

Plan Reviewer for Stormwater Management

Participant Guide



Training provided by the Virginia Department of Environmental Quality
Office of Training Services

Version 3.1

AGENDA

Plan Reviewer for Stormwater Management

(3 Day Class – Time spent on each section listed may vary)

Agenda – Day 1

- 8:30 – 9:30 Module 1 – Introduction to the Virginia Stormwater Management Program
- 9:30 – 10:30 Module 2 – The VSMP Process and Plan Review
- 10:30 – 10:45 Break
- 10:45 – 12:30 Module 3 – Stormwater Engineering Concepts
- 12:30 – 1:30 Lunch (on your own)
- 1:30 – 3:30 Module 4 – Virginia Runoff Reduction Method
- 3:30 – 4:30 *Exercise 1 – Runoff Reduction Method*
- 4:30 – 5:00 Questions and Answers

Agenda – Day 2

- 8:30 – 9:45 Module 5 – Stormwater Quantity Requirements
- 9:45 – 10:00 Break
- 10:00 – 11:00 *Exercise 2 – Energy Balance*
- 11:00 – Noon Module 6 – Overview of 15 Non-Proprietary BMPs
- Noon – 1:00 Lunch (on your own)
- 1:00 – 2:00 Module 6 – Overview of 15 Non-Proprietary BMPs (continued)
- 2:00 – 2:45 *Exercise 3 – BMP Sizing*
- 2:45 – 4:15 Module 7 – Evaluating Water Quality Compliance
- 4:15 – 4:45 *Exercise 4 – Water Quality Compliance*
- 4:45 – 5:00 Questions and Answers

Agenda – Day 3

8:30 – 10:00 Module 8 – Evaluating Water Quantity Compliance

10:00 – 10:15 Break

10:15 – 12:30 *Exercise 5 – Example Site Plan Review*

12:30 – 1:30 Lunch (on your own)

1:30 – 2:30 Module 9 – Final Acceptance

2:30 – 3:30 Wrap-up/Questions & Answers/Additional Resources

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Module 2: The VSMP Process and Plan Review

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Module 5: VSMP Water Quantity Requirements

Module 6: Overview of 15 Non-Proprietary BMPs

Module 7: Evaluating Water Quality Compliance

Module 8: Evaluating Water Quantity Compliance

Module 9: Final Acceptance

Appendices

Exercise Instruction Sets

Resources and References

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Laws and Regulations

Acronyms and Definitions

BMP: Best Management Practice

BMP Clearinghouse: Virginia Stormwater BMP Clearinhouse, vwrrc.vt.edu/swc/

Construction GP: General VPDES Permit for Discharges of Stormwater from Construction Activities (9VAC25-880)

CN: Curve Number

DEQ: Virginia Department of Environmental Quality

ESC: Erosion and sediment control

FEG: Federal effluent guidelines

LDA: Land-disturbing activity

MS4: Municiple separate storm sewer system

Permanent BMP: Permanent best management practice or stormwater management facilities as defined in (9VAC25-870-10)

P2 plan: Pollution prevention plan

Regulated LDA: Land-disturbing activity of one acre or more, 2,500 square feet in all areas of jurisdictions designated as subject to the Chesapeake Bay Preservation Act, part of a larger common plan of development or sale that is one acre or more, or a more stringent area as established in local ordinance, that must follow the provisions of the VSMP Regulations and obtain state permit coverage, where applicable, and VSMP authority permit coverage.

RLD: Responsible land disturber

RRM: Runoff Reduction Method

SWM: Stormwater management

SWPPP: Stormwater pollution prevention plan

TMDL: Total maximum daily load (a calculation of the maximum pollutant amount a body of water can receive while still meeting water quality standards, which is developed by the state or the US Environmental Protection Agency for an impaired water; a TMDL is the sum of the individual wasteload allocations for point sources, load allocations for nonpoint sources, natural background loading and a margin of safety)

TV: Treatment volume

VESCP: Virginia Erosion and Sediment Control Program

VPDES: Virginia Pollution Discharge Elimination System

VSMA: Virginia Stormwater Management Act

VSMP: Virginia Stormwater Management Program

Introduction

Course Goal

This course is designed to provide participants with the basic knowledge and tools needed to operate an effective VSMP plan review program for compliance of regulated land-disturbing activities (LDAs) prior to and after construction.

After completing this training, the participant will be able to:

- Conduct and document stormwater management plan reviews for regulated LDAs in accordance with the requirements of the *Virginia Stormwater Management Act* (Virginia Code § 62.1-44.15:24 et seq.), the *Virginia Stormwater Management Program (VSMP) Regulations* (9VAC25-870), and the *VPDES General Permit for Discharges of Stormwater from Construction Activities* (9VAC25-880)
- Describe and explain basic Pollution Prevention (P2) planning, the Energy Balance Method, and the Runoff Reduction Method (RRM)
- Identify and examine best management practice (BMP) specifications from the Virginia Stormwater BMP Clearinghouse used for design, planning, and construction
- Review BMP Maintenance Plans and Maintenance Agreements, and Final Acceptance of BMPs based upon construction records and as-built documents.

Participant expectations

- Use the training materials as you like. This participant guide is prepared for your use and can be used as a reference during the Plan Review certification examination.
- Certain prior knowledge and experience is important in establishing a good foundation for review of stormwater engineering concepts.
- Participants should already have a basic understanding of hydrologic principles in the area of stormwater runoff prior to attending this course as those skills are not included in this training.

- Other specific topics not covered in this course but that are covered in detail in the Erosion and Sediment Control (ESC) Plan Review course include: ESC requirements, ESC regulations, ESC guidance, ESC plan review, sediment trap/sediment basin/outlet protection/ditch/channel computations, time of concentration, Rational Method, Graphic Peak Design Method (TR55). Familiarity with these specific topics will be useful in preparation for this course.
- Be honest with yourself about your strengths and areas that you need to develop. You are responsible for your own learning. Ask for what you need from your trainers and other group members.