providing stormwater management site plan review to satisfy BMP 3.5.1. Review is completed by certified individuals.

5.15 MS4 Program Plan Comments

JMU's MS4 Program Plan is posted on-line for viewing and we accept comments at any time. The MS4 Program is also discussed during annual training and prior to requesting information for completing this annual report, all persons involved with submitting information as part of the annual report were asked to verify information on BMP's related to their department.

No comments were received concerning the MS4 Program Plan.

5.16 Compliance with Public Participation Pursuant to Section II B 2(b).

Following is a list of some of the activities that JMU participated in through promotion, sponsorship or other involvement this reporting period as required per section II B 2(b) of the permit.

Activity	Partner(s)	Timeframe
Faculty participates as supervisor of the volunteer water quality monitoring for the Friends of the Shenandoah River. Visit www.fosr.org for more information.	Friends of the Shenandoah River	Ongoing
Faculty participates on board of directors of the Shenandoah Valley Pure Water Forum. Visit www.purewaterforum.org for more information.	Shenandoah Valley Pure Water Forum	Ongoing; quarterly and annual meetings
JMU Faculty and staff currently serves on the board of directors and associate directors for the SVSWCD. Visit www.svswcd.org for more information.	Shenandoah Valley Soil & Water Conservation District (SVSWCD)	Ongoing; monthly meetings
JMU participates in meetings with the "Central Shenandoah Stormwater Network", which is a group of stormwater managers which provides regular opportunities to share information, resources and explore opportunities for collaboration.	Central Shenandoah Planning District Commission (CSPDC), Cities of Harrisonburg, Staunton, Waynesboro, Augusta and Rockingham Counties, Town of Bridgewater, and VDOT	Ongoing; quarterly meetings
Solicit input from stakeholders in the development of the MS4 Program.	FM Operations and Engineering Departments	Ongoing

Participation in water quality monitoring programs. Refer to BMP 3.2.4 for additional information.	ISAT Department	Spring and Fall semesters.
Staff participates on the City of Harrisonburg's Stormwater Advisory Committee. Visit www.harrisonburgva.gov/swac for more information.	City of Harrisonburg	Ongoing; quarterly meetings
Participated in the City of Harrisonburg's Blacks Run Cleanup Day. Refer to BMP 3.2.5 for additional information.	City of Harrisonburg	April 8, 2017
Stormwater Management @ JMU presentation and BMP tour provided for senior water resources class. (19 students and 1 faculty)	ISAT	September 9 and 12, 2017
JMU Sustainability/SWM Tour at East Campus Dining Hall and Wayland Hall for 302 students. Refer to BMP 3.1.5 for additional information.	ISAT & OESS	Weeks of September 25 and October 2, 2017
Stormwater Management @ JMU presentation for senior capstone ENVT 400 class. (10 students and 2 faculty)	ISAT	October 19, 2017
MS4 Program Plan Permit Compliance & Reporting presentation given to 11 individuals from VA universities and consultants.	VAPPA	March 7, 2018
JMU Sustainability/SWM Tour at East Campus Dining Hall and Wayland Hall for 216 students. Refer to BMP 3.1.5 for additional information.	ISAT & OESS	Weeks of March 19 and 26, 2018
A presentation entitled, "An Arboretum Stream Restoration: Innovative Methods and Educational Opportunities" was given to approximately 55 people.	Environment Virginia Symposium	April 4, 2018
Participated in the City of Harrisonburg's Blacks Run Cleanup Day. Refer to BMP 3.2.5 for additional information.	City of Harrisonburg	April 14, 2018
Stormwater Management @ JMU presentation given to 6 visiting scholars from Wuhan China.		May 16, 2018