JAMES MADISON UNIVERSITY.

MS4 Program Plan

Annual Report 2024-25

James Madison University - Harrisonburg, Virginia
Annual Report Period: July 1, 2024 - June 30, 2025

Submitted to satisfy the terms of the General VPDES Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4)

Registration Number: VAR040112

Updated: October 2025
Cover picture: Newman Lake fountain with aquatic bench plantings along the shoreline (JMU/Ali Sloop).

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Newly installed bioretention outside of Potomac Hall (JMU/Ali Sloop).

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Virginia Bluebells, a native spring ephemeral, in the forest understory along the North River at the University Farm property (JMU/Ali Sloop).

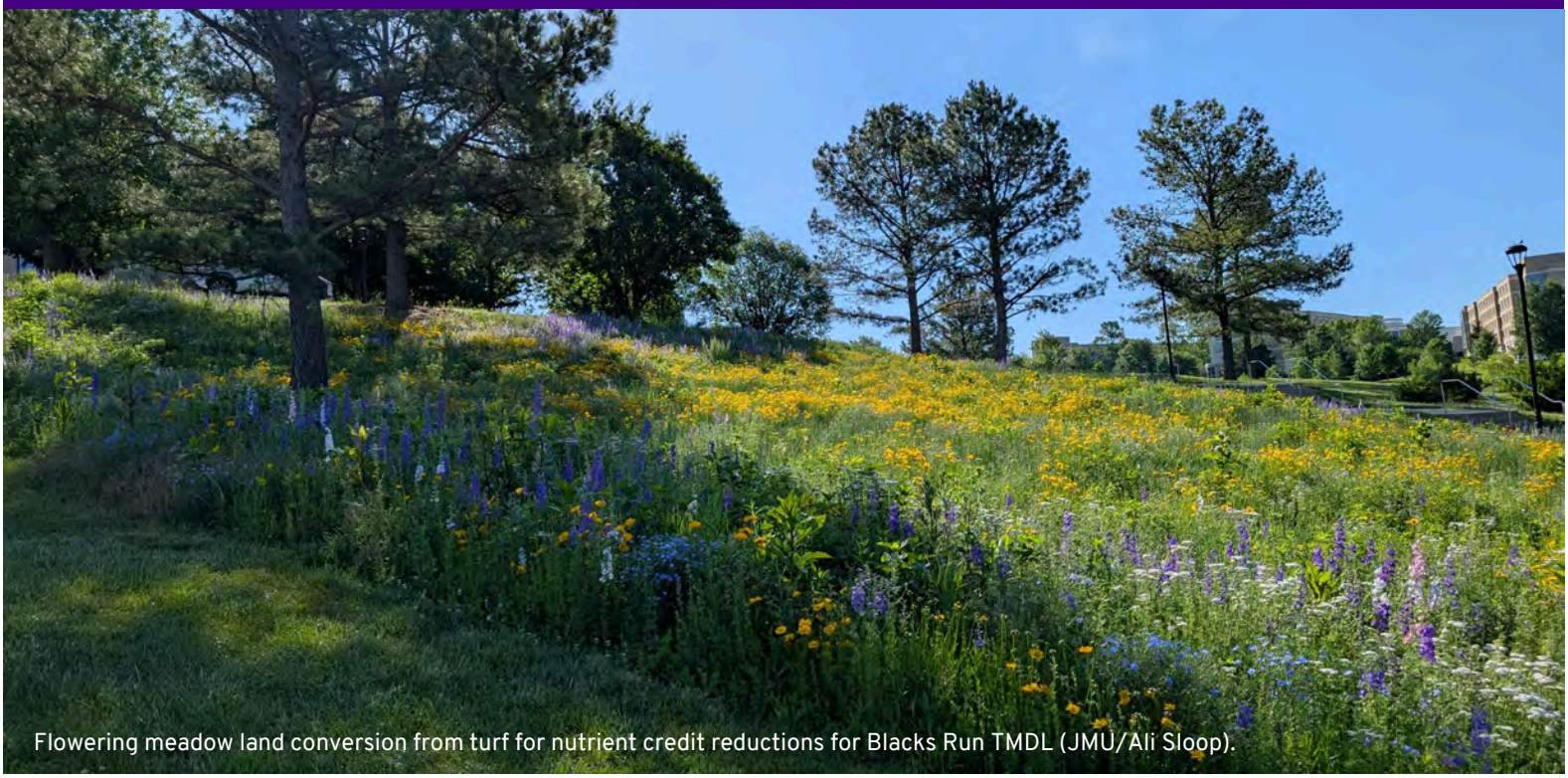
CERTIFICATION STATEMENT

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 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.

I further certify that after an evaluation of the program plan, and associated MCM's, the plan has been determined to be effective and no plan changes are necessary.

ALISON 'ALI" SLOOP
STORMWATER COORDINATOR
SEPTEMBER 30, 2025

MS4 PROGRAM PLAN - SUMMARY



Flowering meadow land conversion from turf for nutrient credit reductions for Blacks Run TMDL (JMU/Ali Sloop).

Rosemallow in the aquatic bench shoreline of Newman Lake (JMU/Ali Sloop).

James Madison University's Municipal Separate Storm Sewer System (MS4) program plan that follows details the minimum control measures that are implemented in order to have coverage under the state's MS4 permit and allow discharges from our storm system into local water bodies. The six minimum control measures that are part of the University's program plan are:

MCM 1 - Public Education & Outreach
MCM 2 - Public Involvement & Participation
MCM 3 - Illicit Discharge Detection & Elimination
MCM 4 - Construction Stormwater Management
MCM 5 - Post-Construction Stormwater Management
MCM 6 - Pollution Prevention & Good Housekeeping

CHANGES & UPDATES TO THE PROGRAM PLAN

There have been no changes to the program plan in this reporting cycle. Minor updates have been made to the program plan to reflect changes in staff and contact information. DEQ performed an audit on the University's MS4 program in July 2025. The program plan was updated in August 2025 in response to recommendations from the audit's report. These updates will be summarized in the next annual reporting period. The program plan is available on our webpage (www.jmu.edu/stormwater).

MCM 1: PUBLIC EDUCATION AND OUTREACH

Meaningful watershed education experience 4th grade field trip at the E.J.C. Arboretum (JMU/Ali Sloop).

To best identify the most efficient use of resources to distribute information related to stormwater impacts to the public, three main issues have been identified for focus: (1) public awareness of pollution prevention and reporting of water quality issues, (2) litter prevention at outdoor athletic events, and (3) bacteria from animal wastes and sanitary sewer overflows. These three issues have been selected as they target campus audiences that are most likely to have significant impacts on stormwater quality within the University.

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

Several strategies listed above are ongoing and always available such as JMU's website, signage, and storm drain marking. Typically, advertisements and posters are promoted during the first semester of each school year, and speaking arrangements and curriculum materials are provided as requested or scheduled throughout the year.

PUBLIC AWARENESS OF POLLUTION PREVENTION AND REPORTING OF WATER QUALITY ISSUES

Illicit discharges to the University's Municipal Separate Storm Sewer System or 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 from pollution). While minimum control measure 3 (MCM 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.

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 (22,285).

MCM 1: PUBLIC EDUCATION AND OUTREACH

Students cleaning up trash along the shoreline of Newman Lake (JMU/Rachel Holderman).

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 team and play a critical role in addressing illicit discharges on campus. In general, bulletins or ads will be placed in the Breeze (printed student newspaper distributed throughout campus) along with posting on bulletin boards such as those at campus libraries during the first semester of each school year. Also, speaking and tabling outreach engagements will be provided as requested to classes and at campus events. (See table at the end of Section MCM 1 for other strategies and activities utilized.)

LITTER PREVENTION AT OUTDOOR ATHLETIC EVENTS

JMU welcomes many 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. 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. Targeting the outdoor athletic events maximizes the opportunity to prevent and reduce litter on campus.

Carried by rain and wind, litter can end up in drainage ways, storm sewers, stormwater facilities, and ultimately Sibert Creek and Blacks Run. While JMU's Landscaping and Recycling 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.

Football games account for approximately 94% of JMU's outdoor athletic event activity. The football game attendees are the most likely to create the largest amount of litter, but also provide the best potential for litter prevention, education and outreach on stormwater pollution.

MCM 1: PUBLIC EDUCATION AND OUTREACH

The population size of the target audience is approximately 25,000 people per home football game. All other outdoor athletic events combined attract only approximately 300 people per event. This includes several other sports team schedules such as track, soccer, lacrosse, baseball, softball, field hockey and tennis. The Athletics Department makes at least two public service announcements at each outdoor sporting event to promote pollution prevention, requesting spectators to be responsible and discard all wastes in the trash and recycling receptacles located throughout the sports facility. With approximately 150,427 spectators at six home football game events, these targeted announcements were estimated to have reached more than 90% of the target audience.

Student walking their dog on the Quad (Photo courtesy of James Madison University).

BACTERIA FROM ANIMAL WASTES & SANITARY SEWER OVERFLOWS

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

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

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

JMU continues to focus on the education of pet owners through signage and access to pet waste stations. The year-round signage will serve as a reminder to pick up after pets. Pet waste stations are available at the E.J.C. Arboretum, where pets are most often walked.

Ducks swimming in a campus stream (JMU/Chelsea Thomas).

MCM 1: PUBLIC EDUCATION AND OUTREACH

EDUCATIONAL SIGNAGE

Educational signage along with storm drain marking is conducted to assist in educating the public on the purpose of stormwater best management practices and to inform that what goes in a storm drain eventually makes its way to our local waterways. No new educational signs were installed on campus this past program year. We are in the process of updating our riparian buffer signage and replacing these along campus streams in the next program year.

There were no new storm drains installed in this program year, so no new storm drain markers were placed. Construction is ongoing for two large building projects, with the anticipation of installing several new storm drain markers on the stormwater inlets associated with those projects once they are completed.

Undergrad students built an unmanned aquatic vessel to map Newman Lake's benthic levels with sonar as part of their capstone undergraduate research project (Photos courtesy of James Madison University).

ENVIRONMENTAL COURSES

A variety of environmental courses are offered at the University that cover issues related to the impact of urban stormwater runoff on the environment, hydrology in the urban landscapes, and strategies for pollution prevention which will increase the overall awareness of stormwater management and the University's MS4 program among students.

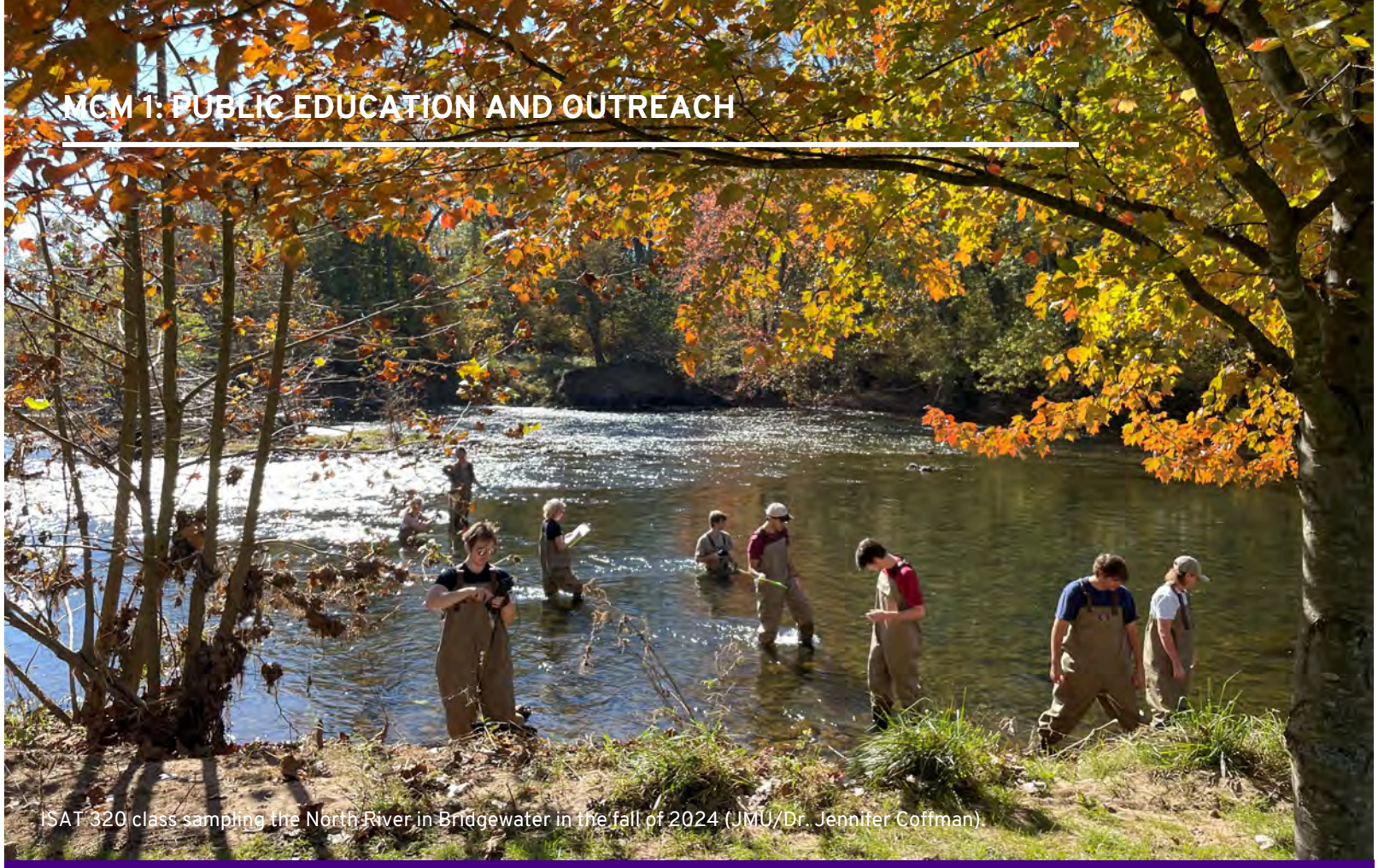
ISAT 320 (Fundamentals of Environmental Science and Technology) provided 39 students with a basic understanding of environmental processes, pollution and control technologies. Grounded in ecology and systems thinking, ISAT 320 integrates classroom learning, field-based studies and laboratory analysis of field samples (such as water quality testing) to explore local aquatic and terrestrial environments and contextualize them in broader scientific knowledge.

Four sections of ISAT 112 (Issues in Environmental Science and Technology) were taught through the year for 288 students. As an outdoor lab, students 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, hardness, conductivity, and turbidity.

One section of ISAT 321 (Fundamentals of Environmental Science and Technology II) was taught in the 2024-2025 academic year. This class specifically covers stormwater impacts and best management practices designed to reduce those impacts. Stormwater quantity and quality were discussed with particular attention given to stormwater best management practices installed on JMU's campus.

In Industrial Environmental Management (ISAT 422), students learn about stormwater and wastewater, and created fictitious companies to produce compliance plans addressing stormwater management.

MCM 1: PUBLIC EDUCATION AND OUTREACH



ISAT 320 class sampling the North River in Bridgewater in the fall of 2024 (JMU/Dr. Jennifer Coffman).

Environmental Course (Stormwater Emphasis) Name and Number	Students Enrolled
Environmental Issues in Science and Technology (ISAT 112)	288
Fundamentals of Environmental Science and Technology I (ISAT 320)	39
Fundamentals of Environmental Science and Technology II (ISAT 321)	41
Industrial Environmental Management (ISAT 422)	25
Environmental Engineering (ENGR 472)	24
Water Resources Engineering (ENGR 478)	33
Environmental Issues (GEOG 310)	16
Total students in 7 courses:	**466**

There were seven courses students enrolled in during the 2024-2025 academic year that focused on stormwater and stormwater-related topics. There are other environment related courses available in Biology, Chemistry, Earth Science, Engineering, Geographic Science, Geology, and Integrated Science and Tech programs.

Undergraduate capstone project group water testing at Muddy Creek and ISAT 112 students sampling the EJC Arboretum pond's water quality. (JMU/Dr. Jennifer Coffman).

MCM 1: PUBLIC EDUCATION AND OUTREACH

E.J.C ARBORETUM IS A HUB FOR WATERSHED EDUCATION FOR THE SURROUNDING SCHOOLS

The MWEE program was implemented for the second school year focusing on watershed education through a partnership between the E.J.C Arboretum and Harrisonburg City Public Schools STEM program. The program is a learner-centered, inquiry and action framework that is used nationwide and provides educators a roadmap for teaching content in a more engaging way. This type of hands-on learning helps students to understand their impact and realize their personal power to make changes in their local community, which in turn has the potential to affect all habitats and species living downstream.

The Education Coordinator (now Director) at the E.J.C. Arboretum and the City's STEM Director received another grant to get all 4th grade, and now all 7th grade, students, out to the arboretum to participate in this MWEE program. Students rotated through different field stations and activities where they learned about stormwater runoff, types of non-point source pollution, soil erosion, how pollution affects the watershed and the ecosystems within the watershed, and then activities they can do at their own homes to reduce stormwater runoff and pollution. JMU stormwater staff and JMU student volunteers were partners in both programs facilitating field stations and activities. In addition to these MWEE field trips, Rockingham County Public School classes and private schools partnered with the arboretum's education staff for watershed education focused field trips at the arboretum.

In total, 1,317 students, 203 adults, 32 JMU students volunteers and 22 community volunteers were a part of these watershed education programs in the 2024-25 school year.

MWEE 4th grade activity (Photo courtesy of The Daily News Record).

The table below lists more activities and strategies utilized in this reporting period to education and engage the community; this is not an inclusive list.

Date	Education and Outreach Event Name	Event Summary
October 2024	Saving the Chesapeake Bay Through Litigation and Environmental Justice	Chesapeake Bay Foundation and Bobby Whitescarver's ISAT 424 class presented to the campus and public community.
October 2024	QuadFest - Stormwater Management and Pollution Prevention Education	Homecoming event on the Quad - stormwater plinko activity about pollution prevention
October 2024	East Campus Hillside Tour	Gave tour of the East Campus hillside area's sustainability and stormwater management features to group of undergrad students in the Roop Learning Community.
October 2024	Karst Model and Watershed Education Program	Redeemer Classical School participated in watershed education field trip at the EJC Arboretum.
December 2024	Safety Champion Series - Stormwater Management and Pollution Prevention	Presented to JMU staff on stormwater and pollution prevention as part of Talent Development and Risk Management safety training series.
February 2025	Harrisonburg City Public School STEM Day	Tabled at STEM Day at the Valley Mall with stormwater pollution prevention activity and plinko board.
February 2025	Watersheds and Floodplain Tour for Architectural Design	Architectural design class tour of arboretum's floodplain and stream restoration for class design project on daylighting a stream.
April 2025	Blacks Run Clean Up Day and Green Scene	Tabled at Green Scene with pollution prevention activity, JMU students cleaned up campus and community streams - 7,000 lbs of trash collected
April 2025	Riparian Buffer Class Tree Planting	Classes planted native bare root trees in riparian buffer on campus.
April 2025	EarthFest - JMU Dining	Tabled with stormwater program info with pollution prevention plinko board during JMU Dining's EarthFest event.
April 2025	The Breeze (JMU Newspaper) Stormwater Ads	3 ads in JMU's student newspaper editions on stormwater pollution reporting.
May 2025	The Breeze (JMU Newspaper) Stormwater Ad	1 ad in JMU's student newspaper on stormwater pollution reporting.

MCM 2: PUBLIC INVOLVEMENT AND PARTICIPATION

East Campus aerial imagery (Photo courtesy of James Madison University)

ENVIRONMENTAL GROUPS AND COMMITTEES

Faculty and staff participate with local organizations and environmental advisory committees such as Soil & Water Conservation Districts, stormwater advisory committees, and environmental performance standards advisory committees . JMU also maintains membership in environmental organizations such as the Virginia Municipal Stormwater Association (VAMSA) and the Central Shenandoah Planning District Regional Stormwater Network to connect and collaborate with the planning district, other municipalities, engineers, and regulatory agencies.

Organization or Committee Name	Web Link
City of Harrisonburg Environmental Performace Standards Advisory Committee	harrisonburgva.gov/epsac
City of Harrisonburg Stormwater Advisory Committee	harrisonburgva.gov/swac
Virginia Municipal Stormwater Association	vamsa.org
Shenandoah Valley Soil & Water Conservation District Dam Maintenance Committee Education and Awards Committee Finance and Personnel Committee	svswcd.org
Central Shenandoah Planning District Regional Stormwater Network	cspdc.org

Black-crowned Night Heron (JMU/Ali Sloop)

STORMWATER MANAGEMENT WEBSITE

Through the FM Engineering and Construction's stormwater website, which can be found at www.jmu.edu/stormwater, documents such as this MS4 Plan, TMDL Action Plans, stormwater related policies and procedures, and other relevant information are available for access. An email and phone number are listed in order for the public to report potential illicit discharges, improper disposal or spills to the MS4, complaints regarding land disturbing activities, or other potential stormwater pollution concerns. The public may provide input on the University's MS4 program plan or TMDL action plans listed on the website. No public input or comments were received regarding the MS4 program or any action plans in this reporting period.

Page Description	Page Views
Stormwater Main Page	782
MS4	211
IDDE	96
Land Disturbing Activities (previously Site Plan Review)	182
Education & Outreach	97
Web Links	56
FAQ	57
Total	**1481**

MCM 2: PUBLIC INVOLVEMENT AND PARTICIPATION

STUDENT WATER QUALITY TESTING

Two sections of ISAT 320 (Fundamentals of Environmental Science and Technology I) were offered in the fall with a total of 46 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. Students performed water quality sampling of tributaries within the North River watershed, including Blacks Run. Parameters measured include specific conductivity, pH, dissolved oxygen, nitrogen, phosphorus, and fecal coliform/E. coli counts. In addition, students performed biological and physical habitat assessments of macro-invertebrates and fish communities. This class increases the awareness of local water quality issues within the student body, and any concerns observed during testing can be reported to Facilities Management for follow-up. This water testing is not for monitoring of stormwater discharges or control measures, but for educational purposes of basic water quality and is to be considered as a "citizen monitoring group".

ISAT 320 class sampling water quality of North River in Bridgewater (JMU/Dr. Jennifer Coffman).

STREAM CLEAN-UP EVENTS

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

In addition to the constant efforts on campus, JMU staff and students typically participate in Earth Day and provide a large group of volunteers to assist the City of Harrisonburg with efforts for the annual Blacks Run Clean-Up Day. This event increases awareness among students and staff of the opportunity to improve local water quality, how to identify illicit discharges, and report illicit discharges to the City or JMU for further investigation. The 25th annual Blacks Run Clean-Up Day was on April 13th and had approximately 614 volunteers that gathered over 2.8 tons of trash from the stream.

The combination of all activities implemented to provide educational outreach through a website, educational signage, speaking engagements, clean-up events, and involvement on committees allows for many beneficial activities for improving water quality.

JMU students participating in Blacks Run Clean Up Day (JMU/Rachel Holderman).

JMU students collecting trash along Newman Lake (JMU/ Rachel Holderman).

MCM 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

MS4 MAP

JMU maintains a GIS map with a corresponding database that contains the locations and attributes of the storm sewer system, structural best management practices, and MS4 outfalls that the university is responsible for within their municipal jurisdiction. The MS4 map and corresponding database have been updated to reflect any changes to the MS4 occurring on or before June 30 of the reporting year.

There were no additional MS4 outfalls installed for this reporting period.

NOTIFICATIONS OF INTERCONNECTIONS WITH ADJACENT MS4's

James Madison University's MS4 system interconnects with the City of Harrisonburg, Rockingham County, and the Virginia Department of Transportation (VDOT). Both Harrisonburg and VDOT are MS4's and have previously been notified and are aware that our systems interconnect.

Natural Resources Technician Intern and student Freddie Tavakoli assisting stormwater staff with annual outfall inspections (JMU/Ali Sloop).

JMU will continue to notify adjacent MS4's of any new interconnections established or discovered.

No new interconnections were made with adjacent MS4s, and no notifications were received from adjacent MS4s.

IDDE POLICY & PROCEDURES

The University has implemented a campus wide IDDE Policy 4310 to establish methods for controlling the introduction of pollutants into the MS4. This policy and an in house document titled, *JMU Stormwater Program Guide* (available by request), includes procedures for field screening, notification of spills and illicit discharges, tracking, enforcement, and training with the goal of eliminating unauthorized discharges.

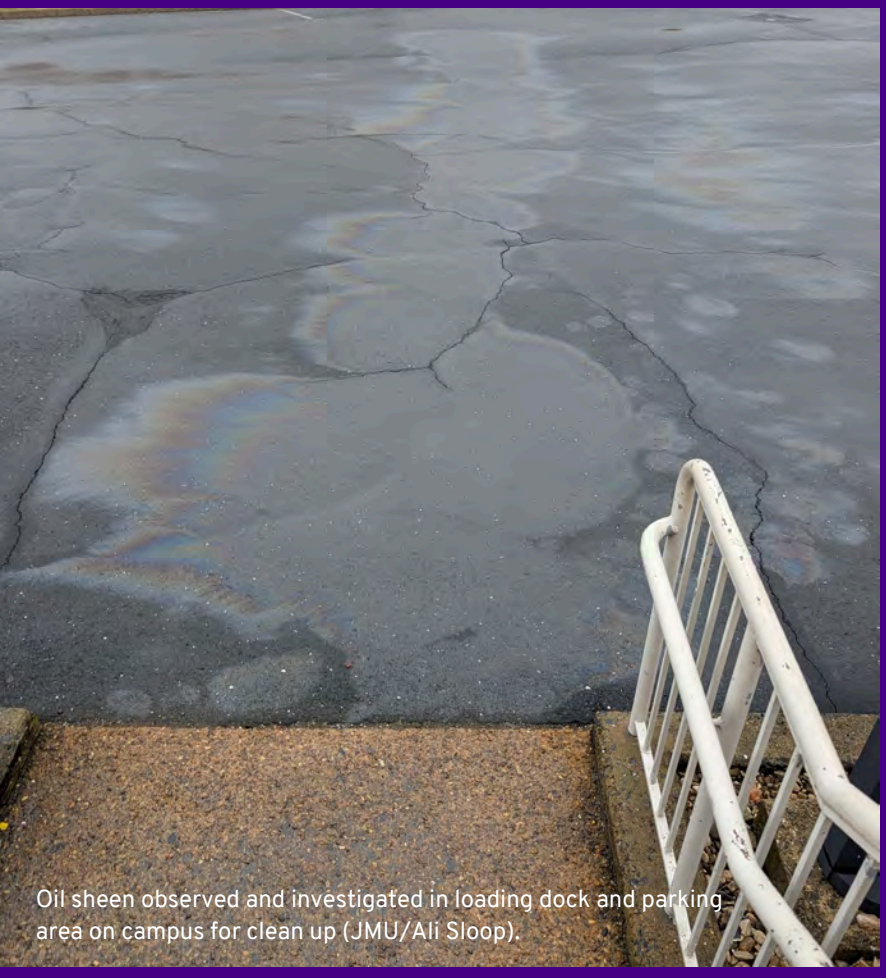
A total of 116 inspections were conducted on the 116 outfalls within JMU's jurisdiction. All of the University's outfalls are inspected annually during dry weather per our protocol and University Policy 4310. No illicit discharges were observed during the annual outfall inspections.

Eight illicit discharges and/or pollution observations were investigated by stormwater staff. Five of the eight investigations revealed that an illicit discharge entered the storm sewer system on campus. One of these five discharges into the storm system entered a waterbody (a stormwater wet pond on campus). The following are summaries of each of the eight illicit discharge investigations.

#1 - On July 10, 2024 concrete washout residue was observed in the ponding area of the bioretention in the F parking lot while staff were completing the bioretention's annual inspection. The concrete washout source was an adjacent construction site. The project manager and contractor were contacted by stormwater staff to clean up the concrete washout that had entered the storm system and the bioretention and install erosion and sediment controls for any inlets receiving runoff from this site. Both the contractor

and the project manager were reminded of the University's IDDE policy and Land Disturbing Activities FM policy. The bioretention and storm system were cleaned up and E&S controls were installed. Photos were received from the contractor of the clean up and installation of controls on 7.18.24. The investigation was closed on this date of 7.18.24.

#2 - On August 9, 2024 a concrete washout facility was observed to have overflowed into a storm drain that connects to a bioretention in the F parking lot during an adjacent stormwater BMP annual inspection. Sediment from an adjacent construction site also was observed by stormwater staff to have entered the storm drain and bioretention. Inlet protection was installed on the inlet, but the runoff had bypassed the protection. The project manager and contractor were contacted by stormwater staff to clean up the concrete washout and sediment that had entered the storm system and the bioretention and ensure that inlet protection was installed appropriately to prevent bypass of the filter. The bioretention and storm system were cleaned up and E&S controls were re-installed. Photos were received from the contractor of the clean up and installation of controls on the same day. The investigation was also closed same day, on 8.9.24.



Oil sheen observed and investigated in loading dock and parking area on campus for clean up (JMU/Ali Sloop).

#3 - On December 16, 2024 an oil sheen was observed by Facilities Management (FM) staff outside of the back loading dock area of the University Services Building. FM staff contacted work control center for clean up. The oil sheen was investigated by stormwater staff, source and date of occurrence was not identified. Believed to be possibly hydraulic oil from a vehicle, (outside contractor or delivery or JMU vehicle), as there was no noticeable smell to the sheen. FM Garage and Landscaping staff utilized dry clean up methods. The oil sheen was not observed in the receiving storm inlet, no impacts to the storm system or downstream water bodies. The investigation was closed following clean up the same day it was observed, 12.16.24.

#4 - On January 31, 2025 stormwater staff received a call about concrete washout overflowing into a parking lot in the R9 parking lot behind Memorial Hall. Upon visiting the site, stormwater staff observed washout overflowing from two kiddie pools that were deflated. It was raining at the time of observation and washout was seen flowing down the curb, into a grass channel and then into a bioretention. Stormwater staff immediately called the project manager, as none of the contractors were on the adjacent unregulated construction site that were utilizing these concrete washout facilities. Following the call to the project manager, a follow up email was sent, requesting that the concrete washout facilities as washout that left the facilities to be cleaned up as soon as possible. The contractor was asked to provide to provide adequate washout facilities, move their location into the construction site area, and cover any washout facilities during a rain event and at the end of each working day, if further concrete work was needed. The contractor cleaned up the site on the next business day and the concrete washout facilities were disposed of appropriately. Adequate washout facilities were placed within perimeter control for the project area and the project manager provided field training to contractor on appropriate concrete

washout best practices for stormwater. The investigation was closed on 2.3.25.

#5 - On February 17, 2025 stormwater staff tested discharge coming from a black pipe draining into a wet pond on east campus where red coloration was observed at the pipe outlet. The nitrate/nitrite testing that was completed in the field showed high levels of these nutrients. Discharge from the unknown black drainage pipe was believed to be coming from a leak in a chilled water line that runs adjacent to the wet ponds. The chilled water lines are a closed loop system that receives a corrosion inhibitor chemical, called Formula CLC, of which the main ingredient is sodium nitrite. This discharge was reported to the DEQ local office the morning of February 18th, 2025. FM Power Plant and Engineering staff have stopped the discharge to the pond by installing a sump pump to collect the leak discharge in the black pipe while the repair and design of a bypass chilled water line is completed and then the leak repaired. Discharge has been stopped to the pond via the sump pump installation. JMU is following a plan put together with DEQ for final resolution and JMU is continuing water quality monitoring of the stormwater wet pond and downstream waterbodies on campus. The investigation is still ongoing and the resolution of the illicit discharge will be complete with the installation of a bypass line and repair of the leaking chilled water line.

#6 - On February 26, 2025 Facilities Management staff reported soybean frying oil entering storm drain at UPARK behind the concessions booth for the main track. Stormwater and power plant staff investigated the discharge and found out that the oil was from a busted trash bag the evening before (2/25/25) that was carried from concessions to disposal/trash area. The JMU HAZWOPER team cleaned up the soybean oil in the area, in the trench drain, and located the next storm manhole junction and removed the oil that was found there via absorbent and a shop vac. Oil was not found any further in the storm system. Aramark employees were reminded to not move grease using trash bags and to place a disposal shed and transport jug(s) closer to the concession booth. The clean up was completed on the same day the spill and discharge was reported. The investigation was closed 2.26.25.

#7 - On March 17, 2025 stormwater staff observed buildup of erodible material at a parking lot inlet in the UPARK U5 lot that had traveled from an uncovered temporary pile upslope from the inlet. Inlet protection was installed at the curb inlet, but material had accumulated to the point that erodible material had entered

Erodible material buildup at storm inlet on campus observed and reported for IDDE investigation (JMU/Ali Sloop).

the storm inlet at this location, bypassing the control measure in place. FM landscaping staff were notified and asked to clean up erodible material in the storm inlet and that had accumulated against the inlet protection. FM landscaping staff were also asked to reinstall the inlet protect and limit stockpiles of erodible material in this lot. Staff were reminded that these piles need to be covered when not in use and to ensure regular maintenance is kept up on inlet protection down slope of these piles. FM staff removed accumulated erodible material at and in the inlet and re-installed inlet protection. Landscaping staff sent photos of completed work on March 21, 2025. The investigation was closed on this date of 3.21.25.

#8 - On April 9, 2025 a spill was reported to the Work Control Center by an Aramark employee that oil from a contractor truck hydraulic leak spilled onto the Festival loading dock and parking area while the truck

MCM 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

Inlet protection installed at curb inlet for unregulated project on campus to prevent illicit discharges (JMU/Chelsea Thomas).

operator was doing a bin swap the day before (4/8/25). The JMU HAZWOPER team responded to the call and cleaned up the spill with dry clean up methods. No oil was observed to have entered any storm drains or water bodies. The investigation was closed after clean up on 4.9.25.

JMU operates a HAZWOPER team with six certified team members and four active responders. JMU's Spill Prevention, Control, and Countermeasure Plan (SPCC) was updated this reporting period, in August 2024. The HAZWOPER team were called out for eight clean-ups over the year, with one reported to enter the storm system or waterway.

The JMU HAZWOPER team's spill response efforts are an important part of ensuring JMU's campus streams and storm system stay free of potential pollutants and illicit discharges. Spills happen and this team's efforts are integral in keeping these spills out of the University's MS4 and local waterbodies. Thank you to the JMU campus community for reporting outside spills as soon as they happen to assist with quicker and easier clean ups.

Snapping turtle in Newman Lake on campus. (JMU/Chelsea Thomas)

One of the 116 outfalls, where stormwater exits the storm system and enters a waterbody, that are annually inspected on campus (JMU/Chelsea Thomas).

MCM 4: CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

A regulated construction site on campus (JMU/Chelsea Thomas).

STANDARDS & SPECIFICATIONS

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

On April 1st, 2025 updated standards and specifications utilizing the Virginia Stormwater Management Handbook's Appendix J template were approved by DEQ with a formal letter of approval.

These standards layout the framework for the administration and implementation of projects within the University concerning erosion and sediment control, and stormwater management.

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

LAND DISTURBING ACTIVITIES POLICY

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

The policy includes definitions of relevant terms, the individuals responsible for implementation of the policy, and procedures for both non-regulated and regulated activities. The land disturbing activities policy was originally approved in July 2009, and is re-evaluated on an annual basis. This policy was updated in November of 2024 to incorporate new and updated regulations and contact information for responsible parties.

MCM 4: CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

REPORTING PERIOD SUMMARY

The project table shows the active construction projects throughout the reporting period along with the VESMP permit number, if applicable, and the disturbed acreage associated with the project. These projects were conducted in accordance with the current department approved standards and specifications for erosion and sediment control and stormwater management. Several JMU Facilities Management staff hold DEQ certifications, the table below lists these.

A total of 157 construction site inspections were conducted over the reporting period on five active projects. Alleged deficiencies observed on-site were noted in inspection reports. Seven of the 157 inspections resulted in corrective actions for the contractor to address. These actions were addressed by the contractor and did not require further enforcement action. Regional DEQ VESMP staff conducted inspections at three sites in the last reporting period, no corrective actions were needed.

Thank you to the contractors and project managers on these regulated project sites for your efforts! Copies of inspection reports are kept on file and are available upon request.

Dry pond enhancements on an unregulated project. (JMU/Chelsea Thomas).

Land Disturbing Projects in 2024-25	VESMP Permit	Disturbed Acreage
Carrier Library Expansion and Renovation	VAR10S5314	2.55
South Main Spoils Site	VAR10Q431	6.20
Village Housing - Ikenberry/Potomac Hall	VAR10S560	3.00
D1 Parking Lot - Paving	N/A	0.83
East Campus Power Plant Phase 2	VAR10V340	1.81
Total Acreage:		**14.39**

Bioretention installation on regulated construction site (JMU/Chelsea Thomas).

DEQ Certification	Employee	Certificate #	Date Expires
Responsible Land Disturber	Atkins, Clay	RLD31364	2/21/2028
Responsible Land Disturber	Dinges, Kyle	RLD05601	12/7/2025
Responsible Land Disturber	Jones, Robert (Scott)	RLD41745	4/7/2026
Dual Combined Adminstrator	Kaufman, Abe	DCA0330	7/11/2026
Responsible Land Disturber	Lucas, Ricky	RLD05597	12/7/2025
Responsible Land Disturber	McNett, Josh	RLD05596	12/7/2025
Responsible Land Disturber	Morris, Justin	RLD15890	12/7/2025
Dual Combined Adminstrator, Responsible Land Disturber	Naftel, Brian	RLD15890, DCA0517	8/3/2026, 10/2/2026
Responsible Land Disturber	Puffenbarger, Patrick	RLD23542	12/6/2025
Dual Combined Adminstrator	Sloop, Alison	DCA0582	8/18/2028
Dual Inspector	Thomas, Chelsea	DIN2210	3/1/2028

MCM 5: POST-CONSTRUCTION STORMWATER MANAGEMENT

JMU is required to operate a post-construction stormwater management program as part of permit and legislative requirements.

STORMWATER MANAGEMENT FACILITIES POLICY

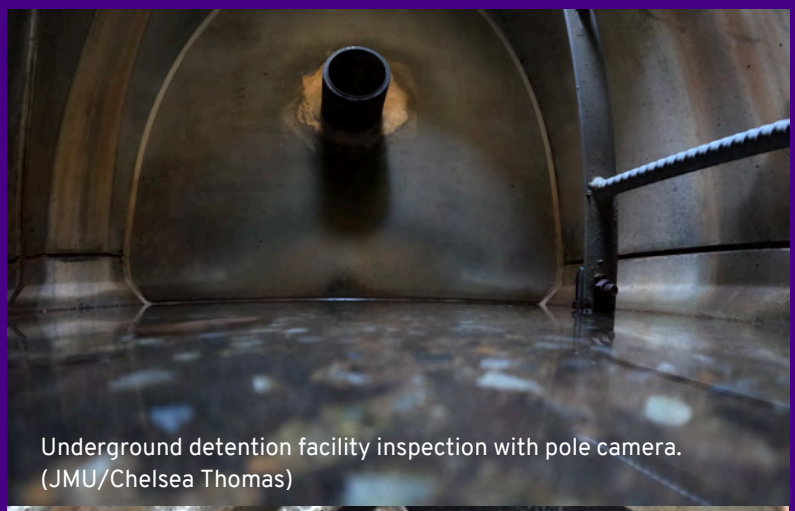
Structural stormwater best management practices (BMP's) are sometimes required to be installed for the mitigation of construction projects or for pollution reduction credits related to watershed clean-up efforts such as the Chesapeake Bay Total Maximum Daily Load (TMDL) and our local Blacks Run TMDL. These BMP's must remain in place as designed and be maintained in perpetuity to function as intended.

The purpose of the policy is to establish procedures for the design, installation, acceptance, inspections, and maintenance of stormwater facilities or BMPs installed on campus. The stormwater management facilities policy was originally approved in 2009 and is re-evaluated on an annual basis. In addition to this policy, the *JMU Stormwater Program Guide* (available upon request), details the stormwater BMP procedures for inspections and maintenance.

Newly installed bioretention at Potomac Hall (JMU/Chelsea Thomas).

For this reporting period, three new BMPs (bioretentions) were installed on campus as part of a new residence hall project. Stormwater staff are awaiting final as-built and engineering approval before these BMPs will be added to our system. Two other large capital projects on campus will be adding a total of four additional BMPs (stormfilter, underground detention, and Filterras or Tree-in-Box) in late 2025 and early 2026. All new BMP's installed as part of a project under a Construction General Permit have been, or will be, provided to the DEQ as part of the project and operator permit's Notice of Termination.

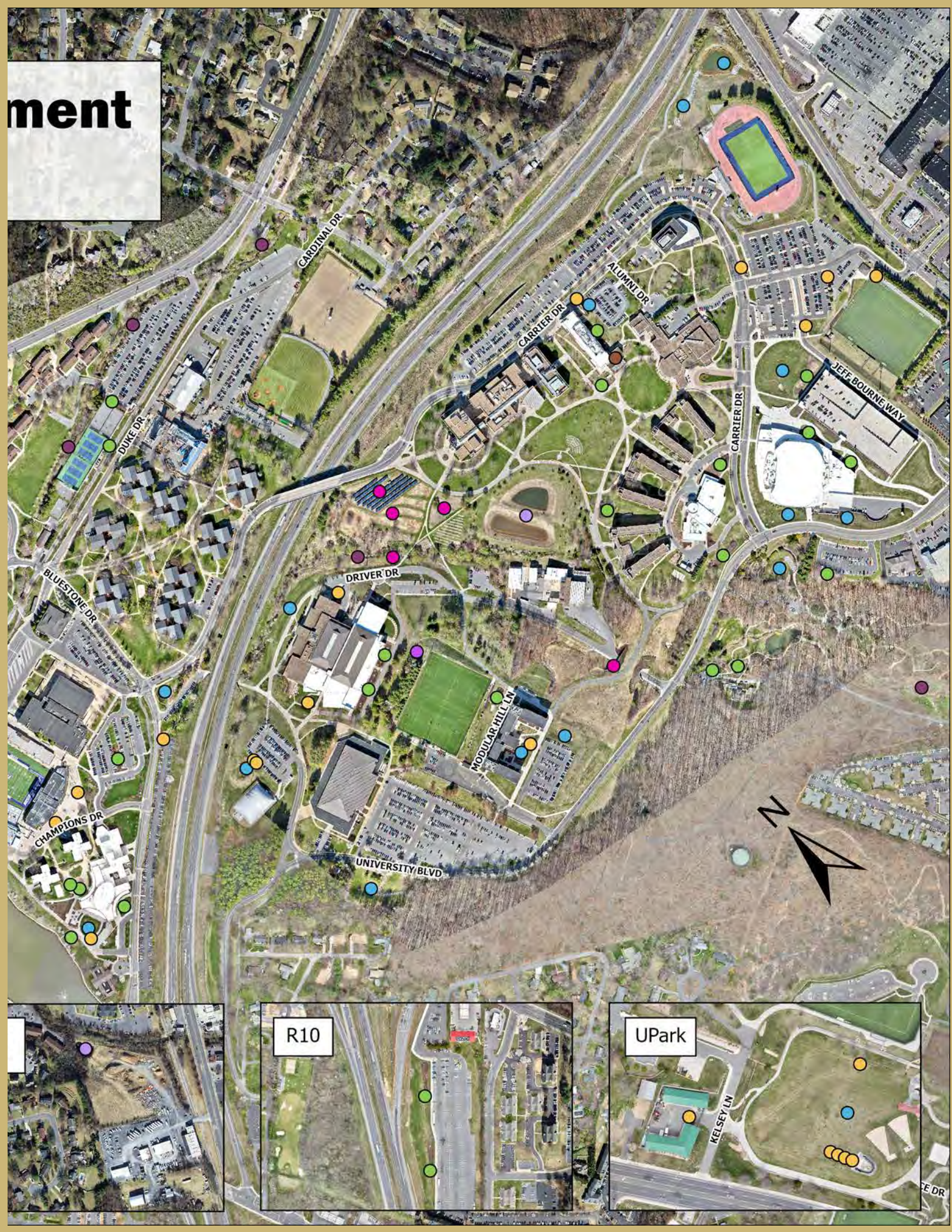
A total of 128 inspections were performed on JMU's 114 structural BMP's. All maintenance work completed on the structural BMP's were typical maintenance items. JMU reported electronically stormwater management facilities inspected in this reporting period using the DEQ BMP Warehouse in accordance with Part III B. 5.



Underground detention facility inspection with pole camera. (JMU/Chelsea Thomas)

Underground stormfilter inspection (JMU/Chelsea Thomas)


JMU
Stormwater Management
Stormwater Manager
Facilities
VETERANS MEMORIAL DR
CHESAPEAKE AVE
PATTERSON ST
WARSAW AVE
MASON ST
GRACE ST
ALUMNAE DR
MADISON DR
DONNA HARPER LN
Bioretention (Rain Garden)
Detention Basin (Underground/Dry Pond)
Green Roof
Manufactured Devices (HDS, OWS, Stormfilter, Filterra)
Land Use Change
Permeable Pavement
Rainwater Harvesting
Retention Pond/Wet Pond
Sand Filter
Stream Restoration
Emma Enright
May 2025
0 0.05 0.1 0.2 0.3 0.4
Miles
S. Main Facility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CARDINAL DR
ALUMNI DR
CARRIER DR
CARRIER DR
JEFF BOURNE WAY
DUKE DR
DRIVER DR
BLUESTONE DR
MODULAR HILL LN
CHAMPIONS DR
UNIVERSITY BLVD
N
R10
UPark
KELSEY LN

MCM 6: POLLUTION PREVENTION AND GOOD HOUSEKEEPING

NUTRIENT MANAGEMENT PLANS

The University currently implements several Nutrient Management Plans (NMPs) that cover the lawn and landscaped areas of the University that receive nutrient applications. The plans outline the rates and frequencies that nutrients may be applied and covers best management practices regarding the application of these nutrients. By following this plan it can be ensured that nutrients are applied in a manner that will minimize their impact on stormwater quality. The table below lists the University's active and DCR approved nutrient management plans.

NMP Name	Acreage	Start Date	Expiration Date
JMU Main Campus NMP	218.87	5/20/2024	5/20/2027
JMU Forest Hills NMP	3.79	2/10/2025	2/11/2028

SWPPP's FOR HIGH PRIORITY FACILITIES

Several facilities at JMU meet the criteria listed in the general permit as high-priority facilities and are considered to have a high potential for discharging pollutants. These facilities are required to maintain and implement a stormwater pollution prevention plan (SWPPP) to provide a summary description of the facility and activities, description of potential pollutants and sources, procedures for reducing and preventing pollutant discharges and procedures for inspections and maintenance. There were no modifications needed for existing SWPPP locations. The following is a list of existing facilities that have been identified as high-priority facilities with a high potential for discharging pollutants:

Facility Name	Type of Facility
Arboretum Storage Yard	Erodible material storage
ECPP Landscape Building	Equipment, vehicle, fueling and material storage
Memorial Hall Maintenance Shop	Maintenance shop and storage
R2 Lot Storage Yard	Materials and salt storage
S. Main St. Facilities: HVAC	Maintenance shop and storage
S. Main St. Facilities: Recycling	Recycling and waste storage
S. Main St. Facilities: Salt & Material	Erodible material and salt storage
S. Main St. Facilities: Transportation	Vehicle storage, fueling, and maintenance
S. Main St. Facilities: K Lot Material	Material and mulch storage
UPARK Maintenance Shop	Maintenance shop
USB and USB Annex	Equipment, vehicle, fueling, maintenance, and material storage

Salt storage area SWPPP facility inspection (JMU/Ali Sloop).

Certification Type	# of Staff
Certified Fertilizer Applicators	10
Commercial Pesticide Applicators	5
Registered Technicians	28
Nutrient Management Planner	1
Licensed Trapper	2

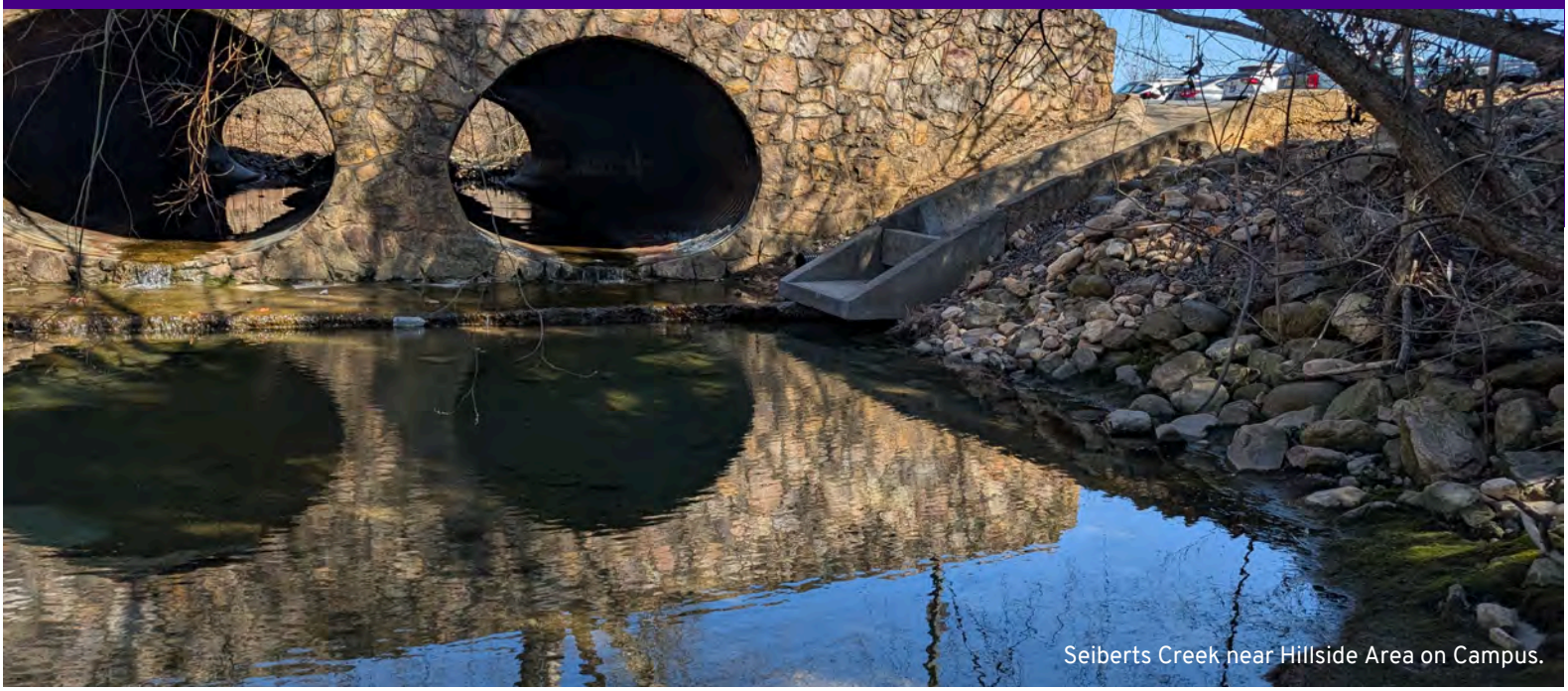
Facilities Management staff hold and maintain certifications for pesticide and fertilizer applications. This helps to ensure that nutrients and pesticides (herbicides) are being applied by trained staff and to the plan.

Recycling SWPPP facility inspection. (JMU/Ali Sloop)

INTEGRATED PEST MANAGEMENT

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

MCM 6: POLLUTION PREVENTION AND GOOD HOUSEKEEPING



Seiberts Creek near Hillside Area on Campus.

DAILY OPERATIONAL PROCEDURES

As a MS4 permittee, JMU is responsible for preventing, or minimizing to the maximum extent practicable, any discharges to the storm sewer system, or waterways, that is not entirely composed of stormwater run-off. A "*Daily Operational Procedures for Stormwater Control Best Management Practices*" policy was created in 2015 to implement written procedures for activities such as road, street, and parking lot maintenance; equipment maintenance; and the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers. The policy and procedures are re-evaluated on an annual basis, and updates were made to the policy this reporting period to ensure compliance with permit deadlines for new standard operating procedures for operations such as exterior improvements, storage and transport of anti-icing agents and several others. These procedures are utilized as part of Facilities Management staff training and is an effective way to ensure that employees are aware of proper procedures associated with operations and the impacts on local waterways.

TRAINING PLAN

A "Stormwater Pollution Prevention/IDDE" presentation and guidebook have been developed for use with Facilities Management (FM) employee training. During new employee orientation for FM personnel, a presentation is given, introducing them to basic stormwater information, pollution prevention, good housekeeping measures, related policies and procedures, and how to recognize and report illicit discharges. Refresher trainings will be provided no less than once per 24 months through the use of a presentation, guidebook, or via in-person facilitated trainings. New FM employee training is provided with FM orientation which typically occurs on a monthly basis. Through new employee orientations, 95 employees received initial training about stormwater management and pollution prevention for this reporting period. Every two years a refresher training is provided to FM employees and was last completed in March and April of 2024 to 357 FM staff. The next biennial training will take place in the spring of 2026. This training will be a combination of in-person and online.

IDDE & Stormwater Pollution Prevention Training		
Date	**Event**	**Employees**
7/1/2024	FM New Hire Orientation	8
8/5/2024	FM New Hire Orientation	3
9/9/2024	FM New Hire Orientation	3
10/7/2024	FM New Hire Orientation	15
11/4/2024	FM New Hire Orientation	9
12/6/2025	FM New Hire Orientation	2
1/10/2025	FM New Hire Orientation	1
2/3/2025	FM New Hire Orientation	26
3/3/2025	FM New Hire Orientation	12
4/7/2025	FM New Hire Orientation	6
5/5/2025	FM New Hire Orientation	5
6/2/2025	FM New Hire Orientation	5
	Total	**95**

TMDL ACTION PLANS

BLACKS RUN TMDL

Blacks Run is located in the City of Harrisonburg and receives run-off from the City, JMU, VDOT and Rockingham County, then eventually flows to Cooks Creek. A TMDL was developed in 2002 for Blacks Run and Cooks Creek but did not issue waste load allocations (WLA) to the jurisdictions in the watershed. A revision to the local TMDL has been completed and approved by the EPA on July 10, 2019. As such, an Action Plan will be developed and included in the requested time frame and submitted to DEQ by May 1, 2026. In preparation for the Blacks Run TMDL, JMU has already implemented the following BMPs:

Description	Total Removal (lbs/yr)		
	Phosphorus	Nitrogen	TSS
East Campus Hillside Meadow	1.21	4.81	0
East Campus Creek Area Tree Buffer Land Conversion	3.76	16.63	1,438.69
East Campus Triangle Meadow	1.82	0.46	0
Total Reductions	***6.79***	***21.90***	***1,438.69***
Required Reductions	***78***	-	-

East Campus Hillside Meadow land conversion (JMU/Ali Sloop).

East Campus riparian buffer tree planting. (JMU/Dr. Cindy Klevickis)

East Campus Hillside "Triangle Meadow" land conversion. (JMU/Ali Sloop).

TMDL ACTION PLANS

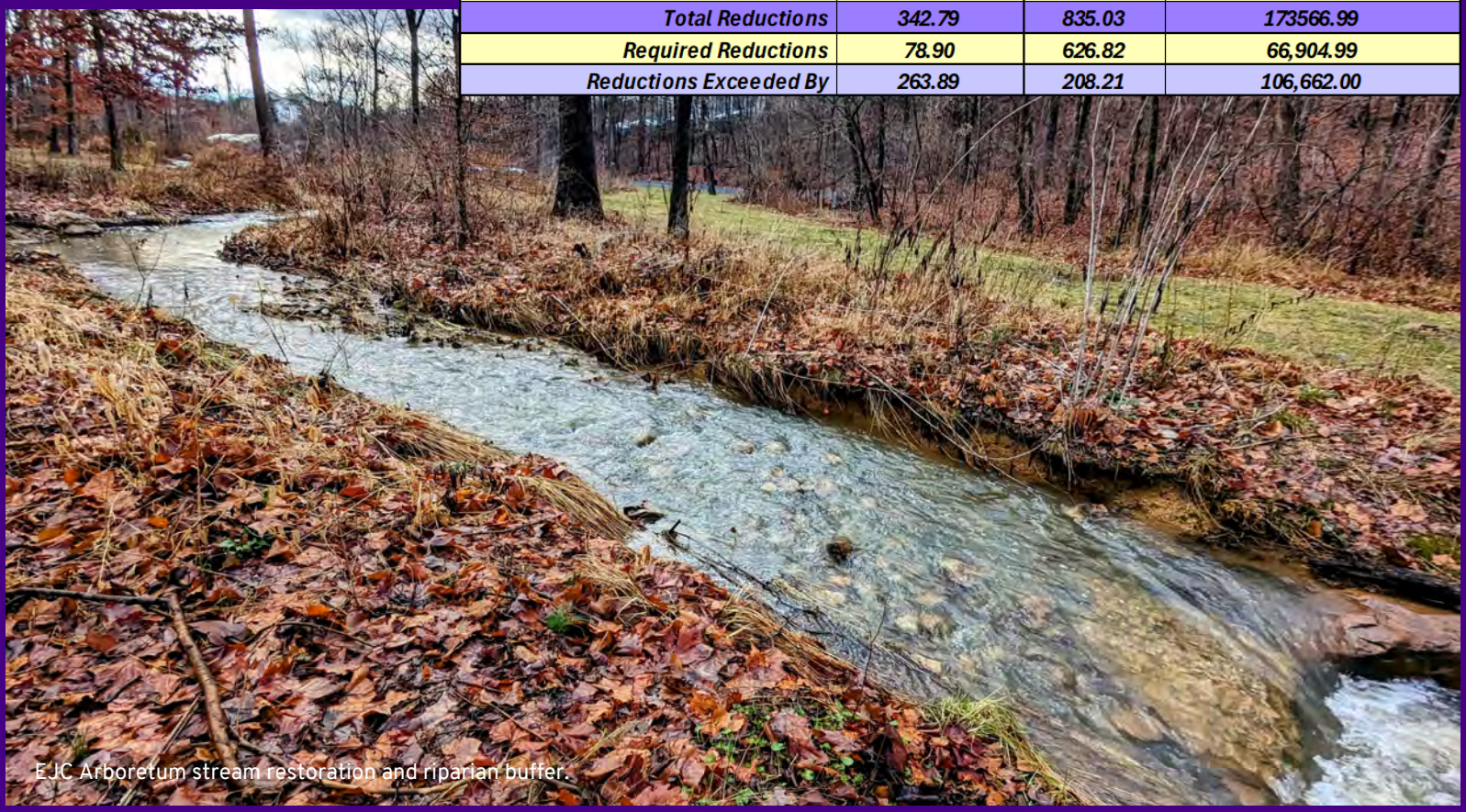
CHESAPEAKE BAY TMDL

The Chesapeake Bay Total Maximum Daily Load (TMDL) was established to create implementation plans to reduce pollutants entering the Bay. The pollutants of concern were listed as phosphorus, nitrogen, and sediment, and more specifically, total suspended solids (TSS). For JMU, those pollutant reductions per year were calculated to be 78.90 lbs/yr of phosphorus, 626.82 lbs/yr of nitrogen, and approximately 66,905 lbs/yr of TSS.

Stream restoration has become a popular choice for meeting the Bay goals, and that practice was chosen to be implemented throughout campus streams to meet those goals and to be an educational tool for students and the public. Nearly 3,700 linear feet of stream has been restored on campus along with allowing a vegetated buffer to grow on most stream banks. In addition to stream restoration work, nearly 53,000 square feet of land has been converted from pervious (turf areas) to a grass buffer (unmanaged grass). The EJC Arboretum's stream restoration with constructed wetland cells was installed in 2016, assisting the University in far surpassing the total required reduction goals for the Chesapeake Bay TMDL.

No new BMP's were installed this reporting period, and none are currently planned to be implemented in the near future. No comments were received for the action plan. JMU's complete Chesapeake Bay TMDL Action Plan can be viewed online at jmu.edu/stormwater.

Description of Nutrient Reduction Practice	Total Removal (lbs/yr)		
	Phosphorous (TP)	Nitrogen (TN)	Total Suspended Solids (TSS)
East Campus Stream Restoration	69.74	71.03	45,895.20
East Campus Land Use Change		2.75	
Siebert Creek Restoration - Segment A	27.63	29.47	18,231.23
Siebert Creek Restoration - Segment B	33.80	36.09	22,283.14
Siebert Creek Restoration - Segment C	47.91	47.45	31,446.04
Siebert Creek Area Land Use Change		4.31	
Siebert Creek Bioretention	1.87	13.02	1,551.38
EJC Arboretum Stream Restoration with Constructed Wetlands	161.84	630.91	54,160.00
Total Reductions	***342.79***	***835.03***	***173566.99***
Required Reductions	***78.90***	***626.82***	***66,904.99***
Reductions Exceeded By	***263.89***	***208.21***	***106,662.00***



EJC Arboretum stream restoration and riparian buffer.

BEING THE CHANGE.

JMU Stormwater Management

Department of Forestry performing a prescribed burn on the native meadow riparian buffer along the North River at the University Farm property. (JMU/Ali Sloop)