COMMONWEALTH of VIRGINIA

Training Notebook
Erosion and Sediment Control In Virginia for Plan Reviewers

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DCR
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CONSERVING VIRGINIA'S NATURAL AND RECREATIONAL RESOURCES

NOTE: This notebook is designed to be used in conjunction with the *1992 Virginia Erosion and Sediment Control Handbook.*

INTRODUCTION

This notebook contains the basis of a structured training program for people with an interest in erosion and sediment control plan review in Virginia. This course is intended to train people responsible for reviewing and preparing Erosion and Sediment Control (ESC) plans. The subject matter in this course will help those persons seeking certification as Plan Reviewers prepare for the exam. This course may also be used as a review course for engineers who design erosion and sediment control plans.

Those interested in attending this course should have experience in plan review, knowledge of the principles of hydrology, and an understanding of the ESC Law and Regulations. A minimal proficiency in math is required. Attendees must also be familiar with the standards and specifications contained in the *Virginia Erosion and Sediment Control Handbook, 1992 Edition* (VESCH). Appropriate recipients of this training would include local government officials (who review plans), employees of Soil and Water Conservation Districts who are involved with erosion and sediment control, local government employees who are involved in erosion and sediment control, consulting engineers, land surveyors, and landscape architects.

This course covers ESC plan compliance with the Virginia Erosion and Sediment Control Law and Regulations; the legal and administrative aspects of ESC plan review; technical training on plan preparation, review, and implementation; and introduction to stormwater management. Actual technical training in stormwater management is provided in a separate course offered periodically by the Division of Soil and Water Conservation (Stormwater Management in Virginia). Those who design or review engineering calculations for stormwater management facilities are encouraged to pursue further training.

This course book is not a self-contained program. It is intended to be used in conjunction with the VESCH. Copies of the VESCH are available from the Division of Soil and Water Conservation. Questions concerning any aspect of this training program or the state erosion and sediment control program in general may be addressed to:

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UNIT I
GENERAL EROSION AND SEDIMENT CONTROL (ESC) PLANNING

INTRODUCTION

Erosion and sediment control planning should be an integral part of the site planning process, not an afterthought. The potential for soil erosion should be a significant consideration when deciding upon the layout of buildings, parking lots, roads, and other facilities. Costly erosion and sediment control measures can be minimized if the site design can be adapted to existing site conditions and good conservation principles are used.

LEARNING OBJECTIVES

1. To understand the development and implementation of an erosion and sediment control plan for a construction project.

2. To understand the plan submittal process outlined in the Virginia Erosion and Sediment Control Law (VESCL).

INSTRUCTION ELEMENTS

I.1 GENERAL GUIDELINES

What is an Erosion and Sediment Control Plan?

Simply stated, an erosion and sediment control plan is a document that describes the potential for erosion and sedimentation on a construction project. The plan also explains and illustrates the measures that are to be taken to control those problems. The plan has a written portion known as the narrative and an illustrative portion known as the plan.

The erosion and sediment control plan should be an independent document from the working or construction drawings of the project. While it is a good idea to include erosion and sediment control standards and specifications in contract documents, the erosion and sediment control plan itself should contain notes to ensure that the controls are installed, inspected, and maintained properly.

I.2 THE PLANNING PROCESS

What is an "Adequate" Plan?

An adequate plan is one that meets the Minimum Standards outlined in the Virginia Erosion and Sediment Control Regulations and the local program guidelines. An erosion and sediment control plan must contain sufficient information to satisfy the plan-approving authority and to ensure that the problems of erosion and sedimentation have been adequately addressed for a proposed project. The length and complexity of the plan should be commensurate with the size of the project, the severity of site conditions, and the potential for off-site damage.

Obviously, a plan for constructing a house on a single subdivision lot does not need to be as complex as a plan for a shopping center. Also, plans for projects undertaken on flat terrain will generally be less complicated than plans for projects constructed on steep slopes where erosion potential is greater. The greatest level of planning and detail should be evident on plans for projects that are directly adjacent to flowing streams, dense population centers, or high value properties where damage may be particularly costly or detrimental to the environment.

The primary guidelines for determining the adequacy of a plan are the Virginia Erosion and Sediment Control Regulations (VESCR). Each of the Minimum Standards in Section §4VAC50-30-40 of the Regulations should be satisfied in the ESC plan, unless a specific variance is granted by the plan approving authority. Variance procedures are contained in Section §4VAC50-30-50 of the Regulations. Maintenance and inspection requirements are contained in Section §4VAC50-30-60 of the Regulations. [The Minimum Standards are listed in the *Virginia Erosion and Sediment Control Handbook, 1992 Edition* (VESCH) at the beginning of Chapter 3, and the law and regulations can be found in their entirety in Chapter 8 of the VESCH.]

As a guide to ESC plan content, the site planners and plan reviewers should use the "Checklist for Plan Preparation." This checklist can be found in Chapter 6 and in Appendix 7A-2 of the VESCH. (A copy of this checklist is contained in the course book; the narrative portion appears at the end of Unit II and the site plan portion appears at the end of Unit III). If the proposed project is subject to local program jurisdiction, the plan preparer should contact the locality since some localities have adopted more stringent requirements.

I.3 PLAN SUBMITTAL AND REVIEW

Who is Responsible for Preparing a Plan?

The owner or lessee of the land being developed is responsible for preparing and submitting the plan. The owner or lessee may designate someone (e.g., an engineer, architect, contractor, etc.) to prepare the plan, but the owner or lessee retains the ultimate responsibility.

What is the Plan Submittal Process?

Requirements

VESCL Section §10.1-563(A): ... no person may engage in any land-disturbing activity until he has submitted to the district or locality an Erosion and Sediment Control Plan for the land-disturbing activity and the plan has been reviewed and approved by the plan-approving authority.

VESCL Section §10.1-563(F): ... the preparation, submission, and approval of an erosion and sediment control plan shall be the responsibility of the owner.

Discussion

The following items are recommended to help streamline the plan submittal process:

1. The public should be informed of the requirements for plan submission. It is recommended that the plan-approving authority prepare a brochure or handout that lists the procedures necessary for submitting a land development plan for approval. The information provided should include names, addresses, and telephone numbers of local government departments involved, number of plans to be submitted, time required for review, and a schedules of fees (see Appendix 7A-1 of the VESCH).

2. Provide information on how to obtain copies of the appropriate handbooks or other technical information such as the VESCH or local ESC handbook. Include a "Checklist for Plan Preparation" (Appendix 7A-2 of the VESCH) in the materials.

3. When the applicant first contacts the locality concerning a proposed development, a screening form may be used to determine whether an ESC plan is required for the project site (Appendix 7A-3 of the VESCH).

4. At the time of plan submission, the applicant should fill out an application for a land-disturbing permit or an application for plan approval if the locality does not issue such a

permit. This application will eventually constitute an agreement between the applicant and the locality. The following items should be included in the application:

a. Identification of the landowner of record and the person responsible for carrying out the plan.

b. Certification that the plan will be carried out as approved.

c. A statement granting right-of-entry to the locality's inspectors or other personnel concerned with the plan (Appendix 7A-4 of the VESCH).

5. At the time of plan submission, the ESC plan should be dated, stamped, or marked with the date received to establish the 45-day deadline.

What is the Plan Review and Approval Process?

Requirements

VESCL Section §10.1-563(B): ... The plan-approving authority shall review the conservation plans submitted to it and grant written approval within forty-five days of the receipt of the plan if it determines that the plan meets the requirements of the Board's regulations. ...

When a plan is determined to be inadequate, written notice of disapproval stating the specific reasons for disapproval shall be communicated to the applicant within 45 days. The notice shall specify such modifications, terms, and conditions that will permit approval of the plan. If no action is taken by the plan-approving authority within the time specified above, the plan shall be deemed approved and the person authorized to proceed with the proposed activity.

Discussion

1. When reviewing a plan, use the "Checklist for Plan Preparation" (Appendix 7A-2 of the VESCH) to be sure that no items are overlooked.

   Note: A site plan without a narrative is usually unacceptable. The narrative may be on separate sheets or may be included as notes on the site plan. Construction specifications usually are not acceptable as a substitute for the ESC Narrative.
2. Plan review by more than one reviewer is encouraged. Utilize the expertise and knowledge of other departments or staff. Make plans available to other reviewers quickly and streamline procedures to facilitate the 45-day deadline.

3. On-site inspection of the proposed project location (pre-approval site visit) should be an integral part of the review process.

4. If the plan is adequate, the plan sheet should be stamped or marked "APPROVED," signed, and dated.

5. If the plan is inadequate, the applicant must be notified in writing within 45 days with the changes that should be made to render the plan acceptable. To expedite the review and any subsequent revisions, the plan reviewer may prefer to discuss the plan with the applicant. **However, the law requires a written communication either approving or disapproving the plan with reasons for disapproval within 45 days.**

6. Consider developing a procedure to abbreviate the re-submittal process so that the plan can reach the reviewer quickly and not delay the applicant for an undue period of time.

   Note: At the time of re-submission, another 45-day review period begins.

7. Appropriate fees may be charged to cover the costs of issuing the permit, reviewing the plan, and inspecting the project. The VESCL was updated to allow fees to be set by the program authority which are commensurate with services rendered (Section §10.1-562(I), 1996). Many localities charge a fee that varies based on the size of the project.

What is the Variance Procedure?

Requirements

VESCR Section §4VAC50-30-50: The plan-approving authority may waive or modify any of the regulations that are deemed inappropriate or too restrictive for site conditions, by granting a variance. A variance may be granted under these conditions:

1. At the time of plan submission, an applicant may request a variance to become part of the approved erosion and sediment control plan. The applicant shall explain the reasons for requesting variances in writing. Specific variances which are allowed by the plan-approving authority shall be documented in the plan.
2. During construction ... the plan-approving authority shall respond in writing either approving or disapproving such a request. If the plan-approving authority does not approve a variance within 10 days of receipt of the request, the request shall be considered to be disapproved....[Note: Following disapproval, the applicant has the option of re-submitting the variance request with additional information.]

3. The plan-approving authority shall consider variance requests judiciously, keeping in mind both the need of the applicant to maximize cost effectiveness and the need to protect off-site properties and resources from damage.

   Note: The minimum standards contained in the VESCR (or other more stringent regulations adopted by the locality) should be satisfied on all ESC plans. These regulations also apply to any land-disturbing activity which might evolve from a construction project (e.g., borrow site, disposal areas, etc.).

Discussion

1. Variances must be requested in writing with reasons to support the variance. The state "Minimum Standards" in one sense could actually be called "General Standards" because local officials have the authority to waive or modify any of the standards on a given project if they are satisfied with the justification given by the applicant. When developing the "Minimum Standards," the Department of Conservation and Recreation realized that no single set of standards would be applicable or appropriate for all site conditions; therefore, a variance procedure was built into the program to provide flexibility. Application of the variance procedure is explained in the state handbook.

   It is important to understand that the variance procedure is not automatic. Just because a plan is approved does not mean that unsatisfied "Minimum Standards" are automatically waived. In order to be valid, a variance must be requested in writing, and approval must be documented. A variance can be made part of the original approved plan. However, the reasons for the variance request must be specifically explained in the plan. Variances requested after plan approval must be requested and approved in writing. It is not necessary to request variances to standards that are not applicable to a project. For example, MS-10, Storm Sewer Inlet Protection, does not need to be officially waived if there are no stormwater inlets on the project.

   The "Minimum Standards" are intended to provide local officials with the guidance and authority they need to ensure adequate erosion and sediment control on all land-disturbing projects. The variance procedure provides local officials with the authority to accept alternative solutions that may be more cost-effective or appropriate for site conditions. **It is the responsibility of each local official to balance the need for environmental protection with the need of land developers to develop land at a reasonable cost.**

I.4 PLAN REVIEW CERTIFICATION

Who is Qualified to Review an Erosion and Sediment Control Plan? I.4

Requirements

VESCR Section §4VAC50-50-40(A-2), Certificates of Competence, Plan Reviewer — The person or persons who review conservation plans to be approved by the program authority.

VESCR Section §4VAC50-50-40(B), Any person employed as a plan reviewer who is licensed as a professional engineer, architect, certified landscape architect, or land surveyor pursuant to Article 1 (§54.1-400 et seq.) of Chapter 4 of Title 54.1 shall qualify as a certified plan reviewer and will not require a certificate of competence from the Board.

VESCR Section §4VAC50-50-10 Definitions — "certified plan reviewer" means an employee or agent of a program authority who: (i) holds a certificate of competence from the Board in the area of plan review; or, (ii) is enrolled in the Board's training program for plan review and successfully completes such a program within one year after enrollment, or (iii) is licensed as a professional engineer, architect, certified landscape architect, or land surveyor pursuant to Article 1 (§54.1-400 et seq.) of Chapter 4 of Title 54.1 of the Code of Virginia.

Discussion

Every local program is required to review plans in writing within 45 days of receipt. This written review should be based on the "Checklist for Plan Preparation." The formal ESC review must be completed by an employee or agent of the plan-approving authority who satisfies the requirements of a certified plan reviewer. It should be noted that in some localities, other ESC and planning personnel may review and comment on the plans, in addition to this formal ESC review. This documentation should be placed in the project file.

What does by "Plan-Approving Authority" Mean?

Requirements

VESCL Section §10.1-560 Definitions — "plan-approving authority" means the Board, the program authority, or a department of a program authority responsible for determining the adequacy of a conservation plan submitted for land-disturbing activities on a unit or units of lands and for approving plans.

Discussion

The plan-approving authority must be designated in the local erosion and sediment control ordinance. This is usually included in the definitions section of the ordinance. The **department** or **position title** that is responsible for determining the adequacy of a conservation plan submitted for land-disturbing activities on a unit or units of lands and for approving plans, must be designated.

It should be noted that the plan-approving authority does not have to be a certified plan reviewer. The Erosion and Sediment control plan must be reviewed by a certified plan reviewer or a person who qualifies as a certified plan reviewer. The plan review should be completed using the plan review checklist and written comments must be provided approving or disapproving this plan. This letter should be sent to the plan-approving authority. It is then up to the plan-approving authority to approve or disapprove the ESC plan as submitted based upon this review. The plan-approving authority needs to approve the plan in writing, with the written comments and the checklist attached, within the 45-day time limit.

What is an "Agreement in Lieu of a Plan" ?

Requirements

VESCL Section §10.1-560 Definitions — "agreement in lieu of a plan" means a contract between the plan-approving authority and the owner which specifies conservation measures which must be implemented in the construction of a single-family residence; this contract may be executed by the plan-approving authority in lieu of a formal site plan.

Discussion

An "agreement in lieu of a plan" is designed for and applies to the individual homeowner. It is not meant for large land-disturbing activities or developments. It was designed to assist the individual in deferring the expense of contracting an outside engineering firm to design and submit a formal ESC plan. This is not appropriate for churches, small businesses, or multi-home developments.

It is up to the program authority to determine which individual home sites may qualify for an "agreement in lieu of a plan." Obviously, if the construction of an individual dwelling is going to disturb an extensive area, for instance a long entrance road, or if the area is in an environmentally sensitive area (located near a live stream or other body of water), then the program authority may require a formal ESC plan.

It should be emphasized that an "agreement in lieu of a plan" does not excuse the owner from complying with the same laws and regulations inherent to a formal ESC plan. "Agreement in lieu of a plan" projects are also subject to the same monitoring and inspection requirements as larger ESC projects.