



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

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INTRODUCTION

The Virginia State University (VSU) Erosion and Sediment Control/Stormwater Program (ESC/SW) is an integral component of the design, construction, maintenance, and management of the University Campus. The University's ESC/SW Annual Standards and Specifications submittal has been developed to ensure that all land-disturbing activities undertaken by the University will proceed in accordance with the Virginia Erosion and Sediment Control Law and Virginia Stormwater Management Law and Regulations (ES/SWL&R), and The Virginia Erosion and Sediment Control Regulations and to Municipal Separate Storm Sewer Systems (MS-4) and construction activities.

The Annual Standards and Specifications for ESC/SW shall apply to all plan design, construction and maintenance activities undertaken by the University, either by its internal workforce or contracted to external entities, where such activities are regulated by the Virginia ESC/SW Law. During any inspections of the University's land-disturbing activities by DEQ and other such environmental agencies, compliance with the approved Authority Annual Standards and Specifications for ESC/SW (and all parts thereof) will be expected.

The University's Annual Standards and Specifications for ESC/SW are submitted to the Department of Environmental Quality (DEQ) for review and approval on an annual basis. This submittal constitutes the University'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 University and DEQ personnel.



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1.0 ANNUAL STANDARDS AND SPECIFICATIONS ADMINISTRATION

All projects involving land-disturbing activity that are subject to Stormwater and Erosion and Sediment Control shall be bound by the University Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management. Only registered design professionals will prepare and seal erosion and sedimentation control plans and stormwater management plans for University projects. The erosion and sediment control plans and stormwater management plans will follow the latest regulations (as amended) which are detailed below.

1.1. ESC/SW References

Authority Annual Standards and Specifications for ESC/SW approved by DEQ are composed of general specifications. The general specifications for ESC/SW that apply to the land-disturbing activities include the ESC/SW technical bulletins (as amended) and by reference include the following:

- 1.1.1. Virginia Erosion and Sediment Control Law (§62.1-44.15 et seq. as amended);
- 1.1.2. Virginia Erosion and Sediment Control Regulations (9VAC25-840 et seq. as amended);
- 1.1.3. Virginia Erosion and Sediment Control Certification Regulations (9VAC25-850 et seq. as amended);
- 1.1.4. Virginia Erosion and Sediment Control Handbook, 1992;
- 1.1.5. Virginia Stormwater Management Program (VSMP) Regulations (9VAC25-870) and the General Virginia Pollutant Discharge Elimination System (VPDES) Permit for Discharges of Stormwater from Construction Activities (9VAC25-880) (as amended).
- 1.1.6. Accessed at:
<http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/Publications.aspx>

1.2. ESC/SW Plans Required

Site-specific ESC/SW plans shall be submitted to the University Annual Standards and Specifications Administrator for review. Checklists that summarize the required components of the ESC/SW Plans are included in Appendix A and Appendix B, respectively. Prior to starting a land-disturbing activity, the project must have written approval issued by the University's ESC/SW Annual Standards and Specifications Administrator.

- 1.2.1. Changes to the University's site-specific SW plans shall be submitted to the University's ESC/SW Annual Standards and Specifications Administrator for review. Prior to starting a land-disturbing project requiring a SW plan, the project must have an approval issued by the University's ESC/SW Annual Standards



and Specifications Administrator for the plan by way of a Land Disturbance/Stormwater Permit.

1.3. Variances and Exceptions

The University may request DEQ to grant a project specific variance to the approved University Annual Standards and Specifications for ESC/SW. 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.

1.4. Recordkeeping

- 1) Project records, including approved stormwater management plans, shall be kept for three years after state permit termination or project completion.
- 2) Stormwater management facility inspection records shall be documented and retained for at least five years from the date of inspection.
- 3) Construction record drawings shall be maintained in perpetuity or until a stormwater management facility is removed.
- 4) All registration statements submitted in accordance with 9VAC25-870-59 shall be documented and retained for at least three years from the date of project completion or state permit termination.

2.0 ANNUAL STANDARDS AND SPECIFICATIONS PERSONNEL

The University's Capital Outlay Department shall be the authority for administering University Projects under the University Annual Standards and Specifications for ESC/SW. The following is a breakdown of related responsibilities and titles. The following functions are designated to ensure compliance with the Authority Annual Standards and Specifications for ESC/SW on all University projects. All certifications shall be in accordance with Virginia Erosion and Sediment and Stormwater Management Control Certification Regulations.

2.4. ESC/SW Annual Standards and Specifications Administrator

The ESC/SW Administrator shall have overall management and coordination responsibilities for the Authority Annual Standards and Specifications for ESC/SW. This person will reside within the Department of Capital Outlay. At a minimum, this person shall be a DEQ certified program administrator.

2.5. ESC/SW Annual Standards and Specifications Plan Reviewer

The ESC/SW Plan Reviewer shall be responsible for reviewing plans to ensure compliance with the University Annual Standards and Specifications for ESC/SW and applicable ESC/SW laws and regulations. The ESC Reviewer is either a licensed professional in accordance with 9VAC25-850-40 or holds the appropriate certificate of competency from the State Water Control Board (Board). The SW Reviewer holds a certificate of competence from the Board in the area of plan review or is enrolled in the Board's training program for plan review and successfully completes such program



within one year after enrollment. The Reviewer shall be responsible to review and permit erosion and sediment control and stormwater management plans and approve SWPPPs and can assume the role of inspector or assist with inspections when needed. The Reviewer must state in writing the reason(s) for disapproval of an ESC/SW Plan and specify the modifications, terms, and conditions necessary for plan approval. This person will reside within the Department of Capital Outlay, or can be a certified third party hired by the Department of Capital Outlay.

2.6. ESC/SW Annual Standards and Specifications Inspector

2.6.1. Responsibilities

The ESC/SW Inspector shall have the responsibility for inspecting erosion and sediment control practices to evaluate compliance with the approved ESC/SW plan and associated laws, regulations, and the Annual Standards and Specifications for ESC/SW. The Inspector shall be responsible to inspect as mandated by the VESCL&R erosion and sediment control measures to ensure proper installation in accordance with the permitted plans and record the state and effectiveness of such measures in an effort to minimize site erosion and maximize sediment control. They shall also be responsible to inspect the construction and effectiveness of permanent stormwater management controls, verify that all required documents are available on-site for view/review, including but not limited to, land disturbance permit, permitted plans, inspection logs, VSMP permits, SWPPP, etc.

2.6.2. Certification Requirements

This position shall be a DEQ certified inspector from the Department of Capital Outlay, or can be a certified third party hired by the Department of Capital Outlay.

Regulations require that ESC inspectors obtain certification from DEQ by:

- 1) Either,
 - i. obtaining 800 hours of experience as an ESC project inspector *or*
 - ii. completing DEQ's "Basic Erosion and Sediment Control in Virginia" and "Erosion and Sediment Control for Inspectors" training programs
- 2) And
 - i. obtaining a passing score on the applicable certification examination administered by DEQ.

Regulations require that SWM inspectors obtain certification from DEQ by:

- 1) Either,
 - i. obtaining 800 hours of experience as an SWM project inspector *or*
 - ii. completing DEQ's "Basic Stormwater Management in Virginia" and "Stormwater Management for Inspectors" training programs



- 2) And
 - i. obtaining a passing score on the applicable certification examination administered by DEQ.

Certification and recertification is valid for three years.

2.7. Responsible Land Disturber

A Responsible Land Disturber (RLD) shall be designated prior to initiating the land-disturbing activity. The Contractor shall notify the University and DEQ Piedmont Regional Office of the Responsible Land Disturber at least two weeks in advance of the land-disturbing activity as follows:

1. Information shall be sent to hannah.zegler@deq.virginia.gov (This is subject to change as DEQ is in the process of obtaining a AS&S specific email account)
2. The following information needs to be included in the e-notification two weeks prior to initiating a regulated LDA:
 - i. Project name or project number and any associated CGP permit 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
 - vi. Acreage of disturbance for project
 - vii. Project start and finish date
 - viii. Any variances/waivers/exemptions associated with this project.

3.0 ANNUAL STANDARDS AND SPECIFICATIONS IMPLEMENTATION

ESC/SW plans shall comply with the University Annual Standards and Specifications and the requirements listed in section 1.1. Starting July 1, 2014, VSMP Construction General Permits (GP) must include the general administrative criteria from Part II A. The technical criteria from Part II B or Part IIC, should then be implemented as applicable to the project. Projects with land disturbances between 2,500 sf and 43,559 sf are not required to seek Construction GP coverage, but are required to have approved stormwater management plans and approved erosion and sediment control plans in accordance with the appropriate technical criteria.

3.1. Technical Criteria

The University has obtained initial 2009 Construction GP coverage for the MS4 boundary encompassing the main campus area in order to implement its architectural master plan in accordance with its stormwater master plan. As such, projects completed within the MS4 boundary limits of the main campus are considered to meet the time limits on applicability of approved design criteria per 9VAC25-870-47 and are eligible to use the technical criteria from Part IIB or Part IIC.



Projects designed to the technical criteria from Part IIB should use the Virginia Stormwater Management BMP Clearinghouse.

Projects designed to the technical criteria from Part IIC should use the *Virginia Stormwater Management Handbook*, First Edition, 1999 Volume I and II.

3.2. Use of Campus “Regional” BMPs

Campus wide water quality treatment BMPs are in place and being developed in accordance with the stormwater master plan. Development projects within the MS4 boundary can utilize these facilities to meet the Part IIC technical criteria. Projects seeking to utilize these campus-wide facilities must provide the following information within their stormwater management plans to demonstrate compliance:

- 3.2.1.** Determination of the proposed project’s water quality requirement using the performance based water quality calculation worksheets.
- 3.2.2.** Water quality accounting calculations and summary information showing the available treatment capacity in the subject BMP prior to the proposed project and remaining treatment capacity in the subject BMP after the proposed is implemented.

A list of projects utilizing the “regional” BMPs is included in Appendix C.

3.3. Storm Water Pollution Prevention Plan (SWPPP) Template

A preliminary SWPPP shall be prepared in accordance with the information provided below for submittal to the contractor.

- 3.3.1.** Complete the preliminary SWPPP prior to the project bid-meeting.
- 3.3.2.** Use the campus-wide SWPPP template included in Appendix D of these annual standards.
- 3.3.3.** Insert the approved ESC/SW plans in the appropriate SWPPP appendices.
- 3.3.4.** Include the Standard Stormwater Pollution Prevention Plan technical specification from Appendix E within the project bid package. The specification is to be implemented on all regulated land disturbing activities that require Construction GP Coverage.
- 3.3.5.** Submit the completed preliminary SWPPP and technical specification to the contractors prior to the pre-bid meeting

3.4. Submittals

ESC/SW drawings and narratives shall be submitted to the University’s Administrator for review and approval prior to any land-disturbing activities. The Administrator will transmit the ESC/SW plans to the appropriate Reviewer. The Reviewer shall have 30



days to review the plan and provide written comments to the University's Administrator. Prior to commencement of a land-disturbing project, the project must have received written approval for the plan(s) from the University's Administrator.

3.5. Plan reviews

Plan reviews shall be conducted by a DEQ Certified Plan Reviewer. Plan reviews shall ensure compliance with the University Annual Standards and Specifications. Plan Reviewers shall use the Plan Checklists provided in Appendix A for ESC and Appendix B for SW plans.

3.6. Inspections

The Inspector(s) is responsible for determining if the implementation of the project is in accordance with the project specific erosion and sediment control plans and associated ESC/SW laws and regulations. Refer to Section 5.0 for more information on inspections and enforcement procedures.

3.7. Changes and Amendments to Approved Plans

An approved plan may be changed by the Department of Capital Outlay in the following cases:

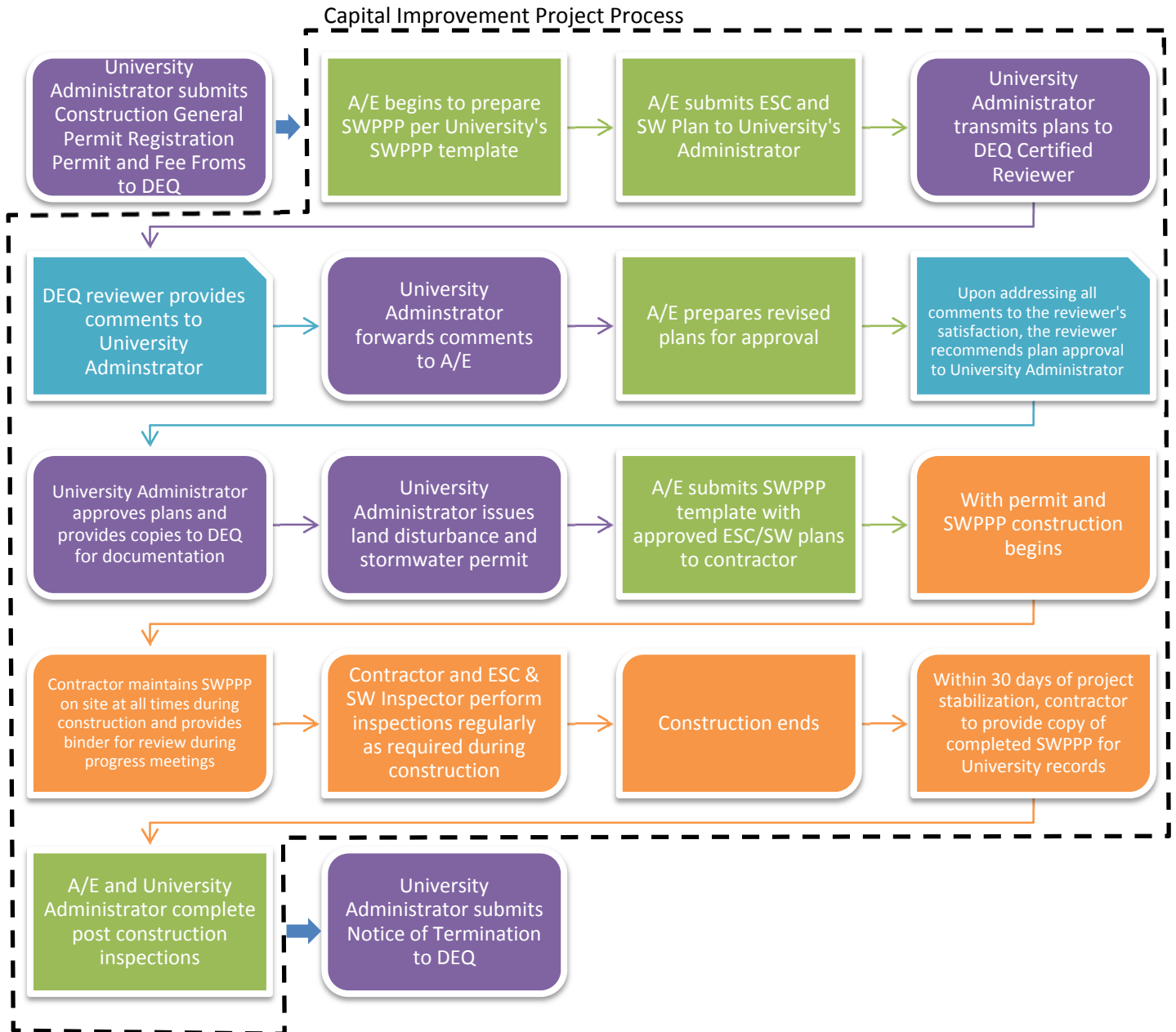
- 3.7.1.** Where inspection has revealed the plan is inadequate to satisfy applicable regulations; or,
- 3.7.2.** If for changed circumstances or other reasons the approved plan cannot be effectively carried out, and proposed amendments to the plan, consistent with the requirements of this article, are 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/SW plan must be submitted in writing to the Administrator for review. Formal plan revisions are only necessary when the changes involve engineered controls (e.g., a sediment trap or basin) or a reduction in the level or quantity of ESC/SW. Revisions shall not be considered approved until written notice is provided. Revisions must comply with the University's Annual Standards and Specifications for ESC/SW.



3.8. Submittal and approval process

The following flow chart outlines the University's submittal and approval process from conception to end of land disturbing activity.





4.0 EROSION & SEDIMENTATION CONTROL/STORMWATER PLAN REQUIREMENTS

ESC and SW Plans must be approved by VSU's DEQ-Certified ESC/SWM Plan Reviewer prior to land disturbance.

4.1. Submittals

ESC/SW plans and supporting documentation as outlined below shall be submitted to the Department of Capital Outlay for review and approval. The submittal must include the appropriate information and data necessary to support the licensed design professional's work.

4.1.1. Checklists

A complete set of project construction plans and checklists (Appendix A and B), in addition to supporting information such as calculations, design standard and specifications, reports, certifications, variances, exceptions, record documents, digital files, *etc.*, shall be submitted to the Department of Capital Outlay for review and approval prior to any land-disturbing activities. The submittal shall include a design that is in accordance with VSU's approved Annual Standards and Specifications for ESC/SW.

4.1.2. Resubmittals

For all second and subsequent submittals, the submitting professional shall include a cover letter with explanations as to how each review comment is addressed and references the relevant drawing sheet or narrative location. In addition, significant changes in the ESC/SW Plan shall be listed as part of the cover letter. The cover letter may warrant additional comments/discussion depending upon the previous review comments or changes to the plans.

4.2. ESC Plan Requirements

Complete erosion and sediment control plans shall be provided in the construction plans and include the following:

- 4.2.1.** Minimum standards 1 through 19 shall be listed in the construction plans.
- 4.2.2.** 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.
- 4.2.3.** Construction plans shall provide information on the maintenance of all erosion and sediment control measures or reference the narrative section that contains the maintenance information.
- 4.2.4.** Construction plans shall include the amount of disturbed area listed per phase as well as the existing and proposed impervious areas, including a net change in impervious area calculation.



- 4.2.5. Land disturbing activity occurring at a separate location (contractor laydown areas, borrow areas, support-activities, etc.) shall be addressed by either:
 - a. Considering the off-site activity as being part of the proposed land-disturbing activity; or
 - b. Ensuring that the offsite area is already covered by an approved erosion and sediment control plan. The University may require the applicant to provide proof of the approval and certification that the plan will be implemented in accordance with the SWM Act.
- 4.2.6. Proof of adequate outfall and adequacy of the receiving channel to the SW treatment facility needs to be submitted and approved.
- 4.2.7. Stockpile/lay-down areas and trailer locations shall be provided on the erosion and sediment control plans.
- 4.2.8. Plans shall comply, to the maximum extent practicable, with any locality's VSMP authority's technical requirements or demonstrate that the locality's VSMP ESC technical requirements are not practicable for the project.

4.3. SW Plan Requirements

The SW plan outlines how stormwater leaving a site after construction will meet the necessary water quality and quantity technical criteria. The SW plan must include the following:

- 4.3.1. The appropriate technical criteria applied to the entire land disturbing activity (LDA).
- 4.3.2. Consideration of all sources of surface runoff including subsurface flows converted to surface runoff.
- 4.3.3. Information on the type of and location of stormwater discharges, information on the features to which stormwater is being discharged including: Surface waters or karst features, if present, and pre-development and post-development drainage areas.
- 4.3.4. Contact information including: Name, address, telephone number, and email address of the owner Tax reference number and parcel number of the property or properties affected
- 4.3.5. Narrative including description of current site conditions and final site conditions or if allowed by the VSMP authority, the information provided and documented during the review process that addresses the current and final site conditions.
- 4.3.6. General description of the proposed stormwater management facilities and the mechanism through which the facilities will be operated and maintained after construction is complete.
- 4.3.7. Information on the proposed stormwater management facilities, including type of facilities, location, including geographic coordinates, acres treated, surface waters or karst features into which the facility will discharge. Stormwater facilities shall have unique identifications and referenced in all documentation, (e.g.,



SWPPP, narrative, construction plans, and calculations sealed by a Virginia Professional Engineer, etc.).

- 4.3.8. Hydrologic and hydraulic computations, including runoff characteristics. SW calculations include but are not limited to: ditch computations, stormwater routing, storm inlet computations, pipe capacity computations, BMP computations, pond routings and computations, etc.
- 4.3.9. Profiles shall be included for all closed and open storm systems. The profile shall include the existing surface, final surface, proposed water surface elevations, pipes, pipe crossings, and hydraulic grade line. Surcharges shall be clearly indicated on the profile.
- 4.3.10. Documentation and calculations verifying compliance with the water quality and quantity requirements of the Stormwater Regulations.
- 4.3.11. Map(s) of the site that depict the topography of the site and includes all contributing drainage areas, existing streams, ponds, culverts, ditches, wetlands, other water bodies, and floodplains, soil types, karst features if present, forest cover, and other vegetative areas. Current land use including existing structures, roads, and location of known utilities and easements and sufficient information on adjoining parcels to assess the impacts of stormwater from site on these parcels. Limits of clearing and grading, and the proposed drainage patterns on the site, proposed buildings, roads, parking areas, utilities, and stormwater management facilities. Proposed land use with tabulation of the percentage of surface area to be adapted to various uses, including but not limited to planned locations of utilities, roads, and easements.
- 4.3.12. Plans should also include a detailed landscape plan with a planting schedule.
- 4.3.13. Project plans shall contain information on maintenance of BMPs.

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

- a. A description of the requirements for maintenance and maintenance inspection of the stormwater management facilities and a recommended schedule of maintenance inspection and maintenance.
- b. The identification of a person or persons who will be responsible for maintenance inspection and maintenance.
- c. 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.
- d. Please 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 and please also provide a table that adds the land cover up by type on the sheet.
- e. Please draw metes and bounds all the way around any conserved open space.



- f. Please label any conserved open space as “Runoff Reduction Compliance Forest / Open Space”
- g. Please include the following note 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.”

4.3.14. Long-Term Maintenance Responsibilities

- a. Responsibility for the operation and maintenance of stormwater management facilities shall remain with the University and shall pass to any successor or owner. If portions of the land are to be sold, legally binding arrangements shall be made to pass the basic responsibility to successors in title. These arrangements shall designate for each state project the property owner, governmental agency, or other legally established entity to be permanently responsible for maintenance.
- b. At a minimum, a stormwater management facility shall be inspected by the University on an annual basis and after any storm which causes the capacity of the facility principal spillway to be exceeded.

4.3.15. Record drawings for the plan must be appropriately sealed and signed by a professional registered in Virginia.

4.3.16. At the completion of the project, a construction record drawing (“as-built”) for permanent stormwater management facilities must be provided bearing the seal and signature of a Virginia registered professional, certifying that the stormwater management facilities have been constructed in accordance with the approved plan.

4.3.17. Plans shall comply, to the maximum extent practicable, with any locality’s VSMP authority’s technical requirements or demonstrate that the locality’s VSMP SW technical requirements are not practicable for the project.

4.4. Suggested Plan Sheets (actual sheets may vary accordingly)

- a) Cover Sheet (General Notes, Vicinity Map)
- b) General Construction Details
- c) Existing Conditions and Grading (2’ contours)
- d) Existing Drainage Divides (include calculated areas, impervious areas, C-values, and soils)
- e) Proposed Site Plan
- f) Proposed Grading Plan (1’-2’ contours; spot elevations @ high/low points and entrances)
- g) Proposed Drainage Divides (include calculated areas, impervious areas, C-values, and soils)
- h) E&S Narrative (Narrative Template)
- i) Phases of ESC w/ Drainage Divides identified per construction phase
- j) ESC/BMP/SW Details



- k) Stormwater Pipe Profiles (include dimensioned utility crossings)
- l) Stormwater Calculations (ditch comps, pipe comps, inlet comps, pond routings, etc.)
- m) Detailed Landscaping Plan (include planting schedule)

5.0 INSPECTIONS AND ENFORCEMENT

5.1. Periodic Inspections

5.1.1. Periodic inspections are required on all projects by the VESCP authority. The VESCP authority shall either:

1. Provide for an inspection during or immediately following initial installation of erosion and sediment controls, at least once in every two-week period, within 48 hours following any runoff producing storm event, and at the completion of the project prior to the release of any performance bonds; or
2. Establish an alternative inspection program which ensures compliance with the approved erosion and sediment control plan. Any alternative inspection program shall be:
 - a. Approved by the board prior to implementation;
 - b. Established in writing;
 - c. Based on a system of priorities that, at a minimum, address the amount of disturbed project area, site conditions and stage of construction; and
 - d. Documented by inspection records.

5.2 Inspection Reports

The inspection report provided in Appendix F shall be used during each site inspection. All measures shown on the plan shall be inspected. All problems and violations shall be documented on the inspection report. Inspection reports shall specify a corrective action for each problem or violation noted and a date the corrective action must be completed. A copy of the inspection report will be provided to the project staff.

5.2.1 ESC Inspections

ESC inspections shall use the Inspection report provided in Appendix F on each site inspection visit. All measures shown on the plan shall be inspected. All issues and violations shall be photographed and documented in the report. Critical Areas that require continuous inspections shall also be identified on the site plan. Inspection reports 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 emailed to the project Contractor.

5.2.2 SW Inspections

SW Inspections shall use the Inspection Report provided in Appendix F to record SW inspections on each site inspection. All stormwater BMPs must be identified



on the site plan. As previously addressed, identification of permanent BMPs shall be coordinated with the University's stormwater permits. Critical areas that require continuous inspections shall also be identified on the site plan. Photographs will be taken during the inspection and referenced within the report.

5.2.3 Final Inspections

Project Closeout is defined as the achievement of final stabilization, verification of final product according to approved plans. The Department of Capital Outlay will determine that final stabilization has been achieved. All SWPPP documentation must be complete and provided to the Department of Capital Outlay in print and electronic format prior to permit close out. The final project as-built will be received and the land disturbance/stormwater permit will be closed-out. If deemed appropriate, retainage may be withheld as a performance guarantee for up to 60 days after achievement of final stabilization unless otherwise directed by the Contract.

5.2.4 Post-Construction Inspections

Post-construction inspections shall be made in accordance with the manufacturer's and/or engineer's recommendation, the provisions of these standards and specifications, and in accordance with the University's MS4 Program. University inspectors shall inspect and note items from the stormwater management devices that were identified for cleaning or repair. The inspection requirements shall be provided to the University's Capital Outlay and Facilities Management Departments for the issuance of a work order to complete the activity.



5.3 Violations

- 5.3.1 When violations noted on written inspection reports remain during subsequent inspections, a Notice to Comply will be issued by the Department of Capital Outlay. 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 the project has failed to meet the prescribed deadlines in a Notice to Comply; or LDA commenced without an approved plan; or when violations are causing or are in imminent danger or causing harmful erosion.
- 5.3.2 Violations shall be documented in the Inspection Report, including photographs, descriptions, and necessary corrective actions. If a violation continues to be repeated, then a formal Notice of Non-Compliance will be issued, and DEQ will be notified. At the discretion of the Capital Outlay Department, the Land Disturbance/Stormwater Permit may be suspended and/or revoked; at which time all land disturbing activity must cease until the violation(s) of the plan or permit has ceased, corrective action completed, and any related environmental or property damages abated. The University reserves the right to contract with a 3rd party to install and maintain the Erosion and Sediment Control and/or Stormwater Management measures in accordance with the approved plan, complete any necessary corrective actions, and abate any related damages. The Contractor (the officer of the company and senior project officers) shall schedule and meet with the Capital Outlay Department to discuss the violations. After the meeting has been conducted and the site is stabilized to the satisfaction of the Capital Outlay Department, site work may resume. All associated costs will be back-charged to the Contractor. The Stop Work Order will be lifted once the required ESC/SW measures or corrections are in place and verified by the ESC/SW Inspector.
- 5.3.3 ESC/SW Inspectors will also be responsible for responding in a timely manner to reports of alleged violations reported by University staff, or adjacent property owners, or others. Corrective measures if warranted will follow standard procedures as outlined for ESC/SW inspections.

6.0 VARIANCES AND EXCEPTIONS

Variations and Exceptions to regulations must ensure protection of off-site properties and resources from damage. Economic hardship is not sufficient reason to request a variance or an exception. For a variance and/or exception to become part of a project specific ESC/SW Plan, a written variance request must be submitted by the Department of Capital Outlay & Facilities for review and approval by DEQ. This request must include an explanation of the reasons for requesting the variance and a description of the specific site conditions necessitating the request. The request must also 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.

6.1. ESC/SW Variance Request Procedures

- 6.1.1.** The Department of Capital Outlay & Facilities shall coordinate the review and approval of all requested variances with DEQ's ESC/SW Program representative(s).
- 6.1.2.** All requests for project specific variances to VSU's approved Annual Standards and Specifications for ESC/SW shall be sent by the licensed design professional to the Department of Capital Outlay & Facilities and shall be accompanied by complete details and documentation, including justification for the requested variance and impacts associated with the variance request. The licensed design professional shall complete the form included in Appendix G.
- 6.1.3.** The VSU ESC/SW Administrator (or representative) will review the request and determine if the request should be sent to DEQ for further consideration. If the Administrator determines the request should not be sent to DEQ, then the request shall be considered denied.
- 6.1.4.** Variance requests will be sent by the Department of Capital Outlay & Facilities to the DEQ Richmond Regional Office and to the Virginia Erosion and Sediment Control Program Manager for review and approval, if determined to be appropriate.
- 6.1.5.** All requested variances shall be considered unapproved until written approval from DEQ is received.
- 6.1.6.** All approved variances shall be listed in the General Notes section of the ESC/SW construction drawings for land disturbing activities and included in the narrative.

6.2. ESC/SW Exception Request Policy and Procedures:

- 6.2.1.** The Department of Capital Outlay & Facilities shall coordinate the review and approval of all requested exceptions with DEQ's ESC/SW Program representative(s).
- 6.2.2.** All requests for project specific exceptions to VSU's approved Annual Standards and Specifications for ESC/SW shall be sent by the licensed design professional to the Department of Capital Outlay & Facilities and shall be accompanied by complete details and documentation, including justification for the requested exception and impacts associated with the exception request. The licensed design professional shall complete the form included in Appendix H.
- 6.2.3.** The VSU ESC/SW Administrator (or representative) will review the request and determine if the request should be sent to DEQ for further consideration. If the Administrator determines the request should not be sent to DEQ, then the request shall be considered denied.
- 6.2.4.** Exception requests will be sent by the Department of Capital Outlay & Facilities to the DEQ Richmond Regional Office and to the Virginia Erosion and Sediment



Control Program Manager for review and approval, if determined to be appropriate.

6.2.5. All requested exceptions shall be considered unapproved until written approval from DEQ is received.

6.2.6. All approved exceptions shall be listed in the General Notes section of the ESC construction drawings for land disturbing activities and included in the narrative.

6.3. Pre-approved Variances

The Department of Capital Outlay & Facilities has included as part of the Annual Standards and Specifications for ESC, certain pre-approved variances for ESC measures/controls that are not included in the VESCH. Appendix I includes a list of pre-approved variances for certain ESC measures that may be included as part of the project construction plans, provided the plans contain a detail sheet, inspection instructions, installation instructions, and maintenance instructions. ESC measures/controls not specifically included as part of the approved ESC Plan shall not be used on the project unless the ESC Plan is amended to include the specific ESC measure/control.

Non-VESCH control measures, best management practices (BMP), and specifications have been included in the Annual Standards and Specifications but their use may be further reviewed and approved by the applicable DEQ Regional Office on a project-specific basis.

Should non-VESCH control measures fail to effectively control soil erosion, sediment deposition, and non-agricultural runoff, then VESCH control measures shall be utilized.

7.0 LAND-DISTURBING ACTIVITIES

7.1. List of Regulated Land-Disturbing Activities

7.1.1. A list of regulated land-disturbing activities expected to be under contract during the referenced time period are included in Appendix J. The list includes project location, estimated disturbed acreage by watershed, and approximate start and completion dates for each project. Information on specific land-disturbing activities not included on the list will be provided to DEQ no less than two weeks prior to the start of the activity as described in Section 2.4.

7.2. Tracking of Regulated Land-Disturbing Activities

7.2.1. The University will track regulated land-disturbing activities through the Capital Outlay Department Permitting process. The Capital Outlay Department shall provide an annual list of proposed projects as related to Erosion and Sediment Control and Stormwater Management. Any changes to the annual list will be updated and forwarded to DEQ.



7.2.2. The University will submit project tracking to the DEQ for all regulated land disturbing activities. This shall be done on a quarterly frequency to DEQ's Central Office. Information in these records should be the same items within the e-notifications as described in Section 2.7.

8.0 DEQ OVERSIGHT OF ANNUAL STANDARDS AND SPECIFICATIONS

DEQ will provide oversight of the University's implementation of these Annual Standards and Specifications as well as the University's SW/ESC program management in accordance with the following:

8.1. DEQ Comment

8.1.1. DEQ shall have sixty days in which to comment on any erosion and sediment control specifications submitted to it for review, and its comments shall be binding on the University and any private business hired by the University.

8.2. DEQ Information Request

8.2.1. The University shall ensure compliance with the approved plan and annual standards and specifications. Upon request by the DEQ, the University shall provide a copy of the approved plan sheets and narrative for each regulated land-disturbing activity as outlined in Section 1.1. The University shall provide DEQ with the appropriate information, in a timely manner, when requested.

8.3. Additional DEQ Over-Sight Information:

8.3.1. Standards and specifications shall be submitted to DEQ by the University on an annual basis.

8.3.2. Enforcement

8.3.2.1. Enforcement shall be administered by the Department and the Board where applicable in accordance with the provisions of this article.

8.3.2.2. The Department and the Board, where applicable, shall provide project oversight and enforcement as necessary and comprehensive program compliance review and evaluation. The Department may take enforcement actions in accordance with this article and related regulations.

8.3.3. Complaints and Inspections

8.3.3.1. The Department 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.

8.3.4. Fees

8.3.4.1. The Department shall assess an administrative charge to cover the costs of services rendered associated with its responsibilities pursuant to this section.

8.3.4.2. The Board shall have the authority to enforce approved specifications and charge fees 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.

8.3.5. DEQ Discretionary requirements. *All linear project entities are required to include the following two discretionary requirements in their annual standards and specifications. Two Discretionary Requirements:*

- 1) Inspection reports conducted by VSU as well as complaint logs and complaint responses may be required to be submitted to DEQ.
- 2) VSU may be required to provide weekly e-reporting to the department's applicable regional office:
 - i. Inspection reports;
 - ii. Pictures;
 - iii. Complaint logs and complaint responses; and
 - iv. Other compliance documents.



APPENDIX A

ESC PLAN PREPARATION & REVIEW CHECKLIST



ESC PLAN PREPARATION & REVIEW CHECKLIST

The following checklist shall be completed prior to submitting the project specific Erosion and Sediment Control Plan. This completed checklist shall be included with the SWPPP immediately after the SWPPP Title Page.

- _____ Minimum Standards – All applicable Minimum Standards must be addressed
- _____ Construction Sequence – A sequence of operations shall be defined on the construction plans with staged implementation of erosion and sediment control measures for each phase.

NARRATIVE

- _____ Project description - Briefly describes the nature and purpose of the land disturbing activity, and the area (acres) to be disturbed.
- _____ Existing site conditions - A description of the existing topography, vegetation and drainage.
- _____ Adjacent areas - A description of neighboring areas such as streams, lakes, residential areas, roads, *etc.*, which might be affected by the land disturbance.
- _____ Off-site areas - Describe any off-site land-disturbing activities that will occur (including borrow sites, waste or surplus areas, *etc.*). Will any other areas be disturbed?
- _____ Soils - A brief description of the soils on the site giving such information as soil name, mapping unit, erodibility, permeability, depth, texture and soil structure.
- _____ Critical areas - A description of areas on the site which have potentially serious erosion problems (*e.g.*, steep slopes, channels, wet areas, streams, underground springs, *etc.*).
- _____ Erosion and sediment control measures - A description of the methods which will be used to control erosion and sedimentation on the site (Controls should meet the specifications in Chapter 3 of the VESCH, latest edition).
- _____ Permanent stabilization - A brief description, including specifications, of how the site will be stabilized after construction is completed.
- _____ Stormwater runoff considerations - Will the developed site cause an increase in peak runoff rates? Will the increase in runoff cause flooding or channel degradation downstream? Describe the strategy to control stormwater runoff.
- _____ Maintenance - A schedule of regular inspections and repair of erosion and sediment control structures should be set forth.
- _____ Calculations - Detailed calculations for the design of temporary sediment basins, permanent stormwater detention basins, diversions, channels, *etc.* Include calculations for pre- and post-development runoff.



CONSTRUCTION PLAN

- _____ 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 - The direction of north in relation to the site.
- _____ Limits of clearing and grading – Areas which are to be cleared and graded.
- _____ Existing contours - The existing contours of the site.
- _____ Final contours - Changes to the existing contours, including final drainage patterns.
- _____ Existing vegetation - The existing tree lines, grassed areas, or unique vegetation.
- _____ Soils - The boundaries of different soil types.
- _____ Existing drainage patterns - The dividing lines and the direction of flow for the different drainage areas. Include the size (acreage) of each drainage area.
- _____ Critical erosion areas - Areas with potentially serious erosion problems (Refer to VESCH, Chapter 6 for criteria).
- _____ Site Development - Show all improvements such as buildings, parking lots, access roads, utility construction, *etc.*
- _____ Location of practices - The locations of erosion and sediment controls and stormwater management practices used on the site (*e.g.* stockpile/laydown locations, temporary/permanent seeding, inlet protection, *etc.*). Use the standard symbols and abbreviations in Chapter 3 of the VESCH.
- _____ Off-site areas - Identify any off-site land-disturbing activities (*e.g.*, borrow sites, waste areas, *etc.*). Show location of erosion controls. (Is there sufficient information to assure adequate protection and stabilization?)
- _____ Detail Drawings – Any structural practices used that are not referenced to the VESCH or local handbooks should be explained and illustrated with detail drawings.

MINIMUM STANDARDS

- _____ MS-1 – Temporary and permanent stabilization of denuded areas within 7 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
- _____ 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: < 3 acres 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
- _____ MS-14 – Other federal, state, and local regulations pertaining to work in live watercourses (Required permits COE, DEQ, VPDES, etc.)
- _____ 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 – Address increases in stormwater volume, velocity, and peak runoff

PROJECT NAME: _____ **SUBMITTAL#:** _____

PLANS DATED: _____ **NARRATIVE DATED:** _____

Print Professional's Signature Date



APPENDIX B

SW PLAN PREPARATION & REVIEW CHECKLIST



SW PLAN PREPARATION & REVIEW CHECKLIST

The following checklist shall be completed prior to submitting the project specific Stormwater Management Plan. This completed checklist shall be included with the SWPPP immediately after the SWPPP Title Page.

SW General (9VAC25-870-55 and 9VAC25-870-160):	YES	NO
Title Page including Project, Contract Number, and Date.	<input type="checkbox"/>	<input type="checkbox"/>
Virginia Professional Engineer Seal	<input type="checkbox"/>	<input type="checkbox"/>
Stormwater Narrative (within plans) to Include:		
• Pre and post site conditions	<input type="checkbox"/>	<input type="checkbox"/>
• Disturbed area	<input type="checkbox"/>	<input type="checkbox"/>
• Existing and proposed impervious areas including a net change in impervious calculation	<input type="checkbox"/>	<input type="checkbox"/>
• VSMP authority	<input type="checkbox"/>	<input type="checkbox"/>
Stormwater Plans to include:		
• SW facility locations and descriptions	<input type="checkbox"/>	<input type="checkbox"/>
• Location of all SW discharges	<input type="checkbox"/>	<input type="checkbox"/>
• Acres treated by SW facility	<input type="checkbox"/>	<input type="checkbox"/>
• Pre/Post Drainage maps	<input type="checkbox"/>	<input type="checkbox"/>
• Limits of clearing and grading	<input type="checkbox"/>	<input type="checkbox"/>
• Information on adjoining parcels	<input type="checkbox"/>	<input type="checkbox"/>
• Location of wetlands or other sensitive habitat within the project	<input type="checkbox"/>	<input type="checkbox"/>
• Description, type, and schedule of stabilization practices provided	<input type="checkbox"/>	<input type="checkbox"/>
Hydrologic and hydraulic calculations (i.e. Drainage area calcs, storm design/HGL calcs, Pondpack Routings Compliance calculations for water quality and quantity (IIB or IIC)	<input type="checkbox"/>	<input type="checkbox"/>
All sources of runoff converted to surface runoff	<input type="checkbox"/>	<input type="checkbox"/>
Soil stockpile stabilization addressed	<input type="checkbox"/>	<input type="checkbox"/>
Designated a qualified individual to inspect all BMPs	<input type="checkbox"/>	<input type="checkbox"/>



Included name and telephone number for the qualified person

Post construction maintenance requirements provided.

PLAN IN COMPLIANCE WITH:

Part IIB

Water quality design criteria (9VAC25-870-63)

Water quality compliance criteria (9VAC25-870-65)

Water quantity criteria (9VAC25-870-66)

Offsite compliance options criteria (9VAC25-870-69)

OR, Part IIC

Water quality design criteria (9VAC25-870-96)

Stream channel erosion (9VAC25-870-97)

Flooding (9VAC25-870-98)

Regional Stormwater Management Plans (9VAC25-870-99)

PROJECT NAME: _____ **SUBMITTAL#:** _____

PLANS DATED: _____ **NARRATIVE DATED:** _____

Print

Professional's Signature

Date



APPENDIX C

UTILIZED WATER QUALITY CREDITS FROM
REGIONAL BMPS



Capital Outlay & Facilities
PO Box 9044
VSU, VA 23806
Phone: (804)-504-7500
Fax: (804)-524-5383

Utilized Water Quality Credits from "Regional" BMPs

VSU Projects	Water Quality Credits Used (lbs/yr)	Water Quality Credits Available (lbs/yr)
VSU Athletic Trunkline BMP	-	10.05
Gateway BMP & Hardscape Ph. I&II	1.74	8.31
Locket Hall Improvements	1.42	6.89



APPENDIX D

STANDARD STORM WATER POLLUTION
PREVENTION (SWPPP) TEMPLATE

VSU STORMWATER MASTERPLAN



Stormwater Pollution Prevention Plan (SWPPP)

In compliance with:

**General VPDES Permit for Discharges of Stormwater from
Construction Activities
General Permit No. VAR10
Virginia
Stormwater Management Program
(VSMP)**

Prepared By:

Timmons Group
1001 Boulders Parkway, Suite 300
Richmond, VA 23225

Prepared For:

Virginia State University
P.O. Box 9414
Petersburg, VA 23806

January 2017

Timmons Group QA/QC

Prepared By: _____
Checked By: _____

VSU STORMWATER MASTERPLAN

Stormwater Pollution Prevention Plan (SWPPP)

In compliance with:

**General VPDES Permit for Discharges of Stormwater from
Construction Activities
General Permit VAR10
Virginia Stormwater Management Program
(VSMP)**

Delegated Authority:

(Signature)

(Name of Person)

(Title)

(Company)

(Phone #)

I certify the individual or position named above has the delegated authority to sign inspection reports and/or amend or modify the SWPPP.

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

Construction Activity Operator: _____
(Name)

(Signature)

(Date)

VSU STORMWATER MASTERPLAN

Stormwater Pollution Prevention Plan

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	References
Appendix 1	General VPDES Permit of Discharges for Stormwater from Construction Activities: General Permit No. VAR10
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I Introduction

A) Plan Purpose

This Stormwater Pollution Prevention Plan (Plan) has been developed as a requirement of the Virginia Stormwater Management Program (VSMP) General VPDES Permit for Discharges of Stormwater from Construction Activities (Permit), as defined in 9VAC25-880. The purpose of this Plan is to:

- 1) Identify potential sources of pollution that may reasonably be expected to affect the quality of stormwater discharges from the construction site, and,
- 2) To describe and ensure the implementation of practices that will be used to reduce pollutants in stormwater discharges from the construction site and to assure compliance with the conditions of the Permit.

Implementation of the components of this Plan is required as a condition of the Permit (Appendix 1). The Department of Environmental Quality has been granted authority to administer the VSMP program and is therefore the regulatory authority overseeing the implementation of this Plan.

B) Background - Construction General Permit No. VAR10

The Permit has a fixed term of 5 years from the effective date of July 1, 2014 and is required for all projects that will disturb 1 or more acres of total land area. To obtain a Permit, operators must submit a Registration Statement (Appendix 2) prior to commencing construction activities (clearing, grading, or other activities that result in soil disturbance). A Registration Statement is considered to be submitted once it is received by the SWM permitting department at DEQ Central Office..

The Permit authorizes the discharge of stormwater from construction activities until the Permit's expiration date. The Permit also authorizes the discharge of stormwater from offsite support activities, provided that certain conditions are met as outlined in the Permit. Certain non-stormwater discharges are also authorized by the Permit, provided the conditions contained in the Permit are met.

Once a definable area has been stabilized, the operator may mark this on the SWPPP and no further SWPPP or inspection requirements apply to that portion of the site (e.g., earth disturbing activities around one of three buildings in a complex are done and the area is finally stabilized; one mile of a roadway or pipeline project is done and finally stabilized, etc).

A Notice of Termination (Appendix 3) shall be submitted to the Department when either:

- i. Necessary permanent control measures included in the SWPPP for the site are in place and functioning effectively and final stabilization has been achieved on all portions of the site for which the operator is responsible. When applicable, long-term

- responsibility and maintenance requirements for permanent control measures shall be recorded in the local land records prior to the submission of a notice of termination;
- ii. Another operator has assumed control over all areas of the site that have not been finally stabilized and obtained coverage for the ongoing discharge;
 - iii. Coverage under an alternative VPDES or state permit has been obtained; or
 - iv. For residential construction only, temporary soil stabilization has been completed and the residence has been transferred to the homeowner.

The Notice of Termination must be submitted within 30 days of site stabilization. Authorization to discharge terminates at midnight on the date that the Notice of Termination is submitted.

II Plan Requirements

A) General Requirements

1) Deadlines

The Plan shall be prepared prior to the submittal of the Registration Statement and shall provide for compliance with the terms and schedule of the Permit beginning with the initiation of construction activities. Any operator authorized to discharge under the 2009 general permit, that intends to continue coverage under this general permit, shall update its SWPPP to comply with the new requirements within 60 days of the coverage date of this permit.

2) Incorporation of Other Plans

The Plan requirements of the Permit are satisfied by incorporating by reference other plans developed for this construction activity, *provided that the other plans meet or exceed the requirements of Part II.A. of the Permit.* The construction plans developed for the campus have been approved by the University. The construction plans meet current plan approving authority requirements regarding erosion and sediment control and stormwater management, as presented in the Virginia State University Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management or Virginia Erosion and Sediment Control Handbook, Third Edition. All plans incorporated by reference into the Plan are enforceable under the Permit.

3) Plan Administration

The Plan shall be certified in accordance with the Permit (the certification statement is presented in the beginning of this Plan). Copies of the Plan shall be kept on-site and be made available to the Department, or other regulatory agencies having authority, upon request. The Plan must also be available to all operators identified as having responsibilities to carry out provisions contained in the Plan. The active, up-to-date SWPPP for each site must be made publicly available upon request by the public. Access to the SWPPP may be arranged upon request at a time and publicly accessible location convenient to the operator but shall be no less than one per month and shall be

during normal business hours. If a copy of the SWPPP is provided to the requestor, the requestor shall be responsible for the costs of reproduction. The active SWPPP can be made accessible electronically. The website address or contact person for access to the SWPPP shall be posted conspicuously near the main entrance of the construction entrance along with the permit coverage letter and registration number for the construction activity.

4) Plan Updates

The Plan shall be amended whenever there is a change in design, construction, operation, or maintenance of the construction site that has a significant effect on the potential for the discharge of pollutants to surface waters and that has not been addressed in the normal implementation of the Plan. The Plan shall also be updated whenever it is found to be ineffective in meeting the requirements of the Permit. In the event the Department notifies the permittee that the Plan does not meet one or more of the provisions of the Permit, within a period of 7 days the permittee must make the required changes to the Plan and submit a certification to the Department stating that the required changes have been made.

5) Potential Construction Site Stormwater Pollutants:

The plan is focused upon limiting the pollution potential from the following:

Table 1
Potential Construction Site Stormwater Pollutants

Trade Name Material	Chemical/Physical Description	Stormwater Pollutants
Pesticides (insecticides, fungicides, herbicides, rodenticides)	Various colored to colorless liquid, powder, pellets, or grains	Chlorinated hydrocarbons, organophosphates, carbamates, arsenic
Fertilizer	Liquid or solid grains	Nitrogen, phosphorus
Plaster	White granules or powder	Calcium sulphate, calcium carbonate, sulfuric acid
Cleaning solvents	Colorless, blue, or yellow-green liquid	Perchloroethylene, methylene chloride, trichloroethylene, petroleum distillates
Asphalt	Black solid	Oil, petroleum distillates
Concrete	White solid	Limestone, sand
Glue, adhesives	White or yellow liquid	Polymers, epoxies
Paints	Various colored liquid	Metal oxides, stoddard solvent, Talc, calcium carbonate, arsenic
Curing compounds	Creamy white liquid	Naphtha
Wastewater from construction equipment washing	Water	Soil, oil & grease, solids
Wood preservatives	Clear amber or dark brown liquid	Stoddard solvent, petroleum

		distillates, arsenic, copper, chromium
Hydraulic oil/fluids	Brown oily petroleum hydrocarbon	Mineral oil
Gasoline	Colorless, pale brown or pink petroleum hydrocarbon	Benzene, ethyl benzene, toluene, xylene, MTBE
Diesel Fuel	Clear, blue-green to yellow liquid	Petroleum distillate, oil & grease, naphthalene, xylenes
Kerosene	Pale yellow liquid petroleum hydrocarbon	Coal oil, petroleum distillates
Antifreeze/coolant	Clear green/yellow liquid	Ethylene glycol, propylene glycol, heavy metals (copper, lead, zinc)
Erosion	Solid Particles	Soil, Sediment

B) Specific Requirements

1) Site Description

The items required by the Permit regarding the general information (Part II A.1., Appendix 1) can be found in the project design plans, which are incorporated by reference into this Plan. A summary of the required elements is provided in Table 1, with a reference to the sheet number in the design plans where the required element can be located:

Table 1.
Site Description Elements

Please refer to the referenced location (i.e. Plan Sheet #) in or as referenced elsewhere

<i>Permit Part II A. 1....</i>	<i>Required Element</i>	<i>Location^{1,2}</i>
a.	A signed copy of the registration statement for coverage under the general VPDES permit for discharges of stormwater from construction activities.	Appendix 2
b.	A copy of the notice of coverage under the general VPDES permit for discharges of stormwater from construction activities. (Upon receipt)	Appendix 2
c.	A copy of the general VPDES permit for discharges of stormwater from construction activities.	Appendix 2
d.	A description of the nature of the construction activity:	
e	A legible site map identifying:	
e.(1)	- Directions of stormwater flow and approximate slopes anticipated after major grading activities	

e.(2)	- Areas of soil disturbance and areas of the site which will not be disturbed	
e.(3)	- Locations of major structural and nonstructural control measures	
e.(4)	- Locations of surface waters	
e.(5)	- Locations where concentrated stormwater discharges	
e.(6)	-Locations of other potential pollution sources, such as vehicle fueling, storage of chemicals, concrete wash-out areas, sanitary waste facilities, including those temporarily placed on the construction site, etc.	Part II Section A-5 and Section B
e.(7)	- When applicable, the location of the on-site rain gauge of the methodology established in consultation with the VSMP authority used to identify measurable storm events for inspection purposes.	

¹*Attach to this Plan any required elements that are not found in the design plans.*

²*The Stormwater Pollution Prevention Plan coordinator is responsible for updating the plan as necessary to maintain compliance*

2) Controls and Measures

The Permit requires the implementation of various types of controls and measures that are implemented to control pollutants in stormwater discharges from the project site. The Permit specifically requires the implementation of erosion and sediment control practices (both structural and non-structural), stormwater management practices, and specific other controls to reduce pollutants. All E & S and SWM/BMP controls employed in this project were selected to meet and/or exceed State and local requirements and are detailed in the referenced design plans.

Several requirements of the Permit relating to controls (Part II.A., Appendix 1) are not included in the referenced design plans. A description of all the required items (including E&S and SWM/BMP) is presented below, along with how they are addressed in this Plan:

a) Erosion and Sediment Control

The design plans for this project contain detailed information regarding erosion and sediment controls used in this project. Specifically E&S control measures can be found on design plans for each project.

b) SWM/BMP's

(i) The design plans for this project contain detailed information regarding SWM/BMP controls used in this project. Specifically Stormwater Management Control Measures can be found on approved plans for each project.

(ii) Water quality protection. The operator must select, install, implement and maintain best management practices (BMPs) at the construction site that minimize pollutants in the discharge as necessary to meet applicable water quality standards. Where a TMDL waste load allocation (WLA) has been established for pollutants that could be contained in the construction site stormwater runoff the operator must develop a plan consistent with the requirements related to TMDLs contained in Section II A 5. Waters that have been identified as impaired in the 2012 § 305(b)/303(d) Water Quality Assessment Integrated Report will require the operator to implement a strategy consistent with the control measures in Sections II A5. If there is evidence indicating that the stormwater discharges authorized by this permit are causing, have the reasonable potential to cause, or are contributing to an excursion above an applicable water quality standard, or are causing downstream pollution (as defined in § 62.1-44.3 of the Code of Virginia), the board may take appropriate enforcement action. The VSMP authority may require the operator to: modify or implement additional controls in accordance with Part II B to adequately address the identify water quality concerns; submit valid and verifiable data and information that are representative of ambient conditions and indicate that the receiving water is attaining water quality standards; or submit an Individual permit application in accordance with 9 VAC 25-870-410 B 3.

(iii) Impaired water(s), approved TMDL(s), pollutant(s) of concern, and exceptional waters identified in 9VAC25-260-30 A 3 c must be identified. The operator shall ensure: permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on and portion of the site; nutrients shall be applied in accordance with manufacturer's recommendations or an approved nutrient management plan and shall not be applied during rainfall events; and a modified inspection schedule shall be implemented in accordance with the Permit.

c) Fuels and Oils

- (i) On-site vehicle refueling will be conducted in a dedicated location away from access to surface waters. Since the location of fueling activities will periodically move during construction, the design plans do not contain a specific location. For each phase of work a location will be determined in the field and noted in the Site Inspection Log (Appendix 4). Containment berms will be located adjacent to the refueling area that will contain any inadvertent spills until they can be cleaned up. Any on-site storage tanks will have a means of secondary containment. In the event of a spill, it will be cleaned up immediately and the material, including any contaminated soil, will be disposed of according to all federal, state, and local regulations.
- (ii) All vehicles on site will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage.
- (iii) Petroleum products will be stored in tightly sealed containers which are clearly labeled.
- (iv) Spill kits will be included with all fueling sources and maintenance activities.
- (v) Any asphalt substances used onsite will be applied according to the manufacturer's recommendation.

d) Solid Waste

No solid materials shall be discharged to surface water. Solid materials, including building materials, garbage, and debris shall be cleaned up daily and deposited into dumpsters, which will be periodically removed from the site and deposited into a landfill.

e) Fertilizer

- (i) Fertilizers will be applied only in the minimum amounts recommended by the manufacturer.
- (ii) Fertilizers will be worked into the soil to limit exposure to stormwater.
- (iii) Fertilizers will be stored in a covered shed and partially used bags will be transferred to a sealable bin to avoid spills.

f) Paint and other Chemicals

- (i) All paint containers and curing compounds will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewers, but will be properly disposed according to the manufacturer's instructions.

- (ii) Spray guns will be cleaned on a removable tarp.
- (iii) Chemicals used on-site are kept in small quantities and stored in closed containers undercover and kept out of direct contact with stormwater. As with fuels and oils, any inadvertent spills will be cleaned up immediately and disposed of according to federal, state, and local regulations.

g) Concrete

- (i) Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum wash water on the site, except in a specially designated concrete disposal area.
- (ii) Form release oil used for decorative stone work will be applied over a pallet covered with an absorbent material to collect excess fluid. The absorbent material will be replaced and disposed of properly when saturated.

h) Water Testing

When testing/cleaning of water supply lines, the discharge from the tested pipe will be collected and conveyed to a completed stormwater pipe system for ultimate discharge into a sedimentation basin or SWM/BMP facility.

i) Sanitary Waste

Portable lavatories are located on-site and are serviced on a regular basis by a contractor. They will be located in upland areas away from direct contact with surface waters. Any spills occurring during servicing will be cleaned up immediately, including any contaminated soils, and disposed of according to all federal, state, and local regulations.

j) Grading and E & S Activities

A record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated shall be maintained and included in this Plan.

3) Spills

Oil, chemical or other hazardous substance spills in excess of reportable quantities, in accordance with the Permit (Appendix 1), will be reported to the Department in accordance with Part III G. of the Permit as soon as the discharge is discovered, but no later than 24 hours. A reportable quantity of oil is defined as a discharge to a surface water that causes a sheen, discoloration, and/or an emulsion. Reports will be made to the following:

**Virginia Department of Emergency Management
Emergency Operations Center (EOC)
Phone: (800) 468-8892**

Materials and equipment necessary for oil or chemical spill cleanup will be kept in the temporary material storage trailer onsite. Equipment will include, but not be limited to, brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, saw dust, and plastic and metal trash containers.

All oil or other chemical spills will be cleaned up immediately upon discovery. Spills large enough to reach the storm sewers will be reported to the National Response Center at 1-800-424-8802.

4) Maintenance

Maintenance of the erosion and sediment controls and the stormwater management/BMP facilities incorporated into this project must be maintained on a regular basis to assure their continued effectiveness; sediment must be removed from sediment traps and sedimentation ponds when the design capacity has been reduced by 25%. This includes repairs to all erosion and sediment controls, including cleanout of all sediment basins and stormwater management facilities at the required intervals. Those controls found to be ineffective during routine inspections (as described in the following section) shall be repaired **before the next anticipated storm event or as soon as practicable**. A more detailed description of the maintenance procedures is contained in the individual design plans for each project and is incorporated in this Plan by reference.

5) Inspections

Regular inspections of the construction site shall be performed by personnel familiar with all aspects of the Plan and the employed control practices. Inspections shall include the review of all disturbed areas, structural and non-structural control measures, material storage areas, and vehicular access points. Inspections are to be performed (i) at least once every **5 business days** or (ii) at least once every **10 business days** and not later than **48 hours** following a measurable storm event. If discharges from construction activities are to surface waters identified as impaired or for which a TMDL wasteload allocation has been established, inspections are to be performed (i) at least once every **4 business days** or (ii) at least once every **5 business days** and no later than **48 hours** following a measurable storm event. Where areas have been temporarily stabilized or land-disturbing activities will be suspended due to continuous frozen ground conditions and stormwater discharges are unlikely, the inspection frequency may be reduced to once per month..

Inspections are intended to identify areas where the pollutant control measures at the site are ineffective and are allowing pollutants to enter surface waters. Receiving

waters shall be inspected to ascertain whether control measures are effective in preventing significant impacts. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.

If as a result of the inspection, the site conditions and/or control measures are found to have changed, the Plan shall be updated within a period of 7 calendar days. If control measures need to be modified to assure effectiveness or if additional measures are determined to be necessary, implementation shall be completed prior to the next anticipated storm event or as soon as practicable.

A report summarizing the inspections and the subsequent maintenance activities must be completed and maintained as part of the Plan. The inspection forms are included in Appendix 4. Required elements include major observations (including information on control measure performance and incidents of non-compliance), information on the inspecting personnel and the amount of rainfall at the construction site during land disturbing activities between SWPPP required inspections. If an inspection does not identify any incidents of non-compliance, then the certification statement contained in the inspection form will apply.

Utility line installation, pipeline construction, and other examples of long, narrow, linear construction activities may limit the access of inspection personnel to the areas described in Part II F 2 c of the permit (Appendix 1). Inspection of these areas could require that vehicles compromise temporarily or even permanently stabilized areas, cause additional disturbance of soils, and increase the potential for erosion. In these circumstances, controls must be inspected on the same frequencies as other construction projects, but representative inspections may be performed. For representative inspections, personnel must inspect controls along the construction site for 0.25 miles above and below each access point where a roadway, undisturbed right-of-way, or other similar feature intersects the construction site and allows access to the areas described above. The conditions of the controls along each inspected 0.25-mile segment may be considered as representative of the condition of controls along that reach extending from the end of the 0.25-mile segment to either the end of the next 0.25-mile segment, or to the end of the project, whichever occurs first. Inspection locations must be listed in the report required by Part II F of the permit (Appendix 1).

6) Non-Stormwater Discharges

Allowable sources of non-stormwater discharges (Part I E. of the Permit, Appendix 1) must be identified in the Plan. Appropriate measures must be taken to ensure that pollution prevention measures for the non-stormwater component of the discharge are implemented. The non-stormwater discharges associated with this project identified at this time are:

- a) Testing of Water as discussed under II, B, 2, h.
- b) Discharges from fire fighting activities
- c) Fire Hydrant flushings;

- d) Waters used to wash vehicles where soaps, solvents, or detergents have not been used and the water has been filtered, settled, or similarly treated prior to discharge;
- e) Water used to control dust that has been filtered, settled, or similarly treated prior to discharge;
- f) Potable water sources, including uncontaminated waterline flushings;
- g) Routine external building wash down where soaps, solvents or detergents have not been used and the wash water has been filtered, settled, or similarly treated prior to discharge;
- h) Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (or where all spilled or leaked material has been removed prior to washing); and where soaps, solvents or detergents have not been used and the wash water has been filtered, settled, or similarly treated prior to discharge;
- i) Uncontaminated air conditioning or compressor condensate;
- j) Uncontaminated ground water or spring water;
- k) Foundation or footing drains where flows are not contaminated with process materials such as solvents;
- l) Uncontaminated excavation dewatering, including dewatering of trenches and excavations that have been filtered, settled, or similarly treated prior to discharge; and
- m) Landscape irrigation.

Environmentally friendly washing, flushing and dust controlling procedures shall be practiced during construction to prevent contamination of surface and ground water. These practices will consist of the use of using off-site facilities; washing in designated, contained areas only; eliminating discharges to storm drains by infiltrating the water or routing to the sanitary sewer; and training employees and subcontractors in proper cleaning procedures.

REFERENCES

Virginia Department of Conservation and Recreation. 1992. Virginia Erosion and Sediment Control Handbook. Third Edition. Division of Soil and Water Conservation, Virginia Department of Conservation and Recreation.

Virginia State University. 2017. Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management.

Appendix 1

**General VPDES Permit for Discharges of Stormwater from Construction Activities
General Permit No. VAR 10**



COMMONWEALTH of VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY

General Permit No.: VAR10

Effective Date: July 1, 2014

Expiration Date: June 30, 2019

**GENERAL VPDES PERMIT FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION
ACTIVITIES**

**AUTHORIZATION TO DISCHARGE UNDER THE VIRGINIA STORMWATER MANAGEMENT
PROGRAM AND THE VIRGINIA STORMWATER MANAGEMENT ACT**

In compliance with the provisions of the Clean Water Act, as amended, and pursuant to the Virginia Stormwater Management Act and regulations adopted pursuant thereto, operators of construction activities are authorized to discharge to surface waters within the boundaries of the Commonwealth of Virginia, except those specifically named in State Water Control Board regulations that prohibit such discharges.

The authorized discharge shall be in accordance with this cover page, Part I - Discharge Authorization and Special Conditions, Part II - Stormwater Pollution Prevention Plan, and Part III - Conditions Applicable to All VPDES Permits as set forth herein.

PART I

DISCHARGE AUTHORIZATION AND SPECIAL CONDITIONS

- A. Coverage under this general permit.
1. During the period beginning with the date of coverage under this general permit and lasting until the general permit's expiration date, the operator is authorized to discharge stormwater from construction activities.
 2. This general permit also authorizes stormwater discharges from support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) located on-site or off-site provided that:
 - a. The support activity is directly related to the construction activity that is required to have general permit coverage for discharges of stormwater from construction activities;
 - b. The support activity is not a commercial operation, nor does it serve multiple unrelated construction activities by different operators;
 - c. The support activity does not operate beyond the completion of the last construction activity it supports;
 - d. The support activity is identified in the registration statement at the time of general permit coverage;
 - e. Appropriate control measures are identified in a stormwater pollution prevention plan and implemented to address the discharges from the support activity areas; and
 - f. All applicable state, federal, and local approvals are obtained for the support activity.
- B. Limitations on coverage.
1. Post-construction discharges. This general permit does not authorize stormwater discharges that originate from the site after construction activities have been completed and the site, including any support activity sites covered under the general permit registration, has undergone final stabilization. Post-construction industrial stormwater discharges may need to be covered by a separate VPDES permit.
 2. Discharges mixed with nonstormwater. This general permit does not authorize discharges that are mixed with sources of nonstormwater, other than those discharges that are identified in Part I E (Authorized nonstormwater discharges) and are in compliance with this general permit.
 3. Discharges covered by another state permit. This general permit does not authorize discharges of stormwater from construction activities that have been covered under an individual permit or required to obtain coverage under an alternative general permit.
 4. Impaired waters and TMDL limitation. Discharges of stormwater from construction activities to surface waters identified as impaired in the 2012 § 305(b)/303(d) Water Quality Assessment Integrated Report or for which a TMDL wasteload allocation has been established and approved prior to the term of this general permit for (i) sediment or a sediment-related parameter (i.e., total suspended solids or turbidity) or (ii) nutrients (i.e., nitrogen or phosphorus) are not eligible for coverage under this general permit unless the operator develops, implements, and maintains a SWPPP that minimizes the pollutants of concern and, when applicable, is consistent with the assumptions and requirements of the approved TMDL wasteload allocations. In addition, the operator shall implement the following items:

- a. The impaired water(s), approved TMDL(s), and pollutant(s) of concern, when applicable, shall be identified in the SWPPP;
 - b. Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the site;
 - c. Nutrients shall be applied in accordance with manufacturer's recommendations or an approved nutrient management plan and shall not be applied during rainfall events; and
 - d. The applicable SWPPP inspection requirements specified in Part II F 2 shall be amended as follows:
 - (1) Inspections shall be conducted at a frequency of (i) at least once every four business days or (ii) at least once every five business days and no later than 48 hours following a measurable storm event. In the event that a measurable storm event occurs when there are more than 48 hours between business days, the inspection shall be conducted on the next business day; and
 - (2) Representative inspections used by utility line installation, pipeline construction, or other similar linear construction activities shall inspect all outfalls discharging to surface waters identified as impaired or for which a TMDL wasteload allocation has been established and approved prior to the term of this general permit.
5. Exceptional waters limitation. Discharges of stormwater from construction activities not previously covered under the general permit issued in 2009 to exceptional waters identified in 9VAC25-260-30 A 3 c are not eligible for coverage under this general permit unless the operator implements the following:
- a. The exceptional water(s) shall be identified in the SWPPP;
 - b. Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the site;
 - c. Nutrients shall be applied in accordance with manufacturer's recommendations or an approved nutrient management plan and shall not be applied during rainfall events; and
 - d. The applicable SWPPP inspection requirements specified in Part II F 2 shall be amended as follows:
 - (1) Inspections shall be conducted at a frequency of (i) at least once every four business days or (ii) at least once every five business days and no later than 48 hours following a measurable storm event. In the event that a measurable storm event occurs when there are more than 48 hours between business days, the inspection shall be conducted on the next business day; and
 - (2) Representative inspections used by utility line installation, pipeline construction, or other similar linear construction activities shall inspect all outfalls discharging to exceptional waters.
6. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- C. Commingled discharges. Discharges authorized by this general permit may be commingled with other sources of stormwater that are not required to be covered under a state permit, so long as the commingled discharge is in compliance with this general permit. Discharges authorized by a separate state or VPDES permit may be commingled with discharges authorized by this general permit so long as all such discharges comply with all applicable state and VPDES permit requirements.

D. Prohibition of nonstormwater discharges. Except as provided in Parts I A 2, I C, and I E, all discharges covered by this general permit shall be composed entirely of stormwater associated with construction activities. All other discharges including the following are prohibited:

1. Wastewater from washout of concrete;
2. Wastewater from the washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials;
3. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
4. Oils, toxic substances, or hazardous substances from spills or other releases; and
5. Soaps, solvents, or detergents used in equipment and vehicle washing.

E. Authorized nonstormwater discharges. The following nonstormwater discharges from construction activities are authorized by this general permit when discharged in compliance with this general permit:

1. Discharges from firefighting activities;
2. Fire hydrant flushings;
3. Waters used to wash vehicles or equipment where soaps, solvents, or detergents have not been used and the wash water has been filtered, settled, or similarly treated prior to discharge;
4. Water used to control dust that has been filtered, settled, or similarly treated prior to discharge;
5. Potable water sources, including uncontaminated waterline flushings;
6. Routine external building wash down where soaps, solvents or detergents have not been used and the wash water has been filtered, settled, or similarly treated prior to discharge;
7. Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (or where all spilled or leaked material has been removed prior to washing); where soaps, solvents, or detergents have not been used; and where the wash water has been filtered, settled, or similarly treated prior to discharge;
8. Uncontaminated air conditioning or compressor condensate;
9. Uncontaminated ground water or spring water;
10. Foundation or footing drains where flows are not contaminated with process materials such as solvents;
11. Uncontaminated excavation dewatering, including dewatering of trenches and excavations that have been filtered, settled, or similarly treated prior to discharge; and
12. Landscape irrigation.

F. Termination of general permit coverage.

1. The operator of the construction activity shall submit a notice of termination in accordance with 9VAC25-880-60 to the VSMP authority after one or more of the following conditions have been met:

- a. Necessary permanent control measures included in the SWPPP for the site are in place and functioning effectively and final stabilization has been achieved on all portions of the site for which the operator is responsible. When applicable, long term responsibility and maintenance requirements shall be recorded in the local land records prior to the submission of a notice of termination;
 - b. Another operator has assumed control over all areas of the site that have not been finally stabilized and obtained coverage for the ongoing discharge;
 - c. Coverage under an alternative VPDES or state permit has been obtained; or
 - d. For residential construction only, temporary soil stabilization has been completed and the residence has been transferred to the homeowner.
2. The notice of termination should be submitted no later than 30 days after one of the above conditions in subdivision 1 of this subsection is met. Authorization to discharge terminates at midnight on the date that the notice of termination is submitted for the conditions set forth in subdivisions 1 b through 1 d of this subsection. Termination of authorizations to discharge for the conditions set forth in subdivision 1 a of this subsection shall be effective upon notification from the department that the provisions of subdivision 1 a of this subsection have been met or 60 days after submittal of the notice of termination, whichever occurs first.
3. The notice of termination shall be signed in accordance with Part III K of this general permit.

G. Water quality protection.

1. The operator must select, install, implement and maintain control measures as identified in the SWPPP at the construction site that minimize pollutants in the discharge as necessary to ensure that the operator's discharge does not cause or contribute to an excursion above any applicable water quality standard.
2. If it is determined by the department that the operator's discharges are causing, have reasonable potential to cause, or are contributing to an excursion above any applicable water quality standard, the department, in consultation with the VSMP authority, may take appropriate enforcement action and require the operator to:
 - a. Modify or implement additional control measures in accordance with Part II B to adequately address the identified water quality concerns;
 - b. Submit valid and verifiable data and information that are representative of ambient conditions and indicate that the receiving water is attaining water quality standards; or
 - c. Submit an individual permit application in accordance with 9VAC25-870-410 B 3.

All written responses required under this chapter must include a signed certification consistent with Part III K.

PART II

STORMWATER POLLUTION PREVENTION PLAN

A stormwater pollution prevention plan (SWPPP) shall be developed prior to the submission of a registration statement and implemented for the construction activity, including any support activity, covered by this general permit. SWPPPs shall be prepared in accordance with good engineering practices. Construction activities that are part of a larger common plan of development or sale and disturb less than one acre may utilize a SWPPP template provided by the department and need not provide a separate stormwater management plan if one has been prepared and implemented for the larger common plan of development or sale.

The SWPPP requirements of this general permit may be fulfilled by incorporating by reference other plans such as a spill prevention control and countermeasure (SPCC) plan developed for the site under § 311 of the federal Clean Water Act or best management practices (BMP) programs otherwise required for the facility provided that the incorporated plan meets or exceeds the SWPPP requirements of Part II A. All plans incorporated by reference into the SWPPP become enforceable under this general permit. If a plan incorporated by reference does not contain all of the required elements of the SWPPP, the operator must develop the missing elements and include them in the SWPPP.

Any operator that was authorized to discharge under the general permit issued in 2009, and that intends to continue coverage under this general permit, shall update its stormwater pollution prevention plan to comply with the requirements of this general permit no later than 60 days after the date of coverage under this general permit.

A. Stormwater pollution prevention plan contents. The SWPPP shall include the following items:

1. General information.

- a. A signed copy of the registration statement, if required, for coverage under the general VPDES permit for discharges of stormwater from construction activities;
- b. Upon receipt, a copy of the notice of coverage under the general VPDES permit for discharges of stormwater from construction activities (i.e., notice of coverage letter);
- c. Upon receipt, a copy of the general VPDES permit for discharges of stormwater from construction activities;
- d. A narrative description of the nature of the construction activity, including the function of the project (e.g., low density residential, shopping mall, highway, etc.);
- e. A legible site plan identifying:
 - (1) Directions of stormwater flow and approximate slopes anticipated after major grading activities;
 - (2) Limits of land disturbance including steep slopes and natural buffers around surface waters that will not be disturbed;
 - (3) Locations of major structural and nonstructural control measures, including sediment basins and traps, perimeter dikes, sediment barriers, and other measures intended to filter, settle, or similarly treat sediment, that will be installed between disturbed areas and the undisturbed vegetated areas in order to increase sediment removal and maximize stormwater infiltration;
 - (4) Locations of surface waters;

- (5) Locations where concentrated stormwater is discharged;
- (6) Locations of support activities, when applicable and when required by the VSMP authority, including but not limited to (i) areas where equipment and vehicle washing, wheel wash water, and other wash water is to occur; (ii) storage areas for chemicals such as acids, fuels, fertilizers, and other lawn care chemicals; (iii) concrete wash out areas; (iv) vehicle fueling and maintenance areas; (v) sanitary waste facilities, including those temporarily placed on the construction site; and (vi) construction waste storage; and
- (7) When applicable, the location of the on-site rain gauge or the methodology established in consultation with the VSMP authority used to identify measurable storm events for inspection purposes.

2. Erosion and sediment control plan.

- a. An erosion and sediment control plan approved by the VESCP authority as authorized under the Erosion and Sediment Control Regulations (9VAC25-840), an "agreement in lieu of a plan" as defined in 9VAC25-840-10 from the VESCP authority, or an erosion and sediment control plan prepared in accordance with annual standards and specifications approved by the department. Any operator proposing a new stormwater discharge from construction activities that is not required to obtain erosion and sediment control plan approval from a VESCP authority or does not adopt department-approved annual standards and specifications shall submit the erosion and sediment control plan to the department for review and approval.
- b. All erosion and sediment control plans shall include a statement describing the maintenance responsibilities required for the erosion and sediment controls used.
- c. A properly implemented approved erosion and sediment control plan, "agreement in lieu of a plan," or erosion and sediment control plan prepared in accordance with department-approved annual standards and specifications, that adequately:
 - (1) Controls the volume and velocity of stormwater runoff within the site to minimize soil erosion;
 - (2) Controls stormwater discharges, including peak flow rates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and stream bank erosion;
 - (3) Minimizes the amount of soil exposed during the construction activity;
 - (4) Minimizes the disturbance of steep slopes;
 - (5) Minimizes sediment discharges from the site in a manner that addresses (i) the amount, frequency, intensity, and duration of precipitation; (ii) the nature of resulting stormwater runoff; and (iii) soil characteristics, including the range of soil particle sizes present on the site;
 - (6) Provides and maintains natural buffers around surface waters, directs stormwater to vegetated areas to increase sediment removal, and maximizes stormwater infiltration, unless infeasible;
 - (7) Minimizes soil compaction and, unless infeasible, preserves topsoil;
 - (8) Ensures that stabilization of disturbed areas will be initiated immediately whenever any clearing, grading, excavating, or other land-disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 days; and

- (9) Utilizes outlet structures that withdraw stormwater from the surface (i.e., above the permanent pool or wet storage water surface elevation), unless infeasible, when discharging from sediment basins or sediment traps.

3. Stormwater management plan.

- a. New construction activities. A stormwater management plan approved by the VSMP authority as authorized under the Virginia Stormwater Management Program (VSMP) Regulation (9VAC25-870), or an "agreement in lieu of a stormwater management plan" as defined in 9VAC25-870-10 from the VSMP authority, or a stormwater management plan prepared in accordance with annual standards and specifications approved by the department. Any operator proposing a new stormwater discharge from construction activities that is not required to obtain stormwater management plan approval from a VSMP authority or does not adopt department-approved annual standards and specifications shall submit the stormwater management plan to the department for review and approval.
- b. Existing construction activities. Any operator that was authorized to discharge under the general permit issued in 2009, and that intends to continue coverage under this general permit, shall ensure compliance with the requirements of 9VAC25-870-93 through 9VAC25-870-99 of the VSMP Regulation, including but not limited to the water quality and quantity requirements. The SWPPP shall include a description of, and all necessary calculations supporting, all post-construction stormwater management measures that will be installed prior to the completion of the construction process to control pollutants in stormwater discharges after construction operations have been completed. Structural measures should be placed on upland soils to the degree possible. Such measures must be designed and installed in accordance with applicable VESCP authority, VSMP authority, state, and federal requirements, and any necessary permits must be obtained.

4. Pollution prevention plan. A pollution prevention plan that addresses potential pollutant-generating activities that may reasonably be expected to affect the quality of stormwater discharges from the construction activity, including any support activity. The pollution prevention plan shall:

- a. Identify the potential pollutant-generating activities and the pollutant that is expected to be exposed to stormwater;
- b. Describe the location where the potential pollutant-generating activities will occur, or if identified on the site plan, reference the site plan;
- c. Identify all nonstormwater discharges, as authorized in Part I E of this general permit, that are or will be commingled with stormwater discharges from the construction activity, including any applicable support activity;
- d. Identify the person responsible for implementing the pollution prevention practice or practices for each pollutant-generating activity (if other than the person listed as the qualified personnel);
- e. Describe the pollution prevention practices and procedures that will be implemented to:
 - (1) Prevent and respond to leaks, spills, and other releases including (i) procedures for expeditiously stopping, containing, and cleaning up spills, leaks, and other releases; and (ii) procedures for reporting leaks, spills, and other releases in accordance with Part III G;
 - (2) Prevent the discharge of spilled and leaked fuels and chemicals from vehicle fueling and maintenance activities (e.g., providing secondary containment such as spill berms, decks, spill containment pallets, providing cover where appropriate, and having spill kits readily available);

- (3) Prevent the discharge of soaps, solvents, detergents, and wash water from construction materials, including the clean-up of stucco, paint, form release oils, and curing compounds (e.g., providing (i) cover (e.g., plastic sheeting or temporary roofs) to prevent contact with stormwater; (ii) collection and proper disposal in a manner to prevent contact with stormwater; and (iii) a similarly effective means designed to prevent discharge of these pollutants);
 - (4) Minimize the discharge of pollutants from vehicle and equipment washing, wheel wash water, and other types of washing (e.g., locating activities away from surface waters and stormwater inlets or conveyance and directing wash waters to sediment basins or traps, using filtration devices such as filter bags or sand filters, or using similarly effective controls);
 - (5) Direct concrete wash water into a leak-proof container or leak-proof settling basin. The container or basin shall be designed so that no overflows can occur due to inadequate sizing or precipitation. Hardened concrete wastes shall be removed and disposed of in a manner consistent with the handling of other construction wastes. Liquid concrete wastes shall be removed and disposed of in a manner consistent with the handling of other construction wash waters and shall not be discharged to surface waters;
 - (6) Minimize the discharge of pollutants from storage, handling, and disposal of construction products, materials, and wastes including (i) building products such as asphalt sealants, copper flashing, roofing materials, adhesives, and concrete admixtures; (ii) pesticides, herbicides, insecticides, fertilizers, and landscape materials; and (iii) construction and domestic wastes such as packaging materials, scrap construction materials, masonry products, timber, pipe and electrical cuttings, plastics, Styrofoam, concrete, and other trash or building materials;
 - (7) Prevent the discharge of fuels, oils, and other petroleum products, hazardous or toxic wastes, and sanitary wastes; and
 - (8) Address any other discharge from the potential pollutant-generating activities not addressed above; and
- f. Describe procedures for providing pollution prevention awareness of all applicable wastes, including any wash water, disposal practices, and applicable disposal locations of such wastes, to personnel in order to comply with the conditions of this general permit. The operator shall implement the procedures described in the SWPPP.
5. SWPPP requirements for discharges to impaired waters, surface waters with an applicable TMDL wasteload allocation established and approved prior to the term of this general permit, and exceptional waters. The SWPPP shall:
- a. Identify the impaired water(s), approved TMDL(s), pollutant(s) of concern, and exceptional waters identified in 9VAC25-260-30 A 3 c, when applicable;
 - b. Provide clear direction that:
 - (1) Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the site;
 - (2) Nutrients shall be applied in accordance with manufacturer's recommendations or an approved nutrient management plan and shall not be applied during rainfall events; and
 - (3) A modified inspection schedule shall be implemented in accordance with Part I B 4 or Part I B 5.

6. Qualified personnel. The name, phone number, and qualifications of the qualified personnel conducting inspections required by this general permit.
7. Delegation of authority. The individuals or positions with delegated authority, in accordance with Part III K, to sign inspection reports or modify the SWPPP.
8. SWPPP signature. The SWPPP shall be signed and dated in accordance with Part III K.

B. SWPPP amendments, modification, and updates.

1. The operator shall amend the SWPPP whenever there is a change in the design, construction, operation, or maintenance that has a significant effect on the discharge of pollutants to surface waters and that has not been previously addressed in the SWPPP.
2. The SWPPP must be amended if, during inspections or investigations by the operator's qualified personnel, or by local, state, or federal officials, it is determined that the existing control measures are ineffective in minimizing pollutants in discharges from the construction activity. Revisions to the SWPPP shall include additional or modified control measures designed and implemented to correct problems identified. If approval by the VESCP authority, VSMP authority, or department is necessary for the control measure, revisions to the SWPPP shall be completed no later than seven calendar days following approval. Implementation of these additional or modified control measures must be accomplished as described in Part II G.
3. The SWPPP must clearly identify the contractor(s) that will implement and maintain each control measure identified in the SWPPP. The SWPPP shall be amended to identify any new contractor that will implement and maintain a control measure.
4. The operator shall update the SWPPP no later than seven days following any modification to its implementation. All modifications or updates to the SWPPP shall be noted and shall include the following items:
 - a. A record of dates when:
 - (1) Major grading activities occur;
 - (2) Construction activities temporarily or permanently cease on a portion of the site; and
 - (3) Stabilization measures are initiated;
 - b. Documentation of replaced or modified controls where periodic inspections or other information have indicated that the controls have been used inappropriately or incorrectly and where modified as soon as possible;
 - c. Areas that have reached final stabilization and where no further SWPPP or inspection requirements apply;
 - d. All properties that are no longer under the legal control of the operator and the dates on which the operator no longer had legal control over each property;
 - e. The date of any prohibited discharges, the discharge volume released, and what actions were taken to minimize the impact of the release;
 - f. Measures taken to prevent the reoccurrence of any prohibited discharge; and
 - g. Measures taken to address any evidence identified as a result of an inspection required under Part II F.

5. Amendments, modifications, or updates to the SWPPP shall be signed in accordance with Part III K.

C. Public Notification. Upon commencement of land disturbance, the operator shall post conspicuously a copy of the notice of coverage letter near the main entrance of the construction activity. For linear projects, the operator shall post the notice of coverage letter at a publicly accessible location near an active part of the construction project (e.g., where a pipeline crosses a public road). The operator shall maintain the posted information until termination of general permit coverage as specified in Part I F.

D. SWPPP availability.

1. Operators with day-to-day operational control over SWPPP implementation shall have a copy of the SWPPP available at a central location on-site for use by those identified as having responsibilities under the SWPPP whenever they are on the construction site.
2. The operator shall make the SWPPP and all amendments, modifications, and updates available upon request to the department, the VSMP authority, the EPA, the VESCP authority, local government officials, or the operator of a municipal separate storm sewer system receiving discharges from the construction activity. If an on-site location is unavailable to store the SWPPP when no personnel are present, notice of the SWPPP's location must be posted near the main entrance of the construction site.
3. The operator shall make the SWPPP available for public review in an electronic format or in hard copy. Information for public access to the SWPPP shall be posted and maintained in accordance with Part II C. If not provided electronically, public access to the SWPPP may be arranged upon request at a time and at a publicly accessible location convenient to the operator or his designee but shall be no less than once per month and shall be during normal business hours. Information not required to be contained within the SWPPP by this general permit is not required to be released.

E. SWPPP implementation. The operator shall implement the SWPPP and subsequent amendments, modifications, and updates from commencement of land disturbance until termination of general permit coverage as specified in Part I F.

1. All control measures must be properly maintained in effective operating condition in accordance with good engineering practices and, where applicable, manufacturer specifications. If a site inspection required by Part II F identifies a control measure that is not operating effectively, corrective action(s) shall be completed as soon as practicable, but no later than seven days after discovery or a longer period as established by the VSMP authority, to maintain the continued effectiveness of the control measures.
2. If site inspections required by Part II F identify an existing control measure that needs to be modified or if an additional control measure is necessary for any reason, implementation shall be completed prior to the next anticipated measurable storm event. If implementation prior to the next anticipated measurable storm event is impracticable, then alternative control measures shall be implemented as soon as practicable, but no later than seven days after discovery or a longer period as established by the VSMP authority.

F. SWPPP Inspections.

1. Personnel responsible for on-site and off-site inspections. Inspections required by this general permit shall be conducted by the qualified personnel identified by the operator in the SWPPP. The operator is responsible for insuring that the qualified personnel conduct the inspection.
2. Inspection schedule.
 - a. Inspections shall be conducted at a frequency of:

- (1) At least once every five business days; or
 - (2) At least once every 10 business days and no later than 48 hours following a measurable storm event. In the event that a measurable storm event occurs when there are more than 48 hours between business days, the inspection shall be conducted no later than the next business day.
- b. Where areas have been temporarily stabilized or land-disturbing activities will be suspended due to continuous frozen ground conditions and stormwater discharges are unlikely, the inspection frequency may be reduced to once per month. If weather conditions (such as above freezing temperatures or rain or snow events) make discharges likely, the operator shall immediately resume the regular inspection frequency.
- c. Representative inspections may be utilized for utility line installation, pipeline construction, or other similar linear construction activities provided that:
- (1) Temporary or permanent soil stabilization has been installed and vehicle access may compromise the temporary or permanent soil stabilization and potentially cause additional land disturbance increasing the potential for erosion;
 - (2) Inspections occur on the same frequency as other construction activities;
 - (3) Control measures are inspected along the construction site 0.25 miles above and below each access point (i.e., where a roadway, undisturbed right-of-way, or other similar feature intersects the construction activity and access does not compromise temporary or permanent soil stabilization); and
 - (4) Inspection locations are provided in the report required by Part II F.
3. Inspection requirements.
- a. As part of the inspection, the qualified personnel shall:
- (1) Record the date and time of the inspection and when applicable the date and rainfall amount of the last measurable storm event;
 - (2) Record the information and a description of any discharges occurring at the time of the inspection;
 - (3) Record any land-disturbing activities that have occurred outside of the approved erosion and sediment control plan;
 - (4) Inspect the following for installation in accordance with the approved erosion and sediment control plan, identification of any maintenance needs, and evaluation of effectiveness in minimizing sediment discharge, including whether the control has been inappropriately or incorrectly used:
 - (a) All perimeter erosion and sediment controls, such as silt fence;
 - (b) Soil stockpiles, when applicable, and borrow areas for stabilization or sediment trapping measures;
 - (c) Completed earthen structures, such as dams, dikes, ditches, and diversions for stabilization;

- (d) Cut and fill slopes;
 - (e) Sediment basins and traps, sediment barriers, and other measures installed to control sediment discharge from stormwater;
 - (f) Temporary or permanent channel, flume, or other slope drain structures installed to convey concentrated runoff down cut and fill slopes;
 - (g) Storm inlets that have been made operational to ensure that sediment laden stormwater does not enter without first being filtered or similarly treated; and
 - (h) Construction vehicle access routes that intersect or access paved roads for minimizing sediment tracking;
- (5) Inspect areas that have reached final grade or that will remain dormant for more than 14 days for initiation of stabilization activities;
- (6) Inspect areas that have reached final grade or that will remain dormant for more than 14 days for completion of stabilization activities within seven days of reaching grade or stopping work;
- (7) Inspect for evidence that the approved erosion and sediment control plan, "agreement in lieu of a plan," or erosion and sediment control plan prepared in accordance with department-approved annual standards and specifications has not been properly implemented. This includes but is not limited to:
- (a) Concentrated flows of stormwater in conveyances such as rills, rivulets or channels that have not been filtered, settled, or similarly treated prior to discharge, or evidence thereof;
 - (b) Sediment laden or turbid flows of stormwater that have not been filtered or settled to remove sediments prior to discharge;
 - (c) Sediment deposition in areas that drain to unprotected stormwater inlets or catch basins that discharge to surface waters. Inlets and catch basins with failing sediments controls due to improper installation, lack of maintenance, or inadequate design are considered unprotected;
 - (d) Sediment deposition on any property (including public and private streets) outside of the construction activity covered by this general permit;
 - (e) Required stabilization has not been initiated or completed on portions of the site;
 - (f) Sediment basins without adequate wet or dry storage volume or sediment basins that allow the discharge of stormwater from below the surface of the wet storage portion of the basin;
 - (g) Sediment traps without adequate wet or dry storage or sediment traps that allow the discharge of stormwater from below the surface of the wet storage portion of the trap; and
 - (h) Land disturbance outside of the approved area to be disturbed;
- (8) Inspect pollutant generating activities identified in the pollution prevention plan for the proper implementation, maintenance and effectiveness of the procedures and practices;
- (9) Identify any pollutant generating activities not identified in the pollution prevention plan; and

(10) Identify and document the presence of any evidence of the discharge of pollutants prohibited by this general permit.

4. Inspection report. Each inspection report shall include the following items:
 - a. The date and time of the inspection and when applicable, the date and rainfall amount of the last measurable storm event;
 - b. Summarized findings of the inspection;
 - c. The location(s) of prohibited discharges;
 - d. The location(s) of control measures that require maintenance;
 - e. The location(s) of control measures that failed to operate as designed or proved inadequate or inappropriate for a particular location;
 - f. The location(s) where any evidence identified under Part II F 3 a (7) exists;
 - g. The location(s) where any additional control measure is needed that did not exist at the time of inspection;
 - h. A list of corrective actions required (including any changes to the SWPPP that are necessary) as a result of the inspection or to maintain permit compliance;
 - i. Documentation of any corrective actions required from a previous inspection that have not been implemented; and
 - j. The date and signature of the qualified personnel and the operator or its duly authorized representative.

The inspection report and any actions taken in accordance with Part II must be retained by the operator as part of the SWPPP for at least three years from the date that general permit coverage expires or is terminated. The inspection report shall identify any incidents of noncompliance. Where an inspection report does not identify any incidents of noncompliance, the report shall contain a certification that the construction activity is in compliance with the SWPPP and this general permit. The report shall be signed in accordance with Part III K of this general permit.

G. Corrective actions.

1. The operator shall implement the corrective action(s) identified as a result of an inspection as soon as practicable but no later than seven days after discovery or a longer period as approved by the VSMP authority. If approval of a corrective action by a regulatory authority (e.g., VSMP authority, VESCP authority, or the department) is necessary, additional control measures shall be implemented to minimize pollutants in stormwater discharges until such approvals can be obtained.
2. The operator may be required to remove accumulated sediment deposits located outside of the construction activity covered by this general permit as soon as practicable in order to minimize environmental impacts. The operator shall notify the VSMP authority and the department as well as obtain all applicable federal, state, and local authorizations, approvals, and permits prior to the removal of sediments accumulated in surface waters including wetlands.

PART III

CONDITIONS APPLICABLE TO ALL VPDES PERMITS

NOTE: Discharge monitoring is not required for this general permit. If the operator chooses to monitor stormwater discharges or control measures, the operator must comply with the requirements of subsections A, B, and C, as appropriate.

A. Monitoring.

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitoring activity.
2. Monitoring shall be conducted according to procedures approved under 40 CFR Part 136 or alternative methods approved by the U.S. Environmental Protection Agency, unless other procedures have been specified in this general permit. Analyses performed according to test procedures approved under 40 CFR Part 136 shall be performed by an environmental laboratory certified under regulations adopted by the Department of General Services (1VAC30-45 or 1VAC30-46).
3. The operator shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals that will ensure accuracy of measurements.

B. Records.

1. Monitoring records and reports shall include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sampling or measurements;
 - c. The date(s) and time(s) analyses were performed;
 - d. The individual(s) who performed the analyses;
 - e. The analytical techniques or methods used; and
 - f. The results of such analyses.
2. The operator shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this general permit, and records of all data used to complete the registration statement for this general permit, for a period of at least three years from the date of the sample, measurement, report or request for coverage. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the operator, or as requested by the board.

C. Reporting monitoring results.

1. The operator shall update the SWPPP to include the results of the monitoring as may be performed in accordance with this general permit, unless another reporting schedule is specified elsewhere in this general permit.
2. Monitoring results shall be reported on a discharge monitoring report (DMR); on forms provided, approved or specified by the department; or in any format provided that the date, location, parameter, method, and result of the monitoring activity are included.

3. If the operator monitors any pollutant specifically addressed by this general permit more frequently than required by this general permit using test procedures approved under 40 CFR Part 136 or using other test procedures approved by the U.S. Environmental Protection Agency or using procedures specified in this general permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the department.
4. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this general permit.

D. Duty to provide information. The operator shall furnish, within a reasonable time, any information which the board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this general permit or to determine compliance with this general permit. The board, department, EPA, or VSMP authority may require the operator to furnish, upon request, such plans, specifications, and other pertinent information as may be necessary to determine the effect of the wastes from his discharge on the quality of surface waters, or such other information as may be necessary to accomplish the purposes of the CWA and the Virginia Stormwater Management Act. The operator shall also furnish to the board, department, EPA, or VSMP authority, upon request, copies of records required to be kept by this general permit.

E. Compliance schedule reports. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this general permit shall be submitted no later than 14 days following each schedule date.

F. Unauthorized stormwater discharges. Pursuant to § 62.1-44.5 of the Code of Virginia, except in compliance with a state permit issued by the department, it shall be unlawful to cause a stormwater discharge from a construction activity.

G. Reports of unauthorized discharges. Any operator who discharges or causes or allows a discharge of sewage, industrial waste, other wastes or any noxious or deleterious substance or a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, 40 CFR Part 302, or § 62.1-44.34:19 of the Code of Virginia that occurs during a 24-hour period into or upon surface waters or who discharges or causes or allows a discharge that may reasonably be expected to enter surface waters, shall notify the Department of Environmental Quality of the discharge immediately upon discovery of the discharge, but in no case later than within 24 hours after said discovery. A written report of the unauthorized discharge shall be submitted to the department and the VSMP authority within five days of discovery of the discharge. The written report shall contain:

1. A description of the nature and location of the discharge;
2. The cause of the discharge;
3. The date on which the discharge occurred;
4. The length of time that the discharge continued;
5. The volume of the discharge;
6. If the discharge is continuing, how long it is expected to continue;
7. If the discharge is continuing, what the expected total volume of the discharge will be; and
8. Any steps planned or taken to reduce, eliminate and prevent a recurrence of the present discharge or any future discharges not authorized by this general permit.

Discharges reportable to the department and the VSMP authority under the immediate reporting requirements of other regulations are exempted from this requirement.

H. Reports of unusual or extraordinary discharges. If any unusual or extraordinary discharge including a "bypass" or "upset," as defined herein, should occur from a facility and the discharge enters or could be expected to enter surface waters, the operator shall promptly notify, in no case later than within 24 hours, the department and the VSMP authority by telephone after the discovery of the discharge. This notification shall provide all available details of the incident, including any adverse effects on aquatic life and the known number of fish killed. The operator shall reduce the report to writing and shall submit it to the department and the VSMP authority within five days of discovery of the discharge in accordance with Part III I 2. Unusual and extraordinary discharges include but are not limited to any discharge resulting from:

1. Unusual spillage of materials resulting directly or indirectly from processing operations;
2. Breakdown of processing or accessory equipment;
3. Failure or taking out of service of some or all of the facilities; and
4. Flooding or other acts of nature.

I. Reports of noncompliance. The operator shall report any noncompliance which may adversely affect surface waters or may endanger public health.

1. An oral report to the department and the VSMP authority shall be provided within 24 hours from the time the operator becomes aware of the circumstances. The following shall be included as information that shall be reported within 24 hours under this subdivision:
 - a. Any unanticipated bypass; and
 - b. Any upset that causes a discharge to surface waters.
2. A written report shall be submitted within five days and shall contain:
 - a. A description of the noncompliance and its cause;
 - b. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
 - c. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The department may waive the written report on a case-by-case basis for reports of noncompliance under Part III I if the oral report has been received within 24 hours and no adverse impact on surface waters has been reported.

3. The operator shall report all instances of noncompliance not reported under Part III I 1 or 2 in writing as part of the SWPPP. The reports shall contain the information listed in Part III I 2.

NOTE: The reports required in Part III G, H and I shall be made to the department and the VSMP authority. Reports may be made by telephone, email, or by fax. For reports outside normal working hours, leaving a recorded message shall fulfill the immediate reporting requirement. For emergencies, the Virginia Department of Emergency Management maintains a 24-hour telephone service at 1-800-468-8892.

4. Where the operator becomes aware of a failure to submit any relevant facts, or submittal of incorrect information in any report, including a registration statement, to the department or the VSMP authority, the operator shall promptly submit such facts or correct information.

J. Notice of planned changes.

1. The operator shall give notice to the department and the VSMP authority as soon as possible of any planned physical alterations or additions to the permitted facility or activity. Notice is required only when:
 - a. The operator plans an alteration or addition to any building, structure, facility, or installation that may meet one of the criteria for determining whether a facility is a new source in 9VAC25-870-420;
 - b. The operator plans an alteration or addition that would significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this general permit; or
2. The operator shall give advance notice to the department and VSMP authority of any planned changes in the permitted facility or activity, which may result in noncompliance with state permit requirements.

K. Signatory requirements.

1. Registration statement. All registration statements shall be signed as follows:
 - a. For a corporation: by a responsible corporate officer. For the purpose of this chapter, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy-making or decision-making functions for the corporation; or (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for state permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
 - c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this chapter, a principal executive officer of a public agency includes: (i) the chief executive officer of the agency or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.
2. Reports, etc. All reports required by this general permit, including SWPPPs, and other information requested by the board or the department shall be signed by a person described in Part III K 1 or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in Part III K 1;
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the operator. (A duly authorized

representative may thus be either a named individual or any individual occupying a named position); and

- c. The signed and dated written authorization is included in the SWPPP. A copy must be provided to the department and VSMP authority, if requested.
3. Changes to authorization. If an authorization under Part III K 2 is no longer accurate because a different individual or position has responsibility for the overall operation of the construction activity, a new authorization satisfying the requirements of Part III K 2 shall be submitted to the VSMP authority as the administering entity for the board prior to or together with any reports or information to be signed by an authorized representative.
4. Certification. Any person signing a document under Part III K 1 or 2 shall make the following certification:

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

L. Duty to comply. The operator shall comply with all conditions of this general permit. Any state permit noncompliance constitutes a violation of the Virginia Stormwater Management Act and the Clean Water Act, except that noncompliance with certain provisions of this general permit may constitute a violation of the Virginia Stormwater Management Act but not the Clean Water Act. Permit noncompliance is grounds for enforcement action; for state permit termination, revocation and reissuance, or modification; or denial of a state permit renewal application.

The operator shall comply with effluent standards or prohibitions established under § 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if this general permit has not yet been modified to incorporate the requirement.

M. Duty to reapply. If the operator wishes to continue an activity regulated by this general permit after the expiration date of this general permit, the operator shall submit a new registration statement at least 90 days before the expiration date of the existing general permit, unless permission for a later date has been granted by the board. The board shall not grant permission for registration statements to be submitted later than the expiration date of the existing general permit.

N. Effect of a state permit. This general permit does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorize any injury to private property or invasion of personal rights, or any infringement of federal, state or local law or regulations.

O. State law. Nothing in this general permit shall be construed to preclude the institution of any legal action under, or relieve the operator from any responsibilities, liabilities, or penalties established pursuant to any other state law or regulation or under authority preserved by § 510 of the Clean Water Act. Except as provided in general permit conditions on "bypassing" (Part III U) and "upset" (Part III V), nothing in this general permit shall be construed to relieve the operator from civil and criminal penalties for noncompliance.

P. Oil and hazardous substance liability. Nothing in this general permit shall be construed to preclude the institution of any legal action or relieve the operator from any responsibilities, liabilities, or penalties to which the operator is or may be subject under §§ 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law or § 311 of the Clean Water Act.

Q. Proper operation and maintenance. The operator shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances), which are installed or used by the operator to achieve compliance with the conditions of this general permit. Proper operation and maintenance also includes effective plant performance, adequate funding, adequate staffing, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems, which are installed by the operator only when the operation is necessary to achieve compliance with the conditions of this general permit.

R. Disposal of solids or sludges. Solids, sludges or other pollutants removed in the course of treatment or management of pollutants shall be disposed of in a manner so as to prevent any pollutant from such materials from entering surface waters and in compliance with all applicable state and federal laws and regulations.

S. Duty to mitigate. The operator shall take all steps to minimize or prevent any discharge in violation of this general permit that has a reasonable likelihood of adversely affecting human health or the environment.

T. Need to halt or reduce activity not a defense. It shall not be a defense for an operator in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this general permit.

U. Bypass.

1. "Bypass," as defined in 9VAC25-870-10, means the intentional diversion of waste streams from any portion of a treatment facility. The operator may allow any bypass to occur that does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to ensure efficient operation. These bypasses are not subject to the provisions of Part III U 2 and 3.
2. Notice.
 - a. Anticipated bypass. If the operator knows in advance of the need for a bypass, the operator shall submit prior notice to the department, if possible at least 10 days before the date of the bypass.
 - b. Unanticipated bypass. The operator shall submit notice of an unanticipated bypass as required in Part III I.
3. Prohibition of bypass.
 - a. Except as provided in Part III U 1, bypass is prohibited, and the board or department may take enforcement action against an operator for bypass unless:
 - (1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage. Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production;
 - (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and
 - (3) The operator submitted notices as required under Part III U 2.

- b. The department may approve an anticipated bypass, after considering its adverse effects, if the department determines that it will meet the three conditions listed in Part III U 3 a.

V. Upset.

1. An "upset," as defined in 9VAC25-870-10, means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based state permit effluent limitations because of factors beyond the reasonable control of the operator. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
2. An upset constitutes an affirmative defense to an action brought for noncompliance with technology-based state permit effluent limitations if the requirements of Part III V 4 are met. A determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is not a final administrative action subject to judicial review.
3. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.
4. An operator who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that:
 - a. An upset occurred and that the operator can identify the cause(s) of the upset;
 - b. The permitted facility was at the time being properly operated;
 - c. The operator submitted notice of the upset as required in Part III I; and
 - d. The operator complied with any remedial measures required under Part III S.
5. In any enforcement proceeding, the operator seeking to establish the occurrence of an upset has the burden of proof.

W. Inspection and entry. The operator shall allow the department as the board's designee, the VSMP authority, EPA, or an authorized representative of either entity (including an authorized contractor), upon presentation of credentials and other documents as may be required by law to:

1. Enter upon the operator's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this general permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this general permit;
3. Inspect and photograph at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this general permit; and
4. Sample or monitor at reasonable times, for the purposes of ensuring state permit compliance or as otherwise authorized by the Clean Water Act or the Virginia Stormwater Management Act, any substances or parameters at any location.

For purposes of this section, the time for inspection shall be deemed reasonable during regular business hours, and whenever the facility is discharging. Nothing contained herein shall make an inspection unreasonable during an emergency.

X. State permit actions. State permits may be modified, revoked and reissued, or terminated for cause. The filing of a request by the operator for a state permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any state permit condition.

Y. Transfer of state permits.

1. State permits are not transferable to any person except after notice to the department. Except as provided in Part III Y 2, a state permit may be transferred by the operator to a new operator only if the state permit has been modified or revoked and reissued, or a minor modification made, to identify the new operator and incorporate such other requirements as may be necessary under the Virginia Stormwater Management Act and the Clean Water Act.
2. As an alternative to transfers under Part III Y 1, this state permit may be automatically transferred to a new operator if:
 - a. The current operator notifies the department at least 30 days in advance of the proposed transfer of the title to the facility or property;
 - b. The notice includes a written agreement between the existing and new operators containing a specific date for transfer of state permit responsibility, coverage, and liability between them; and
 - c. The department does not notify the existing operator and the proposed new operator of its intent to modify or revoke and reissue the state permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Part III Y 2 b.
3. For ongoing construction activity involving a change of operator, the new operator shall accept and maintain the existing SWPPP, or prepare and implement a new SWPPP prior to taking over operations at the site.

Z. Severability. The provisions of this general permit are severable, and if any provision of this general permit or the application of any provision of this state permit to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this general permit shall not be affected thereby.

Appendix 2

Copy of Registration Statement

Permit Coverage Letter

Fee Form

Copy of Check

Vicinity Map



TIMMONS GROUP

YOUR VISION ACHIEVED THROUGH OURS.

June 29, 2012

Department of Conservation and Recreation
Stormwater Permitting
203 Governor Street, Suite 206
Richmond, Virginia 23219

RE: Virginia State University- Stormwater Master Plan

Dear Stormwater Permitting Staff:

Please find enclosed original signed registration statement for the above referenced project. All stormwater discharges for this project will be received by Fleets Branch and the Appomattox River. The Appomattox River is identified as impaired on the 305(b)/303(d) Water Quality Assessment Integrated Report. The operator has implemented strategies and control measures consistent with Sections I H and II D of the permit for water quality protection. Please contact me should you have any questions at kelsey.gray@timmons.com or (804)200-6473. Thank you for your attention to this matter.

Respectfully,
Timmons Group

Kelsey Gray
Environmental Technician

Enclosures:

1. Original signed registration statement
2. Fee form
3. Copy of Check
4. Vicinity Map
5. List of Impaired Waters Fact Sheets

**VSMP General Permit for Stormwater Discharges from Construction Activities (VAR10)
 Registration Statement**

(Please Type or Print All Information)

- 1. Construction Activity Operator** (The permit will be issued to this operator, and the Certification in Item #13 must be signed by the appropriate person associated with this operator [see the instructions])

Name: Virginia State University, C/O: Jonathan Taylor, Capital Outlay Project Manager

Mailing Address: P.O. Box 9414

City: Petersburg State: VA Zip: 23806 Phone: (804) 504-7500

- 2. (Must be included for renewals of coverage only) Existing Permit Coverage #:** N/A

- 3. Location of Construction Activity**

Name: Virginia State University

Address: 1 Hayden Drive

Town, City, County: Petersburg State: VA Zip: 23806

DMS to the nearest 15 seconds : Latitude 37°14'15" N Longitude 77°25'15" W

Location of all Offsite Support Activities to be Covered Under the Permit

Name: N/A

Address: _____

Town, City, or County: _____ State: _____ Zip: _____

If street address unavailable: Latitude _____ Longitude _____

- 4. Status of Activity:** Federal State Public Private (Check one only)

- 5. The Nature of the Construction Activity** (e.g., commercial, industrial, residential, agricultural, oil and gas, etc.):

Drainage Improvements/Stormwater Master Plan

- 6. Name of the Receiving Water(s):** Fleets Branch, Appomattox River

Hydrologic Unit Code (HUC): James River- Appomattox River (NWBD: JA40)

(Receiving waters identified as impaired on the 2008 305(b)/303(d) Water Quality Assessment Integrated Report or for which a TMDL WLA has been established for stormwater discharges from a construction site shall be noted in an attached list.)

- 7. If the discharge is through a Municipal Separate Storm Sewer System (MS4), the name of the municipal operator of the storm sewer:** Virginia State University

- 8. Estimated Project Start Date (mm/dd/yyyy):** 7/1/2012 **Estimated Project Completion Date (mm/dd/yyyy):** 6/30/2014

- 9. Total Land Area of Development** (to the nearest one-tenth acre): 276.7

Estimated Area to be Disturbed (to the nearest one-tenth acre): 276.7

- 10. Is the area to be disturbed by the construction activity part of a larger common plan of development or sale?** Yes No

- 11. Are nutrient offsets intended to be acquired for this activity?** Yes No Under consideration

- 12. A stormwater pollution prevention plan (SWPPP) must be prepared in accordance with the requirements of the General VSMP Permit for Discharges of Stormwater from Construction Activities prior to submitting this Registration Statement. By signing this Registration Statement the operator is certifying that the SWPPP has been prepared.**

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

Print Name: JONATHAN A TAYLOR Title: UNIVERSITY ARCHITECT

Signature: [Signature] Date: 6-29-12

(Please sign in INK. The person signing this form must be associated with the operator identified in Item #1 above.)

Mail to: Department of Conservation and Recreation, Stormwater Permitting, 203 Governor Street, Suite 206 Richmond, VA 23219

DEPARTMENT OF CONSERVATION AND RECREATION PERMIT FEE FORM

Instructions:

Applicants for an individual Virginia Stormwater Management Program (VSMP) Permit are required to pay permit application fees. Fees are also required for registration coverage under General Permits. Fees must be paid when applications for permit issuance or modification are submitted. Applications will be considered incomplete if the proper fee is not paid and will not be processed until the fee is received.

The permit fee schedule is included with this form. Fees for permit issuance, reissuance, modification and maintenance are included. Once you have determined the fee for the type of application you are submitting, complete this form. The original copy of the form and your check or money order payable to "Treasurer of Virginia" should be mailed to:

Department of Conservation and Recreation
Division of Finance, Accounts Payable
203 Governor Street, 4th Floor
Richmond, Virginia 23219

A copy of the form and a copy of your check or money order should accompany the permit registration statement (application). You should retain a copy for your records. Please direct any questions regarding this form or fee payment to SWMESquestions@dcr.virginia.gov.

Construction Activity Operator:

Name: Virginia State University, C/O: Jonathan Taylor FIN: 54-6001811

Mailing Address: P.O. Box 9414

City: Petersburg State: VA Zip: 23806 Phone: (804) 504-7500

Daytime Phone Number: (804) 504 - 7500

Name and Location of Construction Activity:

Name: Virginia State University Stormwater Master Plan

Town, City, or County: Petersburg

Type of VSMP Permit (from Fee Schedule):

MS4 Individual Permit MS4 General Permit
 Construction Individual Permit Construction General Permit

Type of Action: New Issuance Reissuance
 Modification Maintenance

Amount of Fee Submitted (from Fee Schedule): \$500

Existing Permit Number (if applicable): _____

FOR DCR USE ONLY	
Date: _____	DC #: _____

Virginia Stormwater Management Program (VSMP) Permit Fee Schedule

A. VSMP Individual Permits. Applications for issuance of new individual VSMP permits, and for permittee initiated major modifications that occur (and become effective) before the stated permit expiration date. [NOTE: Individual VSMP permittees pay an Annual Permit Maintenance Fee instead of a reapplication fee. The permittee is billed separately by DCR for the Annual Permit Maintenance Fee.]

TYPE OF VSMP PERMIT	ISSUANCE	MODIFICATION
Municipal Stormwater / MS4 Individual (Large and Medium)	\$16,000	\$5,000
Municipal Stormwater / MS4 Individual (Small)	\$8,000	\$2,500
Construction Stormwater Individual	\$15,000	\$0

B. Registration Statements for VSMP MS4 General Permit Coverage. The fee for filing a permit application (registration statement) for coverage under a VSMP MS4 stormwater general permit issued by the permit issuing authority is as follows:

TYPE OF VSMP PERMIT	ISSUANCE
Municipal Stormwater / MS4 General Permit (Small)	\$4,000

C. Registration Statements for VSMP Construction General Permit Coverage. The fee for filing a permit application (registration statement) for coverage under a VSMP Construction stormwater general permit issued by the permit issuing authority is as follows:

TYPE OF VSMP PERMIT	ISSUANCE
Construction General / Stormwater Management - Phase I Land Clearing ("Large" Construction Activity - Sites or common plans of development or sale equal to or greater than five acres)	\$500
Construction General / Stormwater Management - Phase II Land Clearing ("Small" Construction Activity - Sites or common plans of development or sale equal to or greater than one acre and less than five acres)	\$300
Construction General / Stormwater Management – Small Construction Activity/Land Clearing (Sites within designated areas of Chesapeake Bay Act localities with land disturbance acreage equal to or greater than 2,500 square feet and less than one acre)	\$200

D. Permit Maintenance Fees. The annual permit maintenance fees apply to each VSMP permit identified below, including expired permits that have been administratively continued.

TYPE OF PERMIT	MAINTENANCE
VSMP Municipal Stormwater / MS4 Individual (Large and Medium)	\$8,800
VSMP Municipal Stormwater / MS4 Individual (Small)	\$6,000
VSMP Municipal Stormwater / MS4 General Permit (Small)	\$3,000
VSMP General / Stormwater Management - Phase I Land Clearing ("Large" Construction Activity - Sites or common plans of development equal to or greater than 5 acres)	\$0
VSMP General / Stormwater Management - Phase II Land Clearing ("Small" Construction Activity - Sites or common plans of development equal to or greater than 1 acre and less than 5 Acres)	\$0
Construction General / Stormwater Management – Small Construction Activity/Land Clearing (Sites within designated areas of Chesapeake Bay Act localities with land disturbance acreage equal to or greater than 2,500 square feet and less than one acre)	\$0

76204

TIMMONS GROUP
 1001 Boulders Pkwy., Suite 300
 Richmond, Virginia 23225
 (804) 200-6500 Fax (804) 560-1016
 FED I.D. # 54-1301413

UNION FIRST MARKET BANK
 RICHMOND, VIRGINIA

68-316/514

June 29, 2012

PAY Five Hundred and 00/100 Dollars



\$500.00

TO THE ORDER OF
 Treasurer of Virginia
 Department of Conservation & Recreation
 Division of Finance, Accounts Payable
 203 Governor Street, 4th Floor
 Richmond, VA 23219

Sam



THIS DOCUMENT CONTAINS HEAT SENSITIVE INK. TOUCH OR PRESS HERE - RED IMAGE DISAPPEARS WITH HEAT.

⑈076204⑈ ⑆051403164⑆4011272673⑈

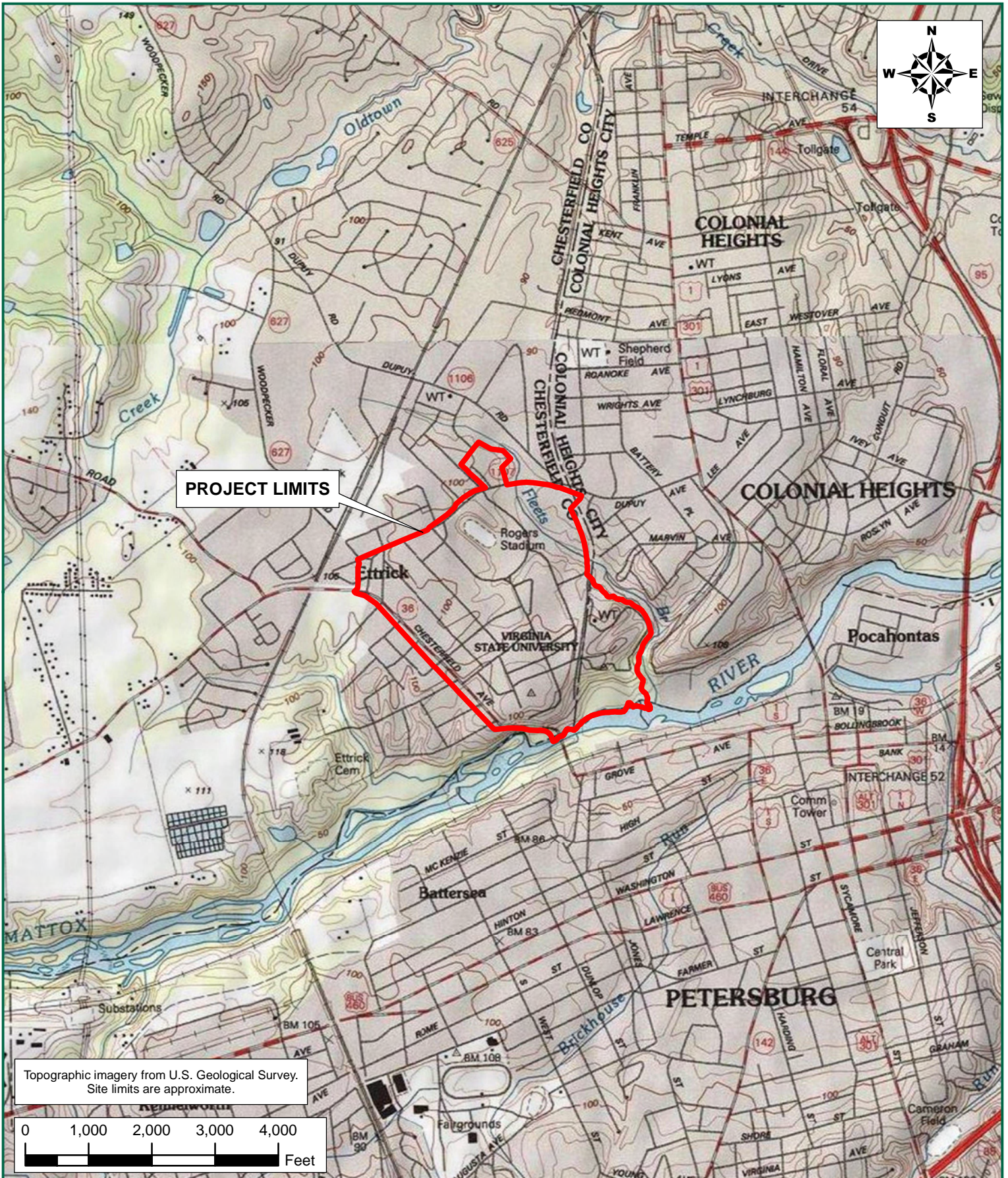
TIMMONS GROUP

Check Date: 6/29/2012

76204

Invoice Number	Date	Voucher	Amount	Discounts	Previous Pay	Net Amount
062912/32820	6/29/2012	000000098923	\$500.00			\$500.00
Treasurer of Virginia			TOTAL			\$500.00
Operating Acct-First Market 1		0405				





VSU STORMWATER MASTERPLAN
PETERSBURG, VA
DRAWING 1: VICINITY MAP

TIMMONS GROUP
 YOUR VISION ACHIEVED THROUGH OURS.

TIMMONS GROUP JOB NUMBER: 32820
 PROJECT STUDY LIMITS: +/- 276.7 ACRES
 LATITUDE: 37° 14' 15.6"
 LONGITUDE: 77° 25' 8.0"

U.S.G.S. QUADRANGLE(S): PETERSBURG
 DATE(S): 1994
 WATERSHED(S): JAMES RIVER- APPOMATTOX RIVER
 HYDROLOGIC UNIT CODE(S): JA40 (NWBD)



2010 Impaired Waters

Category 4 & 5 by 2010 Impaired Area ID*

James River Basin

Cause Group Code: **J15R-01-BAC - Appomattox River**

Location:	Appomattox River from the Lake Chesdin dam downstream to the fall line at the Route 1/301 bridge.
City/County	Chesterfield Co., Dinwiddie Co., Petersburg City
Use(s):	Recreation
Cause(s) / VA Category:	Fecal Coliform / 4A

In 2002, the segment was assessed not supporting of the Recreation use support goal based on fecal coliform violations at the Route 36 bridge (2-APP012.79).

The bacteria TMDL Development for the Appomattox River was completed and approved by EPA on 8/30/2004. The segment was assessed as Cat. 4A,

In 2006, the bacteria impairment switched from fecal coliform to E. coli. The bacteria violation rate for the 2008 cycle was 6/33 for E.coli at station 2-APP012.79

In 2010 cycle the violation rate at station 2-APP012.79 was 8/40 for E. coli.

Assessment Unit	Water name	Location Description	Cause Category	Cause Name	Cycle First Listed	TMDL Schedule	Size
VAP-J15R_APP01A98	Appomattox River	The Appomattox River from the Lake Chesdin dam to the fall line at the Route 1/301 bridge.	4A	Fecal Coliform	2002	2004	7.50

Appomattox River

Impaired area ID: **VAP-J15R-01**

Recreation

Fecal Coliform / 4A

Total impaired size by water type:

Estuary (sq. miles) Reservoir (acres) River (miles)

7.5

Sources:

- Municipal Point Source Discharges
- Agriculture
- Non-Point Source

* Narrative descriptions, location and city/county describe the entire extent of the impairment. Sizes may not represent the total size of the impairment.

Douglas W. Domenech
Secretary of Natural Resources



David A. Johnson
Director

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

203 Governor Street
Richmond, Virginia 23219-2010
(804) 786-1712

July 10, 2012

Virginia State University
c/o Jonathan Taylor
P.O. Box 9414
Petersburg, VA 23806

RE: VSMP Construction Stormwater General Permit No. VAR10-13-100047, Virginia State University - Drainage Improvements/Stormwater Master Plan - 1 Hayden Dr. - Petersburg

Dear Jonathan A. Taylor:

The staff has received your registration statement for the proposed land-disturbing project under the VSMP General Permit for Discharges of Stormwater from Construction Activities (VAR10) on 07/05/2012. The project's date of coverage is either the date in which you receive this letter or fifteen business days after the postmark date of the project's complete registration packet submittal to DCR.

By submission of the registration statement, you acknowledge that the proposed project is eligible for coverage under the General Permit and you have agreed to the conditions in the General Permit including any applicable conditions regarding Total Maximum Daily Loads and impaired waters. Please be aware that § 10.1-603.8:1 of the Code of Virginia and the General Permit contain additional requirements if nonpoint nutrient offsets are chosen to meet the post-development nonpoint nutrient runoff compliance requirements. Section § 10.1-603.8:1 I requires that the permit issuing authority require that nonpoint nutrient offsets or other off-site options achieve the necessary nutrient reductions PRIOR TO THE COMMENCEMENT OF THE PERMITTEE'S LAND DISTURBING ACTIVITY.

A copy of the General Permit is available on the DCR web page at http://www.dcr.virginia.gov/soil_and_water/documents/vsmngenpermvar10.pdf. Print the VAR10 permit and read it carefully as you are responsible for meeting all the permit conditions. The General Permit will expire on June 30, 2014.

Your project specific permit registration number is VAR10-13-100047. A copy of this permit coverage letter, registration statement, copy of the VAR10 permit, and the project's stormwater pollution prevention plan (SWPPP) must be at the construction site from the date of commencement of the construction activity to final stabilization. In addition, DCR staff conducts periodic site inspections for compliance with the permit.

Additional information on the permit and DCR staff contact information are available at http://www.dcr.virginia.gov/soil_and_water/vsmp.shtml on the DCR web page.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Douglas Fritz".

J. Douglas Fritz
Stormwater Permits Manager

Registration Statement
General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR10)

(Please Type or Print All Information)

1. **Construction Activity Operator:** (General permit coverage will be issued to this operator. The Certification in Item #12 must be signed by the appropriate person associated with this operator.)

Name: Virginia State University
Contact: Jonathan Taylor, Capital Outlay Project Manager
Mailing Address: P.O. Box 9414
City: Petersburg State: VA Zip: 23806 Phone: (804) 504-7500
Email address (if available): jtaylor@vsu.edu

Indicate if DEQ may transmit general permit correspondence electronically: Yes No

2. **Existing General Permit Registration Number (for renewals only):** VAR10-13-100047

3. **Name and Location of the Construction Activity:**

Name: Virginia State University
Address (if available): 1 Hayden Drive
City: Petersburg State: VA Zip: 23806
County (if not located within a City): Chesterfield
Latitude (decimal degrees): 37° 14' 15" N Longitude (decimal degrees): 77° 25' 15" W

Name and Location of all Off-site Support Activities to be covered under the general permit:

Name: N/A
Address (if available): _____
City: _____ State: _____ Zip: _____
County (if not located within a City): _____
Latitude (decimal degrees): _____ Longitude (decimal degrees): _____

4. **Status of the Construction Activity (check only one):** Federal State Public Private

5. **Nature of the Construction Activity (e.g., commercial, industrial, residential, agricultural, oil and gas, etc.):**

Drainage Improvements and Stormwater Masterplan

6. **Name of the Receiving Water(s) and Hydrologic Unit Code (HUC):**

Name: Fleets Branch Name: Appomattox River
HUC: James River - Appomattox River (NWBD: JA40) HUC: James River - Appomattox River (NWBD: JA40)

7. **If the discharge is through a Municipal Separate Storm Sewer System (MS4), the name of the MS4 operator:**

Virginia State University

8. **Estimated Project Start and Completion Date:**

Start Date (mm/dd/yyyy): 07/01/2014 Completion Date (mm/dd/yyyy): 06/30/2019

9. **Total Land Area of Development (to the nearest one-hundredth acre):** 276.70

Estimated Area to be Disturbed (to the nearest one-hundredth acre): 276.70

10. **Is the area to be disturbed part of a larger common plan of development or sale?** Yes No

11. **A stormwater pollution prevention plan (SWPPP) must be prepared in accordance with the requirements of the General VPDES Permit for Discharges of Stormwater from Construction Activities prior to submitting this Registration Statement. By signing this Registration Statement the operator is certifying that the SWPPP has been prepared.**

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

Printed Name: JONATHAN A TAYLOR Title: DIRECTOR OF CAPITAL OUTLAY
Signature: [Signature] Date: 5-21-14

(Please sign in INK. This Certification must be signed by the appropriate person associated with the operator identified in Item #1.)

Instructions for Completing the Registration Statement

General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR10)

GENERAL

A. Coverage Under this General Permit.

Any operator applying for coverage under this general permit who is required to submit a Registration Statement (see Section B below) must submit a complete Registration Statement to the Department. The Registration Statement serves as a Notice of Intent for coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR10).

B. Single-family Residences.

Operators with an existing stormwater discharge or proposing a new stormwater discharge associated with the construction of a single-family residence separately built, disturbing less than one acre and part of a larger common plan of development or sale is not required to submit a Registration Statement, provided that the stormwater management plan for the larger common plan of development provides permanent control measures (i.e., stormwater management facilities) encompassing the single family residence.

Operators of these types of discharges are authorized to discharge under this general permit immediately upon the general permit's effective date of July 1, 2014.

C. To Apply for Permit Coverage.

1. New Construction Activities. Any operator proposing a new stormwater discharge from construction activities shall submit a complete Registration Statement to the Department prior to the commencement of land disturbance, unless exempted by Section B above. Any operator proposing a new stormwater discharge from construction activities in response to a public emergency where the related work requires immediate authorization to avoid imminent endangerment to human health or the environment is immediately authorized to discharge under this general permit and must submit a complete Registration Statement to the Department no later than 30 days after commencing land disturbance; documentation to substantiate the occurrence of the public emergency must accompany the Registration Statement.

2. Existing Construction Activities. Any operator that was authorized to discharge under the general permit issued in 2009, and who intends to continue coverage under this general permit, shall submit a complete Registration Statement to the Department on or before June 1, 2014, unless exempted by Section B above.

D. Where to Submit Registration Statements.

All Registration Statements should be submitted to:

**Department of Environmental Quality
Office of Stormwater Management, 10th Floor
P.O. Box 1105
Richmond, VA 23218**

LINE-BY-LINE INSTRUCTIONS

Item 1: Construction Activity Operator Information.

"Operator" means the owner or operator of any facility or activity subject to the Stormwater Management Act and regulations. In the context of stormwater associated with a large or small construction activity, operator means any person associated with a construction project that meets either of the following two criteria: (i) the person has direct operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications or (ii) the person has day-to-day operational control of those activities at a project that are necessary to ensure compliance with a stormwater pollution prevention plan for the site or other state permit or VSMP authority permit conditions (i.e., they are authorized to direct workers at a site to carry out activities required by the

stormwater pollution prevention plan or comply with other permit conditions).

The entities that are considered operators will commonly consist of the owner or developer of a project (the party with control of project plans and specifications) or the general contractor (the party with day to day operational control of the activities at the project site which are necessary to ensure compliance with the general permit).

Provide the legal name (do not use a colloquial name), contact, mailing address, telephone number, and email address (if available) of the construction activity operator; general permit coverage will be issued to this operator. Indicate if the Department may transmit general permit correspondence electronically.

Item 2: Existing General Permit Registration Number.

For reapplications only, provide the existing general permit registration number for the construction activity. This item does not need to be completed for new construction activities applying for general permit coverage.

Item 3: Name and Location of the Construction Activity Information.

Provide the official name, street address (if available), city or county (if not located within a City) of the construction activity. Also, provide the latitude and longitude in decimal degrees of the approximate center of the construction activity (e.g., N 37.5000, W 77.5000).

Name and Location of Off-site Support Activity Information.

This general permit also authorizes stormwater discharges from support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) located on-site or off-site provided that (i) the support activity is directly related to a construction activity that is required to have general permit coverage; (ii) the support activity is not a commercial operation, nor does it serve multiple unrelated construction activities by different operators; (iii) the support activity does not operate beyond the completion of the construction activity it supports; (iv) the support activity is identified in the registration statement at the time of general permit coverage; (v) appropriate control measures are identified in a SWPPP and implemented to address the discharges from the support activity areas; and (vi) all applicable state, federal, and local approvals are obtained for the support activity.

Provide the official name, street address (if available), City and County (if not located within a City) of all off-site support activities to be covered under this general permit. Also, provide the latitude and longitude in decimal degrees of the approximate center of the off-site support activities (e.g., N 37.5000, W 77.5000). Also, if an off-site support activity is going to be covered under this general permit the total land area of the off-site support activity and the estimated area to be disturbed by the off-site support activity need to be included in Item #9.

Item 4: Status of the Construction Activity.

Indicate the appropriate status (Federal, State, Public, or Private) of the construction activity.

Item 5: Nature of the Construction Activity.

Provide a brief description of the construction activity, such as commercial, residential, agricultural, oil and gas, etc. This list is not all inclusive.

Item 6: Receiving Waters(s) and HUC Information.

Provide the name of the receiving water(s) and corresponding HUC for all stormwater discharges including any stormwater discharges from off-site support activities to be covered under this general permit.

Hydrologic Unit Code or HUC is a watershed unit established in the most recent version of Virginia's 6th order national watershed boundary dataset.

Item 7: MS4 Information.

If stormwater is discharged through a municipal separate storm sewer system (MS4), provide the name of the MS4 operator. The name of the MS4 operator is generally the Town, City, County, Institute or Federal facility where the construction activity is located.

Item 8: Construction Activity Start and Completion Date Information.

Provide the estimated start date (month/day/year) of the construction activity. Provide the estimated completion date (month/day/year) of the construction activity.

Item 9: Construction Activity Area Information.

Provide the total area (to the nearest one-hundredth acre) of the development (i.e., the total acreage of the larger common plan of development or sale). Include the total acreage of any off-site support activity to be covered under this general permit.

Provide the estimated area (to the nearest one-hundredth acre) to be disturbed by the construction activity. Include the estimated area of land disturbance that will occur at any off-site support activity to be covered under this general permit.

Item 10: Common Plan of Development or Sale Information.

Indicate if the area to be disturbed by the construction activity is part of a larger common plan of development or sale. Larger common plan of development or sale is defined as a contiguous area where separate and distinct construction may be taking place at different times on different schedules. Plan is broadly defined as any announcement or documentation, including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, etc., or physical demarcation such as boundary signs, lot stakes, or surveyor markings indicating that construction activities may occur.

Item 11: Stormwater Pollution Prevention Plan (SWPPP).

A Stormwater Pollution Prevention Plan (SWPPP) must be prepared in accordance with the requirements of the General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR10) prior to submitting this Registration Statement. By signing this Registration Statement the operator is certifying that the SWPPP has been prepared.

Item 12: Certification.

A properly authorized individual associated with the operator identified in Item 1 of the Registration Statement is responsible for certifying and signing the Registration Statement. **Please sign the Registration Statement in INK.**

State statutes provide for severe penalties for submitting false information on the Registration Statement. State regulations require that the Registration Statement be signed as follows:

- a. For a corporation: by a responsible corporate officer. For the purpose of this part, a responsible corporate officer means:
 - (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy-making or decision-making functions for the corporation, or
 - (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to

gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively.

c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this part, a principal executive officer of a public agency includes:

- (i) The chief executive officer of the agency, or
- (ii) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

**DEPARTMENT OF ENVIRONMENTAL QUALITY
CONSTRUCTION ACTIVITY OPERATOR PERMIT FEE FORM**

(Please Type or Print All Information)

Instructions: Applicants for a Construction Activity Individual Permit are required to pay permit application fees. Fees are also required for registration for coverage under a Construction Activity General Permit. Fees must be paid when applications for state permit issuance, reissuance, modification or transfer are submitted. Applications will be considered incomplete if the proper fee is not paid and will not be processed until the fee is received.

The fee schedule for state permits is included with this form. Fees for state permit issuance, reissuance, maintenance, modification and transfer are included. Once you have determined the fee for the type of application you are submitting, complete this form. The original copy of the form and your check or money order payable to "Treasurer of Virginia" should be mailed to:

**Department of Environmental Quality
Receipts Control
P.O. Box 1104
Richmond, VA 23218**

A copy of this form and a copy of your check or money order should accompany the permit application (or registration statement). You should retain a copy for your records.

Construction Activity Operator:

Name: Virginia State University

Contact: Jonathan Taylor

Mailing Address: P.O. Box 9414

City: Petersburg State: VA Zip: 23806 Phone: (804) 504-7500

Email address (if available): jataylor@vsu.edu

Name and Location of the Construction Activity:

Name: Virginia State University

City: Petersburg State: VA Zip: 23806

County: Chesterfield

Type of State Permit: Construction Activity Individual Permit Construction Activity General Permit
(from Fee Schedule)

Type of Action: New Issuance Reissuance Maintenance
 Modification Transfer

Amount of Fee Submitted (from Fee Schedule): \$750

Existing General Permit Registration Number (if applicable): VAR10-13-100047

FOR DEQ USE ONLY	
Date:	DC #:

CONSTRUCTION ACTIVITY PERMIT FEE SCHEDULE

A. Individual Permits. The fee for filing a state permit application for a Construction Activity Individual Permit issued by the Board is as follows: (NOTE: Individual permittees pay an annual permit maintenance fee instead of a reapplication fee. The permittee is billed separately by DEQ for the annual permit maintenance fee.)

TYPE OF STATE PERMIT	ISSUANCE
Individual Permit for Discharges from Construction Activities	\$15,000

B. Registration Statements. The fee for filing a state permit application (registration statement) for coverage under a Construction Activity General Permit issued by the Board, including a state or federal agency that does not administer a project in accordance with approved annual standards and specifications, is as follows:

TYPE OF STATE PERMIT	ISSUANCE
General / Stormwater Management - Small Construction Activity/Land Clearing (Areas within common plans of development or sale with land-disturbance acreage less than one acre)	\$290
General / Stormwater Management - Small Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land-disturbance acreage equal to or greater than one acre and less than five acres)	\$2,700
General / Stormwater Management - Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land-disturbance acreage equal to or greater than five acres and less than 10 acres)	\$3,400
General / Stormwater Management - Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land-disturbance acreage equal to or greater than 10 acres and less than 50 acres)	\$4,500
General / Stormwater Management - Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land-disturbance acreage equal to or greater than 50 acres and less than 100 acres)	\$6,100
General / Stormwater Management - Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land-disturbance acreage equal to or greater than 100 acres)	\$9,600

The fee for filing a state permit application (registration statement) for coverage under a Construction Activity General Permit issued by the Board for a state or federal agency that administers a project in accordance with approved annual standards and specifications is as follows:

TYPE OF STATE PERMIT	ISSUANCE
Construction General / Stormwater Management – Phase I Land Clearing (“Large” Construction Activity – Sites or common plans of development or sale equal to or greater than 5 acres)	\$750
Construction General / Stormwater Management – Phase II Land Clearing (“Small” Construction Activity – Sites or common plans of development or sale equal to or greater than 1 acre and less than 5 acres)	\$450

C. State Permit Modification or Transfer Fees. The following fees apply to the modification or transfer of a Construction Activity Individual Permit or a Construction Activity General Permit issued by the Board. The fee assessed shall be based on the total disturbed acreage of the construction activity. In addition to the state permit modification fee, modifications resulting in an increase in total disturbed acreage shall pay the difference in the initial Construction Activity General Permit fee paid and the Construction Activity General Permit fee that would have applied for the total disturbed acreage in Section B above.

TYPE OF STATE PERMIT	MODIFICATION
General / Stormwater Management – Small Construction Activity/Land Clearing (Areas within common plans of development or sale with land disturbance acreage less than one acre)	\$20
General / Stormwater Management – Small Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land-disturbance acreage equal to or greater than one and less than five acres)	\$200
General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land-disturbance acreage equal to or greater than five acres and less than 10 acres)	\$250
General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land-disturbance acreage equal to or greater than 10 acres and less than 50 acres)	\$300
General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land-disturbance acreage equal to or greater than 50 acres and less than 100 acres)	\$450
General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land-disturbance acreage equal to or greater than 100 acres)	\$700
Individual Permit for Discharges from Construction Activities	\$5,000

D. State Permit Maintenance Fees. The following annual state permit maintenance fees apply to each state permit identified below, including expired permits that have been administratively continued. No annual state permit maintenance fee is required for coverage under a Construction Activity General Permit for a state or federal agency that administers a project in accordance with approved annual standards and specifications.

TYPE OF STATE PERMIT	MAINTENANCE
General / Stormwater Management – Small Construction Activity/Land Clearing (Areas within common plans of development or sale with land disturbance acreage less than one acre)	\$50
General / Stormwater Management – Small Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land-disturbance acreage equal to or greater than one and less than five acres)	\$400
General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land-disturbance acreage equal to or greater than five acres and less than 10 acres)	\$500
General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land-disturbance acreage equal to or greater than 10 acres and less than 50 acres)	\$650
General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land-disturbance acreage equal to or greater than 50 acres and less than 100 acres)	\$900
General / Stormwater Management – Large Construction Activity/Land Clearing (Sites or areas within common plans of development or sale with land-disturbance acreage equal to or greater than 100 acres)	\$1,400
Individual Permit for Discharges from Construction Activities	\$3,000

79607

TIMMONS GROUP
1001 Boulders Pkwy., Suite 300
North Chesterfield, Virginia 23225
(804) 200-6500 Fax (804) 560-1016
FED I.D.# 54-1301413

UNION FIRST MARKET BANK
RICHMOND, VIRGINIA

68-316/514

May 30, 2014

PAY Seven Hundred Fifty and 00/100 Dollars **TIMMONS GROUP**

\$750.00

TO THE ORDER OF
Treasurer of Virginia
c/o Department of Environmental Quality
Receipts Control
P O Box 1104
Richmond, VA 23218

Helene A. [Signature]

THIS DOCUMENT CONTAINS HEAT SENSITIVE INK. TOUCH OR PRESS HERE - RED IMAGE DISAPPEARS WITH HEAT

⑈079607⑈ ⑆051403164⑆4011272673⑈

TIMMONS GROUP

Check Date: 5/30/2014

79607

Invoice Number	Date	Voucher	Amount	Discounts	Previous Pay	Net Amount
053014/VSU	5/30/2014	000000108533	\$750.00			\$750.00
Treasurer of Virginia			TOTAL			\$750.00
Operating Acct-First Market	5	0405				

TIMMONS GROUP

Appendix 3

**Transfer of Ownership Agreement Form
Notice of Termination**

Transfer of Ownership Agreement Form
General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR10)

(Please Type or Print All Information)

Instructions: This agreement form must be signed in INK by properly authorized individuals as specified in the General VPDES Permit for Stormwater Discharges from Construction Activities (VAR10), Part III K (Signatory Requirements). Please retain a copy of this agreement form for your records.

Mail the original agreement form to:

Department of Environmental Quality
Office of Stormwater Management, 10th Floor
P.O. Box 1105
Richmond, VA 23218

General Permit Registration Number: _____ Date of Transfer (mm/dd/yyyy): _____

Construction Activity Name: _____

CURRENT CONSTRUCTION ACTIVITY OPERATOR:

Name: _____

Contact: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____ Phone: _____

Email Address (if available): _____

"I (We) hereby agree to the transfer of ownership modification to the referenced General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR10)."

Printed Name: _____ Title: _____

Signature: _____ Date: _____

NEW CONSTRUCTION ACTIVITY OPERATOR:

Name: _____

Contact: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____ Phone: _____

Email Address (if available): _____

Indicate if DEQ may transmit general permit correspondence electronically: Yes No

I (We) hereby agree to the change of ownership modification to the referenced General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR10), and agree to accept all responsibility, coverage, and liability of the general permit."

Printed Name: _____ Title: _____

Signature: _____ Date: _____

Notice of Termination
General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR10)

(Please Type or Print All Information)

1. Construction Activity Operator:

Name: _____

Contact: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____ Phone: _____

Email address (if available): _____

2. Name and Location of the Construction Activity: (As listed on the Registration Statement.)

Name: _____

Address (if available): _____

City: _____ State: _____ Zip: _____

County (if not located within a City): _____

Latitude (decimal degrees): _____ Longitude (decimal degrees): _____

3. General Permit Registration Number: _____

4. Reason for Terminating Coverage Under the General Permit: (The operator shall submit a Notice of Termination after one or more of the following conditions have been met.)

- A. Necessary permanent control measures included in the SWPPP for the site are in place and functioning effectively and final stabilization has been achieved on all portions of the site for which the operator is responsible. When applicable, long-term responsibility and maintenance requirements for permanent control measures shall be recorded in the local land records prior to the submission of a notice of termination;
- B. Another operator has assumed control over all areas of the site that have not been finally stabilized and obtained coverage for the ongoing discharge;
- C. Coverage under an alternative VPDES or state permit has been obtained; or
- D. For residential construction only, temporary soil stabilization has been completed and the residence has been transferred to the homeowner.

The notice of termination should be submitted no later than 30 days after one of the above conditions being met. Authorization to discharge terminates at midnight on the date that the notice of termination is submitted for the conditions set forth in subsections B through D above, unless otherwise notified by the VSMP authority or the Department. Termination of authorizations to discharge for the conditions set forth in subsection A above shall be effective upon notification from the Department that the provisions of subsection A have been met or 60 days after submittal of the notice of terminations, whichever occurs first.

5. Permanent Control Measures Installed: (When applicable, a list of the on-site and off-site permanent control measures (both structural and nonstructural) that were installed to comply with the stormwater management technical criteria. Attach a separate list if additional space is needed.)

Permanent Control Measure #1

Type of Permanent Control Measure: _____

Date Functional: _____

Address (if available): _____

City: _____ State: _____ Zip: _____

County (if not located within a City): _____

Latitude (decimal degrees): _____ Longitude (decimal degrees): _____

Receiving Water: _____

Total Acres Treated: _____ Impervious Acres Treated: _____

Permanent Control Measure #2

Type of Permanent Control Measure: _____

Date Functional: _____

Address (if available): _____

City: _____ State: _____ Zip: _____

County (if not located within a City): _____

Latitude (decimal degrees): _____ Longitude (decimal degrees): _____

Receiving Water: _____

Total Acres Treated: _____ Impervious Acres Treated: _____

Permanent Control Measure #3

Type of Permanent Control Measure: _____

Date Functional: _____

Address (if available): _____

City: _____ State: _____ Zip: _____

County (if not located within a City): _____

Latitude (decimal degrees): _____ Longitude (decimal degrees): _____

Receiving Water: _____

Total Acres Treated: _____ Impervious Acres Treated: _____

6. **Participation in a Regional Stormwater Management Plan:** (When applicable, information related to the participation in a regional stormwater management plan. Attach a separate list if additional space is needed.)

Regional Stormwater Management Facility

Type of Regional Stormwater Management Facility: _____

Address (if available): _____

City: _____ State: _____ Zip: _____

County (if not located within a City): _____

Latitude (decimal degrees): _____ Longitude (decimal degrees): _____

Total Site Acres Treated: _____ Impervious Site Acres Treated: _____

7. **Perpetual Nutrient Credits:** (When applicable, information related to perpetual nutrient credits that were acquired in accordance with § 62.1-44.15:35 of the Code of Virginia. Attach a separate list if additional space is needed.)

Nonpoint Nutrient Credit Generating Entity

Name: _____

Perpetual Nutrient Credits Acquired (lbs/acre/year): _____

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

(Please sign in INK. This Certification must be signed by the appropriate person associated with the operator identified in Item #1.)

Instructions for Completing the Notice of Termination General VDPES Permit for Discharges of Stormwater from Construction Activities (VAR10)

GENERAL

A Notice of Termination must be submitted when an operator no longer wishes to be covered under the General VDPES Permit for Discharges of Stormwater from Construction Activities (VAR10).

All Notice of Terminations should be submitted to:

**Department of Environmental Quality
Office of Stormwater Management, 10th Floor
P.O. Box 1105
Richmond, VA 23218**

LINE-BY-LINE INSTRUCTIONS

Item 1: Construction Activity Operator Information.

Provide the legal name (do not use a colloquial name), contact, mailing address, telephone number, and email address (if available) of the construction activity operator that was issued general permit coverage.

Item 2: Name and Location of the Construction Activity Information.

Provide the official name, street address (if available), city or county (if not located within a City) of the construction activity. Also, provide the latitude and longitude in decimal degrees of the approximate center of the construction activity (e.g., N 37.5000, W 77.5000). NOTE: This information can be obtained from the previously submitted Registration Statement.

Item 3: General Permit Registration Number.

Provide the existing general permit registration number for the construction activity identified in Item 2.

Item 4: Reason for Termination.

Indicate the appropriate reason for submitting this Notice of Termination. The Notice of Termination may only be submitted after one or more of the following conditions have been met:

- a. Necessary permanent control measures included in the SWPPP for the site are in place and functioning effectively and final stabilization has been achieved on all portions of the site for which the operator is responsible. When applicable, long-term responsibility and maintenance requirements for permanent control measures shall be recorded in the local land records prior to the submission of a notice of termination;
- b. Another operator has assumed control over all areas of the site that have not been finally stabilized and obtained coverage for the ongoing discharge;
- c. Coverage under an alternative VDPES or state permit has been obtained; or
- d. For residential construction only, temporary soil stabilization has been completed and the residence has been transferred to the homeowner.

The Notice of Termination should be submitted no later than 30 days after one of the above conditions being met.

Item 5: Permanent Control Measures (when applicable).

For each on-site and off-site permanent control measure (both structural and non-structural) that was installed to comply with the stormwater management technical criteria provide the following information:

- a. The type of permanent control measure;

- b. The date that the permanent control measure became functional as a post-development stormwater management control;
- c. The street address (if available), City or County (if not located within a City) of the permanent control measure;
- d. The latitude and longitude in decimal degrees of the approximate center of the permanent control measure;
- e. The receiving water of the permanent control measure; and
- f. The number of total and impervious acres treated by the permanent control measure (to the nearest one-tenth of an acre).

Attach a separate list if additional space is needed.

Item 6: Participation in a Regional Stormwater Management Plan (when applicable).

For each Regional Stormwater Management Facility provide the following information:

- a. The type of regional facility to which the site contributes;
- b. The street address (if available), City or County (if not located within a City) of the regional facility;
- c. The latitude and longitude in decimal degrees of the approximate center of the regional facility; and
- d. The number of total and impervious site acres treated by the regional facility (to the nearest one-tenth of an acre).

Attach a separate list if additional space is needed.

Item 7: Perpetual Nutrient Credits (when applicable).

Provide the following information related to perpetual nutrient credits that were acquired in accordance with § 62.1-44.15:35 of the Code of Virginia:

- a. The name of the nonpoint nutrient credit generating entity from which perpetual nutrient credits were acquired; and
- b. The number of perpetual nutrient credits acquired (lbs. per acre per year).

Attach a separate list if additional space is needed.

Item 8: Certification.

A properly authorized individual associated with the operator identified in Item 1 of the Registration Statement is responsible for certifying and signing the Registration Statement. **Please sign the Registration Statement in INK.**

State statutes provide for severe penalties for submitting false information on the Registration Statement. State regulations require that the Registration Statement be signed as follows:

- a. For a corporation: by a responsible corporate officer. For the purpose of this part, a responsible corporate officer means:
 - (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy-making or decision-making functions for the corporation, or
 - (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated

facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively.

c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this part, a principal executive officer of a public agency includes:

(i) The chief executive officer of the agency, or

(ii) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

Appendix 4

**Record of Land Disturbance
SWPPP Inspections
Corrective Action Log**

STORMWATER INSPECTIONS FOR VSMP GENERAL PERMIT LAND DISTURBING ACTIVITIES

(To be completed by the Contractor)

PROJECT: _____

MONITORING FOR THE WEEK BEGINNING: _____

RAINFALL:

Date of Rain	Amount (inches)	Initials

By this signature, I certify that this report is accurate and complete to the best of my knowledge:

(Signature and DEQ Cert# of Delegated Authority)

EROSION AND SEDIMENT CONTROL FACILITIES INSPECTED: (Inspections shall be conducted at least once every 4 business days OR at least once every 5 business days and no later than 48 hours following a measurable storm event.)

Facility Identification	Date and Time of Inspection	Operating Properly (Y/N)	Description of inspection observations

OBSERVATION OF RUNOFF AT STORMWATER DISCHARGE OUTFALLS: (Inspections shall be conducted at least once every 4 business days OR at least once every 5 business days and no later than 48 hours following a measurable storm event.)

Stormwater Discharge Outfall Identification	Date	Clarity	Floating Solids	Suspended Solids	Oil Sheen	Other obvious indicators of stormwater pollution (list and describe)	Visible sediment leaving the site? (Y/N)	If yes, describe actions taken to prevent future releases (may need to attach additional information)	Describe measures taken to clean up sediment outside of disturbed limits (may need to attach additional information)

Clarity: Choose the number which best describes the clarity of the discharge where 1 is clear and 10 is very cloudy.

Floating Solids: Choose the number which best describes the amount of floating solids in the discharge where 1 is no solids and 10 the surface is covered in floating solids.

Suspended Solids: Choose the number which best describes the amount of suspended solids in the discharge where 1 is no solids and 10 is extremely muddy.

Oil Sheen: Is there an oil sheen in the stormwater discharge? Y or N.

STORMWATER INSPECTIONS FOR VSMP GENERAL PERMIT LAND DISTURBING ACTIVITIES

(To be completed by the Contractor)

PROJECT: _____

MONITORING FOR THE WEEK BEGINNING: _____

RAINFALL:

Date of Rain	Amount (inches)	Initials

By this signature, I certify that this report is accurate and complete to the best of my knowledge:

(Signature and DEQ Cert# of Delegated Authority)

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Stormwater Discharge Outfall Identification	Date	Clarity	Floating Solids	Suspended Solids	Oil Sheen	Other obvious indicators of stormwater pollution (list and describe)	Visible sediment leaving the site? (Y/N)	If yes, describe actions taken to prevent future releases (may need to attach additional information)	Describe measures taken to clean up sediment outside of disturbed limits (may need to attach additional information)

Clarity: Choose the number which best describes the clarity of the discharge where 1 is clear and 10 is very cloudy.

Floating Solids: Choose the number which best describes the amount of floating solids in the discharge where 1 is no solids and 10 the surface is covered in floating solids.

Suspended Solids: Choose the number which best describes the amount of suspended solids in the discharge where 1 is no solids and 10 is extremely muddy.

Oil Sheen: Is there an oil sheen in the stormwater discharge? Y or N.

STORMWATER INSPECTIONS FOR VSMP GENERAL PERMIT LAND DISTURBING ACTIVITIES

(To be completed by the Contractor)

PROJECT: _____

MONITORING FOR THE WEEK BEGINNING: _____

RAINFALL:

Date of Rain	Amount (inches)	Initials

By this signature, I certify that this report is accurate and complete to the best of my knowledge:

(Signature and DEQ Cert# of Delegated Authority)

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Stormwater Discharge Outfall Identification	Date	Clarity	Floating Solids	Suspended Solids	Oil Sheen	Other obvious indicators of stormwater pollution (list and describe)	Visible sediment leaving the site? (Y/N)	If yes, describe actions taken to prevent future releases (may need to attach additional information)	Describe measures taken to clean up sediment outside of disturbed limits (may need to attach additional information)

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Suspended Solids: Choose the number which best describes the amount of suspended solids in the discharge where 1 is no solids and 10 is extremely muddy.
Oil Sheen: Is there an oil sheen in the stormwater discharge? Y or N.

STORMWATER INSPECTIONS FOR VSMP GENERAL PERMIT LAND DISTURBING ACTIVITIES

(To be completed by the Contractor)

PROJECT: _____

MONITORING FOR THE WEEK BEGINNING: _____

RAINFALL:

Date of Rain	Amount (inches)	Initials

By this signature, I certify that this report is accurate and complete to the best of my knowledge:

(Signature and DEQ Cert# of Delegated Authority)

EROSION AND SEDIMENT CONTROL FACILITIES INSPECTED: (Inspections shall be conducted at least once every 4 business days OR at least once every 5 business days and no later than 48 hours following a measurable storm event.)

Facility Identification	Date and Time of Inspection	Operating Properly (Y/N)	Description of inspection observations

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Stormwater Discharge Outfall Identification	Date	Clarity	Floating Solids	Suspended Solids	Oil Sheen	Other obvious indicators of stormwater pollution (list and describe)	Visible sediment leaving the site? (Y/N)	If yes, describe actions taken to prevent future releases (may need to attach additional information)	Describe measures taken to clean up sediment outside of disturbed limits (may need to attach additional information)

Clarity: Choose the number which best describes the clarity of the discharge where 1 is clear and 10 is very cloudy.

Floating Solids: Choose the number which best describes the amount of floating solids in the discharge where 1 is no solids and 10 the surface is covered in floating solids.

Suspended Solids: Choose the number which best describes the amount of suspended solids in the discharge where 1 is no solids and 10 is extremely muddy.

Oil Sheen: Is there an oil sheen in the stormwater discharge? Y or N.

STORMWATER INSPECTIONS FOR VSMP GENERAL PERMIT LAND DISTURBING ACTIVITIES

(To be completed by the Contractor)

PROJECT: _____

MONITORING FOR THE WEEK BEGINNING: _____

RAINFALL:

Date of Rain	Amount (inches)	Initials

By this signature, I certify that this report is accurate and complete to the best of my knowledge:

(Signature and DEQ Cert# of Delegated Authority)

EROSION AND SEDIMENT CONTROL FACILITIES INSPECTED: (Inspections shall be conducted at least once every 4 business days OR at least once every 5 business days and no later than 48 hours following a measurable storm event.)

Facility Identification	Date and Time of Inspection	Operating Properly (Y/N)	Description of inspection observations

OBSERVATION OF RUNOFF AT STORMWATER DISCHARGE OUTFALLS: (Inspections shall be conducted at least once every 4 business days OR at least once every 5 business days and no later than 48 hours following a measurable storm event.)

Stormwater Discharge Outfall Identification	Date	Clarity	Floating Solids	Suspended Solids	Oil Sheen	Other obvious indicators of stormwater pollution (list and describe)	Visible sediment leaving the site? (Y/N)	If yes, describe actions taken to prevent future releases (may need to attach additional information)	Describe measures taken to clean up sediment outside of disturbed limits (may need to attach additional information)

Clarity: Choose the number which best describes the clarity of the discharge where 1 is clear and 10 is very cloudy.

Floating Solids: Choose the number which best describes the amount of floating solids in the discharge where 1 is no solids and 10 the surface is covered in floating solids.

Suspended Solids: Choose the number which best describes the amount of suspended solids in the discharge where 1 is no solids and 10 is extremely muddy.

Oil Sheen: Is there an oil sheen in the stormwater discharge? Y or N.

CORRECTIVE ACTIONS

Documentation of any corrective actions taken must be noted and retained with the SWPPP as required by the General VPDES Permit for Discharges of Stormwater from Construction Activities. The operator shall implement corrective actions according to Part II G of the Permit.

CORRECTIVE ACTION LOG

Corrective Action Date	Description of Corrective Action
Responsible Party	
Responsible Party	
Responsible Party	
Responsible Party	

"I certify under penalty of law that I have read and understand this document in accordance with the General VPDES Permit for Discharges of Stormwater from Construction Activities. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Operator or Delegated Authority Signature

Appendix 5

Delegation of Authority Identification of Qualified Personnel

Revisions to Delegation of Authority

The individuals or positions with delegated authority must be identified to sign inspection forms and modify the SWPPP, in accordance with the General VPDES Permit for Discharges of Stormwater from Construction Activities. If the identified individual on the cover sheet of the SWPPP changes, it must be noted below.

Site: _____

Name:	_____
Title:	_____
Company:	_____
Telephone:	_____
<i>I certify the individual or position named above has the delegated authority to sign inspection forms and amend/modify the SWPPP.</i>	
Operator Signature:	_____
Date:	_____

Name:	_____
Title:	_____
Company:	_____
Telephone:	_____
<i>I certify the individual or position named above has the delegated authority to sign inspection forms and amend/modify the SWPPP.</i>	
Operator Signature:	_____
Date:	_____

Identification of Qualified Personnel

The individuals responsible for conducting inspections must be identified, in accordance with the General VPDES Permit for Discharges of Stormwater from Construction Activities. If the identified individual changes, it must be noted below.

Site: _____

Name:	_____
Title:	_____
Company:	_____
<i>Address:</i>	_____
<i>Telephone:</i>	_____
Qualifications:	_____

Name:	_____
Title:	_____
Company:	_____
<i>Address:</i>	_____
<i>Telephone:</i>	_____
Qualifications:	_____

Appendix 6

Erosion and Sediment Control Plans

Appendix 7

Stormwater Management Plan and Water Calculations

Appendix 8
Pollution Prevention Plan

Pollution Prevention Plan

A Pollution Prevention Plan must address potential pollutant-generating activities that reasonably be expected to affect the quality of stormwater discharges from the construction activity, including support activities, according to Part IIA4 of the Permit.

Potential Pollutant Sources

Leaks, Spills, and other Releases	Pollution Prevention Practices and Procedures (Part IIA4e1)
Spill Containment Kit Location: _____ Revised Location: _____ Operator Initials: _____	Oil, chemical or other hazardous substance spills in excess of reportable quantities, in accordance with the Permit (Appendix 1), will be reported to the Department in accordance with Part III G. of the Permit as soon as the discharge is discovered, but no later than 24 hours. A reportable quantity of oil is defined as a discharge to a surface water that causes a sheen, discoloration, and/or an emulsion. Reports will be made to the following: Virginia Department of Emergency Management Emergency Operations Center (EOC) Phone: (800) 468-8892 Materials and equipment necessary for oil or chemical spill cleanup will be kept in the temporary material storage trailer onsite. Equipment will include, but not be limited to, brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, saw dust, and plastic and metal trash containers. All oil or other chemical spills will be cleaned up immediately upon discovery. Spills large enough to reach the storm sewers will be reported to the National Response Center at 1-800-424-8802.

Equipment/Vehicle Washing	Pollution Prevention Practices and Procedures (Part IIA4e4)
Location of Dedicated Area: _____ Revised Location: _____ Operator Initials: _____	Washing must be conducted in a dedicated area that is to be located greater than 50 feet from storm drain inlets, ditches, waterbodies or wetlands. All wash water used for vehicle wheel washing must be directed to a sediment basin/trap. All vehicle washing activities other than wheel washing must have secondary containment. Appropriate signage must inform users of location of dedicated areas. Water Source:

Vehicle Fueling and Maintenance	Pollution Prevention Practices and Procedures (Part IIA4e2)
Location of Dedicated Area: _____ Revised Location: _____ Operator Initials: _____	<p>(i) On-site vehicle refueling will be conducted in a dedicated location away from access to surface waters. Since the location of fueling activities will periodically move during construction, the design plans do not contain a specific location. For each phase of work a location will be determined in the field and noted in the Site Inspection Log (Appendix 4). Containment berms will be located adjacent to the refueling area that will contain any inadvertent spills until they can be cleaned up. Any on-site storage tanks will have a means of secondary containment. In the event of a spill, it will be cleaned up immediately and the material, including any contaminated soil, will be disposed of according to all federal, state, and local regulations.</p> <p>(ii) All vehicles on site will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage.</p> <p>(iii) Petroleum products will be stored in tightly sealed containers which are clearly labeled.</p> <p>(iv) Spill kits will be included with all fueling sources and maintenance activities.</p> <p>(v) Any asphalt substances used onsite will be applied according to the manufacturer's recommendation.</p>

Discharge from Storage, Handling, and Disposal of Construction Materials	Pollution Prevention Practices and Procedures (Part IIA4e6)
Location of Dedicated Area: _____ Revised Location: _____ Operator Initials: _____	<p>Storage of construction products, materials, and waste is to be conducted in dedicated areas. The dedicated area is to be located greater than 50 feet from storm drain inlets, ditches, waterbodies or wetlands. The dedicated areas must be designed to minimize the discharge of pollutants from storage, handling, and disposal of construction products, materials and wastes including i) building products such as asphalt sealants, copper flashings, roofing materials, adhesives, and concrete mixtures; ii) pesticides, herbicides, insecticides, fertilizers, and landscape materials; and iii) construction and domestic wastes such as packaging materials, scrap construction materials, masonry products, timber, pipes and electrical cuttings, plastics, Styrofoam, concrete and other trash or building products. Appropriate signage must inform users of location of dedicated areas.</p>

Discharges from other Potential Pollutant Sources	Pollution Prevention Practices and Procedures (Part IIA4e8)
Location of Dedicated Area: _____	Discharges from other pollutant sources not mentioned elsewhere must be addressed.
Revised Location: _____	
Operator Initials: _____	

Discharges from Concrete Related Wash Activities	Pollution Prevention Practices and Procedures (Part IIA4e5)
Location of Dedicated Area: _____	<p>(i) Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum wash water on the site, except in a specially designated concrete disposal area.</p> <p>(ii) Form release oil used for decorative stone work will be applied over a pallet covered with an absorbent material to collect excess fluid. The absorbent material will be replaced and disposed of properly when saturated.</p>
Revised Location: _____	
Operator Initials: _____	

Discharges of Soaps, Detergents, Solvents, and Wash Water from Construction Activities	Pollution Prevention Practices and Procedures (Part IIA4e3)
Location of Dedicated Area: _____	<p>Environmentally friendly washing, flushing and dust controlling procedures shall be practiced during construction to prevent contamination of surface and ground water. These practices will consist of the use of using off-site facilities; washing in designated, contained areas only; eliminating discharges to storm drains by infiltrating the water or routing to the sanitary sewer; and training employees and subcontractors in proper cleaning procedures.</p>
Revised Location: _____	
Operator Initials: _____	

Discharges of Hazardous, Toxic, and Sanitary Waste	Pollution Prevention Practices and Procedures (Part IIA4e7)
Location of Dedicated Area: _____ Revised Location: _____ Operator Initials: _____	Portable lavatories are located on-site and are serviced on a regular basis by a contractor. They will be located in upland areas away from direct contact with surface waters. Any spills occurring during servicing will be cleaned up immediately, including any contaminated soils, and disposed of according to all federal, state, and local regulations.

<i>"I certify under penalty of law that I have read and understand this document in accordance with the General VPDES Permit for Discharges of Stormwater from Construction Activities. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."</i>
Operator or Delegated Authority Signature

Appendix 9
TMDL Information

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029**

Mr. Alan Pollock, Acting Director
Division of Water Quality Programs
Virginia Department of Environmental Quality
629 Main Street
Richmond, VA 23219

Dear Mr. Pollock:

The United States Environmental Protection Agency (EPA) Region III is pleased to approve the Total Maximum Daily Loads (TMDLs) for the primary contact use impairments within the Appomattox River Watershed. The TMDLs were submitted to EPA for review in April 2004. The TMDLs were established and submitted in accordance with Section 303(d)(1)(c) and (2) of the Clean Water Act to address multiple water quality impairments as identified in Virginia's 1998 and 2002 Section 303(d) lists.

In accordance with Federal regulations at 40 CFR §130.7, a TMDL must comply with the following requirements: (1) designed to attain and maintain the applicable water quality standards, (2) include a total allowable loading and as appropriate, wasteload allocations (WLAs) for point sources and load allocations for nonpoint sources, (3) consider the impacts of background pollutant contributions, (4) take critical stream conditions into account (the conditions when water quality is most likely to be violated), (5) consider seasonal variations, (6) include a margin of safety (which accounts for uncertainties in the relationship between pollutant loads and instream water quality), (7) consider reasonable assurance that the TMDL can be met, and (8) be subject to public participation. The enclosure to this letter describes how the TMDLs for the primary contact use impairments satisfy each of these requirements.

Following the approval of these TMDLs, Virginia shall incorporate the TMDLs into an appropriate Water Quality Management Plan pursuant to 40 CFR § 130.7(d)(2). As you know, all new or revised National Pollutant Discharge Elimination System permits must be consistent with the TMDL WLA pursuant to 40 CFR §122.44 (d)(1)(vii)(B). Please submit all such permits to EPA for review as per EPA's letter dated October 1, 1998.



If you have any questions or comments concerning this letter, please don't hesitate to contact Mr. Peter Gold at (215) 814-5236.

Sincerely,

Jon M. Capacasa, Director
Water Protection Division

Enclosure



Decision Rationale

Total Maximum Daily Loads for the Primary Contact Use (Bacteriological) Impairments in the Appomattox River Watershed

I. Introduction

The Clean Water Act (CWA) requires a Total Maximum Daily Load (TMDL) be developed for those water bodies identified as impaired by a state where technology-based and other controls will not provide for attainment of water quality standards. A TMDL is a determination of the amount of a pollutant from point, nonpoint, and natural background sources, including a margin of safety (MOS), that may be discharged to a water quality-limited water body.

This document will set forth the Environmental Protection Agency's (EPA's) rationale for approving the TMDLs for the primary contact use (bacteriological) impairments within the Appomattox River Watershed. EPA's rationale is based on the determination that the TMDLs meet the following eight regulatory conditions pursuant to 40 CFR §130.

- 1) The TMDLs are designed to implement applicable water quality standards.
- 2) The TMDLs include a total allowable load as well as individual waste load allocations and load allocations.
- 3) The TMDLs consider the impacts of background pollutant contributions.
- 4) The TMDLs consider critical environmental conditions.
- 5) The TMDLs consider seasonal environmental variations.
- 6) The TMDLs include a margin of safety.
- 7) There is reasonable assurance that the TMDLs can be met.
- 8) The TMDLs have been subject to public participation.

II. Background

The Falling River Watershed is located in Central Virginia, the watershed falls within the jurisdiction of several counties. There are nineteen bacteriologically impaired segments within the Appomattox River Watershed. These segments were identified as impaired by the Commonwealth of Virginia's Department of Environmental Quality (VADEQ) on the Commonwealth's Section 303(d) List. The Section 303(d) is a list which identifies the waters within the state that are failing to attain their applicable designated uses. Table 1 lists all of the impaired segments within the Appomattox River Watershed and the date of initial listing which are covered by this TMDL

Table 1 - List of Impaired Waters in the Appomattox River Watershed.

Stream Name	Segment Id	Initial Listing	Location
Spring Creek	VAC-J02R	1998	Mud Creek to Buffalo Creek (5.50 miles)
Briery Creek	VAC-J05R	1998	Briery Creek Lake Dam to Bush River (9.94 miles)
Bush River (1)	VAC-J04R	2002	Mountain Creek to limit of watershed (4.22 miles)
Little Sandy Creek	VAC-J03R	2002	Headwaters to the Sandy Reservoir (7.35 miles)
Bush River (2)	VAC-J03R	2002	Sandy River to mouth (0.78 miles)
Sayers Creek	VAC-J06R	1996	Headwaters to mouth (8.90 miles)
Angola Creek (1)	VAC-J06R	2002	Headwaters to Unnamed Tributary at Rt. 664 (4.59 miles)
Angola Creek (2)	VAC-J06R	2002	Unnamed Tributary at Rt 664 to mouth (2.56 miles)
Horsepen Creek	VAC-J06R	2002	Headwaters to Big Guinea Creek (3.82 miles)
Nibbs Creek	VAC-J09R	1998	Amelia Courthouse Sewage Treatment Plant to Flat Creek (5.28 miles)
Flat Creek	VAC-J08R	1996	Nibbs Creek to mouth (3.99 miles)
Appomattox River (1)	VAC-J01R	1996	Vaughans Creek to Deep Creek (2.13 miles)
West Creek	VAC-J11R	2002	Tanners Branch to Deep Creek (7.22 miles)
Deep Creek	VAC-J11R	1998	Cellars Creek to Beaverpond Creek (11.19 miles)
Appomattox River (2)	VAC-J15R	2002	Lake Chesdin Dam to Fall Line (7.44 miles)
Swift Creek (1)	VAC-J16R	1998	Turkey Creek to Swift Creek Reservoir (1.61 miles)
Swift Creek (2)	VAC-J17R	1998	Swift Creek Lake Dam to Licking Creek (7.09 miles)
Swift Creek (3)	VAC-J17R	2002	Lakeview Reservoir Dam to Timsbury Creek (4.00 miles)
Appomattox River (3)	VAC-J15R	1998	Entire Estuarine Segment (2.68 square miles)

In response to Section 303(d) of the CWA, VADEQ listed the above segments of the Appomattox River Watershed on Virginia's 1996, 1998 and/or 2002 Section 303(d) lists as being unable to attain their primary contact uses. The decisions to list these segments of the Appomattox River Watershed were based on observed violations of the Commonwealth's bacteriological criteria. At the time of listing, the bacteria criteria used fecal coliform as an indicator species and had an instantaneous standard 1,000 colony forming units (cfu) per 100 milliliters (ml) and geometric mean standard of 200 cfu/100 ml. Water quality samples collected from these waters during the assessment period violated this criteria greater than 10 percent of the time. There are waters within the watershed with impairments based on low dissolved oxygen concentrations and/or impaired biological communities, these waters and impairments were not addressed by the Appomattox River Watershed TMDL. This decision rationale will address the TMDLs for the impairments of the primary contact use.

Fecal coliform is a bacterium which can be found within the intestinal tract of all warm blooded animals. Fecal coliform in itself is not a pathogenic organism. However, fecal coliform indicates the presence of fecal wastes and the potential for the existence of other pathogenic bacteria. The higher concentrations of fecal coliform indicate the elevated likelihood of increased pathogenic organisms.

EPA encouraged the states to use e-coli and enterococci as the indicator species instead of fecal coliform. A better correlation was drawn between the concentrations of e-coli and enterococci, and the incidence of gastrointestinal illness. The Commonwealth adopted e-coli and enterococci criteria in January 2003. According to the new criteria, streams will be evaluated via the e-coli and enterococci criteria after 12 samples have been collected using these indicator species. Twelve e-coli samples were collected from the waters within the Appomattox River Watershed.

As Virginia designates all of its waters for primary contact, all waters are required to meet the bacteriological standard for primary contact. Virginia's standard applied to all streams designated as primary contact for all flows. The e-coli criteria requires a geometric mean concentration of 126 cfu/100 ml of water with no sample exceeding 235 cfu/100 ml of water. Unlike the new fecal coliform criteria, which allows a 10 percent violation rate, the new e-coli criteria requires the concentration of e-coli to not exceed 235 cfu/100 ml of water.

Although the TMDL and criteria require the 235 cfu/100 ml of water concentration limit not be exceeded, waters are not placed on the Section 303(d) list if their violation rate does not exceed 10 percent. Therefore, the impaired waters of the Appomattox River Watershed may be deemed as attaining their primary contact use prior to the implementation of all of the TMDL reductions. It is necessary to keep this in mind because of the reductions required to attain the instantaneous criteria for e-coli according to the model. Since the criteria apply both standards to the water and the instantaneous criteria must be met during all flows, high sporadically occurring violations can drive the model. A single violation of 23,500 cfu/100 ml would require the removal of 99 percent of the bacteria.

The TMDL submitted by Virginia is designed to determine the acceptable load of e-coli which can be delivered to the impaired waters, as demonstrated by the Hydrologic Simulation Program Fortran (HSPF)¹, in order to ensure that the water quality standard is attained and maintained. HSPF is considered an appropriate model to analyze the impaired watershed because of its dynamic ability to simulate both watershed loading and receiving water quality over a wide range of conditions. The model was run to determine the fecal coliform loading to the impaired waters and the loads were then converted to e-coli using a conversion factor established by the Commonwealth.

¹Bicknell, B.R., J.C. Imhoff, J.L. Little, and R.C. Johanson. 1993. Hydrologic Simulation Program-FORTRAN (HSPF): User's Manual for release 10.0. EPA 600/3-84-066. U.S. Environmental Protection Agency, Environmental Research Laboratory, Athens, GA.

The TMDL model allocates the application/deposition of fecal coliform to land based and instream sources. For land based sources, HSPF accounts for the buildup and washoff of pollutants from these areas. Buildup (accumulation) refers to all of the complex spectrum of dry-weather processes that deposit or remove (die-off) pollutants between storms.² Washoff is the removal of fecal coliform which occurs as a result of runoff associated with storm events. These two processes allow the model to determine the amount of fecal coliform from land based sources which is reaching the stream. Point sources and wastes deposited directly to the stream are treated as direct deposits. Wastes which are deposited directly to the stream do not need a transport mechanism.

Local rainfall and temperature data were needed to develop the model. Weather data provides the rainfall and temperature data which drive the TMDL model. Due to the size of the watershed and the lack of hourly rainfall data, multiple weather stations were used including National Climatic Data Center (NCDC) weather stations in Amelia (440187), Appomattox (440243), Buckingham (441136), Camp Pickett (441322), Charlotte Court House (1585), Farmville (442941), Hopewell(444101), Powhatan (446906), and Winterpock (449213). Hourly weather data was derived using a disaggregation scheme.

Stream flow data was available for Appomattox River, therefore, the hydrology model was calibrated to the observed flow collected at a United States Geological Survey (USGS) gages 02039000, 02039500 and 020400000. The calibration period for the model was from October 1993 through September 1998. During the calibration the model parameters were adjusted to allow the model to more accurately represent the observed data. When a satisfactory simulation was developed it was validated to a different data set of observed flow. The validation period for the model was from October 1988 through September 1993. During the validation the parameters were held constant to insure that the model accurately reflected the stream. The model replicated the observed gage data reasonably well during the calibration and validation.

The HSPF model was next set-up to predict the water quality in the impaired reaches of the Appomattox Watershed. The model was calibrated against water quality monitoring data collected from the many water quality stations within the Appomattox River Watershed from October 1998 through August 2003. The model was validated to data collected from October 1993 through September 1998.

Through the development of this and other similar TMDLs, it was discovered that natural conditions (wildlife contributions to the streams) could cause or contribute to violations of the bacteria criteria. Bacterial source tracking (BST) sampling data collected from the impaired segments of the Appomattox River demonstrated that bacteria from wildlife represents a significant portion of the total bacterial load. In some instances the loads from wildlife alone appear to violate the numeric criteria. Many of Virginia's TMDLs, including the TMDLs for the

²CH2MHILL, 2000. Fecal Coliform TMDL Development for Cedar, Hall, Byers, and Hutton Creeks Virginia,

Appomattox River Watershed, have called for some reduction in the amount of wildlife contributions to the impacted streams. EPA believes that a significant reduction in wildlife is not practical and will not be necessary due to the implementation plan discussed below. It should be noted that in order for the impaired waters to be in compliance approximately 90 percent of the time, less stringent reductions are required from wildlife sources. This would be the violation rate necessary for the water to be assessed as attaining criteria for 303(d) listing purposes.

A phased implementation plan will be developed for all streams in which the TMDL calls for reductions in wildlife. In Phase 1 of the implementation, the Commonwealth will begin implementing the reductions (other than wildlife) called for in the TMDL. In Phase 2, which can occur concurrently to Phase 1, the Commonwealth will consider addressing its standards to accommodate this natural loading condition. The Commonwealth has indicated that during Phase 2, it may develop a Use Attainability Analysis (UAA) for streams with wildlife reductions which are not used for frequent bathing. Depending upon the result of the UAA, it is possible that these streams could be designated for secondary contact.

After the completion of Phase 1 of the implementation plan, the Commonwealth will monitor the stream to determine if the wildlife reductions are actually necessary, as the violation level associated with the wildlife loading may be smaller than the percent error of the model. In Phase 3, the Commonwealth will investigate the sampling data to determine if further load reductions are needed in order for these waters to attain standards. If the load reductions and/or the new application of standards allow the stream to attain standards, then no additional work is warranted. However, if standards are still not being attained after the implementation of Phases 1 and 2, further work and reductions will be warranted.

The TMDL was modeled using fecal coliform loading rates, as was done in previous TMDL efforts. The fecal coliform concentrations were then converted to e-coli concentrations using a translator equation developed by VADEQ. Significant reductions in the modeled load were required in order for the impaired waters within the Appomattox River Watershed to attain the new e-coli criteria in the model. Table 2 documents the TMDL load for each of the bacteriologically impaired segments.

Table 2 - Summarizes the Specific Elements of the TMDLs.

Segment	TMDL (cfu/yr)	WLA (cfu/yr)	LA (cfu/yr)	MOS
Angola Creek (1)	6.76E+12	0.00	6.76E+12	Implicit
Angola Creek (2)	1.80E+13	0.00	1.80E+13	Implicit
Appomattox River (1)	6.90E+14	4.74E+12	6.86E+14	Implicit
Appomattox River (2)	6.01E+14	1.07E+13	5.90E+14	Implicit
Appomattox River (3)	7.91E+14	6.87E+13	7.22E+14	Implicit
Briery Creek	3.84E+13	3.50E+09	3.84E+13	Implicit
Bush River (1)	9.03E+13	3.50E+09	9.03E+13	Implicit

Bush River (2)	1.10E+14	3.50E+09	1.10E+14	Implicit
Deep Creek	1.06E+14	8.71E+11	1.06E+14	Implicit
Flat Creek	8.80E+13	5.24E+11	8.75E+13	Implicit
Horsepen Creek	4.44E+12	0.00	4.44E+12	Implicit
Little Sandy Creek	1.62E+12	0.00	1.62E+12	Implicit
Nibbs Creek	1.29E+13	5.24E+11	1.23E+13	Implicit
Sayers Creek	1.40E+13	0.00	1.40E+13	Implicit
Spring Creek	2.08E+13	0.00	2.08E+13	Implicit
Swift Creek (1)	2.01E+13	8.37E+09	2.01E+13	Implicit
Swift Creek (2)	8.42E+13	3.07E+11	8.39E+13	Implicit
Swift Creek (3)	1.29E+14	4.59E+11	1.28E+14	Implicit
West Creek	3.91E+13	0.00	3.91E+13	Implicit

The United States Fish and Wildlife Service has been provided with copy of this TMDL.

III. Discussion of Regulatory Conditions

EPA finds that Virginia has provided sufficient information to meet all of the eight basic requirements for establishing a primary contact (bacteriological) impairment TMDLs for the Appomattox Watershed. EPA is therefore approving these TMDLs. EPA's approval is outlined according to the regulatory requirements listed below.

1) The TMDLs are designed to meet the applicable water quality standards.

Virginia has indicated that excessive levels of fecal coliform due to nonpoint sources (both wet weather and directly deposited nonpoint sources) have caused violations of the water quality criteria and designated uses in the Appomattox Watershed. The water quality criterion for fecal coliform was a geometric mean 200 cfu/100 ml or an instantaneous standard of no more than 1,000 cfu/100 ml. Two or more samples over a 30 day period are required for the geometric mean standard. Since the state rarely collects more than one sample over a thirty-day period, most of the samples were measured against the instantaneous standard. The violation rate varied among the different subwatersheds from as low as 10 percent on Swift Creek to 100 percent on Angola Creek.

The Commonwealth has changed its bacteriological criteria as indicated above. The new e-coli criteria requires a geometric mean of 126 cfu/100 ml of water with no sample exceeding 235 cfu/100 ml. When the data is judged against the new criteria, the violation rate for most of the segments increase.

The HSPF model was used to determine the fecal coliform deposition rates to the land as

well as loadings to the stream from direct deposit sources. Once the existing load was determined allocations were assigned to each source category to develop a loading pattern that would allow the impaired waters within the Appomattox River Watershed to support the e-coli water quality criterion and primary contact use. The following discussion is intended to describe how controls on the loading of e-coli to the watershed will ensure that the criterion is attained.

The TMDL modelers determined the fecal coliform production rates within the watershed. Data used in the model was obtained from a wide array of sources, including farm practices in the area, the amount and concentration of farm animals, animal access to the stream, wildlife in the watershed, wildlife fecal production rates, septic system numbers and failure rates, pet populations, landuses, weather conditions, stream geometry, etc.. The model combined all of the data to determine the hydrology and water quality of the stream.

The lands within the watershed were categorized into specific landuses. The landuses had specific loading rates and characteristics that were defined by the modelers. Therefore, the loading rates are different in lands defined as forested versus pasture. Pasture lands support cattle and are influenced differently by stormwater runoff. The amount of cattle on the land, the time cattle spend on the land, and how much waste the cattle deposit impacts the loading rate.

Local rainfall and temperature data were needed to develop the model. Hourly weather data was ascertained through the transformation of daily average rainfall data from a compilation of NCDC weather stations. This data was used to determine the precipitation rates in the watershed which transports the on land pollutants to the streams through overland and groundwater flows. Waste that was deposited to the land was subjected to a die-off rate. The longer fecal coliform stayed on the ground the greater the die-off was. Materials that were washed off the surface shortly after deposition were subjected to less die-off.

Stream flow data was available for Appomattox River, therefore, the hydrology model was calibrated to the observed flow collected at a United States Geological Survey (USGS) gages 02039000, 02039500 and 020400000. The calibration period for the model was from October 1993 through September 1998. During the calibration the model parameters were adjusted to allow the model to more accurately represent the observed data. When a satisfactory simulation was developed it was validated to a different data set of observed flow. The validation period for the model was from October 1988 through September 1993. During the validation the parameters were held constant to insure that the model accurately reflected the stream. The model replicated the observed gage data reasonably well during the calibration and validation.

The HSPF model was next set-up to predict the water quality in the impaired reaches of the Appomattox Watershed. The model was calibrated against water quality monitoring data collected from the many water quality stations within the Appomattox River Watershed from October 1998 through August 2003. The model was validated to data collected from October 1993 through September 1998. The TMDL modelers adjusted the loading rates from the various land uses and direct deposit sources to determine what reductions were required to meet the applicable water quality criteria. It was determined that in addition to almost the complete

removal of anthropogenic sources, a significant reduction was needed from land based and direct deposit inputs from wildlife for almost all of the impaired segments.

2) *The TMDLs include a total allowable load as well as individual waste load allocations and load allocations.*

Total Allowable Loads

Virginia indicates that the total allowable loading is the sum of the loads allocated to land based precipitation driven nonpoint source areas (forest and agricultural land segments) and point sources. Activities that increase the levels of bacteria to the land surface or their availability to runoff are considered flux sources. The actual value for total loading can be found in Table 2 of this document. The total allowable load is calculated on an annual basis.

Waste Load Allocations

There are 27 facilities within the Appomattox River Watershed that are permitted to discharge into the stream. Four of these permits regulate stormwater discharge the remaining 23 of these are traditional dischargers. The WLA of the 23 traditional dischargers can be determined by multiplying their design flow by the bacterial concentration allowed in their discharge by 365 after the appropriate unit conversions. All of these facilities are allowed to discharge effluent with an e-coli concentration of 126 cfu/100 ml, which is the water quality criteria for e-coli. These facilities can not cause a violation of the criteria if they are discharging at or below the criteria. The facilities are in all likelihood discharging below this concentration. Table 3 documents the WLAs for the Appomattox River Watershed.

EPA regulations require that an approvable TMDL include individual waste load allocations (WLAs) for each point source. According to 40 CFR 122.44(d)(1)(vii)(B), “Effluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with assumptions and requirements of any available WLA for the discharge prepared by the state and approved by EPA pursuant to 40 CFR 130.7.” Furthermore, EPA has authority to object to the issuance of any National Pollutant Discharge Elimination System (NPDES) permit that is inconsistent with the WLAs established for that point source.

Table 3 - WLAs for the Appomattox River Watershed

Facility	Permit Number	WLA (cfu/yr)
Single Family Unit	VAG402047	1.75E+09
Single Family Unit	VAG404002	1.75E+09
Single Family Unit	VAG404107	1.75E+09
Single Family Unit	VAG404129	1.75E+09
Single Family Unit	VAG404140	1.75E+09

Single Family Unit	VAG404161	1.75E+09
Single Family Unit	VAG407199	1.75E+09
Single Family Unit	VAG407198	1.75E+09
Single Family Unit	VAG404092	1.75E+09
Farmville Waste Water Treatment Plant (WWTP)	VA0083135	4.18E+12
Amelia County Sanitary District	VA0086681	5.24E+11
Chesterfield Co. Grange Elementary WWTP	VA0020222	1.15E+10
Crewe WWTP	VA0020303	8.71E+11
DOC Dinwiddie Field Unit 27 WWTP	VA0023540	2.62E+10
Appomattox River Water Authority	VA0005819	4.70E+12
South Central Wastewater Authority	VA0025437	4.01E+13
Red Hill Mobile Home Park WWTP	VA0028258	6.81E+10
US Army Fort Lee Aerial Delivery Site	VA0059161	8.73E+11
Swift Creek Water Treatment Plant	VA0006254	1.05E+10
DOC Pocahontas Correctional Unit 13	VA0023426	9.59E+10
Thomas Dale West Sewage Treatment Plant (STP)	VA0020206	1.67E+10
Children's Home of VA Baptist Lagoon	VA0027561	1.75E+10
New Matoaca High School	VA0090344	6.99E+10
Chesterfield (Stormwater)	VA0088609	1.14E+13
Colonial Heights (Stormwater)	VAR040009	2.49E+12
Hopewell (Stormwater)	VAR040015	1.44E+12
Petersburg (Stormwater)	VAR040013	1.76E+12

Load Allocations

According to Federal regulations at 40 CFR 130.2(g), load allocations (LAs) are best estimates of the loading, which may range from reasonably accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting loading. Wherever possible, natural and nonpoint source loads should be distinguished.

In order to accurately simulate landscape processes and nonpoint source loadings, VADEQ used the HSPF model to represent the impaired watershed. The HSPF model is a comprehensive modeling system for the simulation of watershed hydrology, point and nonpoint source loadings, and receiving water quality. HSPF uses precipitation data for continuous and storm event simulation to determine total loading to the impaired segments from the various landuses within the watershed. The TMDL allocated the loadings to specific landuses such as commercial, residential, pasture, cropland, barren and woodlands. In order to meet the applicable criteria at least a 90 percent reduction was needed from all anthropogenic sources. Reductions were also required from wildlife deposits on forested lands and within the stream. Tables 4a through 4t document the allocated loads of fecal coliform for each segment.

Table 4a - Load Allocations to Bush Run (1)

Land Use	Allocated Load (cfu/yr)	Percent Reduction
Barren	2.50E+10	99
Commercial	1.89E+10	99
Cropland	3.71E+13	99
Pasture	1.78E+13	99
Potential	5.89E+11	99

Residential	7.48E+11	99
Wetlands	7.38E+13	88
Woodlands	1.58E+14	88
Straight Pipes	0.00	100
Livestock Direct Deposit	0.00	100
Wildlife Direct Deposit	2.63E+13	0

Table 4b - Load Allocations to Little Sandy Creek

Land Use	Allocated Load (cfu/yr)	Percent Reduction
Barren	1.29E+10	99

Commercial	3.82E+09	99
Cropland	1.41E+13	99
Pasture	5.97E+12	99
Potential	1.88E+11	99
Residential	5.94E+10	99
Wetlands	7.97E+13	99
Woodlands	2.00E+14	99
Straight Pipes	0.00	100
Livestock Direct Deposit	0.00	100

Wildlife Direct Deposit	4.15E+12	48
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Table 4c- Load Allocations to Brush Run (2)

Land Use	Allocated Load (cfu/yr)	Percent Reduction
Barren	5.40E+10	99
Commercial	1.62E+10	99
Cropland	3.74E+13	99
Pasture	7.96E+12	99
Potential	2.62E+11	99
Residential	4.35E+11	99

Wetlands	4.41E+13	88
Woodlands	6.31E+13	88
Straight Pipes	0.00	100
Livestock Direct Deposit	0.00	100
Wildlife Direct Deposit	1.74E+13	35

Table 4d - Load Allocations for Saylers Creek

Land Use	Allocated Load (cfu/yr)	Percent Reduction
Barren	1.06E+10	99
Commercial	1.42E+09	99

Cropland	1.56E+13	99
Pasture	1.38E+13	99
Potential	5.62E+11	99
Residential	3.91E+11	99
Wetlands	2.83E+13	80
Woodlands	7.52E+13	80
Straight Pipes	0.00	100
Livestock Direct Deposit	0.00	100
Wildlife Direct Deposit	7.33E+12	55

Table 4e- Load Allocations for Angola Creek (1)

Land Use	Allocated Load (cfu/yr)	Percent Reduction
Barren	1.90E+09	99
Commercial	1.19E+08	99
Cropland	5.22E+11	99
Pasture	1.20E+13	99
Potential	2.46E+11	99
Residential	7.16E+10	99
Wetlands	3.70E+12	90
Woodlands	2.24E+13	90

Straight Pipes	0.00	100
Livestock Direct Deposit	0.00	100
Wildlife Direct Deposit	2.96E+12	50

Table 4f - Load Allocations for Angola Creek (2)

Land Use	Allocated Load (cfu/yr)	Percent Reduction
Barren	9.49E+09	99
Commercial	1.25E+08	99
Cropland	2.02E+13	99
Pasture	9.71E+12	99

Potential	3.82E+11	99
Residential	5.07E+10	99
Wetlands	4.90E+12	95
Woodlands	5.29E+12	95
Straight Pipes	0.00	100
Livestock Direct Deposit	0.00	100
Wildlife Direct Deposit	7.43E+12	0

Table 4g - Load Allocations for Horsepen Creek

Land Use	Allocated Load (cfu/yr)	Percent Reduction
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Barren	4.46E+09	99
Commercial	0.00	99
Cropland	1.03E+13	99
Pasture	4.12E+12	99
Potential	1.29E+11	99
Residential	5.42E+10	99
Wetlands	2.47E+11	99
Woodlands	1.37E+12	99
Straight Pipes	0.00	100

Livestock Direct Deposit	0.00	100
Wildlife Direct Deposit	9.42E+11	62

Table 4h - Load Allocations for Nibbs Creek

Land Use	Allocated Load (cfu/yr)	Percent Reduction
Barren	0.00	100
Commercial	0.00	100
Cropland	0.00	100
Pasture	0.00	100
Potential	0.00	100

Residential	0.00	100
Wetlands	3.36E+13	70
Woodlands	1.43E+14	70
Straight Pipes	0.00	100
Livestock Direct Deposit	0.00	100
Wildlife Direct Deposit	1.58E+13	20

Table 4i - Load Allocations for Flat Creek

Land Use	Allocated Load (cfu/yr)	Percent Reduction
Barren	1.20E+11	99

Commercial	3.23E+10	99
Cropland	1.03E+14	99
Pasture	8.66E+13	99
Potential	1.82E+12	99
Residential	1.35E+12	99
Wetlands	1.67E+14	80
Woodlands	4.89E+14	80
Straight Pipes	0.00	100
Livestock Direct Deposit	0.00	100

Wildlife Direct Deposit	4.58E+13	51
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Table 4j - Load Allocations for Appomattox River (1a)

Land Use	Allocated Load (cfu/yr)	Percent Reduction
Barren	4.04E+11	99
Commercial	2.21E+11	99
Cropland	1.23E+14	99
Livestock	5.33E+12	99
Pasture	1.20E+14	99
Residential	5.59E+12	99

Wetlands	2.71E+14	80
Woodlands	1.27E+15	80
Straight Pipes	0.00	100
Livestock Direct Deposit	0.00	100
Wildlife Direct Deposit	2.09E+14	0

Table 4k - Load Allocations for Appomattox River (1b)

Land Use	Allocated Load (cfu/yr)	Percent Reduction
Barren	1.94E+11	99
Commercial	9.36E+09	99

Cropland	1.49E+14	99
Pasture	1.08E+14	99
Potential	2.91E+12	99
Residential	3.13E+12	99
Wetlands	5.21E+14	69
Woodlands	1.21E+15	69
Straight Pipes	0.00	100
Livestock Direct Deposit	7.62E+12	93
Wildlife Direct Deposit	1.46E+14	0

Table 4l - Load Allocations for Appomattox (1c)

Land Use	Allocated Load (cfu/yr)	Percent Reduction
Barren	1.32E+11	99
Commercial	1.45E+11	99
Cropland	1.62E+13	99
Pasture	1.34E+13	99
Potential	5.28E+11	99
Residential	8.16E+11	99
Wetlands	1.57E+13	52
Woodlands	1.31E+15	52

Straight Pipes	0.00	100
Livestock Direct Deposit	1.32E+13	0
Wildlife Direct Deposit	6.04E+13	0

Table 4m - Load Allocations for West Creek

Land Use	Allocated Load (cfu/yr)	Percent Reduction
Barren	4.23E+10	99
Commercial	6.57E+09	99
Cropland	3.21E+13	99
Pasture	1.43E+13	99

Potential	5.75E+11	99
Residential	5.29E+11	99
Wetlands	4.21E+13	89
Woodlands	1.25E+14	89
Straight Pipes	0.00	100
Livestock Direct Deposit	0.00	100
Wildlife Direct Deposit	1.79E+13	62

Table 4n - Load Allocations for Deep Creek

Land Use	Allocated Load (cfu/yr)	Percent Reduction

Barren	2.14E+11	99
Commercial	2.48E+11	99
Cropland	1.11E+14	99
Pasture	6.27E+13	99
Potential	2.76E+12	99
Residential	2.07E+12	99
Wetlands	2.40E+13	95
Woodlands	1.85E+14	95
Straight Pipes	0.00	100

Livestock Direct Deposit	0.00	100
Wildlife Direct Deposit	3.13E+13	70

Table 4o - Load Allocations for Appomattox River (2)

Land Use	Allocated Load (cfu/yr)	Percent Reduction
Barren	9.38E+11	96
Commercial	5.83E+12	96
Cropland	8.26E+14	96
Pasture	3.03E+14	96
Potential	1.25E+13	96

Residential	3.05E+13	96
Wetlands	4.25E+13	0
Woodlands	5.32E+15	0
Straight Pipes	0.00	100
Livestock Direct Deposit	1.18E+14	0
Wildlife Direct Deposit	1.41E+14	0

Table 4p - Load Allocations for Swift Creek (1)

Land Use	Allocated Load (cfu/yr)	Percent Reduction
Barren	2.22E+09	99

Commercial	1.74E+10	99
Cropland	2.08E+11	99
Pasture	5.16E+10	99
Potential	1.59E+12	99
Residential	8.62E+11	99
Wetlands	7.51E+12	74
Woodlands	2.87E+14	74
Straight Pipes	0.00	100
Livestock Direct Deposit	0.00	100

Wildlife Direct Deposit	9.84E+12	51
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Table 4q - Load Allocations for Swift Creek (2)

Land Use	Allocated Load (cfu/yr)	Percent Reduction
Barren	4.26E+10	99
Commercial	2.19E+11	99
Cropland	5.10E+11	99
Livestock	1.04E+11	99
Pasture	2.79E+12	99
Residential	1.01E+13	99

Wetlands	5.45E+12	53
Woodlands	8.59E+14	53
Straight Pipes	0.00	100
Livestock Direct Deposit	0.00	100
Wildlife Direct Deposit	3.32E+13	33

Table 4r - Load Allocations for Swift Creek (3)

Land Use	Allocated Load (cfu/yr)	Percent Reduction
Barren	5.65E+10	99
Commercial	1.61E+11	99

Cropland	4.10E+11	99
Livestock	1.14E+11	99
Pasture	3.93E+12	99
Residential	3.50E+12	99
Wetlands	1.98E+13	59
Woodlands	6.58E+14	59
Straight Pipes	0.00	100
Livestock Direct Deposit	0.00	100
Wildlife Direct Deposit	3.08E+13	25

Table 4s - Load Allocations for Appomattox River (3)

Land Use	Allocated Load (cfu/yr)	Percent Reduction
Barren	2.52E+11	99
Commercial	1.58E+12	99
Cropland	9.54E+11	99
Pasture	2.37E+12	99
Potential	8.10E+10	99
Residential	1.01E+13	99
Wetlands	1.80E+14	80
Woodlands	3.67E+14	80

Straight Pipes	0.00	100
Livestock Direct Deposit	0.00	100
Wildlife Direct Deposit	7.22E+13	10

Table 4t - Load Allocations for Spring Creek

Land Use	Allocated Load (cfu/yr)	Percent Reduction
Barren	2.36E+10	99
Commercial	5.32E+09	99
Cropland	1.04E+11	99
Livestock	5.13E+11	99

Pasture	9.44E+12	99
Residential	2.88E+11	99
Wetlands	5.21E+13	70
Woodlands	1.63E+14	70
Straight Pipes	0.00	100
Livestock Direct Deposit	0.00	100
Wildlife Direct Deposit	2.23E+13	33

Table 4u - Load Allocations for Briery Creek

Land Use	Allocated Load (cfu/yr)	Percent Reduction

Barren	3.17E+10	99
Commercial	7.76E+09	99
Cropland	3.97E+10	99
Pasture	5.78E+12	99
Potential	3.16E+11	99
Residential	9.40E+11	99
Wetlands	6.37E+13	78
Woodlands	1.92E+14	78
Straight Pipes	0.00	100

Livestock Direct Deposit	0.00	100
Wildlife Direct Deposit	1.86E+13	33

3) The TMDLs consider the impacts of background pollution.

The TMDL considers the impact of background pollutants by considering the bacteria load from background sources like wildlife.

4) The TMDLs consider critical environmental conditions.

According to EPA’s regulation 40 CFR 130.7 (c)(1), TMDLs are required to take into account critical conditions for stream flow, loading, and water quality parameters. The intent of this requirement is to ensure that the water quality of the Appomattox Watershed is protected during times when it is most vulnerable.

Critical conditions are important because they describe the factors that combine to cause a violation of water quality standards and will help in identifying the actions that may have to be undertaken to meet water quality standards³. Critical conditions are a combination of environmental factors (e.g., flow, temperature, etc.), which have an acceptably low frequency of occurrence. In specifying critical conditions in the waterbody, an attempt is made to use a reasonable “worst-case” scenario condition. For example, stream analysis often uses a low-flow (7Q10) design condition because the ability of the waterbody to assimilate pollutants without exhibiting adverse impacts is at a minimum.

The HSPF model was run over a multi-year period to insure that it accounted for a wide range of climatic conditions. The allocations developed in the TMDL will therefore insure that the criteria is attained over a wide range of environmental conditions including wet and dry weather conditions.

5) The TMDLs consider seasonal environmental variations.

Seasonal variations involve changes in stream flow and loadings as a result of hydrologic

³EPA memorandum regarding EPA Actions to Support High Quality TMDLs from Robert H. Wayland III, Director, Office of Wetlands, Oceans, and Watersheds to the Regional Management Division Directors, August 9, 1999.

and climatological patterns. In the continental United States, seasonally high flows normally occur in early spring from snow melt and spring rain, while seasonally low flows typically occur during the warmer summer and early fall drought periods.

Bacteria loadings also change during the year based on crop cycles, waste application rates, and cattle access patterns. Consistent with our discussion regarding critical conditions, the HSPF model and TMDL analysis effectively considered seasonal environmental variations through the use of observed weather data over an extended period of time and by modifying waste application rates, crop cycles, and livestock practices.

6) The TMDLs include a margin of safety.

This requirement is intended to add a level of safety to the modeling process to account for any uncertainty. The MOS may be implicit, built into the modeling process by using conservative modeling assumptions, or explicit, taken as a percentage of the WLA, LA, or TMDL. Virginia included an implicit MOS in the TMDL through the use of conservative modeling assumptions in the determination of bacteria loadings and production.

7) There is a reasonable assurance that the TMDLs can be met.

EPA requires that there be a reasonable assurance that the TMDLs can be implemented. WLAs will be implemented through the NPDES permit process. According to 40 CFR 122.44(d)(1)(vii)(B), the effluent limitations for an NPDES permit must be consistent with the assumptions and requirements of any available WLA for the discharge prepared by the state and approved by EPA. Furthermore, EPA has authority to object to issuance of an NPDES permit that is inconsistent with WLAs established for that point source.

Nonpoint source controls to achieve LAs can be implemented through a number of existing programs such as Section 319 of the CWA, commonly referred to as the Nonpoint Source Program.

8) The TMDLs have been subject to public participation.

There were six public meetings held for the TMDL, three for the Upper Appomattox Watershed and three for the Lower Appomattox Watershed. The three public meetings for the Upper Appomattox Watershed were held on May 20, 2003, November 4, 2003, and March 4, 2003, 58 and 36 people attended the last two meetings respectively. The first two meetings were held in Hampden-Sydney Virginia and the last meeting was held in Farmville, Virginia. The meetings were noticed in the Virginia Register and Farmville Herald.

The meetings for the Lower Appomattox Watershed were held on May 21, 2003, November 6, 2003 and March 11, 2003. All three meetings were held in municipal buildings in Chesterfield, Virginia and between 13 and 19 people attended the meetings. The meetings were noticed in the Virginia Register and several local paper. VADEQ responded to written comments associated with both watersheds.





Appendix 10

SWPPP Amendments, Modifications and Update

SWPPP Amendment, Modification and Update Log

Documentation of SWPPP amendment, modification, or update must be noted and retained with the SWPPP as required by the General VPDES Permit for Discharges of Stormwater from Construction Activities. The operator shall record these actions according to Part II B of the Permit.

SWPPP Amendment, Modification and Update Log

Date	Description of Amendment, Modification, or Update
Responsible Party	
Responsible Party	
Responsible Party	
Responsible Party	

"I certify under penalty of law that I have read and understand this document in accordance with the General VPDES Permit for Discharges of Stormwater from Construction Activities. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."



Operator or Delegated Authority Signature



APPENDIX E

STANDARD STORM WATER POLLUTION PREVENTION SPECIFICATION



SECTION 31 2514 - STORM WATER POLLUTION PREVENTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings, Contract and Special Provisions, Supplementary Conditions, latest version of the Virginia Erosion and Sediment Control Handbook, latest version of the applicable Stormwater Management Handbook, and other Division *[List Section Number Here]* Specifications apply to this Section.

1.2 SUMMARY

- A. This Section includes instruction for completion and maintaining a Storm Water Pollution Prevention Plan (SWPPP). The campus-wide SWPPP template provided by the A/E shall be used and updated accordingly when work is performed within the campus MS4 Boundary.
- B. Related Sections
 1. Division *[List Section Number Here]* Section *[List Section Name Here]*

1.3 DEFINITIONS

- A. CWA- Clean Water Act means the law passed by the Congress of the United States in 1972 controlling the Discharge of Pollutants into the Nation's waterways.
- B. BMP- Best Management Practices are defined as anyone or group of management practices, activities, policies, equipment, and structures that will: prevent pollutants from entering the environment, minimize pollutants from entering the environment, and mitigate, reduce, and treat prior to the pollutant entering the environment.
- C. NPDES- National Pollutant Discharge Elimination System is the national program for issuing, modifying, revoking, reissuing, terminating, monitoring and enforcing permits pursuant to sections 402, 318, and 405 of the CWA.
- D. VDEQ- Virginia Department of Environmental Quality is the agency of the Commonwealth of Virginia that manages the Commonwealth of Virginia's environmental regulations.
- E. VPDES- Virginia Pollutant Discharge Elimination System is the Commonwealth of Virginia program and regulations that describe the proper management of discharges of pollutants into the waters of the Commonwealth of Virginia.



1.4 Submittals

- A. Storm Water Pollution Prevention Plan (SWPPP) – Using the campus wide SWPPP template provided by the A/E, complete the Contractor sections in accordance with the information provided below and submit for written approval by the University. In addition, the SWPPP will serve as the Soil Erosion and Sediment Control Plan required as a condition of the University's issuance of a Land Disturbance/Stormwater Permit by the University's Capital Outlay Department. Issuance of this Land Disturbance/Stormwater Permit is required prior to initiation of any project construction.
 - 1. Complete the SWPPP Coordinator section
 - 2. Complete the Qualified Personnel section (Appendix 5)
 - 3. Complete the Pollution Prevention Plan section or create and P2 Plan Sheet illustrating all areas of potential pollutant discharge (Appendix 8)

- B. The University has acquired a single Virginia Storm Water Management Program (VSMP) general construction permit registration from the Virginia Department of Environmental Quality (DEQ) to cover construction activities within the MS4 boundary. The contractor is responsible for compliance with all provisions of the VSMP permit on the University's behalf. The contractor will use the campus-wide SWPPP template and will be responsible for maintaining the current SWPPP documentation listed below for this project.
 - 1. Record of all land disturbance (Appendix 4)
 - 2. Record of regularly performed inspections (Appendix 4)
 - 3. Record of corrective actions taken (Appendix 4)
 - 4. Record of SWPPP amendments, modifications and updates (Appendix 10)

- C. Within 30 days of project stabilization, and in lieu of submitting the Notice of Project Termination, all hardcopy records and an electronic record of the SWPPP information will be provided to the University for their documentation purposes.

- D. Immediately notify the University of any changes that affect the information on the registration statement, permit fee form, and/or permit coverage. The University will then notify the DEQ with this information by sending it to *constructionGP@deq.virginia.gov*.

1.5 Quality Assurance

- A. Prepare and submit the SWPPP with input from each subcontractor.

PART 2 - PRODUCTS

2.1 General

- A. Provide erosion and sediment control devices and products as indicated, in accordance with the SWPPP and in accordance with the latest updated version of the Virginia Erosion and Sediment Control Handbook.



PART 3 - EXECUTION

3.1 Implementation

- A. Implement and maintain the approved SWPPP throughout the life of the contract in accordance with provisions of the Virginia Erosion and Sediment Control Handbook, the applicable Stormwater Management Handbook, and applicable contract documents.
- B. Exercise every reasonable precaution, including temporary and permanent measures, throughout the duration of the project to control erosion and prevent or minimize pollution of rivers, streams, lakes and other receiving waters. Apply siltation and stabilization control measures to material, subject to erosion, exposed by any activity associated with construction including but not limited to local material sources, stockpiles, disposal areas, and haul roads.
- C. Initiate stabilization measures as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased but no later than 14 days after the construction activities have temporarily or permanently ceased. Except as provided in the following paragraphs:
 - 1. If snow cover and or severe weather conditions preclude initiation of the stabilization measures by the 14th day after construction activities have ceased, either temporarily or permanently, the stabilization practices shall be initiated as soon as practicable.
 - 2. If construction activities resume on a portion of the site within 21 days from the date that construction activities have temporarily ceased, then stabilization practices need not be initiated on that particular portion of the site by the 14th day after construction activities have temporarily ceased.
- D. Be solely responsible for complying with the soil erosion, sedimentation control and good housekeeping requirements of this Contract, and for otherwise preventing contamination of stormwater from construction activities. Be solely responsible for any and all fines, penalties or damage that result from the Contractor's failure to comply.

3.2 Erosion and Siltation Control:

- A. Control erosion and siltation through the use of the devices and measures specified herein, in the approved SWPPP or as is otherwise necessary. The University reserves the right to require other temporary measures not specifically described herein to correct an erosion or siltation condition.
- B. Maintenance: Maintain erosion and siltation control devices and measures in a functional condition at all times. Inspect temporary and permanent erosion and sedimentation control measures after each rainfall and at least daily during periods of prolonged rainfall. Correct deficiencies immediately. Make a daily review of the location of erosion and sediment control devices to ensure that they are properly located for effectiveness. Where deficiencies exist, make corrections immediately as approved or directed by the University.



PART 4 - CONTRACTOR'S QUALITY CONTROL

4.1 Field Quality Control

- A. Conform to all applicable provisions of Division *[List Section Number Here]* Section *[List Section Name Here]*. Perform regular inspections in accordance with the approved SWPPP. The results of the regular inspections shall be submitted to the University upon completion.



APPENDIX F

ESC & SW INSPECTION REPORTS



ESC/SW INSPECTION REPORT

(To be completed by VSU DEQ-Certified personnel, and where VSU is the GCP Holder)

Project Name: _____ Project Authority: _____
 RLD Name: _____ RLD No. _____
 Project Location: _____ Project No: _____
 Inspector Name: _____ Inspection Date: _____ Time: _____
 Most Recent Measurable Storm Event: Date: _____ Amount: _____

Previous violation(s) been corrected: YES or NO

STAGE OF CONSTRUCTION

Pre-Construction Conference Building Construction Construction of SW Facilities
 Clearing & Grubbing Finish Grading Maintenance of SW 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 Permit Regulations (9VAC25-870), or Annual Standards and Specifications for ESC and SW
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: _____
(DD/MM/YY) (DD/MM/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, STOP WORK ORDER**, and/or other enforcement actions may be issued to the entity responsible for ensuring compliance on the above project.

Inspector: _____
Signature and DEQ Certificate Number Date

Acknowledgement of on-site report receipt: _____
Print Name Signature Date

This report will be provided to the following parties via mail, fax, or e-mail within 24 hours of inspection:



ESC/SW INSPECTION REPORT, continued

(To be completed by VSU DEQ-Certified personnel)

Project Name: _____ Project Authority: _____

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 Permit Regulations (9VAC25-870), or Annual Standards and Specifications for ESC and SW
2. Note whether or not off-site damage resulting from the problem/violation was evident during the inspection.

Acknowledgement of on-site report receipt: _____

 Print Name Signature Date

This report will be provided to the following parties via mail, fax, or e-mail within 24 hours of inspection:



APPENDIX G

VARIANCE REQUEST FORM



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/Justification for Variance Request and Specific Site Conditions Necessitating the

Request: _____

Designers Signature: _____ Date: _____

Signature of applicant: _____ Date: _____

*Providing supporting documentation (sketches, calculations, etc...) as necessary to support request
(NOTE: All approved Variance Requests will be considered part of the ESC/SW Plan.)*



APPENDIX H

EXCEPTION REQUEST FORM



EXCEPTION REQUEST

Requested by: _____ Date: _____

Street Address: _____

City/Town/Zip: _____

Telephone #: _____ Fax #: _____

E-mail address: _____

Project Name/Location: _____

Project Description: _____

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

Reasons/Justification for Exception Request and Specific Site Conditions Necessitating the

Request: _____

Mitigating Measures: _____

Designers Signature: _____ Date: _____

Signature of applicant: _____ Date: _____

Providing supporting documentation (sketches, calculations, etc...) as necessary to support request

(NOTE: All approved Exception Requests will be considered part of the ESC/SW Plan.)



Capital Outlay & Facilities
PO Box 9414
VSU, VA 23806
Phone: (804)-504-7500
Fax: (804)-524-5383



APPENDIX I

PRE-APPROVED VARIANCES



SUMMARY OF PRE-APPROVED NON-VESCH PROPRIETARY CONTROL MEASURES

Practice	Definition	Purpose	Conditions where practice applies	Planning Considerations	Design Criteria	Construction Specifications	Design Tables and Plates	Maintenance	Inspections
VSU-VAR01: DANDY CURB BAG®	Note 1	Note 1	DI-2, curb drop inlet (with grate) downstream of disturbance.	Light sediment accumulation expected.	Note 3	Note 2	Note 6	Note 4	Note 5
VSU-VAR02: DANDY BAG®	Note 1	Note 1	DI-1, drop inlet (yard grate) downstream of disturbance.	Light sediment accumulation expected.	Note 3	Note 2	Note 6	Note 4	Note 5
VSU-VAR03: DANDY CURB®	Note 1	Note 1	DI-3, curb inlet downstream of disturbance.	Light sediment accumulation expected.	Note 3	Note 2	Note 6	Note 4	Note 5
VSU-VAR04: DANDY SACK®	Note 1	Note 1	DI-1, drop inlet (yard grate) downstream of disturbance.	Heavy sediment accumulation expected.	Note 3	Note 2	Note 6	Note 4	Note 5
VSU-VAR05: DANDY CURB SACK®	Note 1	Note 1	DI-2, curb drop inlet (with grate) downstream of disturbances.	Heavy sediment accumulation expected.	Note 3	Note 2	Note 6	Note 4	Note 5
VSU-VAR06: DANDY POP®	Note 1	Note 1	DI-1, drop inlet (yard grate) downstream of disturbance.	Heavy ponding expected.	Note 3	Note 2	Note 6	Note 4	Note 5
VSU-VAR07: DANDY DEWATERING BAG™	Note 1	Note 1	When dewatering trenches or basins.		Note 3	Note 2	Note 6	Note 4	Note 5
VSU-VAR08: GUTTER BUDDY™	Note 1	Note 1	DI-3, curb inlet downstream of disturbance.	Light sediment accumulation expected.	Note 3	Note 2	Note 6	Note 4	Note 5
VSU-VAR09: SILT SACK®	Note 1	Note 1	DI-7, drop inlet (yard grate) downstream of disturbance.	Heavy sediment accumulation expected.	Note 3	Note 2	Note 6	Note 4	Note 5
VSU-VAR10: AlturMats® & VersaMats®	Ground protection mat	Prevent ground compression and rutting	Heavy equipment travel lanes over natural ground where installation of stone construction entrance is not practical.	Needed to prevent damage during heavy equipment travel over fragile or soft natural ground.	Size based on needed travel lane width.	½" thick polyethylene	Note 6	No maintenance required, replace mats as needed.	Note 5

Notes

- 1: See product specification sheet, Section 1 – Description.
- 2: See product specification sheet, Section 2 – Material.
- 3: See product specification sheet, Section 3 – Installation.
- 4: See product specification sheet, Section 4 – Maintenance.
- 5: After each storm event and at regular intervals
- 6: See end of product specification sheet.

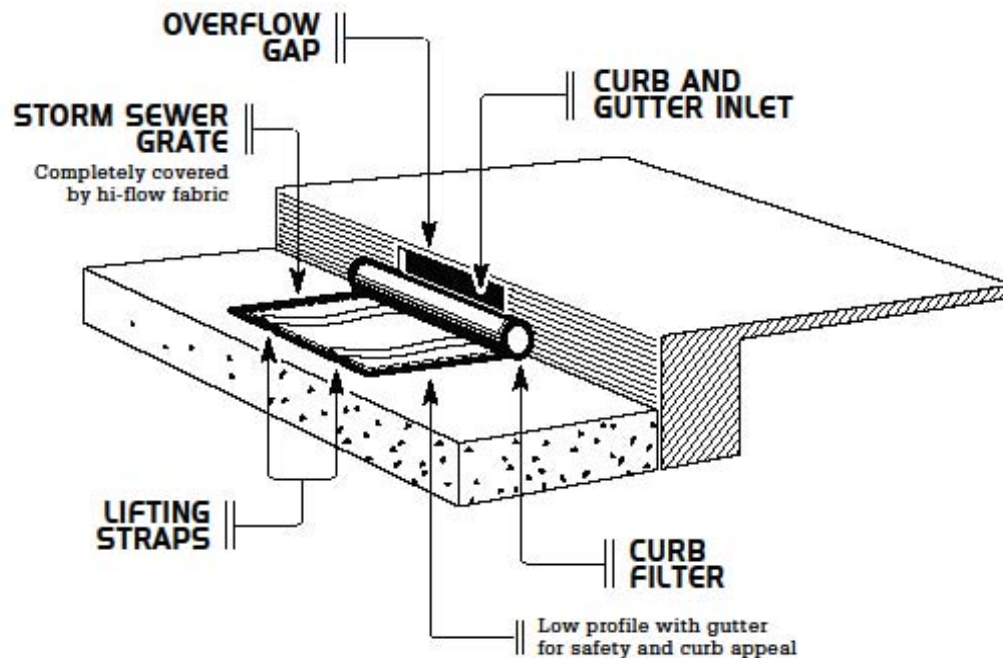


Capital Outlay & Facilities
PO Box 9414
VSU, VA 23806
Phone: (804)-504-7500
Fax: (804)-524-5383

VSU-VAR01: DANDY CURB BAG®



▶ **DANDY CURB BAG™** ◀





DANDY CURB BAG® CURB AND GUTTER INLET/GRATE PROTECTION SYSTEM GUIDE SPECIFICATION

PRODUCT: DANDY CURB BAG®

MANUFACTURER: Dandy Products, Inc.
 P.O. Box 1980
 Westerville, Ohio 43086
 Phone: 800-591-2284
 Fax: 740-881-2791
 E-mail: dlc@dandyproducts.com
 Web: www.dandyproducts.com

1.0 Description:

1.1 Work covered under this item consists of installing a Dandy Curb Bag® curb and gutter inlet protection system. The purpose is to keep silt, sediment and construction debris out of the storm water system.

2.0 Material:

- 2.1 The Dandy Curb Bag® curb and gutter inlet protection unit shall be a **sewn in the U.S.A.** geotextile fabric unit enclosing a porous structure in the form of a cylindrical tube placed in front of and extending beyond the inlet opening on both sides and have a geotextile fabric envelope fitted to the individual grate(s) on the street side of the sewn unit for grate(s) to be inserted and to completely enclose the grate(s).
- 2.2 The Dandy Curb Bag® shall have lifting devices to allow manual inspection of the storm water system.
- 2.3 The Dandy Curb Bag® unit shall utilize an orange monofilament fabric that is manufactured in the U.S.A. with the following characteristics:

PROPERTY	TEST METHOD	UNITS	TEST RESULTS
Grab Tensile Strength	ASTM D 4632	lbs	450 x 300
Grab Tensile Elongation	ASTM D 4632	%	40 x 25
Puncture Strength	ASTM D 4833	lbs	130
Mullen Burst Strength	ASTM D 3786	psi	600
Trapezoid Tear Strength	ASTM D 4533	lbs	165 x 150
% Open Area (POA)	COE - 22125-86	%	28
Apparent Opening Size	ASTM D 4751	US Std Sieve	30
Permittivity	ASTM D 4491	sec ¹	3.5
Permeability	ASTM 4491	cm/sec	0.25
Water Flow Rate	ASTM 4491	gal/min/ft ²	250
Ultraviolet Resistance	ASTM D 4355	%	70
Color			Orange ¹

¹The color orange is a trademark of Dandy Products, Inc.
 The property values listed above are effective October 2010 and are subject to change without notice.



3.0 Installation:

- 3.1 Place the empty Dandy Curb Bag® unit over the grate as the grate stands on end.
- 3.2 *For oil and sediment model; to install or replace absorbent, place absorbent pillow in pouch, on the bottom (below-grade side) of the unit.*
- 3.3 Tuck the enclosure flap inside to completely enclose the grate.
- 3.4 Holding the lifting devices, being careful not to damage the sewn fabric unit, insert the grate into its frame, street side edge first, then lower back edge with cylindrical tube into place. The cylindrical tube should be partially blocking the curb hood opening when installed properly.

4.0 Maintenance:

- 4.1 The contractor shall remove all accumulated sediment and debris from surface and vicinity of unit after each rain event or as directed by engineer/inspector. Dispose of unit no longer in use at an appropriate recycling or solid waste facility.
- 4.2 *For oil and sediment model; remove and replace absorbent when near saturation.*

5.0 Method of Measurement:

- 5.1 The quantity to be paid is for the actual number of Dandy Curb Bag® inlet protection units installed.

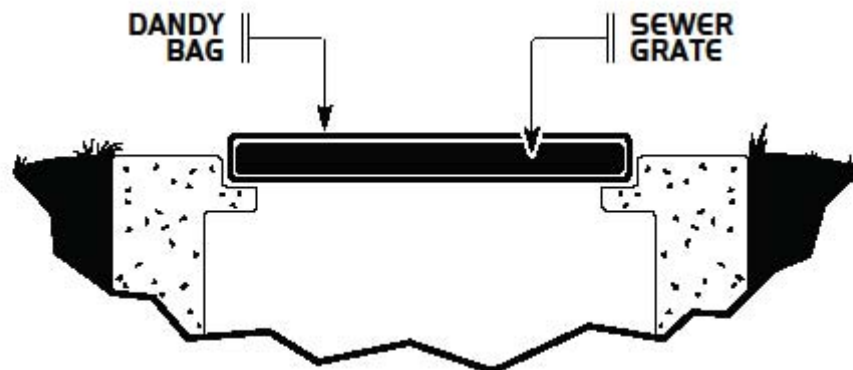
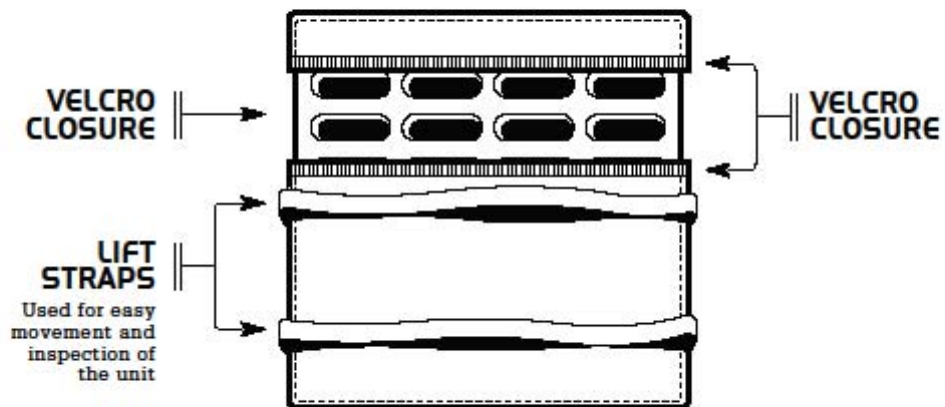
6.0 Basis of payment:

- 6.1 The unit price shall include labor, equipment, and materials necessary to complete the work and maintain the Dandy Curb Bag® inlet protection units.
- 6.2 Payment for the completed work will be made at the contract prices for:

<u>ITEM</u>	<u>UNIT</u>	<u>DESCRIPTION</u>
Dandy Curb Bag®	EA	Curb Inlet Protection Unit (#_____Inlet)



VSU-VAR02: DANDY BAG®





DANDY BAG® INLET PROTECTION SYSTEM GUIDE SPECIFICATION

PRODUCT: DANDY BAG®
 MANUFACTURER: Dandy Products Inc.
 P.O. Box 1980
 Westerville, Ohio 43086
 Phone: 800-591-2284
 Fax: 740-881-2791
 E mail: dlc@dandyproducts.com
 Web: www.dandyproducts.com

1.0 Description:

1.1 Work covered under this item consists of installing a Dandy Bag® inlet protection system. The purpose is to keep silt, sediment and construction debris out of the storm water system.

2.0 Material:

- 2.1 The Dandy Bag® inlet protection unit shall be a **sewn in the U.S.A.** geotextile fabric unit fitted to the individual grate(s) and completely enclosing the grate(s).
- 2.2 The Dandy Bag® shall have lifting devices to allow manual inspection of the storm water system.
- 2.3 The Dandy Bag® unit shall utilize an orange monofilament fabric manufactured in the U.S.A. with the following characteristics:

PROPERTY	TEST METHOD	UNITS	TEST RESULTS
Grab Tensile Strength	ASTM D 4632	lbs	450 X 300
Elongation	ASTM D 4632	%	40% X 25%
Puncture Strength	ASTM D 4833	lbs	130
Mullen Burst Strength	ASTM D 3786	psi	600
Trapezoid Tear Strength	ASTM D 4533	lbs	165 x 150
% Open Area (POA)	COE - 22125-86	%	28
Apparent Opening Size	ASTM D 4751	US Std Sieve	30
Permittivity	ASTM D 4491	sec ¹	3.5
Permeability	ASTM 4491	cm/sec	0.25
Water Flow Rate	ASTM 4491	gal/min/ft ²	250
Ultraviolet Resistance	ASTM D 4355	%	70
Color			Orange ¹

¹The color orange is a trademark of Dandy Products, Inc.

The property values listed above are effective October 2010 and are subject to change without notice.

3.0 Installation:

- 3.1 Place the empty Dandy Bag® over the grate as the grate stands on end.
- 3.2 *For oil and sediment model; to install or replace absorbent, place absorbent pillow in pouch, on the bottom (below-grade side) of the unit.*



- 3.3 Tuck the enclosure flap inside to completely enclose the grate.
- 3.3 Holding the lifting devices, insert the grate into the inlet being careful not to damage the Dandy Bag® unit.

4.0 Maintenance:

- 4.1 The contractor shall remove all accumulated sediment and debris from surface and vicinity of unit after each rain event or as directed by engineer/inspector. Dispose of unit no longer in use at an appropriate recycling or solid waste facility.
- 4.2 *For oil and sediment model; remove and replace absorbent when near saturation.*

5.0 Method of Measurement:

- 5.1 The quantity to be paid is for the actual number of Dandy Bag® inlet protection units installed.

6.0 Basis of Payment:

- 6.1 The unit price shall include labor, equipment, and materials necessary to complete the work and maintain the Dandy Bag® inlet protection units.
- 6.2 Payment for the completed work will be made at the contract prices for:

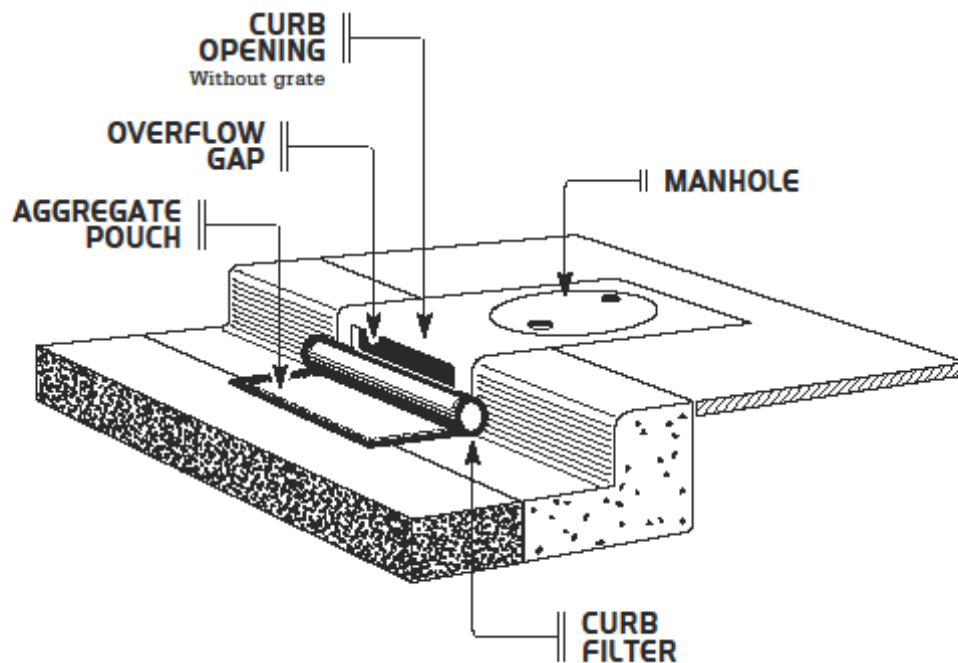
ITEM	UNIT	DESCRIPTION
Dandy Bag®	EA	Inlet Protection Unit (#_____Inlet)



VSU-VAR03: DANDY CURB®



▶ **DANDY CURB™** ◀





DANDY CURB® GRATELESS CURB INLET AND MEDIAN BARRIER INLET PROTECTION SYSTEM GUIDE SPECIFICATION

PRODUCT: DANDY CURB®
 MANUFACTURER: Dandy Products Inc.
 P.O. Box 1980
 Westerville, Ohio 43086
 Phone: 800-591-2284
 Fax: 740-881-2791
 E mail: dlc@dandyproducts.com
 Web: www.dandyproducts.com

1.0 Description:

1.1 Work covered under this item consists of installing a Dandy Curb® inlet protection system for inlets and median barrier inlets without grates. The purpose is to keep silt, sediment and construction debris out of the storm system.

2.0 Material:

- 2.1 The Dandy Curb® inlet protection system shall be a **sewn in the U.S.A.** fabric unit enclosing a porous structure in the form of a cylindrical tube placed in front of and extending beyond the inlet opening on both sides.
- 2.2 The Dandy Curb® inlet protection system shall have a pouch on the street side of the sewn unit for aggregate or other material to hold the unit in place.
- 2.3 The Dandy Curb® unit shall utilize an orange monofilament fabric that is manufactured in the U.S.A. with the following characteristics:

PROPERTY	TEST METHOD	UNITS	TEST RESULTS
Grab Tensile Strength	ASTM D 4632	lbs	450 x 300
Grab Tensile Elongation	ASTM D 4632	%	40 x 25
Puncture Strength	ASTM D 4833	lbs	130
Mullen Burst Strength	ASTM D 3786	psi	600
Trapezoid Tear Strength	ASTM D 4533	lbs	165 x 150
% Open Area (POA)	COE - 22125-86	%	28
Apparent Opening Size	ASTM D 4751	US Std Sieve	30
Permittivity	ASTM D 4491	sec ¹	3.5
Permeability	ASTM 4491	cm/sec	0.25
Water Flow Rate	ASTM 4491	gal/min/ft ²	250
Ultraviolet Resistance	ASTM D 4355	%	70
Color			Orange ¹

¹The color orange is a trademark of Dandy Products, Inc.
 The property values listed above are effective October 2010 and are subject to change without notice.

3.0 Installation:

3.1 Place Dandy Curb® inlet protection unit on ground with aggregate pouch on street side near inlet it will be installed on.



- 3.2 *For oil and sediment model, to install or replace absorbent, place absorbent sock in pouch.*
- 3.3 Fill pouch with aggregate such as #5-7, 8's or similar to a level (at least ½ full) that will keep unit in place during a rain event and create a seal between the Dandy Curb® and the surface of the street. Reseal Velcro access.
- 3.4 Center the unit against curb or median inlet opening so that the curb side of the unit creates a seal with the curb or median barrier and inlet structure. There will be approximately twelve (12) inches of the inlet protection unit overhanging on each side of the opening. If the unit is not installed in this manner, it will not function properly.

4.0 Maintenance:

- 4.1 The contractor shall remove all accumulated sediment and debris from surface and vicinity of unit after each rain event or as directed by engineer/inspector. Dispose of unit no longer in use at an appropriate recycling or solid waste facility.
- 4.2 *For oil and sediment model; remove and replace absorbent when near saturation.*

5.0 Method of Measurement:

- 5.1 The quantity to be paid is for the actual number of Dandy Curb® inlet protection units installed.

6.0 Basis of payment:

- 6.1 The unit price shall include labor, equipment, and materials necessary to complete the work and maintain the True Dam® inlet protection units.
- 6.2 Payment for the completed work will be made at the contract prices for:

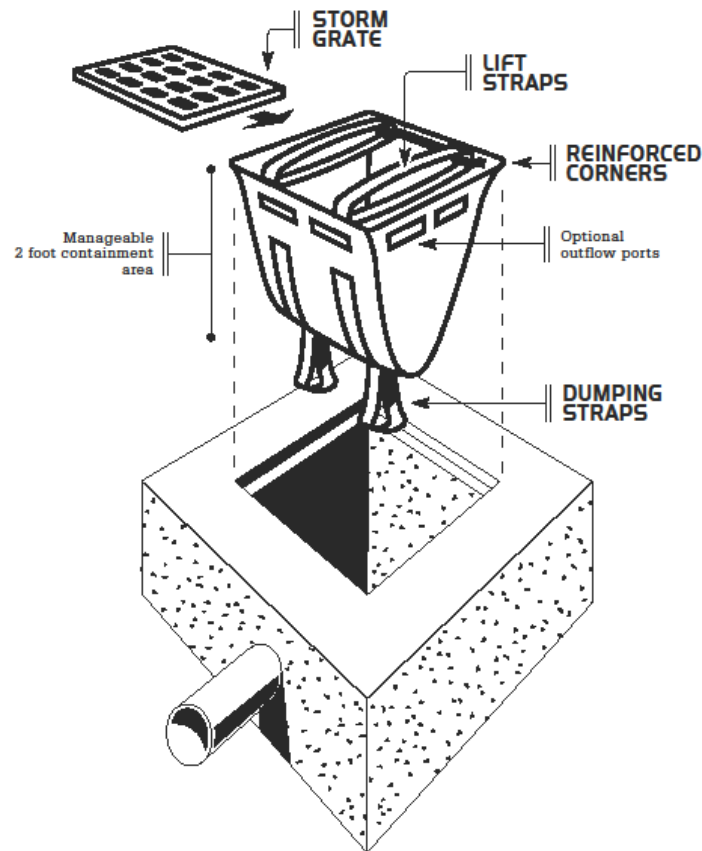
ITEM	UNIT	DESCRIPTION
Dandy Curb®	EA	Inlet Protection Unit (# _____ Inlet)



VSU-VAR04: DANDY SACK®



▶ DANDY SACK™ ◀





DANDY SACK® INLET PROTECTION SYSTEM GUIDE SPECIFICATION

PRODUCT: DANDY SACK®
 MANUFACTURER: Dandy Products Inc.
 P.O. Box 1980
 Westerville, Ohio 43086
 Phone: 800-591-2284
 Fax: 740-881-2791
 E mail: dlc@dandyproducts.com
 Web: www.dandyproducts.com

1.0 Description:

1.1 Work covered under this item consists of installing a Dandy Sack® inlet protection system. The purpose is to keep silt, sediment and construction debris out of the storm water system.

2.0 Material:

2.1 The Dandy Sack® inlet protection unit shall be a **sewn in the U.S.A.** geotextile fabric unit.

2.2 The Dandy Sack® shall have lifting straps to allow removal of the unit and manual inspection of the storm water system.

2.3 The Dandy Sack® unit shall utilize an orange monofilament fabric that is manufactured in the U.S.A. with the following characteristics:

PROPERTY	TEST METHOD	UNITS	TEST RESULTS
Grab Tensile Strength	ASTM D 4632	lbs	450 x 300
Grab Tensile Elongation	ASTM D 4632	%	40 x 25
Puncture Strength	ASTM D 4833	lbs	130
Mullen Burst Strength	ASTM D 3786	psi	600
Trapezoid Tear Strength	ASTM D 4533	lbs	165 x 150
% Open Area (POA)	COE - 22125-86	%	28
Apparent Opening Size	ASTM D 4751	US Std Sieve	30
Permittivity	ASTM D 4491	sec ¹	3.5
Permeability	ASTM 4491	cm/sec	0.25
Water Flow Rate	ASTM 4491	gal/min/ft ²	250
Ultraviolet Resistance	ASTM D 4355	%	70
Color			Orange ¹

¹The color orange is a trademark of Dandy Products, Inc.

The property values listed above are effective October 2010 and are subject to change without notice.

3.0 Installation:

3.1 Remove the grate from the catch basin.

3.2 *For Oil and Sediment Model; to install or replace absorbent, place absorbent pillow in unit, on the bottom (below-grade side) of the unit.*



3.3 Stand the grate on end. Move the top lifting straps out of the way and place the grate into the Dandy Sack® unit so that the grate is below the top straps and above the lower straps. The grate should be cradled between the upper and lower straps.

3.3 Holding the lifting devices, insert the grate into the inlet, being careful that the grate remains in place and being careful not to damage the Dandy Sack® unit.

4.0 Maintenance:

4.1 Remove all accumulated sediment and debris from vicinity of unit after each storm event.

4.2 After each storm event and at regular intervals, look into the Dandy Sack® unit. If the unit is more than 1/3 full of accumulated sediment, the unit must be emptied.

4.3 To empty the unit, using the lifting straps lift the unit out of the inlet and remove the grate. Transport the unit to an appropriate location for removal of the contents. Holding the dumping straps on the outside at the bottom of the unit, turn the unit upside down, emptying the contents. Reinstall unit as above.

4.4 *For Oil and Sediment Model; remove and replace absorbent when near saturation.*

4.5 Dispose of unit and/or absorbent in accord with applicable Federal, state and local environmental laws and regulations.

5.0 Method of Measurement:

5.1 The quantity to be paid is for the actual number of Dandy Sack® inlet protection units installed.

6.0 Basis of Payment:

6.1 The unit price shall include labor, equipment, and materials necessary to complete the work and maintain the Dandy Sack® inlet protection units.

6.2 Payment for the completed work will be made at the contract prices for:

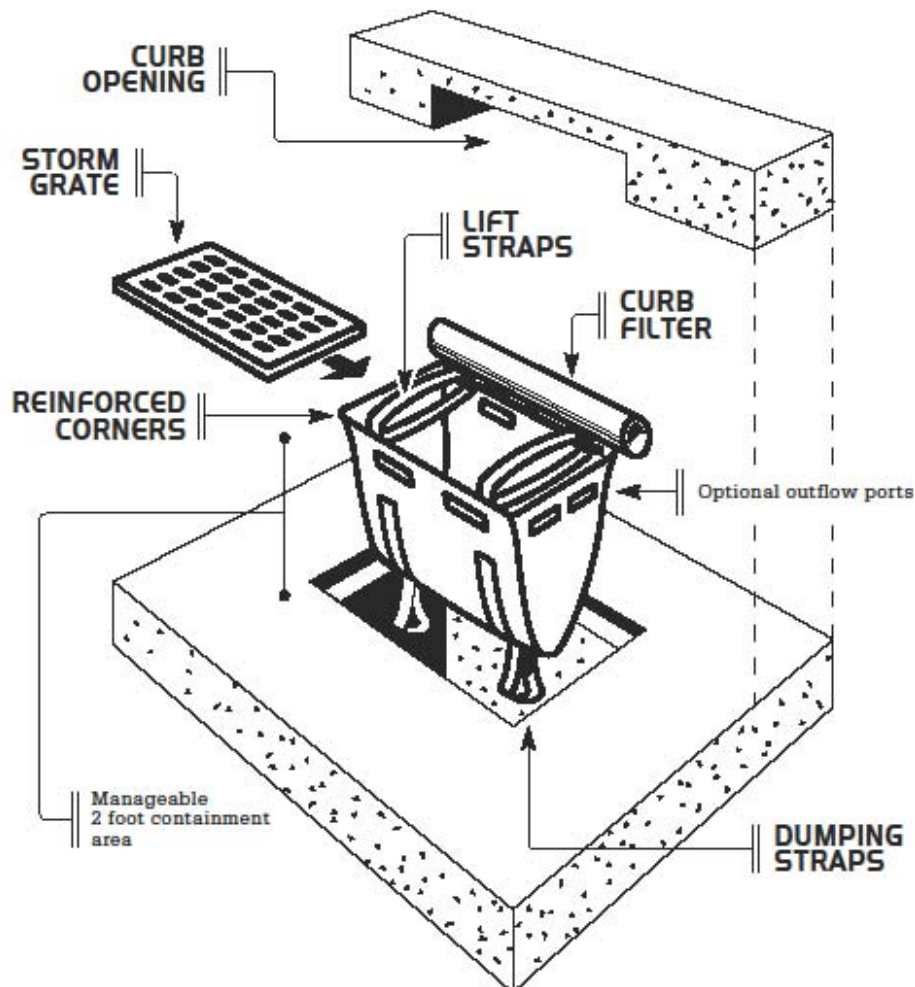
ITEM	UNIT	DESCRIPTION
Dandy Sack®	EA	Inlet Protection



VSU-VAR05: DANDY CURB SACK®



DANDY CURB SACK™





DANDY CURB SACK® CURB AND GUTTER INLET PROTECTION SYSTEM GUIDE SPECIFICATION

PRODUCT: DANDY CURB SACK®
 MANUFACTURER: Dandy Products Inc.
 P.O. Box 1980
 Westerville, Ohio 43086
 Phone: 800-591-2284
 Fax: 740-881-2791
 E mail: dlc@dandyproducts.com
 Web: www.dandyproducts.com

1.0 Description:

1.1 Work covered under this item consists of installing a Dandy Curb Sack® curb and gutter inlet protection system. The purpose is to keep silt, sediment and construction debris out of the storm water system.

2.0 Material:

2.1 The Dandy Curb Sack® curb and gutter inlet protection unit shall be a sewn geotextile fabric unit **made in the U.S.A.** enclosing a porous structure in the form of a cylindrical tub placed in front and extending beyond the inlet opening on both sides and have a geotextile fabric sack attached designed to fit the opening of the catch basin or drop inlet and to hang underneath the grate and into the catch basin.

2.2 The Dandy Curb Sack® shall have lifting straps to allow removal of the unit and manual inspection of the storm water system.

2.3 The Dandy Curb Sack® unit shall utilize an orange monofilament fabric that is manufactured in the U.S.A. with the following characteristics:

PROPERTY	TEST METHOD	UNITS	TEST RESULTS
Grab Tensile Strength	ASTM D 4632	lbs	450 x 300
Grab Tensile Elongation	ASTM D 4632	%	40 x 25
Puncture Strength	ASTM D 4833	lbs	130
Mullen Burst Strength	ASTM D 3786	psi	600
Trapezoid Tear Strength	ASTM D 4533	lbs	165 x 150
% Open Area (POA)	COE - 22125-86	%	28
Apparent Opening Size	ASTM D 4751	US Std Sieve	30
Permittivity	ASTM D 4491	sec ¹	3.5
Permeability	ASTM 4491	cm/sec	0.25
Water Flow Rate	ASTM 4491	gal/min/ft ²	250
Ultraviolet Resistance	ASTM D 4355	%	70
Color			Orange ¹

¹The color orange is a trademark of Dandy Products, Inc.
 The property values listed above are effective October 2010 and are subject to change without notice.



3.0 Installation:

- 3.1 Remove the grate from the catch basin.
- 3.2 *For Oil and Sediment Model; to install or replace absorbent, place absorbent pillow in unit, on the bottom (below-grade side) of the unit.*
- 3.3 Stand the grate on end. Move the top lifting straps out of the way and place the grate into the Dandy Curb Sack® unit so that the grate is below the top straps and above the lower straps. The grate should be cradled between the upper and lower straps.
- 3.4 Holding the lifting devices, insert the grate into the inlet, then lower back edge with cylindrical tube into place, being careful that the grate remains in place and being careful not to damage the Dandy Curb Sack® unit. The cylindrical tube should partially block the curb hood opening when installed properly.

4.0 Maintenance:

- 4.1 Remove all accumulated sediment and debris from vicinity of unit after each storm event.
- 4.2 After each storm event and at regular intervals, look into the Dandy Curb Sack® unit. If the unit is more than 1/3 full of accumulated sediment, the unit must be emptied.
- 4.3 To empty the unit, using the lifting straps lift the unit out of the inlet and remove the grate. Transport the unit to an appropriate location for removal of the contents. Holding the dumping straps on the outside at the bottom of the unit, turn the unit upside down, emptying the contents. Reinstall unit as above.
- 4.4 *For Oil and Sediment Model; remove and replace absorbent when near saturation.*
- 4.5 Dispose of unit and/or absorbent in accord with applicable Federal, state and local environmental laws and regulations.

5.0 Method of Measurement:

- 5.1 The quantity to be paid is for the actual number of Dandy Curb Sack® inlet protection units installed.

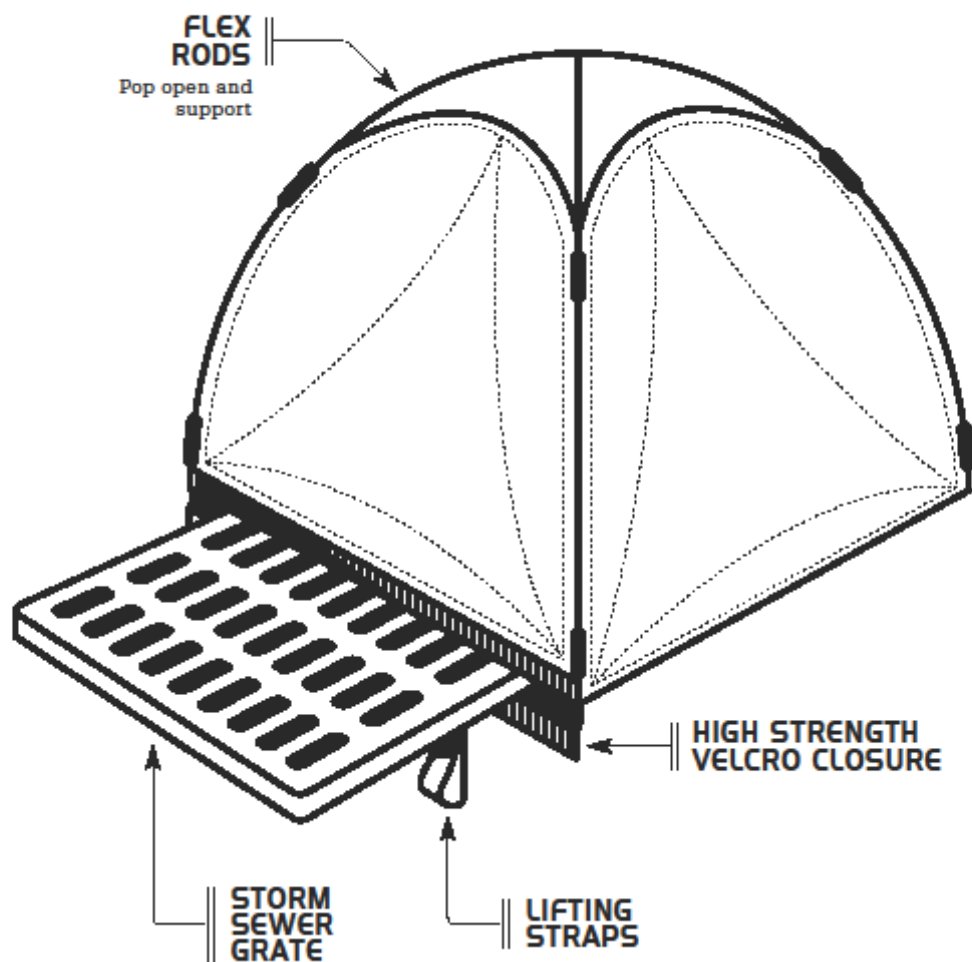
6.0 Basis of Payment:

- 6.1 The unit price shall include labor, equipment, and materials necessary to complete the work and maintain the Dandy Curb Sack® inlet protection units.
- 6.2 Payment for the completed work will be made at the contract prices for:

ITEM	UNIT	DESCRIPTION
Dandy Curb Sack®	EA	Inlet Protection Unit (#_____Inlet)



VSU-VAR06: DANDY POP®





DANDY POP® (POP-UP DANDY BAG®) INLET PROTECTION SYSTEM GUIDE SPECIFICATION

PRODUCT: DANDY POP®
 MANUFACTURER: Dandy Products Inc.
 P.O. Box 1980
 Westerville, Ohio 43086
 Phone: 800-591-2284
 Fax: 740-881-2791
 E mail: dlc@dandyproducts.com
 Web: www.dandyproducts.com

1.0 Description:

1.1 Work covered under this item consists of installing a Dandy Pop® inlet protection system. The purpose is to keep silt, sediment and construction debris out of the storm water system.

2.0 Material:

- 2.1 The Dandy Pop® inlet protection unit shall be a **sewn in the U.S.A.** geotextile fabric dome unit with a fully-covered support frame. The unit shall enclose the grate.
- 2.2 The Dandy Pop® shall unfold for installation to a height of approximately 24" (twenty-four inches).
- 2.3 The Dandy Pop® shall have lifting devices sewn to the bottom of the unit to assist in installation and to allow manual inspection of the storm water system.
- 2.4 The Dandy Pop® shall utilize an orange monofilament fabric that is manufactured in the U.S.A. with the following characteristics:

PROPERTY	TEST METHOD	UNITS	TEST RESULTS
Grab Tensile Strength	ASTM D 4632	lbs	450 x300
Grab Tensile Elongation	ASTM D 4632	%	40 x 25
Puncture Strength	ASTM D 4833	lbs	130
Mullen Burst Strength	ASTM D 3786	psi	600
Trapezoid Tear Strength	ASTM D 4533	lbs	165 x 150
% Open Area (POA)	COE - 22125-86	%	28
Apparent Opening Size	ASTM D 4751	US Std Sieve	30
Permittivity	ASTM D 4491	sec1	3.5
Permeability	ASTM 4491	cm/sec	0.25
Water Flow Rate	ASTM 4491	gal/min/ft ²	250
Ultraviolet Resistance	ASTM D 4355	%	70
Color			Orange ¹

¹The color orange is a trademark of Dandy Products, Inc. The property values listed above are effective October 2010 and are subject to change without notice.

3.0 Installation:

- 3.1 Pop open the Dandy Pop® near the inlet.
- 3.2 Stand the grate on end and slide the Dandy Pop® over the grate.



3.3 *For oil and sediment model; to install or replace absorbent, place absorbent pillow in pouch, on the bottom (below-grade side) of the unit. As desired, or required, attach absorbent pillow to provided tether loop.*

3.4 Turn the grate 180° on end (turn twice) so that the opening is facing up.

3.5 Pull up slack and seal velcro® to enclose the grate.

3.6 Lay the grate flat, and holding the lifting devices, insert the grate into the inlet making sure that the grate seats completely in the frame.

4.0 Maintenance:

4.1 The contractor shall remove all accumulated sediment and debris from panels and surface and vicinity of unit after each rain event or as directed by engineer/inspector. Dispose of unit no longer in use at an appropriate recycling or solid waste facility.

4.2 *For oil and sediment model; remove and replace absorbent when near saturation.*

5.0 Method of Measurement:

5.1 The quantity to be paid is for the actual number of Dandy Pop® inlet protection units installed.

6.0 Basis of payment:

6.1 The unit price shall include labor, equipment, and materials necessary to complete the work and maintain the Dandy Pop® inlet protection units.

6.2 Payment for the completed work will be made at the contract prices for:

ITEM	UNIT	DESCRIPTION
Dandy Pop®	EA	Inlet Protection Units (# _____ INLET)

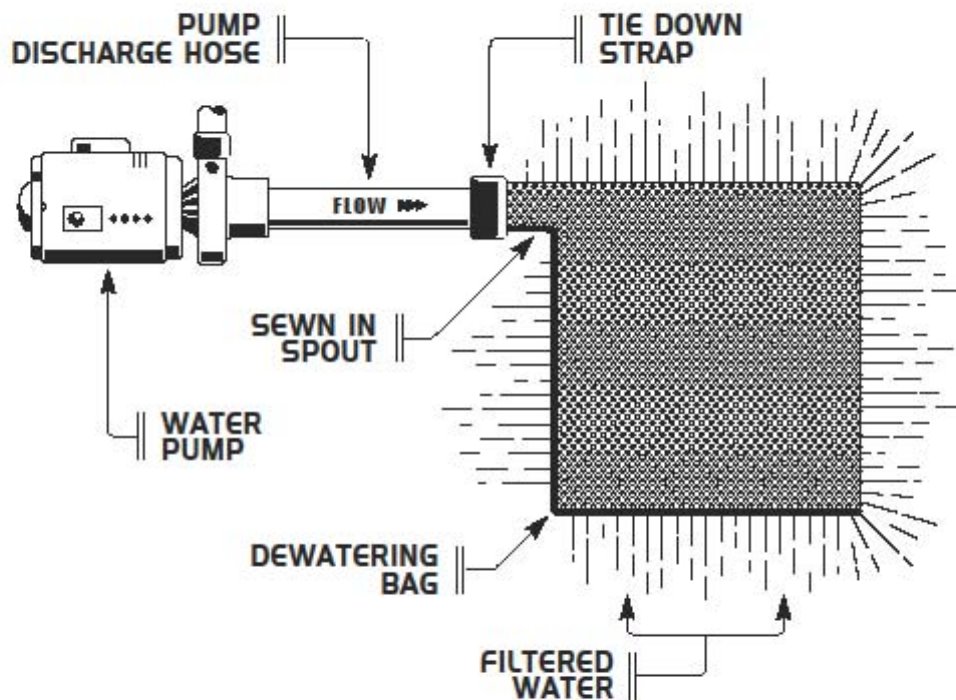


VSU-VAR07: DANDY DEWATERING BAG™

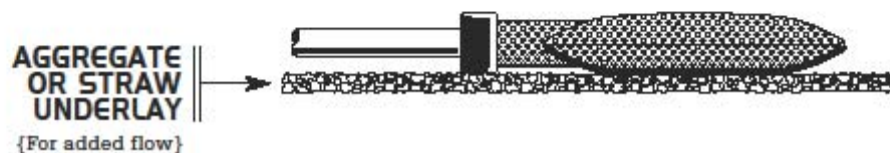


DANDY DEWATERING BAG™

TOP VIEW



SIDE VIEW





DANDY DEWATERING BAG™ PUMPED WATER SEDIMENT CONTROL SYSTEM GUIDE SPECIFICATIONS

PRODUCT: DANDY DEWATERING BAG™
 MANUFACTURER: Dandy Products Inc.
 P.O. Box 1980
 Westerville, Ohio 43086
 Phone: 800-591-2284
 Fax: 740-881-2791
 E Mail: dlc@dandyproducts.com
 Web: www.dandyproducts.com

1.0 Description:

1.1 Work covered under this consists of furnishing, installing, maintaining, and removal of the Dandy Dewatering Bag™. The purpose is to control sediment discharge in any dewatering or pumped water application.

2.0 Material:

- 2.1 The Dandy Dewatering Bag™ shall be a bag sewn of nonwoven fabric **in the U.S.A.** using a double needle machine and a high strength thread.
- 2.2 The Dandy Dewatering Bag™ shall have a spout opening large enough to accommodate at least a four (4) inch pump discharge hose with an attached strap to tie unit closed.
- 2.3 The Dandy Dewatering Bag™ Seams shall be a double stitched “J” type seam with an average wide width strength per ASTM D-4884 of 60lb/in for a 8 oz. fabric manufactured in the U.S.A. with the following characteristics:

PROPERTY	TEST METHOD	UNITS	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	0.9 (205)
Grab Tensile Elongation	ASTM D 4632	%	50
Puncture Strength	ASTM D 4833	kN (lbs)	0.58 (130)
Mullen Burst Strength	ASTM D 3786	KPa (psi)	2618 (380)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.36 (80)
% Open Area	COE – 22125-86	%	N/A
Apparent Opening Size	ASTM D 4751	mm (US Std Sieve)	.0180 (80)
Permittivity	ASTM D 4491	sec ¹	1.2
Permeability	ASTM 4491	cm/sec	0.21
Water Flow Rate	ASTM 4491	l/min/m ² (gal/min/ft ²)	3866 (95)
Ultraviolet Resistance	ASTM D 4355	%	70
Color			Black

3.0 Installation:

3.1 Lifting straps (not included) should be placed under the unit to facilitate removal after use.



- 3.2 Unfold Dandy Dewatering Bag™ on a stabilized area over dense vegetation, straw, or gravel (if an increased drainage surface is needed) or as detailed in plans.
- 3.3 Insert discharge hose from pump into Dandy Dewatering Bag™ a minimum of six (6) inches and tightly secure with attached strap to prevent water from flowing out of the unit without being filtered.

4.0 Maintenance:

- 4.1 Replace the unit when ½ full of sediment or when sediment has reduced the flow rate of the pump discharge to an impractical rate.
- 4.2 Remove and dispose of the sediment in a manner satisfactory to the engineer/inspector or in one of the following ways:

- A) Remove the unit and sediment from environmentally sensitive areas and waterways. At the approved disposal site, slit the unit; remove the sediment and grade smoothly into the existing topography. Dispose of unit no longer in use at an appropriate recycling or solid waste facility.
- B) Bury unit on site; remove any visible fabric and seed.

5.0 Method of Measurement:

- 5.1 The quantity to be paid is for the actual number of Dandy Dewatering Bags™.

6.0 Basis of Payment:

- 6.1 The unit price shall include labor, equipment, and materials necessary to install, maintain, and remove the Dandy Dewatering Bag™.
- 6.2 Payment for the completed work will be made at the contract prices for:

ITEM	UNIT	DESCRIPTION
Dandy Dewatering Bag™	EA	Pumped Water Sediment Control Unit (#_____UNITS)



VSU-VAR08: GUTTER BUDDY™

GUTTERBUDDY™

Curb Inlet Drain Filters

88.2% Reduction in Total Suspended Solids
87.4% Reduction in Hydrocarbons



Gutterbuddy™ Curb Inlet and Ditch Pavement Filters

Gutterbuddy™ Advantages

- Easy to transport, install and maintain
- Keeps out sand, asphalt millings and other fine sediment
- Available in regular and super flow
- Washable
- Reusable

Gutterbuddy™ Curb Inlet Filters

effectively prevent sediment, debris and other pollutants from entering storm water systems. The filtering action lets water freely flow through the fibrous material while stopping sediment and debris. Built-in overflows drain water even more quickly during extreme events.

Long lasting Gutterbuddy™ Curb Inlet Filters are 9" in diameter and can be purchased in 4', 6', 8', 10', 12', 14' and 16' lengths. These inlet filters are flexible enough to conform to any curb radius, allowing for quick and easy installation.

Gutterbuddy™ Ditch Pavement Filters

effectively prevent sediment, debris and other pollutants from entering storm water systems or other areas that ditch pavement is used to channel water runoff. Their filtering action lets water freely flow through the fibrous material while stopping sediment and debris. Each ditch pavement filter comes with a stake hole at each end and has bendable steel in the middle of the fabric that allows it to conform to all types of ditch pavement.

For more information about Gutterbuddy™ Curb Inlet and Drainage Ditch Filters, call your ACF Environmental or SI Geosolutions distributor.

PROBLEM:



Failed Inlet Protection

SOLUTION:



Gutterbuddy™ Curb Inlet Drain Filter





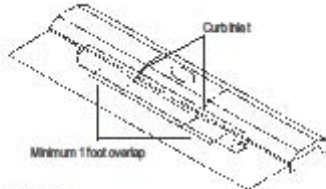
Gutterbuddy™ Specification

For Curb Gutter Storm Drains

1.0 Description

1.1 This work shall consist of furnishing, placing, maintaining and removing the Gutterbuddy™ sediment control device as directed by the engineer and as shown on the contract drawings. The Gutterbuddy™ sediment control system distributed by:

ACF Environmental, Inc.
 2831 Cardwell Road
 Richmond, Virginia 23234
 Phone: 800-448-3636 • Fax: 804-743-7779
 www.acfenvironmental.com



2.0 Materials

2.1 GUTTERBUDDY™

The Gutterbuddy™ shall be synthetic filter manufactured from recycled synthetic fibers.

2.1.1 The Gutterbuddy™ will be manufactured to be 9" in diameter and are available in 4', 6', 8', 10', 12', 14' and 16' lengths and a minimum of twenty-four (24) inches longer than the curb inlet opening. This will allow for sufficient length to cover the inlet with twelve (12) inches beyond the inlet on both ends.



3.0 Construction Sequence

3.1 General

3.1.1 Install the Gutterbuddy™ in front of the curb inlet opening. Each end of the Gutterbuddy™ should overlap the curb inlet approximately 12".

3.1.2 The Gutterbuddy™ should be cleaned if a visual inspection shows silt and debris build up around the Gutterbuddy™.



3.1.3 To remove the Gutterbuddy™, lift out of the opening.

3.1.4 The Gutterbuddy™ is reusable. Once the construction project is complete and it is no longer needed for sediment control, remove, clean and store out of the sunlight until needed on the next project.

3.1.5 Ponding is likely if sediment is not removed regularly. Inspection of Gutterbuddy™ should be on a regular basis and immediately after major rain events.

4.0 Basis of Payment

4.1 The payment for any Gutterbuddy™ used during the construction is to be included in the bid of the overall erosion and sediment control plan and priced by the linear foot.

ACF Environmental		
"Complete Source for Storm Water Solutions"		
 (800) 644-9223 www.thebmpstore.com	Distributed by: <div style="border: 1px solid black; height: 60px; width: 100%;"></div>	 2831 Cardwell Road Richmond, Virginia 23234 (800) 448-3636 • FAX (804) 743-7779 www.acfenvironmental.com



VSU-VAR09: SILT SACK®

SILTSACK

(U.S. Patent #5,575,925)

**Catch Basin
Sediment Capture Device**
Keeping catch basins free of silt!

Now Available
in High Visibility
Yellow

Versatile

Available in 2 styles to meet your needs:

- High flow
- Regular flow

And It's Simple

- Remove drain grate
- Insert Siltsack
- Replace grate to hold Siltsack in position
- Siltsack traps silt
- Remove filled Siltsack easily
- Clean and reuse or simply discard and replace

Are you looking for a cost-effective, easy way to stop silt and sediment from entering catch basins on construction site? Siltsack is the simple and economical solution to prevent clogging of catch basins.

Siltsack is a sediment control device used to prevent silt and sediment from entering your drainage system by catching the silt and sediment while allowing water to pass through freely. Siltsack can be used as a primary or secondary sediment control device to prevent failure of your drainage system due to clogging. It must be maintained on a regular basis to function properly.

Siltsack is available in both high-flow or regular flow. A modified Siltsack is also available with a curb opening deflector attached to prevent sediment and debris from entering through curb openings. Constructed with properties shown on the Specifications page, Siltsack is a quality product designed to save time and money.



Routine inspection of a Siltsack's collected sediment level is important to prevent "ponding" around storm drains. We recommend the following maintenance schedule:

- Each Siltsack should be inspected after every major rain event.
- If there have been no major events, Siltsack should be inspected every 2-3 weeks.
- The yellow restraint cord should be visible at all times. If the cord is covered with sediment, the Siltsack should be emptied.

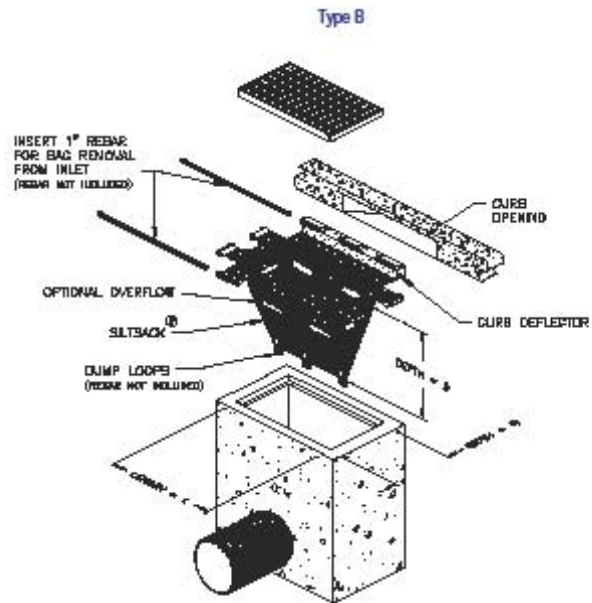
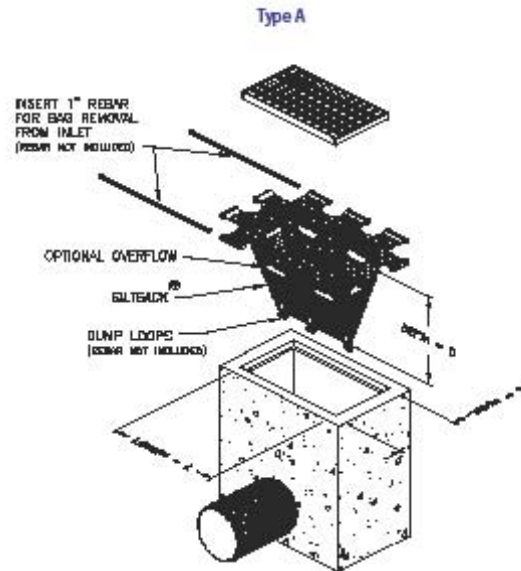


installed Siltsack held in place by grate.



Sediment captured by Siltsack® can easily be removed from the site.

Typical Siltsack® Construction





Siltsack® Specification
Control of Sediment Entering Catch Basins
 (Storm Water Management)

1.0 Description

1.1 This work shall consist of furnishing, installing, maintaining, and removing Siltsack sediment control device as directed by the engineer or as shown on the site drawings. Siltsack sediment control device is manufactured by:

ACF Environmental, Inc.
 2831 Cardwell Road, Richmond, Virginia 23234
 Phone: 800-448-3636 • Fax: 804-743-7779
 www.acfenvironmental.com

2.0 Materials

2.1 Siltsack®

- 2.1.1** Siltsack shall be manufactured from a specially designed woven polypropylene geotextile and sewn by a double needle machine, using a high strength nylon thread.
- 2.1.2** Siltsack will be manufactured to fit the opening of the catch basin or drop inlet. Siltsack will have the following features: two dump straps attached at the bottom to facilitate the emptying of Siltsack; Siltsack shall have lifting loops as an integral part of the system to be used to lift Siltsack from the basin; Siltsack shall have a restraint cord approximately halfway up the sack to keep the sides away from the catch basin walls, this yellow cord is also a visual means of indicating when the sack should be emptied. Once the cord is covered with sediment, Siltsack should be emptied, cleaned and placed back into the basin.
- 2.1.3** Siltsack seams shall have a certified average wide width strength per ASTM D-4884 standards as follows:

Siltsack Style	Test Method	Test Method
Regular Flow	ASTM D-4884	165.0 lbs./in
Hi-Flow	ASTM D-4884	114.6 lbs./in

Siltsack Regular Flow

Property	Test Method	Units	Test Results
Grab Tensile	ASTM D-4832	lbs.	315x300
Grab Elongation	ASTM D-4832	%	15x15
Puncture	ASTM D-4833	lbs.	125
Mullen Burst	ASTM D-3786	P.S.I.	650
Trapezoid Tear	ASTM D-4533	lbs.	120x150
UV Resistance	ASTM D-4355	%	90
Apparent Opening	ASTM D-4751	US Sieve	40
Flow Rate	ASTM D-4491	Gal/Min/FF ²	40
Permittivity	ASTM D-4491	sec ⁻¹	0.55

or SILTSACK® High Flow

Property	Specification	Units	Test Results
Material	Polypropylene		
Weight	5.6 oz/sq yd		
Color	Black		
Grab Tensile Strength	380lbs (530N)	lbs.	255x275
Grab Elongation (Max %)	30%	%	20x15
Trapezoid Tear	120 lbs (250N) Min	lbs.	40x50
Puncture	140 lbs (250N) Min	lbs.	135
Mullen Burst	800 psi	P.S.I.	420
Coefficient of Permeability	0.04 in/sec		
Permittivity	0.3 gal/min/sq ft	sec ⁻¹	1.5
Water Flow Rate	152 gal/min/sq ft	gal/min/ft ²	200
AOS	0.212mm	US Sieve	40
UV Resistance Strength	90%		
Fabric Width	72"		

All properties are Minimum Average Roll Values (MARV)

3.0 Construction Sequence

3.1 General

- 3.1.1** To install Siltsack in the catch basin, remove the grate and place the sack in the opening. Hold approximately six inches of the sack outside the frame. This is the area of the lifting straps. Replace the grate to hold the sack in place.
- 3.1.2** When the restraint cord is no longer visible, Siltsack is full and should be emptied.
- 3.1.3** To remove Siltsack, take two pieces of 1" diameter rebar and place through the lifting loops on each side of the sack to facilitate the lifting of Siltsack.
- 3.1.4** To empty Siltsack, place unit where the contents will be collected. Place the rebar through the lift straps (connected to the bottom of the sack) and lift. This will lift Siltsack from the bottom and empty the contents. Clean out and rinse. Return Siltsack to its original shape and place back in the basin.
- 3.1.5** Siltsack is reusable. Once the construction cycle is complete, remove Siltsack from the basin and clean. Siltsack should be stored out of sunlight until next use.

4.0 Basis of Payment

- 4.1** Payment for all Siltsacks used during construction is to be included in the bid price for the overall erosion and sediment control plan unless unit price is requested. Maintenance of Siltsack also to be included in this price.

**Siltsack is covered by U.S. Patent No. 5,575,925*



Installation and Maintenance



Remove grate from catch basin.



Slide Siltsock® over one side of grate.



Slide Siltsock® over opposite side of grate.



Replace Siltsock® and grate inlet into recess.



Installed Siltsock®.



To remove Siltsock®, clean area around grate and slide rebar through Siltsock® pockets.





Slowly remove Siltsock® from inlet.



Removed Siltsock® is now ready for cleanout.



To clean Siltsock® attach rebar through empty loops at bottom and lift to empty.

<p>ACF Environmental "Complete Source for Stormwater Solutions"</p>		
 2831 Cardwell Road Richmond, Virginia 23234 (800) 448-3636 • FAX (804) 743-7779 www.acfenvironmental.com	Distributed by: <div style="border: 1px solid black; height: 60px; width: 100%;"></div>	 (800) 644-6223 www.thebmpstore.com



Capital Outlay & Facilities
PO Box 9414
VSU, VA 23806
Phone: (804)-504-7500
Fax: (804)-524-5383

VSU-VAR10: AlturnaMats® & VersaMats®

AlturnaMATS®

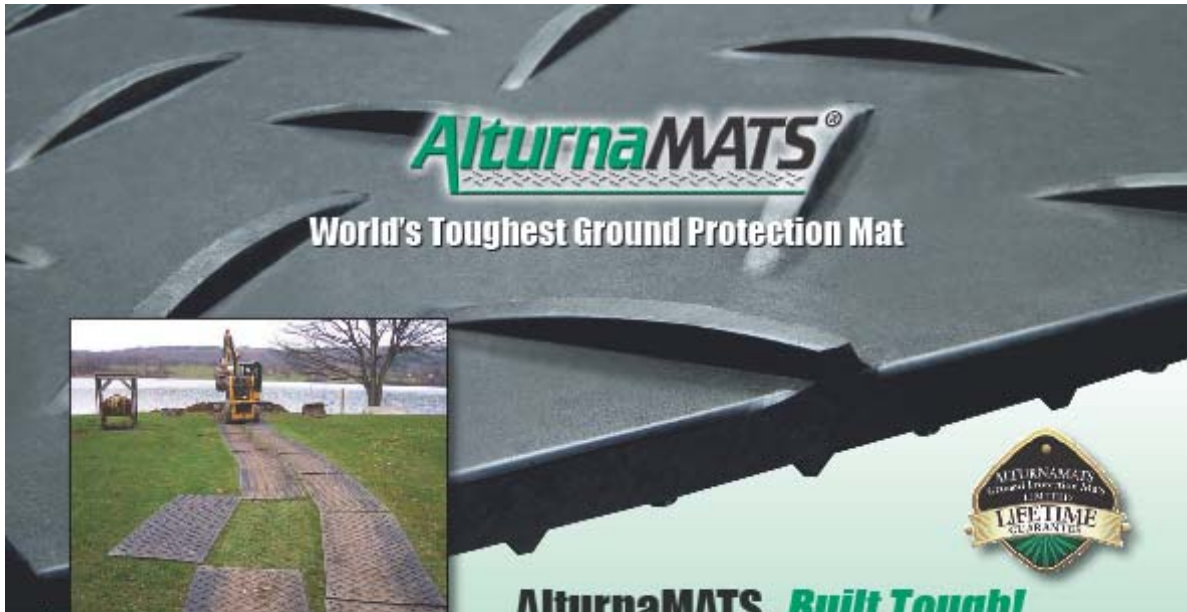
The Original drive-on, ground protection mats



The mats preferred by professionals worldwide

*Protect Your Turf & Save Thousands in
Ground Restoration Costs...*





AlturnaMATS *Built Tough!*

The Original Ground Protection Mats Featuring Maximum Traction Diamond Plate Tread Design

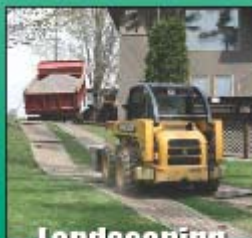
These rugged mats are made of 1/2" thick polyethylene so they are virtually indestructible. They withstand vehicles weighing up to 60 tons, bend but do not break and feature a Limited Lifetime Warranty. AlturnaMATS have been tested in record cold and heat. AlturnaMATS are an environmentally friendly mat as they are made from recycled plastic materials.

With AlturnaMATS, getting stuck is virtually eliminated. They are available smooth on one side or smooth on both sides, ideal for removing dirt or gravel.

- Easily supports 60 ton vehicles
- Rugged 1/2" thick polyethylene
- Bold cleat design for great traction
- Build a roadway or working platform in minutes
- Leave turf smooth, even in soft conditions
- No more splintered, warped, water logged plywood
- Simply hosing down leaves the mats clean
- Available in both black or white mats
- Mats can be locked together with Turn-A-Links forming a continuous roadway
- Limited Lifetime Warranty

Sizes to meet your needs

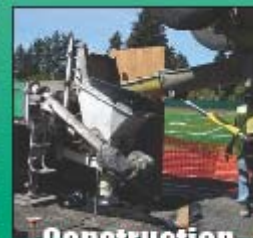
Black	White	Weight
4' x 8'	4' x 8'	86 lbs.
3' x 8'	3' x 8'	64.5 lbs.
3' x 6'	3' x 6'	51 lbs.
2' x 8'	2' x 8'	43 lbs.
2' x 6'	2' x 6'	32.25 lbs.
2' x 4'	2' x 4'	21.5 lbs.



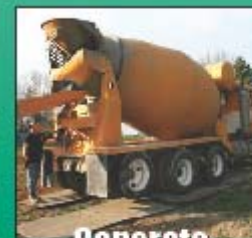
Landscaping



Tree Care



Construction



Concrete



St...



VersaMATS

Most Versatile Mats in the Industry



VersaMATS

Easy to Walk On - Safe to Work On - Great to Drive On
Featuring an Exclusive Slip-Resistant Tread Design

VersaMATS literally are the most versatile ground protection mats in the industry. The flat, slip-resistant tread permits pedestrians to walk safely on the mats, yet they are as rugged as the original AlturAMATS. The reverse side has the same diamond plate tread as AlturAMATS, providing great traction for vehicles.

VersaMATS are also available in white, making them ideal for safe use as long walkways even in darkened conditions. They are also available smooth on one side.

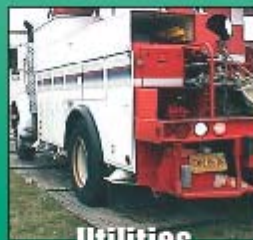
- Leaves turf smooth even in soft soil conditions
- Tough 1/2" thick polyethylene
- Two practical cleat designs... for walking and vehicle traffic
- Withstand 60-ton loads
- Build a temporary roadway or walkway in minutes
- Lock together with Turn-A-Links
- Limited Lifetime Warranty

Sizes to meet your needs

Black	White	Weight
4' x 8'	4' x 8'	86 lbs.
3' x 8'	3' x 8'	64.5 lbs.
2' x 8'	2' x 8'	43 lbs.



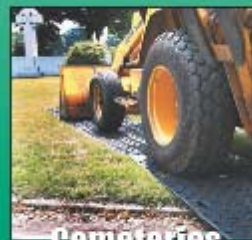
Snow/Slush



Utilities



Golf Courses



Cemeteries



Drilling



AlturnaMATS

One Piece Plastic Outrigger Pads



Safety Tech Pads

Deliver the safety, quality and performance you expect from the industry leader.



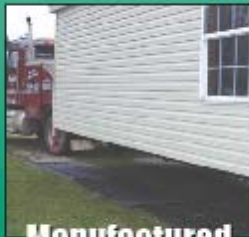
Stock Models

MODEL	LOAD	CAPACITY	WIDTH	LENGTH	HEIGHT	WEIGHT	SQ.IN.
PAD181678	40,000# (1828.412)	18,000# (816.472)	15" (38.1)	15" (38.1)	.75" (1.9)	5.5# (2.5)	225 (146.3)
PAD18181	55,000# (249.848)	30,000# (136.35)	18" (45.7)	18" (45.7)	1" (2.5)	11.0# (5.0)	324 (210.4)
PAD24241	60,000# (272.216)	35,000# (158.75)	24" (60.9)	24" (60.9)	1" (2.5)	20.0# (9.0)	576 (371.3)
PAD24242	62,000# (281.22)	40,000# (181.84)	24" (60.9)	24" (60.9)	2" (5.0)	38.0# (17.2)	576 (371.3)
PAD30301	81,000# (367.24)	41,000# (186.37)	30" (76.2)	30" (76.2)	1" (2.5)	31.0# (14.0)	900 (580.6)
PAD30301	93,000# (421.59)	43,000# (195.0)	36" (91.4)	36" (91.4)	1" (2.5)	45.0# (20.4)	1296 (841.7)
PAD48481	135,000# (612.3)	52,000# (235.8)	48" (121.9)	48" (121.9)	1" (2.5)	80.0# (36.3)	2304 (1498.4)
PAD30302	85,000# (385.8)	43,000# (195.0)	30" (76.2)	30" (76.2)	2" (5.0)	62.0# (28.1)	900 (580.6)
PAD30302	98,000# (444.2)	45,000# (204.1)	36" (91.4)	36" (91.4)	2" (5.0)	90.0# (40.8)	1296 (841.7)
PAD48482	140,000# (635.3)	55,000# (249.1)	48" (121.9)	48" (121.9)	2" (5.0)	160.0# (72.6)	2304 (1498.4)

Safety Tech Pad Features:

- Reliable Load Distribution
- Lightweight
- Safety Texturing
- Memory Recovery
- Lifetime Guarantee

*8" X 18" OUTRIGGER LEG APPLIED UNDER TWO SEPARATE CONDITIONS: 10,000# VERTICALLY & 10,000# WITH A 45° ANGLE
 **HANDLE LOCKED ON WIDTH SIDE OF ALL PADS. PADS 360 SQ. IN. & LARGER HAVE 2 OR MORE HANDLES OPPOSITE EACH OTHER.
 ***CUSTOM SIZE PADS ARE AVAILABLE. REQUIRES A MINIMUM ORDER. LEAD TIME FOR NON-STOCK ITEMS IS 30-45 DAYS.
 KEY: C = CENTIMETERS; KG = KILOGRAMS; CT = SQUARE CENTIMETERS



Manufactured Housing



Recreation Areas & Events



Trenching



Septic Pumping



AlturnaMATS Accessories

Turn-A-Links

Single Turn-A-Link



Steel links lock mats together to form a semi-permanent, yet portable, continuous roadway, walkway or working platform.

Double Turn-A-Link



Galvanized Turn-A-Link: Single or Double



The same steel material, but with a galvanized coating: easier to locate & harder to rust.

		Item #	Ship Wt.
Round Links	Single	RTL-S-G	8 oz.
	Double	RTL-G-G	20 oz.
Flat Links	Single	FTL-S-G	8 oz.
	Double	FLT-D-G	20 oz.
EZ Links	Single	EZL-S	4 oz.
	Double	EZL-D	6 oz.

Handi-Hooks



AlturnaMATS' Handi-Hooks make moving mats easier, even in wet areas. Made of steel rod, painted white.

Length	Weight
3'	2.5 lbs.
(91.44 cm)	(1.13 kg)

E-Z Link System

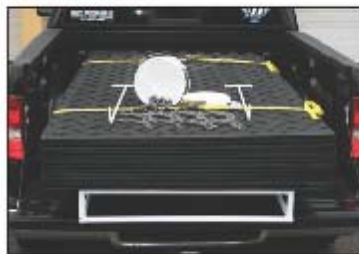


E-Z Links are a quick & convenient linking system for the AlturnaMATS VersaMATS. The links are available in single or double, & are suitable for pedestrian applications as well as movement of light, compact equipment (less than 12,000 GVW) when on stable ground conditions.

Single E-Z Link



MAT-PAK



This complete package is the handy way to transport and store your AlturnaMATS.

- Consists of:
- 12 Mats (4' x 8' or 3' x 8')
 - 1 Metal storage, skid rack
 - 20 Single Turn-A-Links
 - 2 Handi-Hooks
 - 2 Ratchet Straps

MAT-PAK	Item No.	Weight
Original Diamond Plate		
Black - 4' x 8' Package	AMCP4	1126 lbs.
Black - 3' x 8' Package	AMCP3	868 lbs.
White - 4' x 8' Package	WMCP4	1126 lbs.
White - 3' x 8' Package	WMCP3	868 lbs.
VersaMATS		
Black - 4' x 8' Package	VMCP4	1126 lbs.
Black - 3' x 8' Package	VMCP3	868 lbs.
White - 4' x 8' Package	VMCP4	1126 lbs.
White - 3' x 8' Package	VMCP3	868 lbs.



Phone: 888-544-6287 • Fax: 814-827-2903 • E-mail: sales@alturnamats.com

www.alturnamats.com

AHA - 408



AlturMATs®

"AlturMATs, Your Single Source for Professional Ground Protection Mats."

AlturMATs & VersaMATs each leave turf smooth, even under heavy vehicle traffic. No costly turf repair bills and you'll Never Get Stuck Again.

AlturMATs, Inc. markets two different ground mats described in this brochure...

- **AlturMATs:** Featuring a bold diamond plate tread for maximum traction.
- **VersaMATs:** Featuring a flat, slip-resistant tread on one side designed for pedestrian traffic, and the bold diamond plate tread on the other side for vehicle traffic.

These mats virtually eliminate damage to lawns and landscaped areas throughout the world...from North America, Asia, Australia, Europe, to even Antarctica. These rugged mats are the popular choice among professionals. They are easy to use, lock into place to form a continuous, solid roadway or work platform

and they last for years. They are unequalled for quality and performance under the most hazardous conditions.

Each mat can be used in a broad variety of applications such as construction, golf courses, utilities, landscaping, tree care, cemeteries, drilling, sewage...wherever saving the costs of ground restoration is a factor. And they are great to save heavy vehicles from getting stuck in mud.

AlturMATs and VersaMATs provide locking links designed of steel to fit into holes on each end of the mats, locking them end-to-end to create a continuous roadway, or you can easily create a large platform for working vehicles.

Don't Get Stuck in a Rut

Now there is no reason to create ruts such as shown here after a stump traversed this front lawn. The owner had the ruts repaired at a cost of \$1,800 and needless to say, never used the tree removal company again.



www.alturmat.com



Capital Outlay & Facilities
PO Box 9414
VSU, VA 23806
Phone: (804)-504-7500
Fax: (804)-524-5383



APPENDIX J

RECORD OF LAND DISTURBING ACTIVITIES



Capital Outlay & Facilities
 PO Box 9414
 VSU, VA 23806
 Phone: (804)-504-7500
 Fax: (804)-524-5383

07/01/16-06/30/17 Planned and Ongoing Land Disturbing Activities

Project Name	Project Location	Project Description	Estimated Disturbed Area Acreage	Approximate Start Date	Approximate Completion Date	On-site Project Manager Name	On-site Project Manager Contact Information	Responsible Land Disturber Permit Number	Operator Name	VAR10 Registration Number
Drainage Improvements/ Stormwater Master Plan	VSU Campus	Install drainage improvements and water quality improvements proposed in the Stormwater Master Plan and related to the implementation of the Campus Master Plan 20/20 Vision	276.7	July 1, 2012	June 30, 2019, with renewal anticipated	As noted by project below	As noted below by project	As noted by project below	Jonathan Taylor 804-504-7500	New VAR10-9268 Old VAR10-13-100047
Lockett Hall Renovation	Myster Macklin Street	Perform a complete renovation to the existing Lockett Hall Academic Building	1.42	March 15, 2015	August 1, 2016	Charlie Bradley and Beth Heath Brubaker	Charlie 804-892-3860 & Beth 804-614-0751	Thomas Stading 00848 & Bernard Taylor 01351	Beavers Excavating and WM Jordan	Has coverage under: New VAR10-9268 Old VAR10-13-100047
Trunk Storm Extension Phase III & IV	VSU Campus	Install a new storm line from Barnes Street north of Trinkle Hall to Daniel's Gym where the line will tie into the Phase I&2 Trunk Line.	3.56	TBD	TBD	TBD	TBD	TBD	TBD	Will have coverage under: New VAR10-9268 Old VAR10-13-100047
Puryear Hall Demolition	Jackson Place	Demolish Puryear Hall and install a band practice facility	1.30	TBD	TBD	TBD	TBD	TBD	TBD	Will have coverage under: New VAR10-9268 Old VAR10-13-100047