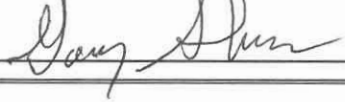


POLICY IV 10: Stormwater Management Facilities

APPROVED: *Executive Director of Facilities & Construction:*



Policy Review: Annually

Dated: July 2009

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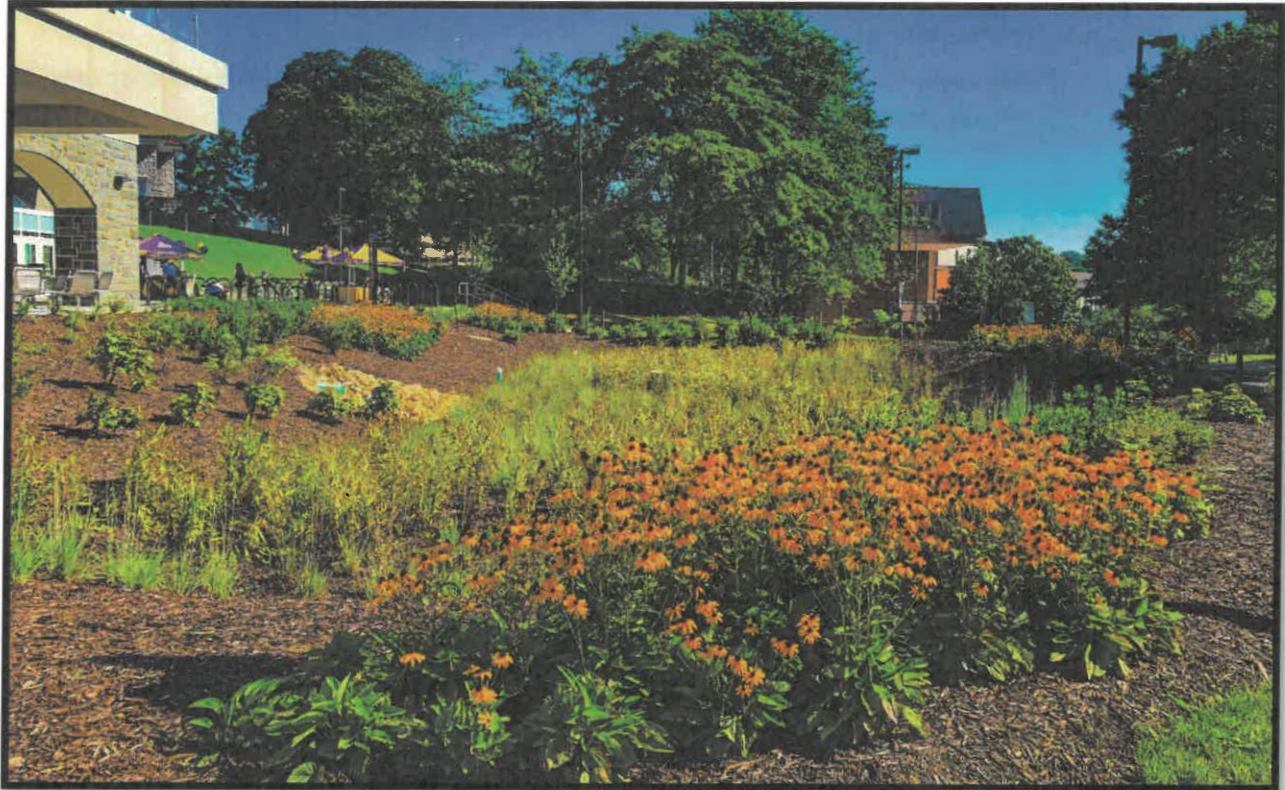


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1.0 Purpose

James Madison University is required to operate a Virginia Erosion & Stormwater Management Program (VESMP) as part of permit and legislative requirements. Stormwater Best Management Practices (BMPs) are required to be installed for the mitigation of construction projects or for pollution reduction credits related to watershed cleanup efforts such as the Chesapeake Bay Total Maximum Daily Load (TMDL). These BMPs must remain in place as designed and be maintained in perpetuity to function as intended.

The purpose of this policy is to establish procedures for the design, installation, acceptance, inspections, and maintenance of stormwater management facilities installed on campus.

2.0 Definitions

Best Management Practice (BMP) – Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices, including both structural and nonstructural practices to prevent or reduce pollution of surface waters and groundwater systems.

Environmental Protection Agency (EPA) – Federal entity responsible for monitoring, standard-setting, and enforcing activities to ensure environmental protection.

Erosion and Sediment Control (ESC) Plan – A site specific plan identifying best management practices and control measures to be implemented during a land-disturbing activity of 10,000 square feet or more, or part of a common plan of development, to prevent or minimize downstream impacts from sediment deposition, erosion, and damage due to increases in stormwater run-off. Will include a quantity analysis for channel protection and flood protection.

Stormwater Management Facility – A structural best management practice that controls stormwater runoff and changes the characteristics of that runoff, including but not limited to, the quantity and quality, the period of release, or the velocity of flow.

Stormwater Management (SWM) Plan – A site specific plan identifying best management practices and control measures to be implemented during a land-disturbing activity of 1 acre or more, or part of a common plan of development, to mitigate effects of additional pollutant loads from development or redevelopment projects. Will include a water quantity analysis for channel protection and flood protections, and a water quality analysis to meet regulatory design criteria requirements.

Virginia Department of Environmental Quality (DEQ) – State department responsible for overseeing the university's stormwater related programs and the enforcement of stormwater legislation.

3.0 Responsibilities

Executive Director of Facilities & Construction, and Director of Engineering and Construction: Responsible for the overall implementation of this policy and procedures.

Assistant Director of Environmental Services: Responsible for ensuring that stormwater management facilities are properly maintained when work orders are issued for maintenance and/or repair.

Project Manager: Responsible for ensuring that stormwater management facilities are designed in accordance with the appropriate water quality and water quantity design criteria as required in 9VAC25-875 and installed in accordance with the approved site plan and applicable requirements of the Department of Environmental Quality (DEQ) and any annual standards and specifications adopted by the university. Responsible for ensuring that

redevelopment and new development projects do not impact the functionality or footprint of existing stormwater management facilities.

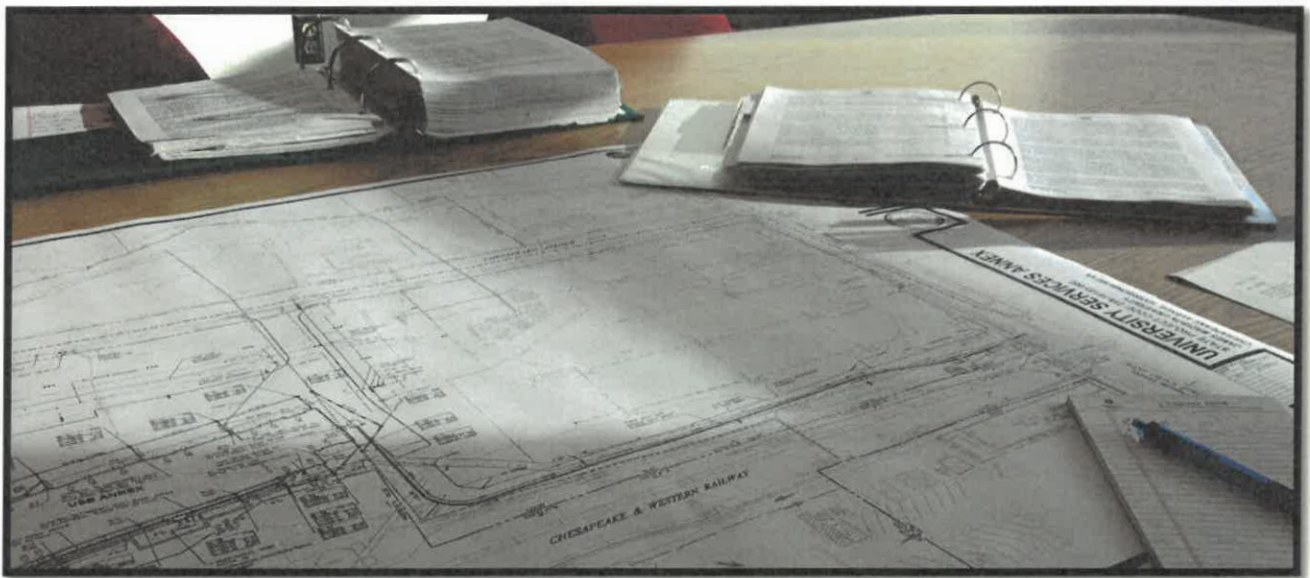
Stormwater Coordinator: Responsible for overseeing site plan review, long-term maintenance inspections, preparation of report for work orders for BMPs requiring maintenance and submitting the required annual report and BMP database submissions to the Department of Environmental Quality (DEQ).

4.0 Procedures

4.1 Design & Plan Review

Project Manager will ensure that a professional engineer licensed in the Commonwealth of Virginia submits a site plan for review to FM Engineering that is designed to incorporate required stormwater management facilities and will meet current water quality and water quantity standards and specifications.

Stormwater Coordinator shall oversee review of plans to ensure compliance with stormwater regulations. Project construction shall not begin until site plan has been approved for erosion and sediment control and stormwater management. Refer to JMU's *Annual Standards and Specifications for ESC and SWM* and JMU's *Land Disturbing Policy* for more information.



4.2 Installation & Approval

Project Manager, or project inspector, shall observe construction of the stormwater management facility to ensure compliance with approved plan.

Project Manager shall have contractor provide any requested as-built documentation. Construction as-built documentation shall be appropriately sealed and signed by a professional registered in the Commonwealth of Virginia, certifying that the stormwater management facilities have been constructed in accordance with the approved plan.

Stormwater Coordinator will file as-built certification with BMP files for reference during maintenance inspections and any needed repair work. Stormwater Management Facility database and related layer in GIS will be updated as facilities are completed in the field.



4.3 Long-Term Maintenance & Inspections

Stormwater Coordinator shall oversee required annual or biannual inspections on stormwater management facilities. Stormwater management facilities include, but are not limited to: bioretention, permeable pavers, detention and retention basins, ecosystem restoration projects, green roofs, meadows, and manufactured treatment devices.

All BMP inspections shall be conducted using JMU's *Stormwater BMP Inspection Report* form available via ArcGIS FieldMaps smartphone application and Survey123 which has the inspector evaluate key components of each BMP such as the contributing drainage area, the BMP inlet, vegetation, structure components, the BMP outlet and any other site conditions. Any required maintenance shall be documented, and information included in a work order to Operations or outside contractor for remedial work.

The relevant Director of the department within Facilities Management that is assigned BMP maintenance shall ensure the work is performed as instructed by work orders, unless outside contractor is hired for repair.

Stormwater Coordinator or Stormwater Specialist will perform a final inspection once informed of completion of remedial work.



4.4 Reporting

Stormwater Coordinator will be responsible for preparing and submitting required annual BMP report to DEQ. A copy of this report will be kept in the Engineering Department file. The report shall include the following information:

- Type of structural stormwater facility installed as defined in the Virginia Stormwater Management Handbook.
- Geographic Location (Hydrologic Unit Code)
- Where applicable, the impaired surface water that the stormwater management facility is discharging into.
- Number of acres treated.

The Stormwater Coordinator is also responsible for reporting inspections of BMPs into DEQ's BMP Warehouse database annually with pass or fail result of inspections and ensuring that new stormwater management facilities installed as part of a regulated or unregulated project are added to the DEQ BMP database by the operator/contractor that installed the facility.

5.0 References

Following are references to stormwater related laws, regulations, and specifications:

Code of Virginia. Chapter 3.1. State Water Control Law

<https://law.lis.virginia.gov/vacode/title62.1/chapter3.1/>

James Madison University. *Annual Standards and Specifications for ESC & SWM*

<https://www.jmu.edu/facmgt/sustainability/stormwater/site-plan-review.shtml>

James Madison University. *Municipal Separate Storm Sewer (MS4) Program Plan*

<https://www.jmu.edu/facmgt/sustainability/stormwater/ms4.shtml>

Virginia Administrative Code. Chapter 875. Virginia Erosion and Stormwater Management Program (VESMP) Regulation

<https://law.lis.virginia.gov/admincode/title9/agency25/chapter875/>

Virginia Administrative Code. Chapter 880. General VPDES Permit for Discharges of Stormwater from Construction Activities

<https://law.lis.virginia.gov/admincode/title9/agency25/chapter880/>

Virginia Administrative Code. Chapter 890. General VPDES Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems.

<https://law.lis.virginia.gov/admincode/title9/agency25/chapter890/>

6.0 Evaluation

This policy with procedures will be evaluated annually and updated as needed.