Chapter 10 - Erosion and Sediment Control

TABLE OF CONTENTS

CHAPTER 10 - EROSION AND SEDIMENT CONTROL 10-1

10.1 Introduction 10-1
10.1.1 Objective 10-1
10.1.2 Principal Factors Influencing Erosion 10-1
10.1.2.1 Soil Characteristics 10-1
10.1.2.2 Vegetative Cover 10-2
10.1.2.3 Topography 10-2
10.1.2.4 Climate 10-2

10.2 Design Policy 10-3
10.2.1 Federal Policy 10-3
10.2.2 State Policy 10-3
10.2.2.1 DEQ Certifications 10-5
10.2.2.2 VDOT Training/Certifications 10-7
10.2.2.3 Policy/General Guidelines 10-8
10.2.2.4 More Stringent ESC Criteria 10-9
10.2.2.5 Chesapeake Bay Preservation Areas 10-9

10.3 Documentation 10-10
10.3.1 Minimum Requirements for All ESC Plans 10-10
10.3.1.1 Sequence of Construction 10-10
10.3.1.2 Limits of Disturbance 10-11
10.3.1.3 Contents of ESC Plan 10-13
10.3.2 ESC Plan Development Process 10-13
10.3.2.1 Concurrent Engineering Process for Plan Development (CEP) 10-13
10.3.2.2 Plan Development Process for “No Plan” Projects and Special Advertisement and Award Process (SAAP) Projects 10-14
10.3.2.3 Plan Development Process for State Force Construction Projects 10-16
10.3.2.4 Plan Development Process for Minimum Plan and Standard Plan Construction Projects 10-17
10.3.3 SWPPP Applicability and Requirements 10-20
10.3.4 SWPPP Certification 10-21
10.3.5 SWPPP General Information Sheets 10-22
10.3.6 SWPPP Documents 10-24
10.3.7 SWPPP Components 10-25
10.3.8 Computations 10-30
10.3.9 Field Revisions and Evaluations 10-30
10.3.10 Maintenance 10-31
10.3.11 Standard Forms 10-33

10.4 References 10-34

List of Appendices

Appendix 10B-1 Erosion and Sediment Control Plan Details

Appendix 10C-1 Erosion and Sediment Control Plan – Example No Plan Project

10.2.2.4 More Stringent ESC Criteria

When requested by DEQ, and where deemed practical by VDOT, projects located in jurisdictions with more stringent ESC technical criteria than that contained in the Virginia ESC Law and Regulations shall be designed to meet the more stringent criteria. The local criteria may be part of a locally adopted State approved program or may be part of a watershed initiative related to the protection of a water supply, or a TMDL implementation plan. It will be the responsibility of the ESC Plan Designer to demonstrate, through appropriate analysis and documentation, that the local requirements are not practical for the project under consideration. Early coordination should occur between the ESC Plan Designer and the local ESC program authority in order to identify any such requirements.

10.2.2.5 Chesapeake Bay Preservation Areas

Any maintenance or construction activity disturbing 2,500 square feet or greater within the area of Tidewater, Virginia, as defined in the Virginia Chesapeake Bay Preservation Act, must have a project specific ESC Plan developed and implemented in accordance with the VDOT's Approved ESC Standards and Specifications. Tidewater, Virginia is defined as the Counties of Accomack, Arlington, Caroline, Charles City, Chesterfield, Essex, Fairfax, Gloucester, Hanover, Henrico, Isle of Wight, James City, King George, King and Queen, King William, Lancaster, Matthews, Middlesex, New Kent, Northampton, Northumberland, Prince George, Prince William, Richmond, Spotsylvania, Stafford, Surry, Westmoreland and York and the Cities of Alexandria, Chesapeake, Colonial Heights, Fairfax, Falls Church, Fredericksburg, Hampton, Hopewell, Newport News, Norfolk, Petersburg, Poquoson, Portsmouth, Richmond, Suffolk, Virginia Beach and Williamsburg.

The required contents of a SWPPP for those land disturbance activities requiring coverage under the Construction General Permit are found in Part II of the Construction General Permit Regulation (9VAC25-880-70).

Except for the items dealing with the post construction stormwater management requirements, some of the items that must be addressed in the SWPPP (Sections I and II) for land disturbance activities requiring Construction General Permit coverage must also be addressed for those land disturbance activities that do not require Construction General Permit coverage but do require an ESC Plan in accordance with the requirements of the Virginia ESC Law and Regulations.

When the land-disturbing activity requires coverage under the Construction General Permit, the SWPPP must also include a copy of the Construction General Permit, the Construction General Permit Registration Information form LD-445, the Construction General Permit Contact Information form LD-445A, and the Construction General Permit coverage letter received from DEQ showing a project specific permit number.

The SWPPP for the RLDA is to include any onsite support facilities used exclusively for the RLDA (e.g., borrow and disposal sites, the contractor's storage and fueling areas, etc.) (See the current version of IIM-LD-242 for guidance related to SWPPP information for support facilities).

For those RLDAs requiring coverage under the Construction General Permit, Part II A.8 of the Construction General Permit Regulation (9VAC25-880-70) requires the SWPPP to be signed by a person so identified in Part III K.2 of that same document. For a State Agency, that person is the principal executive officer or designee. For VDOT projects, that authority has been delegated for each specific RLDA as listed on the SWPPP General Information Sheet I, Note 11, and acknowledge on Form LD-445H.

Many of the items required in the SWPPP are inherently contained in the construction plans (or other such documents) by means of the erosion and sediment control plans and the post construction stormwater management plans and in other VDOT documents such as the R&B Standards and Specifications, which can be incorporated into the SWPPP by reference.

10.3.4 SWPPP Certification

For those land-disturbing activities requiring coverage under the Construction General Permit, the Construction Permit requires that the SWPPP for any support facilities be included in the permit coverage for the RLDA be developed and included with the SWPPP for the RLDA prior to issuance of permit coverage.

On most VDOT land-disturbing activities, it is the responsibility of the contractor or other such person performing the land-disturbing activity to identify the location of the support facilities and provide the SWPPP for such to the RLD, District Drainage Engineer and District VPDES Coordinator for review and approval (see the current version of IIM-LD-242 for further discussion on support facilities).

Since the Construction General Permit coverage for VDOT RLDAs is normally obtained prior to the identification of the support areas, a mechanism is required whereby the project files can be documented, and DEQ can be assured, that all of the information for the support facilities, as well as other required information not available at the time the Construction General Permit coverage for the RLDA is applied for, has been, or will be, included in the SWPPP for the RLDA. The mechanism to be used for this purpose will be SWPPP Certification on the SWPPP General Information Sheet*.

The DEQ has approved the signature of the delegated authority on the SWPPP General Information Sheet, Section I Note 11 as acknowledged on form LD-445H as meeting the SWPPP signatory requirements contained in Part II A.8 of the Construction General Permit Regulation (9VAC25-880-70).

10.3.5 SWPPP General Information Sheets

In order to provide a clear understanding of what is required in a SWPPP and to provide a reference as to where those items are located within the contract/construction documents, a set of SWPPP General Information Sheets has been developed. The SWPPP General Information Sheets provide a summary of the information required in Part II of the Construction General Permit Regulation (9VAC25-880-70) and, where not included on the General Information Sheets, provide a reference to where that information can be found within the contract/construction documents for the RLDA (e.g., the construction plans or other such documents, the VDOT R&B Standards and/or Specifications, contractor supplied documents, etc.).

The SWPPP General Information Sheets incorporate many of the notes previously included in the ESC General Notes as well as those necessary to identify and describe the post construction stormwater management plan for the RLDA (if applicable).

The SWPPP General Information Sheets are to be included in the construction plan set (or other such documents) for all land disturbance activities requiring Construction General Permit coverage and/or an erosion and sediment control plan. Completion and inclusion of the SWPPP General Information Sheets in the contract documents satisfies one of the many requirements contained in the Construction General Permit. Those persons who oversee or perform activities covered by the Construction General Permit must review and understand all of the conditions and requirements contained within that permit.

The SWPPP General Information Sheets are updated from time to time to clarify and/or include additional requirements as a result of changes to the VSMP Regulation, the Construction General Permit or VDOT's Approved ESC and SWM Standards and Specifications. Prior to finalization of the construction plans or other such documents for a proposed land disturbance activity, the Project Manager or other such project authority is to verify that the most recent SWPPP General Information Sheets are included.

*Rev. 7/19