

**VPDES MUNICIPAL SEPARATE STORM
SEWER SYSTEM (MS4)
PERMIT NO. VA040094**

**MS4 PROGRAM PLAN
PERIOD OF JULY 1, 2020 TO JUNE 30, 2021**

THE UNIVERSITY OF MARY WASHINGTON



**UNIVERSITY OF
MARY WASHINGTON**

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July 1, 2020

TABLE OF CONTENTS

1.0 **INTRODUCTION 3**

 1.1 Summary of Changes 3

2.0 **PART 1.C – THE MS4 PROGRAM PLAN 4**

3.0 **PART 1.E – MINIMUM CONTROL MEASURES (MCM)..... 6**

 3.1 Part I.E.1 – Public Education and Outreach 6

 3.2 Part I.E.2 – Public Involvement and Participation..... 8

 3.3 Part I.E.3 – Illicit Discharge Detection and Elimination 9

 3.4 Part I.E.4 – Construction Site Stormwater Runoff Control 10

 3.5 Part I.E.5 – Post-Construction Stormwater Management for New Development
 and Development On Prior Developed Lands 11

 3.7 Part I.E.6 – Pollution Prevention and Good Housekeeping for Facilities Owned or
 Operated by the Permittee Within the MS4 Service Area 13

TABLES

Table 1: MS4 Program Plan Table – Part I.C – The MS4 Program Plan 4
Table 2: MS4 Program Plan – Part I.E.1 – Public Education and Outreach..... 6
Table 3: MS4 Program Plan – Part I.E.2 – Public Involvement and Participation 8
Table 4: MS4 Program Plan Table – Part I.E.3 – Illicit Discharge Detection and Elimination..... 9
Table 5: MS4 Program Plan – Part I.E.4 – Construction Site Stormwater Runoff Control..... 10
Table 6: MS4 Program Plan Table – Part I.E.5 – Post-Construction Stormwater Management for
New Development and Development On Prior Developed Lands..... 11
Table 7: MS4 Program Plan Table – Part I.E.6 – Pollution Prevention and Good Housekeeping
for Facilities Owned or Operated by the Permittee Within the MS4 Service Area 13

APPENDICIES

APPENDIX A

ROLES AND RESPONSIBILITIES OF PERMITTEE'S DIVISIONS AND DEPARTMENTS

APPENDIX B

EDUCATION AND OUTREACH EVENT INFORMATION

APPENDIX C

ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE) written procedures

APPENDIX D

Annual Standards and Specifications for Erosion and Sediment Control and Stormwater
Management

APPENDIX E

DEQ Approval Letter of the University of Mary Washington Construction Standards and
Specifications

APPENDIX F

The University of Mary Washington Stormwater Operations and Maintenance Manual

1.0 INTRODUCTION

This MS4 Program plan has been prepared based on the University of Mary Washington General VPDES Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4) under General Permit No.: VAR040094. This document is intended to demonstrate compliance with the permit's requirements for reporting the MS4 Program Plan. Included tables outline compliance for each section of the report. Associated documents have been included in the Appendices or can be provided upon request.

1.1 Summary of Changes

In compliance with permit Part I.C.4, the following changes have been made since the last MS4 Program Plan:

- ◆ Link to the current version of UMW's Annual Standards and Specifications has been revised.
- ◆ Appendix A has been revised.
- ◆ Appendix B has been revised.
- ◆ Appendix C has been revised.
- ◆ Appendix D added directly to this document.
- ◆ Appendix E added directly to this document.
- ◆ Appendix F added directly to this document.

2.0 PART 1.C – THE MS4 PROGRAM PLAN

See Table 1 (below) for general permit Part I.C compliance summary– The MS4 Program Plan:

Table 1: MS4 Program Plan Table – Part I.C – The MS4 Program Plan

| MS4 Permit ID | Permit Requirement | Responsible Party | Compliance Action |
|----------------|---|--|--|
| Part I.C.1 | The MS4 program plan shall include, at a minimum, the following written items | | |
| Part I.C.1.a | The roles and responsibilities of each of the permittee's divisions and departments in the implementation of the requirements of the permit tasked with ensuring that the permit requirements are met; | Capital Outlay Les Johnson | See Appendix A for list of roles and responsibilities |
| Part I.C.1.b | If the permittee utilizes another entity to implement portions of the MS4 program, a copy of the written agreement. The description of each party's roles and responsibilities, including any written agreements with third parties, shall be updated as necessary | Capital Outlay Les Johnson | Draper Aden Associates contracted with the permittee. Written agreements available upon request |
| Part I.C.1.c | For each MCM in Part I.E, the following information shall be included | | |
| Part I.C.1.c.1 | Each specific requirement as listed in Part I.E for each MCM | | See tables for each MCM |
| Part I.C.1.c.2 | A description of the BMPs or strategies that the permittee anticipates will be implemented to demonstrate compliance with the permit conditions in Part I.E | See tables for each MCM | See tables for each MCM |
| Part I.C.1.c.3 | All standard operating procedures or policies necessary to implement the BMPs | See tables for each MCM | See tables for each MCM |
| Part I.C.1.c.4 | The measurable goal by which each BMP or strategy will be evaluated; and | See tables for each MCM | See tables for each MCM |
| Part I.C.1.c.5 | The persons, positions, or departments responsible for implementing each BMP or strategy; and | See tables for each MCM | See tables for each MCM |
| Part I.C.1.d | A list of documents incorporated by reference including the version and date of the document being incorporated. | See tables for each MCM | See tables for each MCM |
| Part I.C.2 | If the permittee is receiving initial coverage under this general VPDES permit for the discharge of stormwater, the permittee shall: | | |
| Part I.C.2.a | No later than six months following the date of permit coverage, submit to the department a schedule for the development of each component of the MS4 program plan in accordance with Part I.C.1 that does not exceed the expiration date of this permit; and | Les Johnson Capital Outlay Program Coordinator | MS4 Program Plan was submitted to DEQ on September 30, 2018. Revision submitted May 19, 2020. |
| Part I.C.2.b | Provide to the department a copy of the MS4 program plan upon completion of development. | Les Johnson Capital Outlay Program Coordinator | MS4 Program Plan was submitted to DEQ on September 30, 2018. Revision submitted May 19, 2020. |
| Part I.C.3 | If the permittee was previously covered under the General VPDES Permit for the Discharge of Stormwater from MS4 effective July 1, 2013, the permittee shall update the MS4 program plan to meet the requirements of this permit no later than six months after the effective date of this permit unless otherwise specified in another permit condition and shall post the most up-to-date version of MS4 program plan on the permittee's website or location where the MS4 program plan can be obtained as required by Part I.E.2 within 30 days of updating the MS4 program plan. Until such time that the MS4 program plan is updated in accordance with Part I.E, the permittee shall continue to implement the MS4 program plan in effect at the time that coverage is issued under this general permit. | Les Johnson Capital Outlay Program Coordinator | MS4 Program Plan has been maintained and updated. The University website has been updated and contains links to the latest MS4 Program Plan. |
| Part I.C.4 | Revisions to the MS4 program plan are expected throughout the life of this permit as part of the iterative process to reduce pollutant loading and protect water quality to the maximum extent practical. As such, revisions made in accordance with this permit as a result of the iterative process do not require modification of this permit. The permittee shall summarize revisions to the MS4 program plan as part of the annual report as described in Part I.D.2. | Les Johnson Capital Outlay Program Coordinator | Program plan will be updated, and summarization of revisions will be provided. |

| MS4 Permit ID | Permit Requirement | Responsible Party | Compliance Action |
|---------------|--|--|--|
| Part I.C.5 | The permittee may demonstrate compliance with one or more MCM in Part I.E through implementation of separate statutory or regulatory programs provided that the permittee's MS4 program identifies and fully describes any program that will be used to satisfy one or more of the minimum control measures of Part I E. If the program that the permittee is using requires the approval of a third party, the program shall be fully approved by the third party, or the permittee shall be working toward getting full approval. Documentation of the program's approval status, or the progress toward achieving full approval, shall be included in the annual report required by Part I D. The permittee shall remain responsible for compliance with the permit requirements if the other entity fails to implement one or more components of the control measures. | See tables for each MCM | See tables for each MCM |
| Part I.C.6 | The permittee may rely on another entity to satisfy the permit requirements to implement a minimum control measure if: | | No other entity is used to satisfy the permit requirements. |
| Part I.C.6.a | The other entity, in fact, implements the control measure; | | |
| Part I.C.6.b | The particular control measure, or component thereof, is at least as stringent as the corresponding permit requirement; | | |
| Part I.C.6.c | The other entity agrees to implement the control measure on behalf of the permittee; and | | |
| Part I.C.6.d | The agreement between the parties is documented in writing and retained by the permittee with the MS4 program plan for as long as the agreement is active | | |
| Part I.C.6 | The permittee shall remain responsible for compliance with requirements of the permit and shall document in the annual reports required in accordance with Part I D that another entity is being relied on to satisfy all or part of the state permit requirements. The permittee shall provide the information required in Part I D. | | |
| Part I.C.7 | If the permittee relies on another governmental entity regulated under 9VAC25-870-380 to satisfy all of the state permit obligations, including the obligation to file periodic reports required by Part I D, the permittee must note that fact in the registration statement, but is not required to file the periodic reports. The permittee remains responsible for compliance with the state permit requirements if the other entity fails to implement the control measures or components thereof. | Les Johnson Capital Outlay Program Coordinator | The University does not rely on another government entity to satisfy any parts |

Commented [MO1]: Part I.C.6 - check numbering

3.0 PART 1.E – MINIMUM CONTROL MEASURES (MCM)

3.1 Part I.E.1 – Public Education and Outreach

See Table 2 for outline of general permit compliance for Part I.E.1 – Public Education and Outreach:

Table 2: MS4 Program Plan – Part I.E.1 – Public Education and Outreach

| MS4 Permit ID | Permit Requirement | Description of BMP'S Strategies | Standard Operation Procedure or Policies | Measurable Goal | Responsible Party | Associated Documents |
|----------------|--|--|--|--|---|--|
| Part I.E.1.F | The MS4 program plan shall include: | | | | | |
| Part I.E.1.f.1 | A list of the high-priority stormwater issues the permittee will communicate to the public as part of the public education and outreach program; | <ol style="list-style-type: none"> Proper collection and disposal of pet waste Proper disposal of human-generated litter Stormwater reuse strategies which incorporate Virginia Native Plant Materials | N/A | N/A | Richard Blair Landscape & Grounds Department Director | Refer to University MS4 webpage (https://adminfinance.umw.edu/facilities/storm-water-management-ms4-program/umw-local-chesapeake-bay-bacteria-tmdl-action-plan/) |
| Part I.E.1.f.2 | The rationale for selection of each high-priority stormwater issue and an explanation of how each education or outreach strategy is intended to have a positive impact on stormwater discharges; | <ol style="list-style-type: none"> Proper collection and disposal of pet waste was selected due to the large areas of open land in the services area that pet owners like to visit. Reduction of human generated waste was selected as means to address stormwater and aesthetics concerns within the service area. The reduction of human generated waste we allow for the facilities SMF to operate efficiently. Incorporation of Virginia Native Plant Materials was selected as it aligns with the University's other goals and efforts. The use of native plants helps prevent the introduction of invasive specials and makes for a cohesive ecosystem. | N/A | <ol style="list-style-type: none"> Amount of waste disposal bags dispensed at waste stations. Pounds of waste collected at waste collection events. Reduction of non-native species of plant material. | Richard Blair Landscape & Grounds Department Director | Refer to University MS4 webpage (https://adminfinance.umw.edu/facilities/storm-water-management-ms4-program/umw-local-chesapeake-bay-bacteria-tmdl-action-plan/) |
| Part I.E.1.f.3 | Identification of the public audience to receive each high-priority stormwater message | <ol style="list-style-type: none"> Pet owners. Student body of the University Surrounding home and business owners. | N/A | % of audience reached | Richard Blair Landscape & Grounds Department Director | Refer to University MS4 webpage (https://adminfinance.umw.edu/facilities/storm-water-management-ms4-program/umw-local-chesapeake-bay-bacteria-tmdl-action-plan/) |
| Part I.E.1.f.4 | The strategies from Table 1 of Part I E 1 d to be used to communicate each high-priority stormwater message; and | <ol style="list-style-type: none"> Permanent signage has been installed to communicate with pet owners. Radio and curriculum materials were used to communicate with the student body of the University Speaking engagements and training material were used to communicate with surrounding home and business owners. | N/A | <ol style="list-style-type: none"> Number of signs Length of radio information is broadcasted, and number of curriculum material handed out. Number of attendants at speaking engagements and number of training material handed out. | Richard Blair Landscape & Grounds Department Director | See Appendix B for education and outreach event information |

Commented [MO2]: Need copy of this from UMW

Commented [MO3]: need docs from UMW. reference website?

Commented [MO4]: need docs / reference website?

| MS4 Permit ID | Permit Requirement | Description of BMP'S Strategies | Standard Operation Procedure or Policies | Measurable Goal | Responsible Party | Associated Documents |
|----------------|---|---|--|-----------------|---|--|
| Part I.E.1.f.5 | The anticipated time periods the messages will be communicated or made available to the public. | Refer to University MS4 webpage: https://adminfinance.umw.edu/facilities/storm-water-management-ms4-program/public-education-and-outreach/ | N/A | N/A | Richard Blair Landscape & Grounds Department Director | Refer to University MS4 webpage https://adminfinance.umw.edu/facilities/storm-water-management-ms4-program/public-education-and-outreach/ |

3.2 Part I.E.2 – Public Involvement and Participation

See Table 2 for outline of general permit compliance for Part I.E.2 – Public Involvement and Participation:

Table 3: MS4 Program Plan – Part I.E.2 – Public Involvement and Participation

| MS4 Permit ID | Permit Requirement | Description of BMP'S Strategies | Standard Operation Procedure or Policies | Measurable Goal | Responsible Party | Associated Documents |
|----------------|---|---|--|-----------------|---|---|
| Part I.E.2.e | The MS4 program plan shall include: | | | | | |
| Part I.E.2.e.1 | The webpage address where mechanisms for the public to report (i) potential illicit discharges, improper disposal, or spills to the MS4, (ii) complaints regarding land disturbing activities, or (iii) other potential stormwater pollution concerns | Required website: https://adminfinance.umw.edu/facilities/storm-water-management-ms4-program/report-a-problem/ | N/A | Web Page | Richard Blair Landscape & Grounds Department Director | Refer to University MS4 webpage: https://adminfinance.umw.edu/facilities/storm-water-management-ms4-program/report-a-problem/ |
| Part I.E.2.e.2 | The webpage address that contains the methods for how the public can provide input on the permittee's MS4 program; and | Webpage is currently under development. | N/A | Web Page | Richard Blair Landscape & Grounds Department Director | |
| Part I.E.2.e.3 | A description of the public involvement activities to be implemented by the permittee, the anticipated time period the activities will occur, and a metric for each activity to determine if the activity is beneficial to water quality. An example of metrics may include the weight of trash collected from a stream cleanup, the number of participants in a hazardous waste collection event, etc. | Refer to University MS4 webpage: https://adminfinance.umw.edu/facilities/storm-water-management-ms4-program/public-involvement-opportunities/ | N/A | | Richard Blair Landscape & Grounds Department Director | Refer to University MS4 webpage: https://adminfinance.umw.edu/facilities/storm-water-management-ms4-program/public-involvement-opportunities/ |

3.3 Part I.E.3 – Illicit Discharge Detection and Elimination

See Table 2 for outline of general permit compliance for Part I.E.3 – Illicit Discharge Detection and Elimination:

Table 4: MS4 Program Plan Table – Part I.E.3 – Illicit Discharge Detection and Elimination

| MS4 Permit ID | Permit Requirement | Description of BMP'S Strategies | Standard Operation Procedure or Policies | Measurable Goal | Responsible Party | Associated Documents |
|----------------|--|--|--|---|--|---|
| Part I.E.3.d | The MS4 program plan shall include: | | | | | |
| Part I.E.3.d.1 | The MS4 map and information table required by Part I E 3 a. The map and information table may be incorporated into the MS4 program plan by reference. The map shall be made available to the department within 14 days upon request; | Map and required data have been developed. Maps can be found as part of the University of Mary Washington Stormwater Master Plan dated September 28, 2018. Interactive maps can also be located online at: https://adminfinance.umw.edu/facilities/storm-water-management-ms4-program/umw-ms4-maps/ | N/A | Maintain and update map as needed | Les Johnson Capital Outlay Program Coordinator | Maps were included as part of the University of Mary Washington Stormwater Master Plan dated September 28, 2018 |
| Part I.E.3.d.2 | Copies of written notifications of new physical interconnections given by the permittee to other MS4s; and | No new interconnections have been established. | N/A | Maintain and update the list of interconnections. | Les Johnson Capital Outlay Program Coordinator | Letter of interconnections available upon request. |
| Part I.E.3.d.3 | The IDDE procedures described in Part I.E.3.c | The Illicit Discharge Detection and Elimination (IDDE) written procedures are currently under development. Document will be submitted for review once complete | N/A | Maintain and update procedures as-need | Les Johnson Capital Outlay Program Coordinator | See Appendix C for Illicit Discharge Detection and Elimination (IDDE) written procedures. |

3.4 Part I.E.4 – Construction Site Stormwater Runoff Control

See Table 2 for outline of general permit compliance for Part I.E.4 – Construction Site Stormwater Runoff Control:

Table 5: MS4 Program Plan – Part I.E.4 – Construction Site Stormwater Runoff Control

| MS4 Permit ID | Permit Requirement | Description of BMP'S Strategies | Standard Operation Procedure or Policies | Measurable Goal | Responsible Party | Associated Documents |
|------------------|---|---|--|---|--|---|
| Part I.E.4.c | The permittee's MS4 program plan shall include: | | | | | |
| Part I.E.4.c.1 | If the permittee implements a construction site stormwater runoff control program in accordance with Part I E 4 a (1), the local ordinance citations for the VESCP program; | | | Does not apply to the University | | |
| Part I.E.4.c.2 | If the permittee implements a construction site stormwater runoff control program in accordance with Part I E 4 a (3): | | | The University implements construction site stormwater runoff control program in accordance with Part I E 4 a (3) | | |
| Part I.E.4.c.2.a | The most recently approved standards and specifications or if incorporated by reference, the location where the standards and specifications can be viewed; and | The University has established standards and specifications in accordance with the Virginia Law. See Appendix D. | Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management | Maintain the Standards and Specifications. | Gary Hobson Capital Outlay Department Director | See Appendix D for Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management |
| Part I.E.4.c.2.b | A copy of the most recent standards and specifications approval letter from the department; | See Appendix E for most recent standard and specification approval letter. | Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management | Maintain DEQ approval of Standards and Specifications. | Gary Hobson Capital Outlay Department Director | See Appendix E for most recent standard and specification approval letter. |
| Part I.E.4.c.3 | A description of the legal authorities utilized to ensure compliance with Part I E 4 a to control construction site stormwater runoff control such as ordinances, permits, orders, specific contract language, policies, and interjurisdictional agreements | | | Does not apply to the University | | |
| Part I.E.4.c.4 | Written inspection procedures to ensure the erosion and sediment controls are properly implemented and all associated documents utilized during inspection including the inspection schedule | See Appendix D for Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management | Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management | Maintain the Standards and Specifications. | Gary Hobson Capital Outlay Department Director | See Appendix D for Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management |
| Part I.E.4.c.5 | Written procedures for requiring compliance through corrective action or enforcement action to the extent allowable under federal, state, or local law, regulation, ordinance, or other legal mechanisms; and | See Appendix D for Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management | Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management | Maintain the Standards and Specifications. | Gary Hobson Capital Outlay Department Director | See Appendix D for Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management |
| Part I.E.4.c.6 | The roles and responsibilities of each of the permittee's departments, divisions, or subdivisions in implementing the construction site stormwater runoff control requirements in Part I E 4. | See Appendix A for list of roles and responsibilities | N/A | Maintain the list of roles and responsibilities | Les Johnson Capital Outlay Program Coordinator | See Appendix A for list of roles and responsibilities |

3.5 Part I.E.5 – Post-Construction Stormwater Management for New Development and Development On Prior Developed Lands

See Table 2 for outline of general permit compliance for Part I.E.5 – Post-Construction Stormwater Management for New Development and Development on Prior Developed Lands:

Table 6: MS4 Program Plan Table – Part I.E.5 – Post-Construction Stormwater Management for New Development and Development On Prior Developed Lands

| MS4 Permit ID | Permit Requirement | Description of BMP'S Strategies | Standard Operation Procedure or Policies | Measurable Goal | Responsible Party | Associated Documents |
|------------------|--|---|--|--|---|---|
| Part I.E.5.h | The MS4 program plan shall include: | | | | | |
| Part I.E.5.h.1 | If the permittee implements a VSMP in accordance with Part I E 5 a (1) and (2): | | | Does not apply to the University | | |
| Part I.E.5.h.1.a | A copy of the VSMP approval letter issued by the department | | | Does not apply to the University | | |
| Part I.E.5.h.1.b | Written inspection procedures and all associated documents utilized in the inspection of privately-owned stormwater management facilities; and | | | Does not apply to the University | | |
| Part I.E.5.h.1.c | Written procedures for compliance and enforcement of inspection and maintenance requirements for privately owned BMPs | | | Does not apply to the University | | |
| Part I.E.5.h.2 | If the permittee implements a post-development stormwater runoff control program in accordance with Part I E 5 a (3): | The University implements a post-development stormwater runoff control program in accordance with Part I E 5 a (3) | | | | |
| Part I.E.5.h.2.a | The most recently approved standards and specifications or if incorporated by reference, the location where the standards and specifications can be viewed; and | The University has established standards and specifications in accordance with the Virginia Law | Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management | Maintain the Standards and Specifications. | Gary Hobson Capital Outlay Department Director | See Appendix D for Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management |
| Part I.E.5.h.2.b | A copy of the most recent standards and specifications approval letter from the department. | See Appendix E for most recent standard and specification approval letter. | Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management | Maintain DEQ approval of Standards and Specifications. | Gary Hobson Capital Outlay Department Director | See Appendix E for most recent standard and specification approval letter. |
| Part I.E.5.h.3 | A description of the legal authorities utilized to ensure compliance with Part I E 5 a for post-construction stormwater runoff control such as ordinances (provide citation as appropriate), permits, orders, specific contract language, and interjurisdictional agreements | The UMW Operations and Maintenance manual for SMF is currently under development. Manual will be shared with DEQ once it is complete. | UMW Operations and Maintenance manual for SMF | Maintain the Operation and Maintenance manual. | Richard Blair Landscape & Grounds Department Director | See the UMW Operations and Maintenance manual for SMF |
| Part I.E.5.h.4 | Written inspection procedures and all associated documents utilized during inspection of stormwater management facilities owned or operated by the permittee | The UMW Operations and Maintenance manual for SMF is currently under development. Manual will be shared with DEQ once it is complete. | UMW Operations and Maintenance manual for SMF | Maintain the Operation and Maintenance manual. | Richard Blair Landscape & Grounds Department Director | See the UMW Operations and Maintenance manual for SMF |
| Part I.E.5.h.5 | The roles and responsibilities of each of the permittee's departments, divisions, or subdivisions in implementing the post-construction stormwater runoff control program; and | See Appendix A for list of roles and responsibilities | N/A | Maintain the list of roles and responsibilities | Richard Blair Landscape & Grounds Department Director | See Appendix A for list of roles and responsibilities |

| MS4 Permit ID | Permit Requirement | Description of BMP'S Strategies | Standard Operation Procedure or Policies | Measurable Goal | Responsible Party | Associated Documents |
|----------------|---|---|--|-----------------------------------|--|---|
| Part I.E.5.h.6 | The stormwater management facility spreadsheet or database incorporated by reference and the location or webpage address where the spreadsheet or database can be reviewed. | No new facility has been installed since last reporting. Database has been incorporated into the interactive maps located at: https://adminfinance.umw.edu/facilities/storm-water-management-ms4-program/umw-ms4-maps/ | N/A | Maintain and update map as needed | Gary Hobson Capital Outlay Department Director | Maps were included as part of the University of Mary Washington Stormwater Master Plan dated September 28, 2018 |

3.7 Part I.E.6 – Pollution Prevention and Good Housekeeping for Facilities Owned or Operated by the Permittee Within the MS4 Service Area

See Table 2 for outline of general permit compliance for Part I.E.6 – Pollution Prevention and Good Housekeeping for Facilities Owned or Operated by the Permittee within the MS4 Service Area:

Table 7: MS4 Program Plan Table – Part I.E.6 – Pollution Prevention and Good Housekeeping for Facilities Owned or Operated by the Permittee Within the MS4 Service Area

| MS4 Permit ID | Permit Requirement | Description of BMP'S Strategies | Standard Operation Procedure or Policies | Measurable Goal | Responsible Party | Associated Documents |
|------------------|--|---|--|---|---|---|
| Part I.E.6.p | The MS4 program plan shall include | | | | | |
| Part I.E.6.p.1 | The written procedures for the operations and maintenance activities as required by Part I E 6 a; | The Universities Operations and Maintenance Manual is currently in development. Once completed manual will be submitted to DEQ for review | UMW Operations and Maintenance manual | Maintain and update the UMW operations and maintenance manual as needed | Gary Hobson Capital Outlay Department Director | See appendix F for The University of Mary Washington Stormwater Operations and Maintenance Manual. |
| Part I.E.6.p.2 | A list of all high-priority facilities owned or operated by the permittee required in accordance with Part I E 6 c, and whether or not the facility has a high potential to discharge; | The Physical Plant on Hanover Street is the only site within the service area designated as a "high-priority facility". This facility does not have a high potential for discharge. | Physical Plant SWPPP | Maintain and update the Physical Plant SWPPP as needed | Gary Hobson Capital Outlay Department Director | The SWPPP for the Physical Plant is available at the front desk of the facility. |
| Part I.E.6.p.3 | A list of lands for which turf and landscape nutrient management plans are required in accordance with Part I E 6 i and j, including the following information: | Nutrients are applied at: 1. Main Campus 2. Belmont 3. Athletic Fields | Nutrient Management plan | Maintain and update the Nutrient Management plan as needed. | Richard Blair Landscape & Grounds Department Director | See the Nutrient Management plan. |
| Part I.E.6.p.3.a | The total acreage on which nutrients are applied | Nutrients is applied to 63.62 acres | Nutrient Management plan | Maintain and update the Nutrient Management plan as needed. | Richard Blair Landscape & Grounds Department Director | See the Nutrient Management plan. |
| Part I.E.6.p.3.b | The date of the most recently approved nutrient management plan for the property; and | | Nutrient Management plan | N/A | Richard Blair Landscape & Grounds Department Director | See the Nutrient Management plan. |
| Part I.E.6.p.3.c | The location in which the individual turf and landscape nutrient management plan is located; | The UMW Nutrient Management Plan is located in the office of the Landscape and Grounds Supervisor at the Physical Plant on Hanover Street. | Nutrient Management plan | N/A | Richard Blair Landscape & Grounds Department Director | See the Nutrient Management plan. |
| Part I.E.6.p.4 | A summary of mechanisms the permittee uses to ensure contractors working on behalf of the permittees implement the necessary good housekeeping and pollution prevention procedures, and stormwater pollution plans as appropriate; and | See Appendix D for Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management | Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management | Maintain the Standards and Specifications. | Richard Blair Landscape & Grounds Department Director | See Appendix D for Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management |
| Part I.E.6.p.5 | The written training plan as required in Part I E 6 m | Written training plan is currently under development. Training plan will be shared with DEQ once complete. | UMW Training Plan | Maintain, update, and implement the UMW Training Plan | Richard Blair Landscape & Grounds Department Director | |

APPENDIX A
ROLES AND RESPONSIBILITIES OF PERMITTEE'S DIVISIONS AND DEPARTMENTS

| Title | Department | Contact | Responsibility |
|--|--------------------------|---|---|
| Vice President | Administration & Finance | Paul Messplay pmesspla@umw.edu 540-654-1410 | Executive administration of the MS4 program, authorizing UMW policy related to the program. Determines funding within available university resources. |
| Associate Vice President (Interim Director) | Facilities Services | Stuart Sullivan ssulliva@umw.edu 540-654-2080 | Administration of MS4 program, directing personnel and program objectives to maximize available resources. Executive administration of UMW Annual Standards and Specification for construction. |
| Department Director | Capital Outlay | Gary Hobson ghobson@umw.edu 540-654-1292 | Administration and revision of UMW Annual Standards and Specifications. Administration of construction stormwater management E&S regulation, inspection, and enforcement. Coordinate E&S and stormwater management training and certification. |
| Department Director | Landscape & Grounds | Richard Blair rblair@umw.edu 540-654-2091 | Administration of Stormwater Management Facilities (SMF) inspection and maintenance. Manages contract maintenance service providers. Advises AVP of Facilities Services on BMP changes in SMF operations. Provides operational information, and opportunities for Education and Outreach programs, to MS4 Program Coordinator for inclusion in Annual report. |

| | | | |
|----------------------------------|------------------------|---|--|
| Department Assistant Director | Landscape & Grounds | Holly Chichester hchiches@umw.edu 540-654-2088 | Provisionally approved Stormwater Inspector. In coordination with Project Inspector and Program Coordinator, conducts periodic inspection of SWM facilities. Reports maintenance needs to Landscape & Grounds Director, and oversees corrective action once funding has been approved. |
| Program Coordinator | Capital Outlay | Les Johnson ajohnso3@umw.edu 540-654-2100 | Collects data from the MCM elements of the MS4 Program Plan for inclusion in the Annual report. Arranges meeting times and places for regional MS4 operator quarterly meetings. Helps the UMW community in Education, and Outreach, opportunities through engagement with university departments and local riverine and water quality organizations. |
| Project Inspector | Capital Outlay | Tanasha Whittaker twhittak@umw.edu 540-654-2077 | Performs inspections and issues reports for construction E&S work, providing an annual summary report to Program Coordinator. Collects data on IDDE events, providing an annual summary report to the Program Coordinator. Advises Department Directors and Program Coordinator on site conditions resulting from implementation of BMP. |
| Third Party | Draper Aden Associates | Glenn Telfer 804-264-2228 gtelfer@daa.com | Provides 3rd party SMF inspections. Provides assistance preparing / updating MS4-related programs and forms as may be deemed necessary by UMW. Provides other services as required by UMW. |

APPENDIX B
EDUCATION AND OUTREACH EVENT INFORMATION

Public Education and Outreach

Rappahannock River Report Card

Issued June 2018

To Be Continued 2020-2021

UMW has cosponsored a *Report Card for Health of the Rappahannock River* with Friends of the Rappahannock. The Middle Rappahannock Report Card is an effort to quantify observations and conditions of this waterway in order to help the community of Planning District 16 understand the condition of their waterways and the land that surrounds them, and to identify how the Rappahannock River watershed is performing within its specific context and geography.

This report card will be continued to be distributed both in print and through electronic media to people throughout the greater Fredericksburg area.

<https://riverfriends.org/wp-content/uploads/2018/12/Report-Card-Final-Draft-1.pdf>

MCMIA

MCMID

Public Education and Outreach

Butts are Litter Too

November 2020

Downtown Fredericksburg and Fredericksburg Campus

The University of Mary Washington is teaming up with the City of Fredericksburg's Clean and Green Commission again this November for the *Butts are Litter Too* campaign. This year's campaign will kick off with a university clean-up in November 2020, where UMW Students will participate along with others from throughout the city to remove cigarette butts and other litter from the Fredericksburg Campus area.

UMW Office of Sustainability will also place temporary signage throughout campus, as well as post information on social media sites such as UMW's Sustainability Facebook page and Instagram.

Additionally, we will refresh any decals/stickers on any University fleet vehicles.

MCM1C-D

Social Media and Bumper Stickers

MCM2B

Downtown Clean Up

Public Education and Outreach

2021 UMW Earth Day Event

April 2021

Ball Circle

As part of the annual UMW Earth Day Event, Landscape and Grounds \ UMW Sustainability distributes information on pet waste, details on our (cigarette) *Butts Are Litter Too* campaign, UMW stormwater management initiatives, information on native trees, and details about ongoing projects such as mapping UMW's urban forest and identifying and reporting illicit discharge into our stormwater systems. Additionally, temporary signage will be placed at strategic trees on campus explaining each tree's specific benefits regarding stormwater runoff interception, energy conservation, carbon reduction and benefits to wildlife.

Earth day participants may include:

Virginia Department of Forestry

Tri County/City Soil and Water Conservation District

UMW ADOPTA Club

UMW Bee Club

UMW B.E.A.M. Club

UMW Ecology Club

UMW Eco Village and Garden Squad

UMW Campus and Recreation Department

UMW Office of Sustainability

UMW Landscape and Grounds

UMW President's Council on Sustainability

Dr. Alan Griffith

Tree Fredericksburg

Friends of the Rappahannock

Virginia Master Naturalists

Virginia Cooperative Extension Master Gardeners

Fredericksburg Food Coop

Bartlett Tree Experts

Wood Workers

Rappahannock Area Community Services Board

And other vendors....

MCM1A

Public Education and Outreach

2020 UMW Tree Festival

Fall 2020

Ball Circle

The Virginia Department of Forestry will be presented UMW's President, Dr. Troy Paino, with our fifth National Arbor Day Foundation Tree Campus USA designation, recognizing UMW's commitment to maintaining a healthy urban forest.

Local agencies, student groups, and organizations will be invited to celebrate and disseminate information about sustainable activities and opportunities on the UMW campus and within the community. Bartlett Tree Experts will set up a tree climbing demonstration in a mature willow oak on the eastern side of the green, allowing participants to sport safety and climbing gear and get a bird's eye view of Ball Circle and surrounds.

UMW Landscape and Grounds / sustainability Office will distribute information on pet waste, details on our (cigarette) *Butts Are Litter Too* campaign, UMW stormwater management initiatives, information on native trees, and details about ongoing projects like mapping UMW's Trees and identifying and reporting illicit discharge into our stormwater systems. Additionally, temporary signage will be placed at strategic trees on campus explaining each tree's specific benefits regarding stormwater runoff interception, energy conservation, carbon reduction and benefits to wildlife.

Festival participants may include:

Virginia Department of Forestry

Tri County/City Soil and Water Conservation District

UMW ADOPTA Club

UMW Bee Club

UMW B.E.A.M. Club

UMW Ecology Club

UMW Eco Village and Garden Squad

UMW Campus and Recreation Department

UMW Office of Sustainability

UMW Landscape and Grounds

UMW President's Council on Sustainability

Dr. Alan Griffith

Tree Fredericksburg

Friends of the Rappahannock

Virginia Master Naturalists

Virginia Cooperative Extension Master Gardeners

Fredericksburg Food Coop

Bartlett Tree Experts

Wood Workers

Rappahannock Area Community Services Board

MCM1A

Public Involvement Opportunities

Friends of the Rappahannock Big River Clean Up and other River Clean Ups.

Fall 2020

Students from the University of Mary Washington and volunteers for Friends of the Rappahannock will team up on ___DATES___ for a water shed Restoration program. **(Insert blurb here)**
UMW will also co-sponsored the Friends of the Rappahannock Big River Clean Up

MCM2B

Public Involvement Opportunities

Good Neighbor Day

March 21, 2021

Ball Circle / Fredericksburg Campus

UMW Landscape and Grounds will team up with UMW's COAR (Community Engagement) for the annual *Good Neighbor Day* event. Event options include: Litter clean-up, stormwater facility restoration, or pollution prevention.

MCM2B/2E

Public Involvement Opportunities

Storm Drain Identification

Fall 20

Fredericksburg Campus

UMW Landscape and Grounds will team up with UMW Students and others to decorate a select portion of our stormwater manhole covers with pollution prevention messages. Event options may include: Litter clean-up, stormwater facility restoration, or pollution prevention. (may also involve Social Media with contest for best design etc.)

MCM2B/2E

Into the Streets

September 2020

Ball Circle / Fredericksburg Campus

UMW Landscape and Grounds will team up with UMW's COAR (Community Engagement) for the annual *Into the Streets* program. This year a campus wide litter clean up event is planned. Three teams of approximately 10 students each dispersed across campus collecting litter and debris from the grounds. 15 other Students participated in the sanding and painting of outdoor recycling containers, while the remaining 15 students removed invasive ivy from campus trees.

MCM2B

Public Involvement Opportunities

Pet Waste Stations ***Ongoing*** ***Fredericksburg Campus***

UMW Landscape and Grounds maintains four Pet Waste Stations on campus and routinely monitors / refreshes supplies. Bag usage is tallied at end of permit year to determine program success.

MCM2E

Public Involvement Opportunities

Wild & Scenic Film Festival

March 2021

UMW will once again co-sponsor the *Wild & Scenic Film Festival* along with the Friends of the Rappahannock and others.

Wild & Scenic Film Festival showcases the best and most inspiring environmental and adventure films of the past year. The festival celebrates the wild and fragile beauty of our environment, the animals and plants that populate it and the people who work to preserve it. Through these stunningly beautiful films you will be inspired to explore the wild places in your own backyard and around the world. Join us and become a partner in protecting the health and scenic beauty of the Rappahannock for future generations.

MCM2E

APPENDIX C

ILLCIT DISCHARGE DETECTION AND ELIMINATION (IDDE) WRITTEN PROCEDURES

LEGAL AUTHORITIES:

The University of Mary Washington (UMW) has a permit to operate a Municipal Separate Storm Sewer System (MS4) issued by the Virginia Department of Environmental Quality. This permit authorizes UMW to discharge stormwater pursuant to the Virginia Stormwater Management Program and the Virginia Stormwater Management Act. These procedures are developed as part of MS4 permit part I-E-3-c.

Since storm drain systems are not connected to a sanitary sewer treatment plant, water traveling through the storm drain system flows directly to local streams, rivers and lakes untreated. An illicit discharge to the storm system is generally defined as any discharge that is not composed entirely of stormwater. A list of approved non-stormwater discharge can be found in 9VAC25-890-20 D 3. UMW's MS4 Program "shall include all procedures developed by the operator to detect, identify, and address unauthorized non-stormwater discharges, including illegal dumping to the MS4."

4.0 RESPONSIBILITIES:

1. Capital Outlay E&S Inspector and the Landscape and Grounds Manager
 - a. Responsible for reporting any illicit discharges discovered during outfall inspections to the MS4 Program Manager, or to the appropriate Facilities Management leadership if the MS4 Program Manager is unavailable.
2. MS4 Program Manager
 - a. Maintains the Illicit Discharge Log
 - b. Prepares the annual Illicit Discharge Summary report and posts it to the FM MS4 web page.
 - c. Provides annual training to Facilities staff.
 - d. Provides annual program review and update, as appropriate.
3. Director, Emergency Management & Safety

- a. Responsible for reporting the illicit discharge to the appropriate regulatory agencies as required, and to the MS4 Program Manager.
- b. Provides technical assistance to emergency responders for hazardous materials spills.

4. Facilities Directors

- a. All Facilities directors are responsible for ensuring that employees are properly informed of and trained on how to prevent illicit discharges from their operations and understand how to trace an illicit discharge upon discovery.
- b. Managers and supervisors are responsible for ensuring training is conducted with the most recent version of the IDDE Standard Operating Procedures.

5. Personnel Performing the Job

- a. Facilities Maintenance & Operations staff, and Landscape & Grounds staff, are required to understand and follow these procedures upon receipt of proper training.

5.0 PROCEDURES

The purpose of this procedure is to identify and address any illicit discharges detected during storm sewer outfall inspections, dry weather screening, or other reported illicit discharges impacting the storm sewer system.

1. Initial Notification

- a. The MS4 Program Manager will be notified of any illicit discharge detected during any storm sewer-related inspection. A complete description of the discharge and as much information as possible will be provided in the notification. Any time the MS4 Program Manager or other Facilities staff are notified of an illicit discharge, the Director of Emergency Management and Safety shall also be notified of the illicit discharge. EM&S staff shall immediately follow up on the illicit discharge report.

- b. When contaminant is discovered, the MS4 Program Manager will enter information about the incident in the Illicit Discharge Investigation log. The log will describe the nature of the contamination and all response and follow-up measures taken to mitigate discharge.

2. Discharge Identified — Primary Option

- a. If the contaminant is identified as a sanitary sewer overflow, Facilities staff will install emergency containment such as sandbags or other means. An emergency contractor will then be called to clean the spill using a vacuum truck or other appropriate means.
- b. Petroleum spills are to be cleaned up in accordance with the UMW Emergency Operations Plan and Fredericksburg Fire Department's oversight.
- c. If the contaminant is identified as dangerous, immediately call the UMW Police at 540-654-4444 and notify the Office of Emergency Management & Safety (OEMS) 540-654-2108 for technical assistance on the clean-up. For more information on hazardous materials spill response, refer to the UMW Emergency Operation Plan and the Stormwater Pollution Prevention Plan.
- d. If the source of the discharge can be immediately identified (such as improper trench dewatering, wash water, or improper disposal of liquids), the staff causing the illicit discharge shall be immediately notified to cease operations. Their supervisor shall be contacted and re-training of appropriate staff shall take place as soon as possible, but not less than one week.
 - i. If a contractor is causing the illicit discharge on the UMW property, the UMW Staff responsible for contractor oversight must also be contacted. The illicit discharge must be brought to the contractor's attention and the contractor must be made aware of appropriate means for handling trench dewatering, wash water, or other liquids on UMW property.

3. Discharge Not Identified —Secondary Option

If the nature and source of the discharge is not immediately obvious, use strategies to test the discharge and locate the source of contamination.

- a. Use GIS map (<https://adminfinance.umw.edu/facilities/storm-water-management-ms4-program/umw-ms4-maps/>) to strategically check manholes in the upstream tributary storm sewer system for contamination.
 - i. Visual observations should be used to look for presence of flow, colors, odors, floatable materials, or deposits or stains. The GIS map can then be used to trace the path of manholes back to the potential source
 - ii. Manholes closest to the outfall should be investigated first, with staff progressively moving up the sewer network and inspecting manholes until it can be determined either the specific entry point where the source is coming in, or the general entry between two manholes where the source is coming in.
- b. Dye testing may be conducted to determine if there are any improper connections between the sanitary sewer and the storm sewer. Dye tests can also provide valuable information as to whether stormwater systems are malfunctioning, and can confirm water flow direction.
- c. Camera equipment may also be used to locate the source of contamination, by exploring the storm sewer system and looking for pollution between manholes.
- d. Smoke testing may be used to identify cross-connections with the sanitary sewer or other underground sources caused by damage to the storm drain. Smoke testing should be used as a last resort. If smoke testing is used, adequate notification shall be provided so as not to cause alarm.

Once the source of an illicit discharge is confirmed, response personnel will fix or eliminate the discharge. If the source of the illicit discharge is not UMW, the UMW OEMS Director shall forward information on the illicit discharge to appropriate offices of the City of Fredericksburg.

6.0 DRY WEATHER FIELD SCREENING:

Procedures

1. Field observations of MS4 outfalls shall be conducted at least once per year during dry weather conditions. Observations shall be recorded using the current inspection form and information entered into a tracking database. If flow is observed, or evidence suggests that illicit discharges may exist, further investigation shall be conducted by any of the following methods:
 - a. Tracing discharge upstream of storm sewer system
 - i. Visual observations should be used to look for presence of flow, colors, odors, floatable materials, or deposits or stains. The GIS map can then be used to trace the path of manholes back to the potential source
 - ii. Manholes closest to the outfall should be investigated first, with staff progressively moving up the sewer network and inspecting manholes until it can be determined either the specific entry point where the source is coming in, or the general entry between two manholes where the source is coming in.
 - b. Taking a sample of discharge for analysis in order to determine if a pollutant is present and identify the pollutant;
 - c. Implement best management practices to eliminate illicit discharges;
 - d. Scheduling follow up observations;
 - e. Any other appropriate measures deemed necessary.

Notification

- a. The MS4 Program Manager will be notified of any illicit discharge detected during any storm sewer-related inspection. A complete description of the discharge and as much information as possible will be provided. Any time the MS4 Program Coordinator or other Facilities staff are notified of an illicit discharge, the Director of Emergency Management and Safety shall also be notified of the illicit discharge. Office of Emergency Management and Safety (OEMS) staff shall immediately follow up on the illicit discharge report.
- b. When the contaminant is discovered, the MS4 Program Coordinator will enter information about the incident in the Illicit Discharge Investigation log. The log will describe the nature of the contamination and all response and follow-up measures taken to mitigate discharge.

Discharge Identified — Primary Option

- c. If the contaminant is identified as a sanitary sewer overflow, Facilities Services Plumbing staff will install emergency containment such as sandbags or other means. An emergency contractor will then be called to clean the spill using a vacuum truck or other appropriate means.
- d. Petroleum spills are to be cleaned up in accordance with the UMW Emergency Operation. If the contaminant is identified as dangerous, immediately call the UMW Police at 540-654-4444 and notify the Office of Emergency Management & Safety (OEMS) for technical assistance on the clean-up. For more information on hazardous materials spill response, refer to UMW Emergency Operations Plan and the Pollution Prevention Plan.

If the source of the discharge can be immediately identified such as improper trench dewatering, wash water, or improper disposal of liquids, the staff causing the illicit discharge should be immediately notified to cease operations.

7.0 **PRIORITIZED SCHEDULE**

1. Interconnection points between the Fredericksburg campus and the surrounding city of Fredericksburg MS4.
2. Stormwater connections to stream restorations.
3. Outfalls to UMW stormwater management facilities (SMFs).

8.0 **FOLLOW-UP**

Upon confirmation that the illicit discharge has been eliminated, either the Capital Outlay E&S Inspector or the Landscape and Grounds Manager should follow up within 48 hours to revisit the site and ensure the illicit discharge has been completely eliminated and that additional issues have not occurred as a result of clean-up efforts. Follow up should be documented on the Illicit Discharge Investigation log for the site.

9.0 **ANNUAL REVIEW OF PROCEDURE/TRAINING**

The MS4 Program Coordinator is responsible for conducting annual training and annual review of these procedures with the appropriate staff.

APPENDIX D
ANNUAL STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT
CONTROL AND STORMWATER MANAGEMENT



Annual Standards and Specifications
for
Erosion and Sediment Control
and
Stormwater Management

January 31, 2020

**Facilities Services
University of Mary Washington
1301 College Avenue
Fredericksburg, VA 22401**

**Annual Standards and Specifications Administrator: Gary Hobson, P.E.
(540) 654-1292
Email: ghobson@umw.edu**

I certify under penalty of law that all documents and all attachments related to the submission and updating of the UMW Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management have been prepared under my direction or supervision in 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 a fine and imprisonment for knowing violations.

Gary T. Hobson, P.E., Dual Program Administrator 0128

INTRODUCTION

The University of Mary Washington (UMW) Erosion and Sediment Control and Stormwater Management Program is an integral component of UMW's design, construction, maintenance, and management of the University's facilities and campuses located in Fredericksburg, Stafford County, and King George County. UMW's Erosion and Sediment Control (ESC) and Stormwater Management (SWM) Annual Standards and Specifications submittal has been developed to ensure that all land-disturbing activities undertaken by UMW will proceed in accordance with the Virginia Erosion and Sediment Control Law (§ 62.1-44.15:51 et. seq.), and The Virginia Erosion and Sediment Control Regulations (§ 9VAC25-840 et. seq.) and the Virginia Stormwater Management Program (VSMP) permit regulations (9VAC25-870 et.seq.), as related to municipal separate storm sewer systems (MS-4) and construction activities. In addition, stormwater management plans will be informed and coordinated with UMW's approved Stormwater Master Plan to the fullest extent possible.

UMW Annual Standards and Specifications for ESC and SWM shall be administered by Facilities Services and shall apply to all plan design, construction, and maintenance activities undertaken by UMW, either by its internal workforce or contracted to external entities, where such activities are regulated by the Virginia ESC Law and regulations or the Virginia SWM Act and VSMP permit regulations. During any of UMW's land-disturbing activities, compliance with the approved UMW Annual Standards and Specifications for ESC and SWM (and all parts thereof), shall be observed.

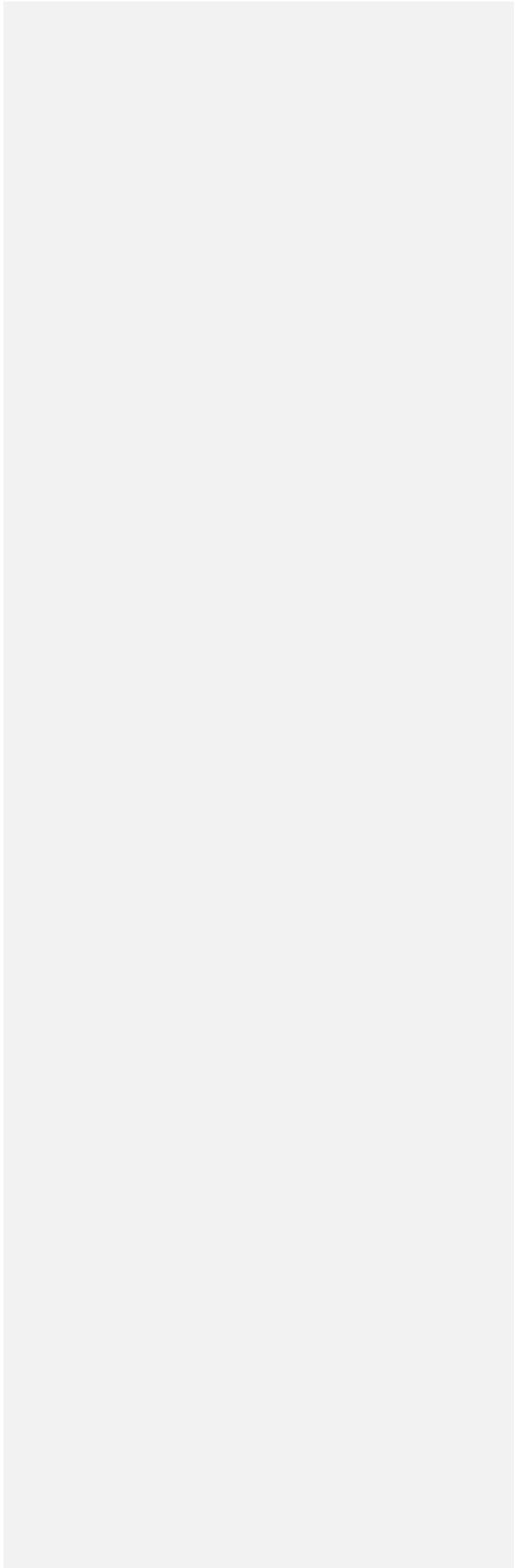
UMW Annual Standards and Specifications for ESC and SWM are submitted to the Department of Environmental Quality (DEQ) for review and approval on an annual basis. This submittal constitutes UMW's commitment to execute all provisions contained herein on our regulated land-disturbing activities and land development projects. As such, this submittal will be made available and utilized as an operational guidance document by all appropriate UMW and DEQ personnel. These Annual Standards and Specifications (as well as, any modifications) will be made available on the University's website at <http://adminfinance.umw.edu/facilities>.

Table of Contents

1.0 ANNUAL STANDARDS AND SPECIFICATIONS ADMINISTRATION 1
2.0 ANNUAL STANDARDS AND SPECIFICATIONS PERSONNEL 3
3.0 ANNUAL STANDARDS AND SPECIFICATIONS IMPLEMENTATION..... 5
4.0 CONSTRUCTION PLAN REQUIREMENTS..... 6
5.0 INSPECTIONS AND ENFORCEMENT 7
6.0 VARIANCES DEVIATIONS AND EXCEPTIONS..... 8
7.0 LAND-DISTURBING ACTIVITES..... 11
8.0 ANNUAL STANDARDS AND SPECIFICATIONS REVIEW AND
EVAULATION 13
9.0 LONG-TERM MAINTENANCE
.....13

APPENDICES

- Appendix – A: ESC/SWM Plan Preparer’s/Reviewer’s Checklists
- Appendix – B: ESC/SWM Inspection Forms
- Appendix – C: Variance Request Form
- Appendix – D: Non-VESCH Specifications



Acronyms and Abbreviations

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

University of Mary Washington Annual Standard and Specifications

1.0 ANNUAL STANDARDS AND SPECIFICATIONS ADMINISTRATION

All UMW-owned property and projects involving land-disturbing activity subject to the Virginia Erosion and Sediment Control Law (§62.1-44 et seq. as amended), the Virginia Erosion and Sediment Control Regulations (9VAC25-840 et seq. as amended), and the Virginia Erosion and Sediment Control Certification Regulations (9VAC25-850 et seq. as amended) and the Virginia Stormwater Management Act (62.1-44. et seq.) and the VSMP Regulations (9VAC25-870 et. seq. as amended) shall be bound by the UMW Annual Standards and Specifications for ESC and SWM. In addition, stormwater management plans will be informed and coordinated with UMW's approved Stormwater Master Plan to the fullest extent possible.

UMW has three campus locations that utilize UMW's AS&S

- University of Mary Washington Fredericksburg Campus
1301 College Ave, Fredericksburg, VA 22401
- University of Mary Washington Stafford Campus
121 University Blvd, Fredericksburg, VA 22406
- University of Mary Washington Dahlgren Campus
4224 University Drive, King George, VA 22485

- 1.1 UMW Annual Standards and Specifications for ESC and SWM approved by DEQ are composed of general specifications. The general specifications for ESC and SWM that apply to the land-disturbing activities, listed in 1.0 above, include by reference the following:
- a. Virginia Erosion and Sediment Control Law (§62.1-44 et seq. as amended)
 - b. Virginia Erosion and Sediment Control Regulations (9VAC25-840 et seq. as amended)
 - c. Virginia Erosion and Sediment Control Certification Regulations (9VAC25-850 et seq. as amended)
 - d. Virginia Erosion and Sediment Control Handbook, 1992
 - e. Virginia Stormwater Management Act (§62.1-44 et seq. as amended)
 - f. Virginia Stormwater Management Permit Regulations (9VAC25-870 et seq. as amended)
 - g. Virginia Stormwater Management Handbook, 1999, as amended
 - h. Virginia Stormwater BMP Clearing House at:
<http://www.vwrrc.vt.edu/swc/index.html>
 - i. Technical Bulletins, as amended, on the Virginia DEQ website at www.deq.virginia.gov
 - j. Memos, as amended, on the Virginia DEQ website at www.deq.virginia.gov
 - ESC Technical Bulletins, as amended, on DEQ web site at:
<http://www.deq.virginia.gov/programs/water/stormwatermanagement/Publications.aspx>.
 - ESC Technical Bulletin #4 – Nutrient Management for Development Sites at:
<http://www.deq.virginia.gov/Portals/0/DEQ/Water/Publications/ESCTechnicalBulletin4.pdf>

- 1.2 Any land-disturbing activity carried out in a locality with a local ESC program with more stringent regulations than those of the state program shall be consistent with the requirements of the local program.
 - 1.2.1 The City of Fredericksburg adopted on October 8, 2013, the Unified Development Ordinance, Chapter 72, which includes Development Standards related to Utilities and more specifically Stormwater, §72-54.3. Development on the Fredericksburg Campus should consider §72-54.3.B.9 regarding post-development stormwater runoff rate of flow and characteristics requiring the design of stormwater management facilities to employ the ten-year frequency, two-hour duration storm to determine pre- and post- development flows; and §72-54.3.B.11 regarding specific local watersheds (volume control areas) and requirement to remove the first one-half inch of runoff from all new impervious surfaces
 - 1.2.2 The use of VESCH control measures (along with accompanying technical documents) is strongly preferred.
 - (i) Non-VESCH control measures, BMPs, and specifications may be included in the Annual Standards and Specifications submittals but their use may be further reviewed and approved by the DEQ on a project specific basis.
 - (ii) Should non-VESCH control measures fail to effectively control soil erosion, sediment deposition, and non-agricultural runoff, then VESCH control measures shall be utilized.
- 1.3 Site-Specific ESC Plans shall be prepared for all projects involving a regulated land-disturbing activity as defined in §62.1-44.15:51. Please note that the Chesapeake Bay Preservation Areas land disturbance threshold is greater than or equal to 2,500 square feet. Site-specific ESC plans shall be submitted to the UMW Facilities Services for review. Checklists that summarize the required components of the ESC Plans are included in Appendix A. Prior to starting a land-disturbing project, as defined in §62.1-44.15:51, the project must have written approval issued by UMW Facilities Services.

When non-VESCH control measures are used, all applicable practical information including definition, purpose, conditions where practice applies, planning considerations, design criteria, construction specifications, design tables and plates, and maintenance and inspections shall be included in the ESC Plan.

When proprietary BMPs are proposed, the specific product manufacturer, appropriate design storm, inspection frequency, maintenance, and other applicable product information shall be provided. Use of proprietary BMPs may be further reviewed and approved on a project-specific basis. For projects that must obtain a GCP this information shall be included in the SWPPP for that project.

- 1.4 A DEQ-Certified Responsible Land Disturber (RLD) shall be designated prior to initiating the land disturbing activity. UMW will notify DEQ of the RLD name, certification number and contact information at least two weeks prior to construction.
- 1.5 If the addition of impervious surfaces is part of the scope of work for a project, a SWM narrative and/or schematic must be submitted concurrently to explain/show how the run-off will be treated.
- 1.6 Site specific SWM plans shall be prepared for all projects involving a regulated land-disturbing activity that requires:
 - A Virginia Stormwater Management Program General Permit for Discharges from Construction Activities

- Land-disturbing activity contained within a watershed of a regional water quality Stormwater management facility.
- Incorporates the use of an LID and/or BMP.
- Changes to the University MS4.

Site specific SWM plans shall be submitted to UMW Facilities Services for review. Prior to starting a land-disturbing project requiring a SWM plan, the project must have an approval issued by Facilities Services.

- 1.7 UMW Facilities Services may request DEQ to grant a project specific variance to the approved UMW Annual Standards and Specifications for ESC and SWM. All requested variances are to be considered unapproved until written approval from DEQ is received. Refer to Section 6.0 for more information on variances.

2.0 ANNUAL STANDARDS AND SPECIFICATIONS PERSONNEL

The UMW Facilities Services shall be the authority for administering UMW Projects under the UMW Annual Standards and Specifications for ESC and SWM. The following is a breakdown of related responsibilities and titles. Responsibilities may be combined in terms of staffing resources only if the person responsible for the task(s) is qualified per the Virginia Erosion and Sediment Control and Stormwater Management Certification Regulations (9VAC25-850 et seq. as amended). The following titles are designated to ensure compliance with UMW Annual Standards and Specifications for ESC on all UMW projects.

- a. An AS&S holder may enter into agreements or contracts with soil and water conservation districts, adjacent localities, or other public or private entities to assist with carrying out the provisions of this article, including the review and determination of adequacy of erosion and sediment control plans submitted for land-disturbing activities on a unit or units of land as well as for monitoring, reports, inspections, and enforcement where authorized in this article, of such land-disturbing activities.
- b. Certification roles are currently fulfilled at UMW in the following manner:
 - DEQ-Certified Inspector for ESC --- In-house by Tanasha Whittaker
 - DEQ-Certified Inspector for SWM --- In-house by Tanasha Whittaker primarily responsible for land disturbing and capital projects; and Holly Chichester (provisionally certified) primarily responsible for MS4 inspections.
 - DEQ-Certified Plan Reviewer for ESC --- In-house by Gary Hobson, registered professional engineer.

- DEQ-Certified Plan Reviewer for SWM --- Contracted service utilizing civil engineering term contract to have DEQ Certified Plan Reviewer provide review of stormwater plans on a project-by-project basis.
 - DEQ-Certified Program Administrator for ESC --- In-house by Gary Hobson.
 - DEQ-Certified Program Administrator for SWM --- In-house by Gary Hobson.
- 2.1 “DEQ-Certified inspector for ESC” means an employee or agent of UMW who: (i) holds a certificate of competence from the Board in the area of project inspection; or, (ii) is enrolled in the Board’s training program for project inspection and successfully completes such program within one year after enrollment; and (iii) shall be responsible to inspect as mandated by the VESCL&R erosion and sediment control measures to ensure proper installation in accordance with the approved plan and record the state and effectiveness of such measures in an effort to minimize site erosion and sediment control.
- 2.2 “DEQ-Certified inspector for SWM” means an employee or agent of UMW: (i) holds a certificate of competence from the Board in the classification of project inspector in the area of SWM; or (ii) is enrolled in the Board’s training program for project inspector and successfully completes such program within one year after enrollment; and, (iii) shall be responsible to inspect the construction of permanent stormwater management controls.
- 2.3 “DEQ-Certified plan reviewer for ESC” means and employee or agent of UMW who: (i) holds a certificate of competence from the Board in the area of plan review; or, (ii) is enrolled in the Board’s training program for plan review and successfully completes such program within one year after enrollment.
- 2.4 “DEQ-Certified plan reviewer for SWM” means and employee or agent of UMW who: (i) holds a certificate of competence from the Board in the area of plan review; or, (ii) is enrolled in the Board’s training program for plan review and successfully completes such program within one year after enrollment.
- 2.5 “DEQ-Certified program administrator for ESC” means and employee or agent of UMW who: (i) holds a certificate of competence from the Board in the area of plan review; or, (ii) is enrolled in the Board’s training program for plan review and successfully completes such program within one year after enrollment.
- 2.6 “DEQ-Certified program administrator for SWM” means and employee or agent of UMW who: (i) holds a certificate of competence from the Board in the area of plan review; or, (ii) is enrolled in the Board’s training program for plan review and successfully completes such program within one year after enrollment.
- 2.7 “DEQ-Certified combined administrator for ESC” means and employee or agent of UMW who: (i) holds a certificate of competence from the Board in the area of program administration, plan review and project inspection; or, (ii) is enrolled in the Board’s training program for program administration and successfully completes such program within one year after enrollment.
- 2.8 “DEQ-Certified combined administrator for SWM” means and employee or agent of UMW who: (i) holds a certificate of competence from the Board in the area of program

administration, plan review and project inspection; or, (ii) is enrolled in the Board's training program for program administration and successfully completes such program within one year after enrollment.

3.0 ANNUAL STANDARDS AND SPECIFICATIONS IMPLEMENTATION

ESC and SWM plans shall comply with UMW Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management, the Virginia Erosion and Sediment Control Law (62.1-44 et seq.), the Virginia Stormwater Management Act (62.1-44 et Seq.), associated ESC and SWM regulations, and the Virginia Stormwater Management Program Permit regulations (9VAC25-870 et Seq.). Refer to Section 1.1 for more information on general specifications. The use of the VESCH, along with the accompanying technical documents and guidance, control measures is strongly preferred. Non-VESCH control measures, BMPs, and specifications may be included

3.1 Submittals

ESC and SWM plans, drawings and narratives shall be submitted to the UMW Facilities Services for review and approval prior to any land-disturbing activities. The plan reviewer shall have 30 days to review the plan and provide written comments. Re-submittals shall include revision notes referenced to written comments. Prior to commencement of a land-disturbing project, the project must have received written approval for the plan(s) from the UMW Facility Services. Projects requiring a CGP must submit a complete and accurate Registration Statement and Fee Form to UMW Facility Services. UMW will submit the completed Registration Statement to DEQ for issuance of the CGP.

- a. UMW documents ESC & SWM plan approval as appropriate by stamping two approved sets (providing copies to UMW and contractor), including approval letter signed by the UMW Program Administrator.
- b. UMW has an existing stormwater master plan and shares plans with design firms for new land disturbing projects to ensure that ESC & SWM plans are properly coordinated with the stormwater master plan and to address any deficiencies, if practical. UMW does use nutrient credits to address quality issues on certain projects and documents the purchases in a single spreadsheet. UMW has only made two purchases to date and these credits have been purchased on a project-specific basis. The nutrient credit spreadsheet will be used to update the stormwater master plan and inform the MS4 program.

3.2 Plan Reviews

Plan reviews shall be conducted by qualified personnel as per the requirements of 9VAC25-850-40.A. Plan reviews shall ensure compliance with the UMW Annual Standards and Specifications. Plan reviewers shall use the Plan Review Checklist provided in Appendix A for ESC and SWM plans.

3.3 Pre-Construction Conference

Prior to commencement of a land disturbance activity, a pre-construction conference shall be held in order to clarify ESC/SWM roles, responsibilities and obligations of all parties involved with the land-disturbing activity. At a minimum, the pre-construction conference will be attended by the UMW Project Manager, UMW ESC and SWM Project Inspector, UMW ESC and SWM Program Administrator, and the project RLD.

3.4 Inspections and Enforcement

Site inspections will be conducted by qualified personnel as defined in Section 2.0. The UMW project manager shall be responsible for ensuring that corrective measures are taken in response to comments and potential violations noted during site inspections. Refer to Section 5.0 for more information on inspections and enforcement procedures.

3.5 Changes and Amendments

An approved plan may be changed by UMW Facilities Services in the following cases:

- a. Where inspection has revealed the plan is inadequate to satisfy applicable regulations; or
- b. Where the person responsible for carrying out the approved plan finds that because of changed circumstances or for other reasons the approved plan cannot be effectively carried out, and proposed amendments to the plan, consistent with the requirements of this article, are agreed to by the plan-approving authority and the person responsible for carrying out the plan.

Subject to the discretion of the inspector and/or project manager, revisions to an approved ESC/SWM plan must be submitted in writing to the UMW Facilities Services for review. Revisions shall not be considered approved until written notice is provided. Revisions must comply with the UMW Annual Standards and Specifications for ESC and SWM. The DEQ will be notified via email to constructionGP@deq.virginia.gov of any approved changes to the ESC/SWM plans and/or information on the Registration Statement.

4.0 CONSTRUCTION PLAN REQUIREMENTS

- Complete ESC and SWM plans shall be provided in the construction plans.
- Plans shall include the amount of disturbed area listed per phase and proposed net increase in impervious area, as well as, the pre- and post-construction land cover conditions as reported on the VRRM spreadsheet.
- Minimum Standards 1 through 19 (9VAC25-840-40) shall be listed in the construction plans.
- Construction sequence of operations shall be defined on the construction plans with staged implementation of erosion and sediment control measures for each phase. The area which may be disturbed in each phase shall be set forth in the construction plans.
- Construction plans shall provide information on the maintenance of all BMPs and erosion and sediment control measures or reference the narrative section that contains the information.
- Profiles shall be included for all closed and open storm systems. The profile shall include the existing surface, final surface, proposed water elevations, pipes, pipe crossings, and hydraulic grade line. Surcharges shall be clearly indicated on the profile.
- SWM calculations for quantity shall be in accordance with 9VAC25-870-66 and SWM calculations for quality shall be in accordance with 9VAC25-870-63 through -65.
- The SWM plans will be prepared in accordance with the requirements of 9VAC25-870-55.B.
- Proof of adequate outfall and adequacy of the receiving channel to the SWM treatment facility needs to be provided.

- Plans shall comply, to the maximum extent practicable, with any locality's VSMP ESC and SWM technical requirements or demonstrate that the locality's VSMP SCC and SWM technical requirements are not practicable for the project.
- Plans should also include a detailed landscape plan with a planting schedule.
- Stockpile/lay-down areas and trailer locations shall be provided on the plans for all phases.
- Any on-site changes shall be documented on the approved site plan and within the SWPPP.
- Land disturbing activity associated with the project but occurring at a separate location not on UMW property will require documentation of approval by the local program authority for the separate plan.
- A copy of the completed plan checklists (see Appendix A) shall be provided with the construction plans. A notation shall be provided for each checklist item, such as a specific plan sheet or narrative section, indicating the location where the requirement is addressed.

5.0 INSPECTIONS AND ENFORCEMENT

Periodic inspections shall be conducted, at a minimum, every two weeks and within 48 hours of a rainfall event producing runoff by a DEQ-Certified Inspector for ESC and SWM as appropriate. In addition, inspections shall be made during or immediately following initial installation of erosion and sediment controls and BMPs and at the completion of the project. Projects are considered complete after permanent stabilization has been accomplished at the site, not completion of the construction activities.

5.1 Erosion and Sediment Control Inspections

The ECS/SWM inspection report forms provided in Appendix B shall be used on each site inspection visit. All ECS measures shown on the plans shall be inspected and be conducted by a DEQ-Certified Inspector for ESC. All problems and violations shall be photographed and documented on the inspection report. Critical areas that require continuous inspections shall also be identified on the site plan. The inspection report shall specify the required corrective action for each issue or violation noted and a date by which all corrective actions must be completed. A copy of the inspection report will be provided to the project staff.

5.2 Stormwater Management Inspections

The ECS/SWM inspection report forms provided in Appendix B shall be used on each site inspection visit. All stormwater BMPs must be identified on the site plans and each one shall be inspected periodically by a DEQ-Certified Inspector for SWM. All problems and violations shall be photographed and documented on the inspection report. Critical areas that require continuous inspections shall also be identified on the site plan. The inspection report shall specify the required corrective action for each issue or violation noted and a date by which all corrective actions must be completed. A copy of the inspection report will be provided to the project staff.

- a. DEQ-Certified SWM inspectors shall provide for the periodic inspection of the installation of stormwater management measures. SWPPPs (General info, ESC plan, SWM plan, pollution prevention plan, TMDL requirements) shall be inspected at the beginning of the project and periodically throughout. Projects should be inspected to ensure that they have obtained CGP permit coverage, if appropriate.

5.3 Enforcement

When a second or repeat violation is noted on subsequent inspections, a Notice to Comply may be issued by the UMW Program Administrator. The Notice to Comply will contain specific measures or corrections that need to be made and specify deadlines for completion.

Stop Work Orders will be issued when:

- a. The project has failed to meet the prescribed deadlines in a Notice to Comply;
- b. Land disturbing activities commenced without an approved plan; or
- c. Violations are causing or are in imminent danger of causing harmful erosion.

The Stop Work Order will be lifted once the required ESC/SWM measures or corrections are in place and verified by the Project's Inspector.

5.4 Project Close-out

As previously noted, project completion is defined as the achievement of permanent stabilization and verification of final product according to the approved plans. Project completion, concerning ESC and SWM, will be noted using the ESC/SWM Inspection Report Form. A notice of termination will be submitted to DEQ in accordance with 9VAC25-880-60.

At project close out, UMW MS4 coordinator will be notified in writing and assume responsibility of post-construction inspections. Inspection requirements to be provided by MS4 post-construction SWM inspector.

5.5 Other Investigations

DEQ-Certified ESC/SWM Inspectors will also be responsible for responding in a timely manner to reports of alleged violations reported by University staff, students, adjacent property owners, or others. Corrective measures if warranted will follow standard procedures as outlined for ESC and SWM inspections.

In accordance with SWM - §62.1-44.15:31.C, the DEQ shall perform random site inspections or inspections in response to a complaint to assure compliance with this article, the Erosion and Sediment Control Law, and regulations adopted thereunder.

6.0 VARIANCES, DEVIATIONS AND EXCEPTIONS

Variances to the ESC Minimum Standards and regulations must ensure off-site properties and resources are protected from damage. Economic hardship is not sufficient reason to request.

For a variance to become part of the project specific ESC plan, a written variance request must be submitted by UMW to DEQ for review and approval. This request must include a detailed description of the alternative ESC practice and justification that the practice meets the intent of the Minimum Standard for which the variance is sought. (Ref. 9VAC25-840-50).

A deviation is the use of a non-standard VESCH control measure either listed in Appendix D as previously approved, or approved only for a project specific plan.

A request for an exception for Part II B or Part II C of the Stormwater Management Program Regulations must be submitted in writing by UMW to DEQ for review and approval. The request for an exception will be reviewed pursuant to 9VAC25-870-122.

Economic hardship alone is not a sufficient reason to request an exception from the requirement of the Stormwater Management Program Regulations.

6.1 ESC Variance Request Procedures and Policy:

- a. All requests for project specific variances to UMW Annual Standards and Specifications shall be sent by the design professional to UMW Facilities Services and shall be accompanied by complete details and documentation, including justification for the requested variance and impacts associated with the variance request. The design professional shall complete the form included in Appendix C and include the elements for variance information required by the DEQ listed below.
- b. If determined to be appropriate by the UMW DEQ-Certified ESC Program Administrator and the DEQ-Certified Plan Reviewer, then the UMW DEQ-Certified ESC Program Administrator will send the variance request to the Virginia Erosion and Sediment Control Program Manager for review and approval.
- c. DEQ will consider variance requests freestanding of the Annual Standard and Specification submission and on a site-specific basis. UMW may (at DEQ's discretion) be required to produce documentation to demonstrate the applicability of variance requests. The following information may be required for the review of variance requests:
 - 1) Introduction
 - 2) Project Description
 - 3) Minimum Standards Variance Requests
 - 4) Existing Conditions and Adjacent Areas
 - 5) Soil Characterization
 - 6) Critical and Sensitive Areas (Karst, wetland, etc...)
 - 7) Mitigation
 - a) ESC Measures
 - b) Permanent Stabilization
 - c) Vegetative Restoration
 - d) Maintenance
 - e) Critical and Sensitive Areas
 - 8) Self-Inspection, Reporting and DEQ-Certified Personnel
- d. All requested variances will be considered unapproved until written approval from DEQ is received.
- e. All approved variances shall be listed in the General Notes section of the plans for land disturbing activities and included in the Narrative.

6.2 ESC Deviations Request Procedures and Policy:

- a. If the plan shows a deviation by the use of a non-VESCH control measures not listed in Appendix D as previously approved, the designer is required to submit all applicable practical information including definition, purpose, condition where the practice applies, planning consideration, design criteria, construction specification, design tables, plates and maintenance and inspections.
- b. UMW reserves the right to approve or disapprove the non-VESCH control measure on a project-specific basis.
- c. ESC measures shall be designed and constructed in accordance with the VESCH or the manufacturer's recommendations as applicable.
- d. UMW and the DEQ have the discretion to disallow the use of any of the previously approved measures based on findings that demonstrate poor performance related to sedimentation control or maintenance.
- e. Sufficient detail shall be provided on the ESC Plan and in the Specifications for proprietary measures, including any necessary computations, installation, instructions, and inspection and maintenance instructions.
- f. Installation and maintenance shall be per the manufacturer's recommendations. A list of approved, non-VESCH measures can be found in Appendix D.
- g. Should non-VESCH control measures fail to effectively control soil erosion, sediment deposition, and non-agricultural runoff, then VESCH control measures shall be utilized.

Deviations for consideration of ESC measures not listed in Appendix D will only be considered when requested by an Applicant as part of a proposed ESC Plan or on-going land disturbance with an approved ESC Plan.

6.3 SWM Request for an Exception Procedures and Policy:

- a. If determined to be appropriate by the UMW DEQ-Certified Program Administrator for SWM and recommended by a DEQ-Certified Plan Reviewer for SWM, then the UMW DEQ-Certified ESC Program Administrator will submit the request for an exception to DEQ for review and approval.
- b. An exception may be granted provided that:
 - 1) The exception is the minimum necessary to afford relief,
 - 2) Reasonable and appropriate conditions shall be imposed as necessary upon any exception granted so that the intent of the Act

- and the Stormwater Management Program Regulations are preserved,
- 3) Granting the exception will confer any special privileges that are denied in other similar circumstances, and
 - 4) Exception requests are not based upon condition or circumstances that are self-imposed or self-created.
- c. Economic hardship alone is not sufficient reason to grant an exception from the requirements.
 - d. Under no circumstance shall an exception to the requirement that the land-disturbing activity obtain required state permits, nor approve the use of a BMP not found on the Virginia Stormwater BMP Clearinghouse Website, except where allowed under Part II C (9VAC25-870-93 et seq.) of the regulations.
 - e. Exceptions to requirements for phosphorous reductions shall not be allowed unless offsite options available through 9VAC25-870-69 have been considered and found not available.
 - f. A record of all exceptions granted by DEQ shall be maintained by UMW in accordance with 9VAC25-870-126.

7.0 LAND-DISTURBING ACTIVITIES

Land-disturbing activities that obtain an initial state permit or commence land disturbance prior to July 1, 2014, shall be conducted in accordance with the Part II C (9VAC25-870-93 et seq.) technical criteria. Such projects shall remain subject to the Part II C technical criteria for two additional state permit cycles. After such time, portions of the project not under construction shall become subject to any new technical criteria adopted by the board (9VAC25-870-47 B).

Land-disturbing activities that obtain an initial state permit on or after July 1, 2014, shall be conducted in accordance with the Part II B (9VAC25-870-62 et seq.) technical criteria, except as provided for in 9VAC24-870-48. Land-disturbing activities conducted in accordance with the Part IIB technical criteria shall remain subject to the Part IIB technical criteria for two additional state permit cycles. After such time, portions of the project not under construction shall become subject to any new technical criteria adopted by the board (9VAC25-870-47 B).

Grandfathered land-disturbing activities shall be subject to the Part II C technical criteria (9VAC25-870-93 et seq.). Land-disturbing activities will be considered grandfathered if they meet the conditions of 9VAC25-870-48. Grandfathered land disturbing activities shall be subject to Part II C technical criteria for one additional state permit cycle. After such time, portions of the project not under construction shall become subject to any new technical criteria adopted by the board (9VAC25-870-48 C).

7.1 Proposed Land-disturbing activities:

A list of regulated land-disturbing activities expected to be under contract during the referenced time period will be submitted to DEQ semi-annually. The list will include project location, estimated disturbed acreage by watershed, and approximate start and completion dates for each project.

7.2 Current and Past Land-disturbing activities:

A list of completed and on-going regulated land-disturbing activities either under contract or terminated during the previously referenced time period will be submitted to DEQ semi-annually. The list includes project location, project start and completion date, and actual disturbed area.

7.3 Project Tracking and Notification

UMW will provide a semi-annual tracking report (Jan 1st and July 1st) to DEQ identifying project name, location, on-site project manager (with contact information), project description, project status (design or construction), estimated disturbed acreage, start and finish dates, applicable DEQ-Certified RLD information, dates of inspections, and any variances/exemptions/waivers associated with the project.

DEQ e-notifications shall be made 2 weeks prior to initiating a regulated land disturbing activity and will include the following information:

- a. Project name or project number (any associated CGP permit #),
- b. Project location (including nearest intersection, latitude and longitude, access point, etc.),
- c. On-site project manager name and contact information,
- d. Responsible Land-Disturber (RLD) name and contact information,
- e. Project description,
- f. Acreage of disturbance for project,
- g. Project start and finish date, and
- h. Any variances, waivers, or exemptions associated with the project.

8.0 ANNUAL STANDARDS AND SPECIFICATIONS REVIEW and EVALUATION

8.1 DEQ'S RESPONSIBILITIES:

- DEQ shall have sixty days in which to comment on any ECS and SWM standards and specifications submitted to it for review, and its comments shall be binding on UMW and any private business hired by UMW (§62.1-44.15:55.B).
- Enforcement by the DEQ for SWM will be in accordance with §62.1-44.15:27 F and for ESC in accordance with §62.1-44.15:54.E and §62.1-44.15:56G.
- DEQ is the authority for the issuance and termination Construction General Permits.
- DEQ fees for services rendered for SWM will be in accordance with §62.1-44.15:31.D.
- ESC fees to enforce approved specifications will be equal to the lower of (i) \$1,000 or (ii) an amount sufficient to cover the costs associated with standard and specification review and approval, project inspections, and compliance.

8.2 UMW'S RESPONSIBILITIES:

- UMW shall ensure compliance with the approved plans and annual standards and specifications (§62.1-44.15:56.G).
- Upon request by the DEQ, UMW shall provide a copy of the approved plan sheets and narrative for each regulated land-disturbing activity as outlined in Section 1.1.
- UMW will notify DEQ of the Responsible Land Disturber including RLD name, certification number and contact information at least 2 weeks prior to construction.
- UMW will notify DEQ of any newly emerging projects involving regulated land-disturbing activities during the current year as soon as they are known and prior to any land-disturbance.
- UMW shall provide DEQ with the appropriate information, in a timely manner, when requested, including:
 - Inspection Reports
 - Complaint Logs
 - Complaint Responses
- Weekly e-Reporting to the DEQ – Northern Regional Office, if required, will include:
 - Inspection reports
 - Pictures
 - Complaint logs and complaint responses
 - Other compliance documents

9.0 LONG-TERM MAINTENANCE

- 9.1 Project plans shall contain information on the long-term maintenance requirements for the post-construction BMPs. Permanent stormwater facilities shall be inspected as required by the stormwater regulations. The following information will be printed on the approved stormwater management plan:
- A description of the requirements for maintenance and maintenance inspection of the stormwater management facilities and a recommended schedule of maintenance inspection and maintenance.
 - The identification of a person or persons who will be responsible for maintenance inspection and maintenance.

- The maintenance inspection schedule and maintenance requirements should be in accordance with the Virginia BMP Clearinghouse, the Virginia SWM Handbook, the MS4 permit (if applicable) and/or the manufacturer’s specifications.
- The types of land cover on the site will be clearly depicted (i.e. different type of hatching for each land cover), including the acreage for each cover type. The acreage should be labeled in all of the subareas and provide a table that adds the land cover up by type on the sheet.
- The metes and bounds will be drawn all the way around any conserved open space.
- Any conserved open space will be labelled as “Runoff Reduction Compliance Forest / Open Space”
- The following note will be included on the sheet: “The Runoff Reduction Compliance Forest/Open Space area shown here shall be maintained in a forest/open space manner until such time that an amended storm water management plan is approved by the VSMP Authority.”

9.2 UMW Roles and Responsibilities:

- UMW DEQ-Certified SWM Program Administrator shall ensure BMPs are scheduled for annual inspection, beginning on their first anniversary based on the date of Notice of Termination for the subject Construction General Permit. UMW SWM Program Administrator will provide pertinent BMP information to UMW’s MS4 Coordinator.
- UMW DEQ-Certified SWM Project Inspector will conduct annual post construction inspections of BMPs and report results to the UMW DEQ-Certified SWM Program Administrator. The post construction inspections will be conducted in accordance with the maintenance requirements laid out in the Virginia Stormwater BMP clearing house for each BMP. Copies of BMP inspection reports will be maintained for five (5) years.
- UMW Facilities Services will be responsible for committing the necessary resources to maintain BMPs and correct deficiencies noted during these inspections.
- UMW shall, on a fiscal year basis (July 1 to June 30), submit a Report to the DEQ by October 1 of each year, as prescribed in 9VAC25-870-126. The information provided shall include the following:
 - Information on each permanent stormwater management facility completed during the fiscal year to include type of stormwater management facility, geographic coordinates, acres treated, and the surface waters or karst feature into which the stormwater management facility will discharge
 - Comprehensive Stormwater BMP Record done in coordination with MS4 reporting requirements. Initial report will be submitted on or before March 2019 as part of semi-annual update for Land Disturbing Activities.
 - Number and type of enforcement actions during the fiscal year
 - Number of exceptions granted during the fiscal year.

- UMW shall maintain, either onsite or in AS&S files, a copy of approval plan and a record of inspection for each active land disturbing activity.
- (e) UMW shall keep records in accordance with 9VAC25-870-126 B, as follows:
- Approved plans and inspection records for each active land-disturbing activity will be maintained at UMW's Facilities Services.
 - Project Records – including approved SWM plans, shall be kept for 3 years after state permit termination or project completion.
 - SWM facility inspection records shall be documented and retained for at least five years from the date on inspection.
 - Construction record drawings shall be maintained in perpetuity or until a SWM facility is removed.
 - All registration statements submitted in accordance with 9VAC25-870-59 shall be documented and retained for a least three years from the date of project completion or state permit terminations.



Appendix A
ESC/SWM Plan Checklists
Required Elements of a Plan
and
Minimum Standards

PROJECT NAME _____ **PROJECT ID** _____

CHECKLIST

FOR EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT PLANS

NARRATIVE

_____ Project description:

- Briefly describe the nature and purpose of the land-disturbing activity.
- How many acres will be disturbed?
- Is the pre- and post-Construction land condition consistent with the VRRM spreadsheet?
- How much impervious area will the project have in the post-development conditions?
- What are the ultimate developed conditions of the site?

_____ Existing site conditions:

- Provide a description of the existing topography (list percentage of slopes on-site).
- Provide drainage area maps of the site in pre-development and post-development conditions.
- Discuss types of existing vegetation that can be used as erosion control, or areas that are to be left undisturbed and how they will be marked.
- Discuss any existing drainage or erosion problems and how they are to be corrected.

_____ Adjacent areas:

- Provide a description of neighboring areas such as streams, lakes, CBPA Resource Protection Area (RPA), residential areas, roads, etc., which might be affected by the land disturbance.
- Streams that will receive runoff from the site should be surveyed to determine their carrying capacity.

_____ Off-site areas:

- Describe any off-site land-disturbing activities that will occur (including borrow sites, waste or surplus areas, etc.).
- If the site is in balance and no off-site land-disturbing activities are anticipated with this project include a statement in the narrative: "No off-site land-disturbing activities are anticipated with this project however, if due to unforeseen circumstance this changes, prior to commencing land disturbing activities in areas other than indicated on these plans (including, but not limited to, off-site borrow or waste areas) – soil hauled off-site, the contractor shall supply the owner (UMW DEQ-Certified ESC Program

Prepared/Reviewed By _____
Date _____
Page 1 of 7

PROJECT NAME _____ **PROJECT ID** _____

Administrator) with a supplementary erosion control plan for submittal to the receiving locality (City or County) and the University of Mary Washington for review and approval."

- Will any other areas be disturbed?

_____ Soils:

- Provide a brief description of the soils on the site giving such information as soil name, mapping unit, erodibility (K factor), pH, permeability, depth, texture and soil structure.
- Indicate references for soil information.
- Provide copy of soil survey map.

NARRATIVE (continued)

_____ Critical areas:

- Provide a description of areas on the site which have potentially serious erosion problems (e.g., steep slopes, channels, RPA, wet weather/ underground springs, etc.).
- Discuss any area of the project which may become critical during the project.

_____ Erosion and sediment control measures:

- Describe the methods which will be used to control erosion and sedimentation on the site.
- List all controls used, list specification numbers in Chapter 3 of the Virginia Erosion and Sediment Control Handbook.
- Discuss why control was selected and how it satisfies the applicable minimum standard(s).
- Discuss sequence of installation, maintenance requirements and removal for each control selected.
- Discuss Temporary Seeding as a means of erosion control, and list the types to be used.

_____ Permanent stabilization:

- Provide a brief description, including specifications, of how the site will be stabilized after construction is completed. Seed specifications are to include type, and rate and time of application.
- Include specifications for topsoil and seedbed preparation.
- List the soil testing requirements.
- Fertilizer and Lime applications are to be in accordance with the attached ESC technical Bulletin #4. Visit the DEQ web page at

Prepared/Reviewed By _____

Date _____

PROJECT NAME _____ **PROJECT ID** _____

<http://www.deq.virginia.gov/Portals/0/DEQ/Water/Publications/ESCTechnicalBulletin4.pdf>
for more information.

_____ Stormwater runoff considerations:

- Will the development site cause an increase in peak runoff rates?
- Will the increase in runoff cause flooding or channel degradation downstream? Discuss how downstream properties and waterways will be protected (basins, channel improvements, easements, etc.).
- Describe the strategy to control stormwater runoff.
- List or discuss all references for the design of permanent stormwater management facilities.
- Have the possibilities of incorporating low impact development strategies for addressing stormwater management water quality and quantity requirements been investigated?

_____ Maintenance of SWM Facilities:

- Provide a table with a description of the requirements for maintenance of the facility and a recommended schedule for inspections and maintenance.
- Include the following note on the plan sheet; "The Runoff Reduction Compliance Forest/Open Space area shown here shall be maintained in a forest/open space manner until such time that an amended storm water management plan is approved by the VSMP Authority."

_____ Water Quality:

- Is the plan in compliance with the water quality criteria and the Virginia Stormwater BMP Clearinghouse specifications? Provide supporting calculations. For each best management practice with a checklist, include a completed Design and Plan Review Checklist.

_____ Calculations:

- Provide detailed calculations for the design of temporary sediment traps and basins, diversions, on-site and off-site channels, permanent stormwater facilities, etc.
- Provide all calculations showing pre- and post-development runoff. Worksheets, assumptions and engineering decisions should be clearly presented.
- Calculations must show that downstream properties and waterways are adequately protected.

SITE PLAN

Prepared/Reviewed By _____
Date _____
Page 3 of 7

PROJECT NAME _____ **PROJECT ID** _____

- _____ Vicinity map:
 - A small map locating the site in relation to the surrounding area. Include any landmarks which might assist in locating the site.
- _____ Indicate north:
 - Provide an arrow showing the direction of north in relation to the site.
- _____ Limits of clearing and grading:
 - Show all areas that will be cleared and graded.
 - Provide notes on how these areas will be marked.
 - Provide notes and illustrations that clearly indicate areas NOT to be disturbed.
- _____ Existing contours:
 - Provide a small-scale topographic map of the site showing the existing contours elevations at intervals of 1 to 5 feet depending on the slope of the terrain.
 - Should be shown as dashed light lines.
- _____ Final contours:
 - Show changes to the existing contours, including final drainage patterns.
 - Should be shown as heavy solid lines.
- _____ Existing vegetation:
 - Show the existing tree lines, grassed areas, or other unique vegetation.
- _____ Soils:
 - Show the boundaries of different soil types.
- _____ Existing drainage patterns:
 - Show the dividing lines for each drainage area and use arrows to show the direction of flow for the different drainage areas.
 - Include the size (acreage) of each drainage area.
 - All existing drainage swales and patterns on the site should be located and clearly marked on the topographic map.
 - Live or intermittent streams should be shown on the map.
 - Show the drainage areas to each BMP/practice.
- _____ Critical erosion areas:
 - All critical, environmentally sensitive, or prohibited areas are to be clearly shown on the plan with notes provided to state the critical nature.
- _____ Site Development:
 - Show all improvements such as buildings, parking lots, access roads, easements, utility construction, etc.
 - Show the pre- and post-construction land cover conditions as depicted on the VRRM spreadsheet.

PROJECT NAME _____ **PROJECT ID** _____

- _____ Location of practices:
- Show the locations of erosion and sediment control and stormwater management practices used on the site.
 - Symbols showing vegetation are also to be shown.
 - Use the standard symbols and abbreviations in Chapter 3 of the ESC Handbook.
 - A legend denoting symbols, line uses, and other special characters is to be provided.
- _____ Off-site areas:
- Identify any off-site land-disturbing activities (e.g., borrow sites, waste areas, etc.). Show location of erosion controls.
- _____ Detail drawings:
- All structural practices used should be explained and illustrated with detail drawings.
 - All details should list the specification number from the VESCH.
 - Alternative ESC measures must have proper drawings to indicate how and where they will be constructed.
 - All plan drawings, elevations, and cross-section drawings are to show the scales used to prepare the drawings.
 - A schedule of regular inspections and repair of each erosion and sediment control structure should be set forth including the maintenance items to check and perform as well as precautions for large storm events.
 - Outlet protection schedules are to be provided.
- _____ Maintenance:
- A schedule of regular inspections and repair of erosion and sediment control structures should be set forth including the maintenance items to check and perform as well as precautions for large storm events.
 - List the person who is responsible during construction and who will be responsible once the project is complete.

PROJECT NAME _____ **PROJECT ID** _____

MINIMUM STANDARDS

- _____ MS-1 –Permanent or temporary soil stabilization shall be applied to denuded areas within 7 days after final grade is reached on any portion of the site. Temporary soil stabilization shall be applied within seven days to denuded areas that may not be at final grade but will remain dormant for longer than 14 days.
- _____ MS-2 – Protection or stabilization of on-site and off-site soil stockpiles and borrow areas
- _____ MS-3 – Permanent vegetative stabilization of denuded areas not otherwise stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved that is uniform, mature enough to survive and will inhibit erosion.
- _____ MS-4 – Install erosion and sediment controls as the first step in land-disturbing activity
- _____ MS-5 – Earthen controls and structures stabilized immediately upon installation
- _____ MS-6 – Trap and Basin design
Trap: < 3acres total drainage area, 134 cubic yards per acre storage
Basin: 3 acres or more total drainage area, 134 cubic yards per acre storage, safely handle a 25-year, 24-hour storm event
- _____ MS-7 – Design and construction of cut and fill slopes
- _____ MS-8 – Concentrated flow down cut and fill slopes
- _____ MS-9 – Slopes protected from seeps
- _____ MS-10 – Operational stormwater inlets must be protected
- _____ MS-11 – Outlets must be protected and stormwater conveyance channels stabilized before being made operational
- _____ MS-12 – Minimize impacts when working in and around live watercourses
- _____ MS-13 – Temporary vehicular stream crossings for more than 2 trips in 6 months

PROJECT NAME _____ **PROJECT ID** _____

_____ MS-14 – Other federal, state, and local regulations pertaining to work in live watercourses
(Required permits COE, DEQ, VPDES, etc)

MINIMUM STANDARDS (Continued)

_____ MS-15 – Stabilize disturbed bed and banks of watercourses

_____ MS-16 – Utility installations (< 500 feet open trench, stockpile upgradient, filter dewatering effluent, backfill and compact, other safety requirements)

_____ MS-17 – Keep paved or public areas clean

_____ MS-18 – Remove temporary controls within 30 days when no longer needed

_____ MS-19 – Protect downstream properties and waterways from sediment deposition, erosion and damage due to increases in volume, velocity and peak flow rate of stormwater runoff for the stated frequency storm of 24-hour duration. Compliance with the water quantity minimum standards set out in 9VAC25-870-66 of the VSMP permit regulations satisfies the MS-19 standard.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

ES-1: Unless otherwise indicated, all vegetative and structural erosion and sediment control practices will be constructed and maintained according to minimum standards and specifications of the Virginia Erosion and Sediment Control Handbook and the Virginia Erosion and Sediment Control Law (§ 62.1-44.15:51 et. seq.), and The Virginia Erosion and Sediment Control Regulations (§ 9VAC25-840 et. seq.),

ES-2: The plan-approving authority must be notified one week prior to the pre-construction conference, one week prior to the commencement of land disturbing activity, and one week prior to the final inspection. The name of the Responsible Land Disturber must be provided to the plan-approving authority prior to actual engagement in the land-disturbing activity shown on the approved plan. If the name is not provided prior to engaging in the land-disturbing activity, the plan's approval will be revoked.

ES-3: All erosion and sediment control measures are to be placed prior to or as the first step in clearing.

ES-4: A copy of the approved erosion and sediment control plan shall be maintained on the site at all times.

ES-5: Prior to commencing land disturbing activities in areas other than indicated on these plans (including, but not limited to, off-site borrow or waste areas), the contractor shall submit a supplementary erosion control plan to the owner for review and approval by the plan-approving authority.

ES-6: The contractor is responsible for installation of any additional erosion control measures necessary to prevent erosion and sedimentation as determined by the plan-approving authority.

ES-7: All disturbed areas are to drain to approved sediment control measures at all times during land disturbing activities and during site development until final stabilization is achieved, after which, upon approval of the plan-approving authority, the controls shall be removed. Trapped sediment and the disturbed soil areas resulting from the removal of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.

ES-8: During dewatering operations, water shall be pumped into an approved filtering device.

ES-9: The contractor shall inspect all erosion control measures during or immediately following initial installation of erosion and sediment controls, at least once in every 2 week period, within 48 hours following any runoff producing storm event, and at the completion of the project prior to the release of any performance bonds. Any necessary repairs or cleanup to maintain the effectiveness of the erosion control devices shall be made immediately.

ES-10: The contractor is responsible for the daily removal of sediment that has been transported onto a paved or public road surface.

ES-11: Seeding operations shall be initiated within 7 days after reaching final grade or upon suspension of grading operations for anticipated duration of greater than 14 days or upon completion of grading operations for a specific area.

ES-12: The contractor shall be responsible for preventing surface and air movement of dust from exposed soils which may present health hazards, traffic safety problems, or harm animal or plant life.

ES-13: A Virginia Stormwater Management Program Permit (VSMPP) for the discharge of stormwater from construction activities is required for projects disturbing 1 acre or greater. Visit the Virginia Stormwater Management Program Regulations web page at:

<http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPPermits.aspx> for more information.



Appendix B
Inspection Report Forms

Reply To:
 Facilities Services
 University of Mary Washington
 1301 College Avenue
 Fredericksburg, VA 22401



INSPECTION REPORT

Project Name: _____ Project Manager: _____
 RLD Name: _____ RLD No. _____
 Project Location: _____ Project No: _____
 Inspector Name: _____ Inspection Date: _____ Time: _____

Date of Last Measurable Storm Event: _____ Amount (inches): _____ Storm Duration (hours): _____

STAGE OF CONSTRUCTION

- Pre-Construction Conference Building Construction Construction of SWM Facilities
 Clearing & Grubbing Finish Grading Maintenance of SWM Facilities
 Rough Grading Final Stabilization Other _____

| Item# | State/Local Regulation ⁽¹⁾ | Violation | | Description and Location of Problem/Violation ⁽²⁾ , Required or Recommended Corrective Actions, and Other Comments/Notes |
|-------|---------------------------------------|-----------|--------|---|
| | | Initial | Repeat | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

(1) Refers to applicable regulation found in the most recent publication of the *Virginia Erosion and Sediment Control Regulations* (9VAC25-840), *Virginia Stormwater Management Program Regulations* (9VAC25-870), or local ESC/SWM ordinance.
 (2) Note whether or not off-site damage resulting from the problem/violation was evident during the inspection.

REQUIRED CORRECTIVE ACTION DEADLINE DATE: _____ **Re-inspection** _____
Date: (MM/DD/YY) (MM/DD/YY)

The required corrective action deadline date applies to all violations noted on this report. If listed violation(s) currently constitute non-compliance and/or required corrective actions are not completed by the deadline, a **NOTICE TO COMPLY** and/or other enforcement actions may be issued to the entity responsible for ensuring compliance on the above project.

Inspector: _____
 Signature Date Phone

Acknowledgement of _____



Appendix C
Variance Request Form



Send to:
Gary Hobson, P.E.
UMW Facilities Services
University of Mary Washington
1301 College Avenue
Fredericksburg, VA 22401
540-654-1292 (O) 540-654-1069 (fax)
Email: ghobson@umw.edu

VARIANCE REQUEST

Requested by: _____ Date: _____

Street Address: _____

City/Town/Zip: _____

Telephone #: _____ Fax #: _____ E-

mail address: _____

Project Name/Location: _____

Project Description: _____

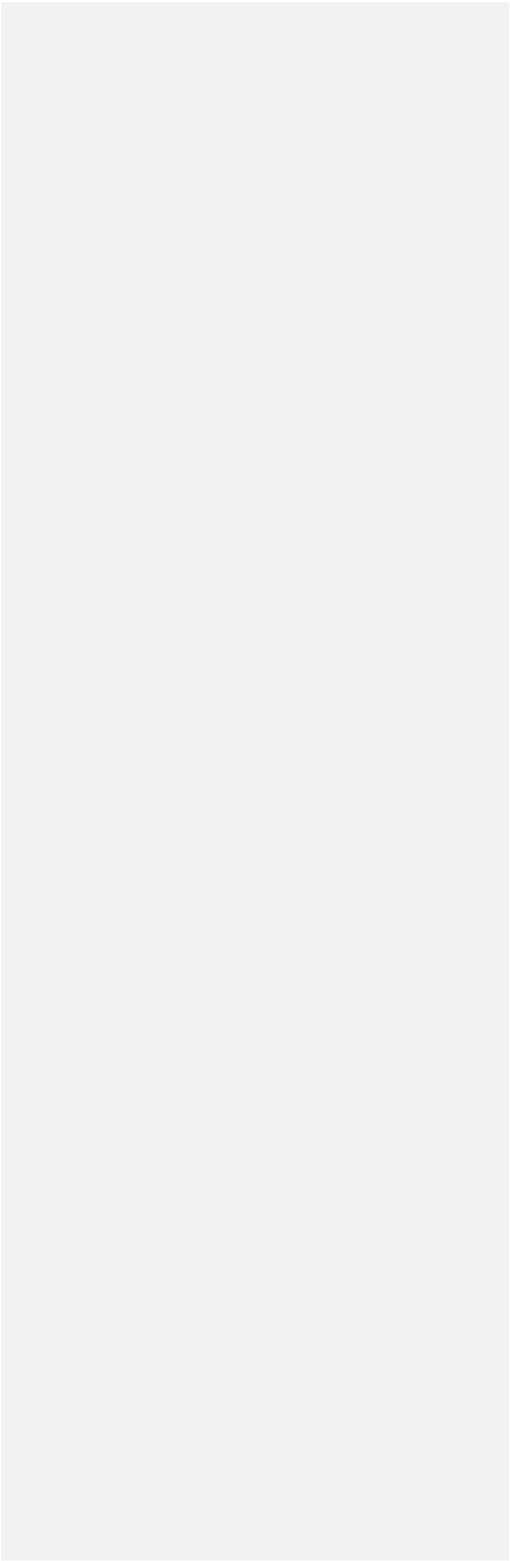
Variance requested for (state appropriate minimum standard & requirement): _____

Reasons and

Justification for Variance Request: _____

**NOTE: Variance request documentation must be submitted with this form.
Refer to section 6.0 for the required information to be included.**

Signature of applicant: _____ Date: _____





Appendix D
APPROVED NON-STANDARD VESCH MEASURES

E-6 STANDARDS AND SPECIFICATIONS

FOR

FILTER LOG

Definition

A temporary, tubular casing filled with compost filter media.

Purpose

To intercept sheet flow, retain sediment, and filter runoff through the log media.

Conditions Where Practice Applies

Filter logs are an alternative to silt fence and can be used in hard to reach areas, on frozen ground and pavement, and near tree roots.

Note: fiber rolls are not interchangeable with filter logs. Although similar in appearance, fiber rolls are filled with rice or wheat straw, flax, coconut fiber, or wood excelsior, and are used when stabilizing and revegetating slopes because they slow and spread overland flow, thereby minimizing erosion, rills, and gullies.

Design Criteria

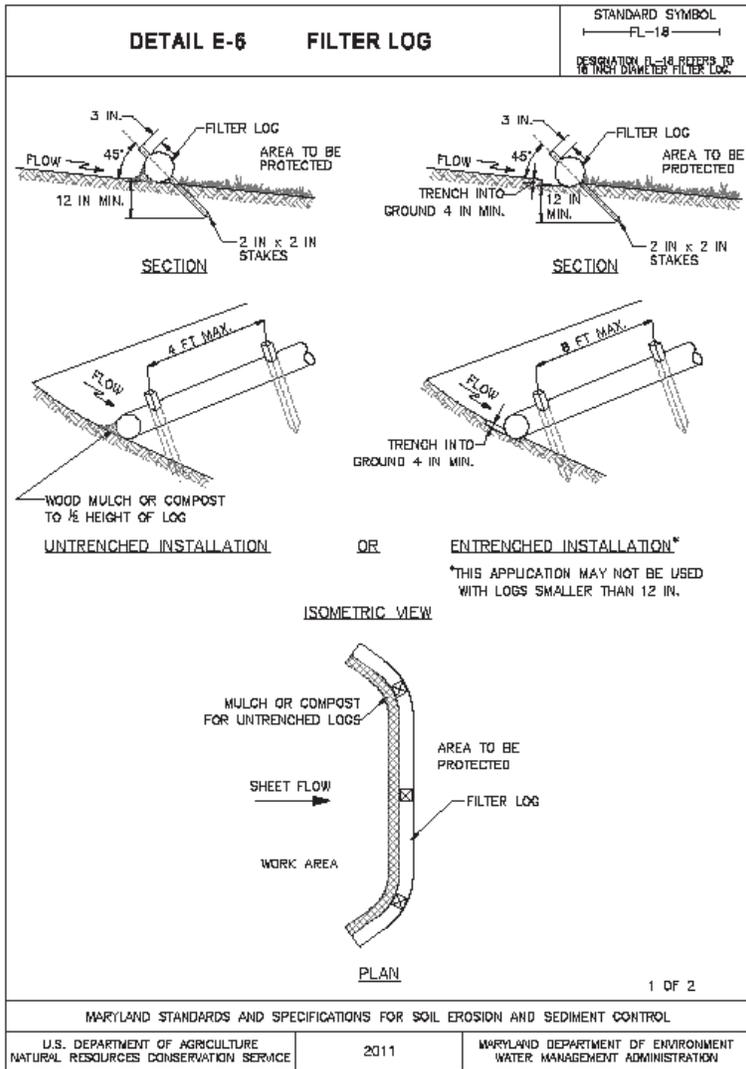
Table E.6: Filter Log Design Constraints

| Log Diameter | 8 to 15 inches | >15 to 24 inches |
|--------------------------|----------------------------------|----------------------------|
| Average Slope | Maximum Slope Length (ft) | |
| Flatter than 50:1 (<2%) | 125 | 250 |
| 50:1 to 10:1 (2 – 10%) | 65 | 125 |
| <10:1 to 5:1 (>10 – 20%) | 50 | 100 |
| <5:1 to 2:1 (>20 – 50%) | N/A | 50 |

1. Filter logs must be placed on the contour with the ends turned up grade to prevent bypass.
2. Filter logs can only be used with sheet flow.
3. Filter logs must be used in accordance with the design constraints in Table E.6.
4. The filter media must be compost in accordance with Table H.3 or other approved biodegradable materials.
5. Filter logs must either be staked every 4 feet maximum, or trenched a minimum of 4 inches into the ground and staked every 8 feet maximum.

Maintenance

Sediment and debris must be removed and mulch replaced when sediment has accumulated to a depth of one half the exposed height of the log. The filter log must be replaced if clogged or torn. The filter log needs to be reinstalled if undermined or dislodged. For permanent applications, vegetation must be established and maintained so that the requirements for Adequate Vegetative Establishment are met in accordance with Section B-4 Vegetative Stabilization.



E.15

| | | |
|---|------|---|
| DETAIL E-6 FILTER LOG | | STANDARD SYMBOL FL-18 DESIGNATION FL-18 REFERS TO 18 INCH DIAMETER FILTER LOG. |
| <p><u>CONSTRUCTION SPECIFICATIONS</u></p> <ol style="list-style-type: none"> 1. PRIOR TO INSTALLATION, CLEAR ALL OBSTRUCTIONS INCLUDING ROCKS, CLOGS, AND DEBRIS GREATER THAN ONE INCH THAT MAY INTERFERE WITH PROPER FUNCTION OF FILTER LOG. 2. FILL LOG NETTING UNIFORMLY WITH COMPOST (IN ACCORDANCE WITH SECTION H-1 MATERIALS), OR OTHER APPROVED BIODEGRADABLE MATERIAL TO DESIRED LENGTH SUCH THAT LOGS DO NOT DEFORM. 3. INSTALL FILTER LOGS PERPENDICULAR TO THE FLOW DIRECTION AND PARALLEL TO THE SLOPE WITH THE BEGINNING AND END OF THE INSTALLATION POINTING SLIGHTLY UP THE SLOPE CREATING A "J" SHAPE AT EACH END TO PREVENT BYPASS. 4. FOR UNTRENCHED INSTALLATION BLOW OR HAND PLACE MULCH OR COMPOST ON UPHILL SIDE OF THE SLOPE ALONG LOG. 5. STAKE FILTER LOG EVERY 4 FEET OR CLOSER ALONG ENTIRE LENGTH OF LOG OR TRENCH LOG INTO GROUND A MINIMUM OF 4 INCHES AND STAKE LOG EVERY 8 FEET OR CLOSER. 6. USE STAKES WITH A MINIMUM NOMINAL CROSS SECTION OF 2X2 INCH AND OF SUFFICIENT LENGTH TO ATTAIN A MINIMUM OF 12 INCHES INTO THE GROUND AND 3 INCHES PROTRUDING ABOVE LOG. 7. WHEN MORE THAN ONE LOG IS NEEDED, OVERLAP ENDS 12 INCHES MINIMUM AND STAKE. 8. REMOVE SEDIMENT WHEN IT HAS ACCUMULATED TO A DEPTH OF $\frac{1}{2}$ THE EXPOSED HEIGHT OF LOG AND REPLACE MULCH. REPLACE FILTER LOG IF TORN. REINSTALL FILTER LOG IF UNDERMINING OR DISLODGING OCCURS. REPLACE CLOGGED FILTER LOGS. FOR PERMANENT APPLICATIONS, ESTABLISH AND CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. | | |
| 2 OF 2 | | |
| MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL | | |
| U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION |

APPENDIX E

**DEQ APPROVAL LETTER OF THE UNIVERSITY OF MARY WASHINGTON
CONSTRUCTION STANDARDS AND SPECIFICATIONS**



Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

1111 E. Main Street, Suite 1400, Richmond, Virginia 23219

P.O. Box 1105, Richmond, Virginia 23218

(800) 592-5482 www.deq.virginia.gov

Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director
(804) 698-4000

March 26, 2020

Mr. Gary Hobson
Capital Outlay Director/Dual Program Administrator
University of Mary Washington
1301 College Avenue
Fredericksburg, VA 22401

Transmitted electronically: ghobson@umw.edu

Subject: University of Mary Washington – Annual Standards and Specifications for Erosion & Sediment Control and Stormwater Management (AS&S for ESC and SWM)

Dear Mr. Hobson:

The Virginia Department of Environmental Quality ("DEQ") hereby approves the Annual Standards and Specifications for Erosion & Sediment Control and Stormwater Management for the University of Mary Washington (UMW) dated "January 31, 2020". This coverage is effective from March 26, 2020 to March 25, 2021.

To ensure compliance with approved specifications, the Virginia Erosion and Sediment Control Law and the Virginia Stormwater Management Act, DEQ staff will conduct random site inspections, respond to complaints, and provide on-site technical assistance with specific erosion and sediment control and stormwater management measures and plan implementation.

Please note that your approved Annual Standards and Specifications include the following requirements:

University of Mary Washington – MS4 Program Plan

1. Variance, exception, and deviation requests must be submitted separately from this Annual Standards and Specifications submission to DEQ. DEQ may require project-specific plans associated with variance requests to be submitted for review and approval.

2. The following information must be submitted to DEQ for each project at least two weeks in advance of the commencement of regulated land-disturbing activities. Notifications shall be sent by email to: StandardsandSpecs@deq.virginia.gov i: Project name or project number;

ii: Project location (including nearest intersection, latitude and longitude, access point);

iii: On-site project manager name and contact info; iv: Responsible

Land Disturber (RLD) name and contact info; v: Project

description;

UMW – AS&S for ESC and SWM

March 26, 2020

Page 2 of 2

vi: Acreage of disturbance for project; vii: Project start and finish date; and viii: Any variances/exceptions/waivers associated with this project.

3. Project tracking of all regulated land disturbing activities (LDA) must be submitted to the DEQ on a semi-annual basis. Project tracking records shall contain the same information as required in the two week e-notifications for each regulated LDA.

4. Erosion & Sediment Control and Stormwater Management plans must be reviewed by DEQCertified Plan Reviewers. UMW, as the AS&S holder, retains the authority to approve plans and must do so in writing. Should an AS&S holder contract out to a third party to fulfill the Plan Reviewer certification, this certified Plan Reviewer may recommend approval of the plan but final approval must come from the AS&S holder.

To ensure an efficient information exchange and response to inquiries, the DEQ Central Office is your primary point of contact. Central Office staff will coordinate with our Regional Office staff as appropriate.

Please contact Hannah Zegler at 804-698-4206 or hannah.zegler@deq.virginia.gov if you have any questions about this letter.

Thank you very much for your submission and continued efforts to conserve and protect Virginia's precious natural resources.

Sincerely,

Erin Ervin Belt

Erin Ervin Belt, Manager
Office of Stormwater Management

Case Decision Information:

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty days from the date of service (the date you actually received this decision or the date it was mailed to you, whichever occurred first) within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Department of Environmental Quality. In the event that this decision is served on you by mail, three days are added to that period.

APPENDIX F

THE UNIVERSITY OF MARY WASHINGTON STORMWATER OPERATIONS AND MAINTENANCE MANUAL

Standard Operating Procedures

A. *Stormwater Management Facilities*

1. Each SMF has unique maintenance requirements, but generally all fall into one of two categories: bioretention or extended detention.
 - a. Bioretention facilities are inspected to determine: 1) the health of the plant material in the bed and 2) the filtration capacity of the bio-media.
 - b. Extended detention facilities incorporate vortex separators, and may include canister filters. During operations the separators must be observed after major storm events to determine whether debris needs to be cleared away.
2. Annual inspection of each SMF shall be conducted by authorized Stormwater inspectors.
 - a. Inspection shall be performed using standard form linked to GIS mapping.
 - b. Results of inspections shall be communicated to the Director of Landscape and Grounds for all necessary corrective action.
 - c. Results shall also be communicated to the MS4 Coordinator for inclusion in the SMF spreadsheet, available in the MS4 Annual Report.

B. *Stream Restoration*

1. Regular operation of stream restorations does not involve active maintenance unless revealed by annual inspection.
2. Annual inspection of each Stream Restoration shall be conducted by a certified stream restoration specialist.
 - a. Regular monitoring stations shall be established along the length of the stream segment, with no less than three (3) monitoring points: upper end, approximate mid-point of the segment, and near the end of the stream segment.
 - b. Results of inspections shall be communicated to the Director of Landscape and Grounds for all necessary corrective action.
 - c. Results shall also be communicated to the MS4 Coordinator for inclusion in the Stream Restoration spreadsheet, available in the MS4 Annual Report.

C. *Hard Surface Travelways*

1. Hard surface travelways falls into two categories: pedestrian walkways and vehicular traffic surfaces (roads and parking areas). Successful operations are determined by the uninterrupted passage of people and vehicles along the travelways.
2. During dry weather conditions, pedestrian walkways are kept free of impediments.
 - a. Grass clippings, fallen leaves, and other debris shall be removed by backpack blower into adjacent managed turf areas.
 - b. Excess landscape waste shall be collected and added to approved UMW compost stockpile.
 - c. Deteriorated walkways shall be renovated / replaced by authorized contractor(s) who follow E&S prescriptions set forth in UMW Annual Standards & Specifications.

3. During wet / freezing conditions both pedestrian and vehicle travelways shall be monitored for treacherous conditions.
 - a. During weather events, walks, roads, and parking lots will be cleared of snow and ice to the extent possible.
 - b. Application of abrasive material shall be the principle means of maintaining safe traction along travelways.
 - c. Magnesium chloride shall be used in limited quantities where necessary to alleviate icing conditions, particularly on inclined travelways.
4. Roads and parking lots shall be swept annually following the winter weather season.

D. Equipment Maintenance and Storage

1. Motorized equipment shall be maintained and operated according to common operating standards and the unique operating instructions of each piece of equipment. Fueling, and fluid reservoir filling shall be done under approved conditions in areas employing spill containment.
2. Mechanical repairs / replacements including hydraulic systems, fuel systems, and lead-acid batteries shall be performed by UMW Mechanic or other authorized personnel under conditions consistent with standard operating procedures for the UMW Mechanic Shop.
3. Waste fluids and lead-acid batteries shall be collected in proper storage containers and in approved storage conditions until collected by approved waste collection contractor.
4. Waste-impregnated papers and cloths shall be collected and disposed of in approved containers, which shall be collected regularly for final disposal at an approved disposal site.
5. Vehicle washing is prohibited.
6. Lawn mower washing to remove adhered grass clipping shall be performed in a space that provides for collection of the clipping and protection against entry into the stormwater conveyance system.
7. Small motorized equipment shall be stored under open shelter, with absorbent sheet material beneath the equipment.

E. Materials Storage, Open

1. UMW stores mulch, compost, and sand under these approved conditions
 - a. Much and compost are stored in conditions open to the influence of weather. Each stockpile is surrounded by an 18-inch high mulch bank.
 - b. Sand is stored within a silt fence structure covered with plastic tarpaulins.
2. Storage containment devices shall be monitored monthly and maintained to ensure protection against escape of the contained materials.

F. Materials Storage, Enclosed

1. UMW stores magnesium chloride (ice melt) in non-conditioned closed storage in two locations on the Fredericksburg campus. One location is a storage container at the Physical Plant, Hanover Street. The other storage location is a former bread store facility owned by UMW.
 - a. Both are protected against loss to stormwater conveyance devices, and shall be inspected periodically to ensure the protection is maintained.
2. UMW also stores fertilizers and pesticides under controlled conditions at the Fredericksburg campus, Physical Plant location.
 - a. Fertilizers are kept in the heated Grounds space.
 - b. Pesticides are under controlled-access within the Grounds space, and further controlled, mixed and dispersed by certified application technicians.