

JAMES MADISON UNIVERSITY®

ESC & SWM PLAN SUBMITTER'S CHECKLIST

In order to obtain plan approval for Erosion and Sediment Control (ESC) and Stormwater Management (SWM), adequate documentation needs to be provided to show compliance with state law, regulations, and JMU's DEQ approved standards and specifications. The purpose of this document is to provide a checklist of required components to be included with plan submissions for review. While this list is not all inclusive due to variability and complexities of each site, this checklist will assist with expediting review times by providing a comprehensive list of needed components and requested formatting. The submitted narratives, construction details and plan views shall clearly convey the construction process for the plan reviewers, construction contractor and regulatory inspectors.

Please fill in all blanks and provide a reference where the information can be found (i.e. plan sheet, engineering report page, appendix name and page number, etc.), or write N/A by items that are not applicable.

SECTION 1: PROJECT INFORMATION

Plan Submission Date: _____ Total Disturbed Acreage (nearest hundredth): _____

Project Name: _____

Project Address or Location: _____

Principal Designer Name and Company: _____

Principal Designer Phone Number: _____ email: _____

1.1 Virginia Stormwater Management Program (VSMP) – Does the VSMP apply to this project? Check the box that applies:

- Yes, the land-disturbing activity will disturb one acre or more of land.
- Yes, the land-disturbing activity will disturb less than one acre of land but is part of a larger common plan of development or sale that will result in one acre or more of land disturbance.
- No, the land-disturbing activity will disturb less than one acre of land and is not part of a larger common plan of development or sale.

1.2 Design Criteria for VSMP Projects – Check the box that applies for this project.

- Part IIB, for projects obtaining initial state permit on or after July 1, 2014.
- Part IIC, for projects obtaining initial state permit or commence land disturbance prior to July 1, 2014.
- Part IIC, for projects considered grandfathered provided: 1. There has been an obligation of locality, state, or federal funding, in whole or in part, prior to July 1, 2012, or the department has approved a stormwater management plan prior to July 1, 2012; 2. A state permit has not been issued prior to July 1, 2014; and 3. Land disturbance did not commence prior to July 1, 2014.

SECTION 2: SUBMITTAL COMPLETENESS CHECK

The Erosion and Sediment Control (ESC) and Stormwater Management (SWM) Plan consists of the Narrative (including any supporting calculations) and the construction sheets (site plan), as noted below. These items shall be provided initially and with each re-submission. All documents shall be provided in digital (pdf) format, except for the VRRM worksheet which shall be submitted digitally in Excel format. The designer's seal, signature, and date are required on the cover sheet of each Narrative and each set of Plan Sheets.

- Completed Plan Submitters Checklist
- Plan Set
- ESC Narrative
- Engineering/Drainage Report
- VRRM Worksheet (if applicable)
- Variances & Exceptions (if applicable)
- Off-site Compliance (if applicable)

2.1 Completed Plan Submitter's Checklist - Provide a completed ESC & SWM Plan Submitter's Checklist.

2.2 Plan Set – A pdf shall be provided that shall include all sheets pertaining to the site grading and stormwater and any activities impacting erosion and sediment control and drainage. The designer's original seal, signature and date are required on the cover sheet of each set of plan sheets. See section 3 for more information.

- Existing conditions
- Demolition
- Site grading
- Erosion and sediment control
- Storm sewer systems
- Stormwater management facilities
- Utility layout
- Landscaping
- On-site and off-site borrow and disposal areas

2.3 ESC Narrative – A narrative shall be provided as a separate pdf or included within the plan set or engineering report. See section 4 for more information.

2.4 Engineering/Drainage Report – An engineering/drainage report shall be provided in pdf format that shall include support documentation for required analysis and calculations. See section 5 for more information.

Sections shall include the following:

- Project summary
- Stormwater management regulations that apply and strategies used to comply with the criteria
- Summary tables showing compliance with the regulations
- Pre-development conditions
- Post-development conditions
- Hydrologic / Hydraulic Analysis
- Calculations
- Stormwater Model / Report
- Drainage Area Maps
- FEMA FIRM panel reference designating special flood hazard areas or zone designations associated with the site, as applicable.

2.5 VRRM Worksheet – A digital copy of the VRRM worksheet in excel format shall be required for projects requiring stormwater quality.

2.6 Variances & Exceptions – Provide a letter requesting a variance or exception with details and documentation including justification and associated impacts. Variances are governed by Section 9VAC25-840-50 of the *Virginia Erosion and Sediment Control Regulations*. Exceptions are governed by Section 9VAC25-870-57 of the *Virginia Stormwater Management Regulations*.

2.7 Off-site Compliance – For off-site stormwater quality compliance, provide a letter of availability from the off-site provider as governed by Section 9VAC-25-870-55 of the *Virginia Stormwater Management Regulations*.

SECTION 3: PLAN SET

A pdf shall be provided that shall include all sheets pertaining to the site grading, stormwater management, and any activities impacting erosion and sediment control and drainage.

All plan sheets shall provide a north arrow and graphical scale

Reference the plan sheet or engineering report where the information can be found in the blanks below.

- Existing conditions
- Demolition
- Site grading
- Erosion and sediment control w/ phasing
- Storm sewer systems
- Stormwater management facilities
- Utility layout
- Landscaping
- Control and structure details
- On-site and off-site borrow and disposal areas

_____ **3.1 Owner Contact Information** – On the cover sheet, provide name, address, telephone number and email of the owner representative/project manager.

_____ **3.2 Vicinity Map** – On the cover sheet, provide a small map locating the site in relation to the surrounding area. Include any landmarks that might assist in locating the site.

_____ **3.3 Limits of disturbance** – Areas which are to be cleared and graded and areas to be protected during construction. This disturbed area shall include laydown, access and any other areas that may be disturbed during the course of the project. Provide notes on how areas will be marked for areas NOT to be disturbed.

_____ **3.4 Existing contours** - The existing contours of the site shall be shown as dashed light lines and elevation labeled adequately. Contours shall be either a 1' or 2' contour interval with spot shot elevations as necessary to define high and low topographic information.

_____ **3.5 Final contours and elevations** - Changes to the existing contours, including final drainage patterns. Note the finished floor elevation (FFE) of all buildings on site, including basements. Proposed contour lines shall be solid and bolder than existing contour lines and the elevation labeled adequately. Contours shall be either a 1' or 2' contour interval with spot shot elevations as necessary to define high and low topographic information.

_____ **3.6 Plan view of storm drainage system** – Existing and proposed storm drainage components shall be provided in a plan view. Pipe diameter, lengths, material, inverts, stationing, and direction of flow shall be included as part of the plan view. Structure inlets, manholes, junctions and end sections shall be shown with a unique identifier, rim elevation, inverts, structure type, and required grate or top type. Label directly on plan or use a structure/pipe schedule on the same plan sheet.

_____ **3.7 Profile of storm drainage system** – Existing and proposed storm drainage components shall be provided in a profile. Pipe diameter, material, inverts, stationing, percent slope, proposed and existing grade, and hydraulic grade lines shall be included as part of the profile.

_____ **3.8 Existing vegetation** - The existing tree lines, grassed areas, or unique vegetation.

_____ **3.9 Soils map** – The boundaries of different soil types, K factor and soil survey classifications.

_____ **3.10 Existing drainage patterns** – The dividing lines and the direction of flow for the different drainage areas. Include the size (acres) of each drainage area and size of impervious area.

_____ **3.11 Proposed drainage patterns** – The dividing lines and the direction of flow for the different drainage areas. Include the size (acres) of each drainage and size of impervious area.

_____ **3.12 Critical areas** – Note all areas with potentially serious erosion problems, or critical slopes. K factors of 0.37 or higher, or slope steepness and length combinations such as slopes between 7-15% with slope lengths of 150'

or more, and slopes 15% and higher with a slope length of 75' or more. Also identify any on-site or adjacent water bodies included in the Virginia 303(d) list of impaired waters.

3.13 Site development – Show all improvements such as buildings, parking lots, access roads, utility construction, etc. Show all physical items that could affect or be affected by erosion, sediment, and drainage.

3.14 Landscape plan – Include a plan showing location and plant selection for landscaped areas.

3.15 Location of practices – Show locations of ESC and SWM practices to be used on the site. Use standard symbols and abbreviations from ESC and SWM handbooks. A legend denoting symbols, line uses and other special characters shall be provided.

3.16 Off-site areas - Include any off-site land-disturbing activities (e.g., borrow sites, disposal areas, etc.) not covered by a separate approved ESC Plan.

3.17 Specifications / Detail Drawings for erosion and sediment control measures – For each VESCH and accepted non-VESCH erosion and sediment control measure employed in the plan, include, at a minimum, the applicable standard detail, narrative, maintenance requirements and associated legend symbol. Include any approved variances or revisions to the standards and specifications. Details should be provided which are clearly dimensioned and reflect the ability to be “built” in the field according to proper design criteria. Corresponding details or reference tables not shown on plan sheets shall be referenced to the detail (ie. “See detail on sheet...”)

3.18 Specifications / Detail Drawings for stormwater management structures – Provide specifications for stormwater management structures such as pipe materials, pipe bedding, structures, etc. Details should be provided which are clearly dimensioned and reflect the ability to be “built” in the field according to proper design criteria. Corresponding details or reference tables not shown on plan sheets shall be referenced to the detail (ie. “See detail on sheet...”)

- Dimensions of pretreatment devices. Note that all pretreatment measures shall be outside the required surface area of the BMP.
- Delineation of permanent pools and 1-, 2-, and 10-year design water surface elevations. (and 100-yr design storm where required)
- VDOT IS-1 storm drain shaping will be required for storm drain structures.

3.19 Erosion and sediment control notes - At a minimum, include the erosion and sediment control notes found appendix B. Ensure that all applicable Minimum Standards not covered elsewhere in the plan have been addressed.

3.20 Minimum Standards – Minimum Standard 1 through Minimum Standard 19 shall be included in the plan set.

3.21 Legend - Provide a complete listing of all ESC and SWM measures to be used, including the VESCH uniform code symbol and the standard and specification number. Include any other items necessary to identify pertinent features in the plan. Hatching patterns shall also be adequately labeled.

3.22 Property lines and easements – Internal property lines within JMU’s jurisdiction is not required, but all property lines adjacent to JMU property shall be shown on plan sheets along with any easements.

ESC MINIMUM STANDARDS

Yes	No	NA		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MS-1	Have temporary and permanent stabilization been addressed in the narrative?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Are practices shown on the plan?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Temporary and permanent seed specifications?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Lime and fertilizer?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Mulching?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Blankets/Matting?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Pavement/Construction Road Stabilization?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MS-2	Has stabilization of soil stockpiles, borrow areas, and disposal areas been addressed in the narrative and on the plan?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Have sediment trapping measures been provided?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MS-3	Has the establishment and maintenance of permanent vegetative stabilization been addressed?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MS-4	Does the plan specifically state that sediment-trapping facilities shall be constructed as a first step in land-disturbing activities?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MS-5	Does the plan specifically state that stabilization of earthen structures is required immediately after installation? Is this noted for each measure on the plan?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MS-6	Are sediment traps and sediment basins specified where needed and designed to the standard and specification?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MS-7	Have the design and temporary/permanent stabilization of cut and fill slopes been adequately addressed? Is Surface Roughening provided for slopes steeper than 3:1?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MS-8	Have adequate temporary or permanent conveyances (paved flumes, channels, slope drains) been provided for concentrated stormwater runoff on cut and fill slopes?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MS-9	Has water seeping from a slope face been addressed (e.g., subsurface drains)?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MS-10	Is adequate inlet protection provided for all operational storm drain and culvert inlets?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MS-11	Are adequate outlet protection and/or channel linings provided for all stormwater conveyance channels and receiving channels? Is there a schedule indicating:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Dimensions of the outlet protection? Lining? Size of riprap?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Cross section and slope of the channels? Type of lining? Size of riprap, if used?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MS-12	Are in-stream protection measures required so that channel impacts are minimized?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MS-13	Are temporary stream crossings of non-erodible material required where applicable?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MS-14	Are all applicable federal, state and local regulations pertaining to working in or crossing live watercourses being followed?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MS-15	Has immediate restabilization of areas subject to in-stream construction (bed and banks) been adequately addressed?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MS-16	Have disturbances from underground utility line installations been addressed?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		No more than 500 linear feet of trench open at one time?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Effluent from dewatering filtered or passed through a sediment-trapping device?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Proper backfill, compaction, and restabilization?

- MS-17 Is the transport of soil and mud onto public roadways properly controlled? (i.e., Construction Entrances, wash racks, transport of sediment to a trapping facility, cleaning of roadways at the end of each day, no washing before sweeping and shoveling)
- MS-18 Has the removal of temporary practices been addressed?
Have the removal of accumulated sediment and the final stabilization of the resulting disturbed areas been addressed?
- MS-19 Are properties and waterways downstream from development adequately protected from sediment deposition, erosion, and damage due to increases in volume, velocity and peak flow rate of stormwater runoff?
- Is concentrated stormwater runoff leaving the development site discharged to an adequate natural or man-made receiving channel, pipe or storm sewer system?
- Are calculations provided to verify the adequacy of all channels and pipes?
- If existing natural receiving channels or previously constructed man-made channels or pipes are not adequate, have provisions been made to prevent downstream erosion?
- Have increased volumes of sheet flows that may cause erosion or sedimentation on adjacent property been diverted to a stable outlet, adequate channel, pipe or pipe system, or to a detention facility?
- Have water quantity requirements under 9VAC25-870-66 been satisfied? Provide documentation.

SECTION 4: ESC NARRATIVE

The ESC narrative is a written statement that explains the erosion and sediment control and stormwater management decisions made for the project and the justification for those decisions. At a minimum, the narrative shall include a section for each of the items described below.

Reference the plan sheet or engineering report page where the information can be found in the blanks below.

- Project Description
- Existing Site Conditions
- Adjacent Areas
- Off-site Areas
- Soils
- Critical Areas
- ESC Measures
- Management Strategies/Sequence of Construction
- Permanent Stabilization
- Maintenance of ESC Measures
- Calculations
- Stormwater Management Considerations

4.1 Project description – This section shall describe the nature and purpose of the land-disturbing activity. Provide project specific information. Also include the following:

- Provide the area (acres to the nearest hundredth) to be disturbed. This disturbed area (limits of disturbance) shall include laydown, access and any other areas that may be disturbed during the course of the project. This area shall provide adequate space for the contractor to perform required work for excavation and grading.
- Provide the existing impervious area and the increase, or decrease, in impervious area (acres).
- Estimated schedule for project. (Start/end dates, or estimated length of project in months or years)
- Ultimate developed condition of the site.

4.2 Existing site conditions – This section shall provide a description of the existing topography (% slopes), ground cover, and drainage (on-site and receiving channels).

- Discuss any existing drainage or erosion problems and how they are to be corrected.

4.3 Adjacent areas – This section shall provide a description of all neighboring areas such as residential developments, agricultural areas, streams, lakes, roads, etc., that may be affected by the land disturbance. Discuss any environmentally sensitive areas, including any on-site or adjacent water bodies included in the Virginia 303(d) list of impaired waters, and any possible problems during and after construction (traffic issues, dust control, increases in runoff, etc.).

4.4 Off-site areas – This section shall describe any off-site land-disturbing activities that may occur (borrow sites, disposal areas, easements, etc.).

- Provide information on whether the proposed site is balanced, estimated cubic yards needed, or to be removed from the site.
- If borrow/disposal site is known, provide documentation showing that site has an approved and current ESC plan (locality land-disturbance permit, construction general permit coverage letter, etc.). If borrow/disposal site does not have an approved ESC plan, this plan will need to incorporate that area as part of the proposed disturbance.
- If borrow/disposal site will not be known until after a contractor has been hired, provide a narrative explaining that the contractor will need to provide documentation showing that their borrow/disposal site has an approved and current ESC plan, or will need to work with the engineer to have their borrow/disposal site included into the proposed plan.

4.5 Soils – This section shall provide a description of the soils on the site, giving such information as soil name, mapping unit, erodibility, permeability, surface runoff, and a brief description of depth, texture and soil structure.

- Indicate reference for additional soil information if not included within this section.
- Provide a reference to where a copy of the soil survey map can be found within the plan set or engineering report.

4.6 Critical areas – This section shall provide a description of areas on the site that may have potentially serious erosion problems or that are sensitive to sediment impacts (e.g., critical slopes, watercourses, wet weather / underground springs, etc.). Discuss any area(s) of the project which may become critical during the project.

4.7 Erosion and sediment control measures – This section shall provide a description of the structural and vegetative methods that will be used to control erosion and sedimentation on the site. Controls should satisfy applicable minimum standards and specifications in Chapter 3 of the latest edition of the Virginia Erosion and Sediment Control Handbook (VESCH) or items alternative measures approved within JMU's *Standards and Specifications for ESC and SWM*.

4.8 Management strategies / Sequence of construction – This section shall address management strategies, the sequence of construction, and any phasing for the installation of ESC measures. The sequence of construction shall provide specific details concerning the construction and installation and phasing of ESC and SWM measures.

4.9 Permanent stabilization – This section shall provide a brief description, including specifications, of how the site will be stabilized after construction is completed. List any soil testing requirements. A permanent vegetative cover shall be established on denuded areas not otherwise permanently 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.

4.10 Maintenance of ESC measures – This section shall provide a schedule of regular inspections, maintenance, and repair of erosion and sediment control structures should be set forth. List who will be responsible for ESC maintenance during the course of the project. VESCH control measures shall be maintained in accordance with the VESCH maintenance schedules, and non-VESCH control measures shall be maintained in accordance with the manufacturer's recommendations.

4.11 Calculations for temporary erosion and sediment control measures – This section shall provide a summary of measures needing calculations and a reference to where calculations and worksheets for each temporary ESC measure can be located (e.g. traps, basins, channels, outlet protection, etc.).

4.12 Stormwater management considerations – This section shall provide a summary of considerations made for the project along with permanent control measures including a reference to where each piece of information can be found within the plan set or engineering report. Will the development of the site cause an increase in peak runoff rates? Will the increase in runoff cause flooding or channel degradation downstream?

All calculations showing pre-development and post-development runoff should be provided including any worksheets, assumptions and engineering decisions. Describe the strategy to control stormwater runoff.

SECTION 5: ENGINEERING/DRAINAGE REPORT

The Engineering/Drainage Report shall provide a summary describing the methodology and design of stormwater management facilities and how compliance with regulations were met along with supporting documentation.

Design assumptions made along with identification of computation methodology shall be proved for calculations.

Reference the plan sheet or engineering report page where the information can be found in the blanks below.

- Project Summary
- SWM Regulations
- Summary Tables
- Pre-Development Conditions
- Post-Development Conditions
- Hydrologic / Hydraulic Analysis
- Calculations
- Stormwater Model / Report
- Drainage Area Maps

5.1 Water quantity compliance – Provide a summary description of the water quantity compliance strategy along with adequate documentation. Clearly define and label the design points and points of analysis to show compliance with the criteria.

- Channel Protection: 9VAC25-870-66B. Check boxes that apply.
 - 1. Manmade stormwater conveyance systems
 - a. or b.
 - 2. Restored stormwater conveyance systems
 - a. or b.
 - 3. Natural stormwater conveyance systems
 - a. or b.
 - 4. Limits of analysis
 - a. or b.
- Flood Protection: 9VAC25-870-66C. Check boxes that apply.
 - 1. Concentrated stormwater flow to stormwater conveyance systems that currently do not experience localized flooding during the 10-year 24-hour storm event.
 - 2. Concentrated stormwater flow to stormwater conveyance systems that currently experience localized flooding during the 10-year 24-hour storm event: The point of discharge either:
 - a. or b.
 - 3. Limits of analysis. Unless subdivision 2 b of this subsection is utilized to comply with the flood protection criteria, stormwater conveyance systems shall be analyzed for compliance with flood protection criteria to a point where:
 - a. or b. or c.

5.2 Water quality compliance – Provide a summary description of the water quality compliance strategy along with adequate documentation, including required limits of analysis, to show compliance with the criteria. Clearly define and/or label point of analysis.

- Identify the water quality compliance strategies and provide adequate documentation.
- Tabulated runoff curve numbers for pre-developed and post-developed site.
- Runoff reduction method spreadsheet (in Excel format) to show water quality compliance.

5.3 Adequate conveyances – Ensure that stormwater conveyances with adequate capacity and adequate erosion resistance have been provided for all on-site concentrated stormwater runoff. Off-site channels that runoff from the site, including those receiving runoff from stormwater management facilities, must be adequate. Increased volumes of sheet flows must be diverted to a stable outlet, adequate channel, pipe or pipe system, or a stormwater management facility.

- Provide exhibits showing draining divides, direction of flow, and size (acreage) of each of the site drainage areas that discharge runoff off-site, both existing and proposed.
- Provide calculations for pre- and post-development runoff from these drainage areas

- Ensure that quantity requirements are satisfied for each off-site receiving channel, including those that receive runoff from stormwater management facilities.
- Provide calculations for the design of each permanent stormwater management facility.
- Provide adequacy calculations for all on-site stormwater conveyances.

5.4 Documentation and Calculations - Provide the following design calculations, as applicable:

- Drainage area map with time of concentration (TC) path shown and points of analysis.
 - Provide TR-55 worksheets 2 thru 4 or equivalent data in a table.
- TC calculation/nomograph
- Locality IDF curve
- Composite runoff coefficient or RCN calculation
- Peak runoff calculations
- Imperviousness of the entire site and each drainage area
- NRCS runoff curve numbers or volumetric runoff coefficients
- Hydrologic analysis for the existing (pre-development) conditions, including runoff rates, volumes, and velocities, showing the methodologies used and supporting calculations.
- Hydrologic analysis for the proposed (post-development) conditions including runoff rates, volumes, and velocities, showing the methodologies used and supporting calculations.
- Hydrologic and hydraulic analysis of the stormwater management system for all applicable design storms.
- Stormwater conveyance channel design calculations
- Storm drain and storm sewer system design calculations
- Curb Inlet length calculations. (limit spread to 6' maximum)
- Drop inlet backwater calculations
- Hydraulic Grade Line on profiles of pipe systems
- Culvert design calculations and analysis
- BMP calculations
- Quantity compliance calculations
- Quality compliance calculations

5.5 BMP Information - Provide a table or summary for all stormwater quantity and quality BMP facilities including the following information:

- BMP Name
- Total Acres Treated
- Impervious Acres Treated
- Pervious Acres Treated with soil type(s) identified
- Pounds of phosphorus removed
- Volume of runoff treated by practice in acre-feet
- Geographic coordinates (Lat/Long)
- Lifespan

5.6 State Maintenance Agreement Information – The following information shall be printed on the approved stormwater management plan for state projects:

- A description of the requirements for maintenance and maintenance inspection of the stormwater facilities and a recommended schedule of 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 identification of the person(s) who will be responsible for maintenance inspection and maintenance.
 - Inspections:
 - Stormwater Coordinator
 - University Services Building
 - 181 Patterson Street, Room 201BC, MSC 7004
 - Harrisonburg, VA 22807
 - Phone: (540) 568-7606
 - Maintenance
 - Facilities Management – Operations, Landscape Manager

University Services Building
181 Patterson Street, Room 158, MSC 7007
Harrisonburg, VA 22807
Phone: (540) 568-3411

- Clearly depict the types of land cover on the site (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. Also provide a table that adds the land cover up by type on the sheet.
- For “Conserved forest/open space” areas, provide metes and bounds around the perimeter.
 - Label any conserved forest/open space as “Runoff Reduction Compliance Forest/Open Space”.
 - Include the following note on the sheet: “The Runoff Reduction Compliance Forest/Open Space area shown shall be maintained in a forest/open space manner until such time that an amended stormwater management plan is approved by the VSMP Authority or entity with DEQ approved standards and specifications for stormwater plan approval.”

_____ **5.7 Page numbers** – Provide unique page numbers for plan sheets and the engineering report for referencing.

_____ **5.8 Supporting documentation** – Provide applicable supporting documents and studies (e.g. infiltration tests, geotechnical investigations, TMDLs, flood studies, etc.)

_____ **5.9 Other required permits** – Provide a statement of notification of additional environmental permits and approvals needed prior to land disturbance, and copies of approvals if already received. (e.g. USACE, FEMA)

SECTION 6: CHECKLIST PREPARER CERTIFICATION STATEMENT

I certify that I am a professional in adherence to all minimum standards and requirements pertaining to the practice of that profession in accordance with Chapter 4 (§ 54.1-400 et seq.) of Title 54.1 of the Code of Virginia and attendant regulations. By signing this checklist, I am certifying that this document and all attachments are, to the best of my knowledge and belief, true, accurate, and complete.

Signature: _____

Printed Name: _____

Date: _____