

Module 1: Role of the Inspection Program

Module 1 Objectives

After completing this module, you will be able to:

- Identify who must provide for inspections during and after construction
- Select the inspection criteria to use to satisfy the requirements for:
 - Construction General Permit
 - Virginia Stormwater Management Program
 - Virginia Erosion and Sediment Control Program
- Recall what documentation must be retained by:
 - Permittee
 - VSMP authority

Module 1 Content

1a. Overview

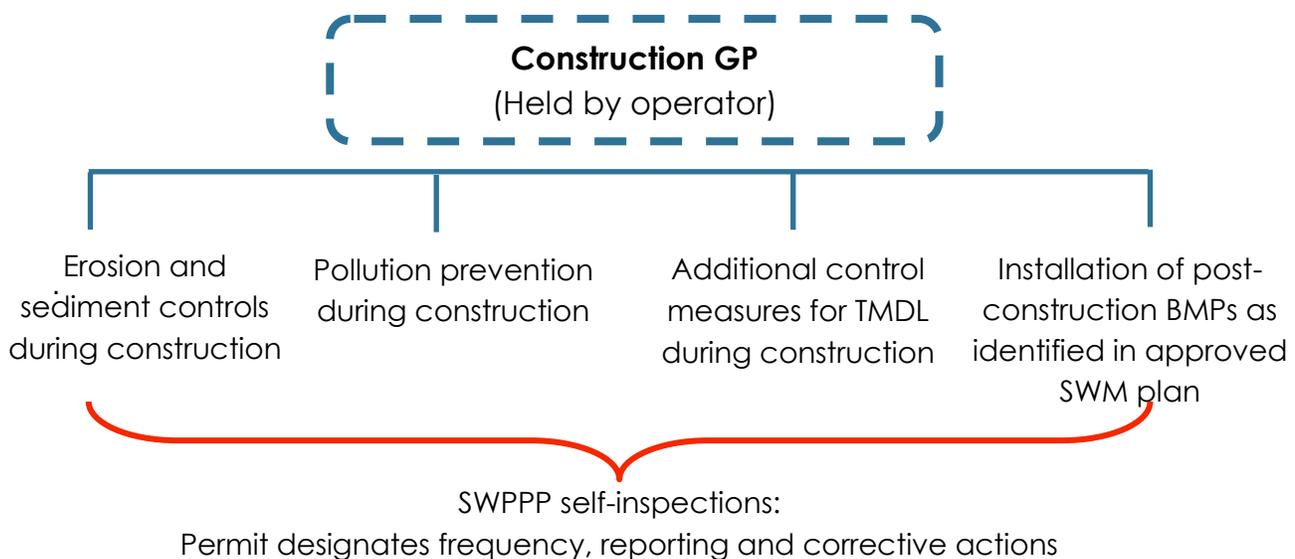
1b. Purpose of Inspection

1c. Documentation

1a. Overview

Virginia Stormwater Management Programs (VSMP) use a comprehensive approach in the management of stormwater at the local level by controlling stormwater with erosion and sediment controls, pollution prevention, and post-construction practices.

Operators of construction projects that are one or more acres – including projects disturbing less than one acre of total land area that are part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one acre - can discharge stormwater from a construction site under the General VPDES Permit for Discharges of Stormwater from Construction Activities (Construction GP).

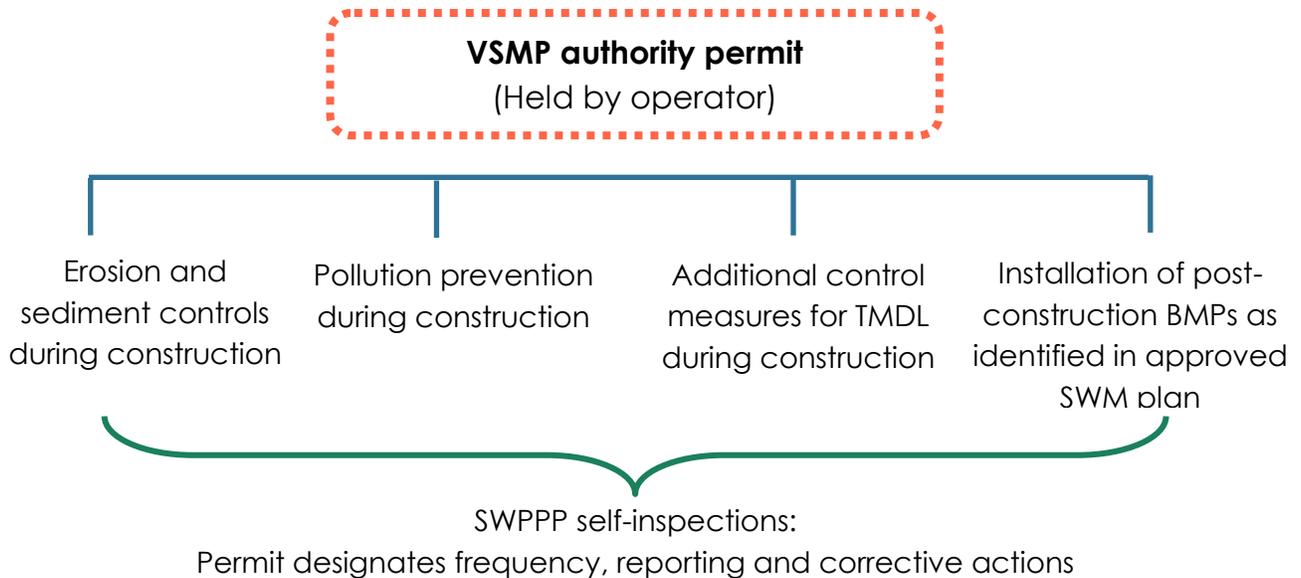


The application process for the Construction GP consists of the following:

1. Operator completes the stormwater pollution prevention plan (SWPPP)
2. Next, operator submits the stormwater management plan and erosion and sediment control plan (two components of the SWPPP) to the locality's VSMP authority and Virginia Erosion and Sediment Control Program (VESCP) authority, respectively, for review and approval
3. After both plans have been approved at the local level and the VSMP authority confirms all necessary application components are in place, state permit coverage is issued by DEQ

★ **A note about VSMP authority permits**

A locality VSMP authority can adopt an ordinance that requires projects less than one acre to hold a VSMP authority permit and follow the administrative and technical criteria of the locality's VSMP. Additionally, an operator must apply for a VSMP authority permit if they have a project that is 2,500 square feet or more and less than one acre in an area of a jurisdiction that is subject to the Chesapeake Bay Preservation Act.



VSMP Process - See Module 5a of the Basic Stormwater Management Course for more information about the Construction GP approval process.



Inspections

Inspections play a critical role in ensuring compliance with the Construction GP, Erosion and Sediment Control (ESC), and VSMP Regulations, as well as protecting natural resources. Inspections take place during construction and after permit termination and by multiple parties. The following four tables outline how the Construction GP, VSMP, and ESC Regulations set forth inspection requirements for the VSMP and VESCP authority, the Department of Environmental Quality (DEQ), and the operator.

- Table 1a-1 provides a brief overview of the Construction GP, VSMP, and ESC Regulations in relation to inspection requirements
- Table 1a-2 outlines construction inspections
- Table 1a-3 outlines construction inspections for state stormwater management annual standards and specifications
- Table 1a-4 outlines post-construction inspection criteria

Tables 1a-2, 3, and 4 include the term [measurable storm event](#), which is defined in [9VAC25-880-1](#) as a rainfall event producing 0.25 inches of rain or greater over 24 hours.

Overview Table 1a-1		
Construction GP Regulation (9VAC25-880)	ESC Regulation (9VAC25-840)	VSMP Regulation (9VAC25-870)
Permit for stormwater discharges from regulated LDAs	Regulation for the effective control of soil erosion and sedimentation	Regulation for stormwater management for regulated land-disturbing activities
Includes: <ul style="list-style-type: none"> • Requirement to develop and implement SWPPP, including ESC plan, stormwater management plan, and pollution prevention plan • "Self-inspection" criteria operators must carry out during construction to comply with SWPPP 	Includes: <ul style="list-style-type: none"> • Minimum standards that must be met during construction • VESCP authority inspection frequency and criteria • Vegetative and structural design practices (i.e. ESC Handbook) 	Includes: <ul style="list-style-type: none"> • Stormwater pollution prevention measures that must take place during construction - including erosion and sediment controls - and post-construction stormwater management criteria • VSMP authority construction and post-construction inspection frequency and criteria

Construction Inspections

Table 1a-2

	Construction GP Regulation <u>(9VAC25-880-70 Part II (F))</u>	ESC Regulation <u>(9VAC25-840-60)</u>	VSMP Regulation <u>(9VAC25-870-114)</u>
Inspector	Designated by operator	VESCP authority	VSMP authority
Frequency	<ul style="list-style-type: none"> • At least once every 5 business days OR At least once every 10 business days and no later than 48 hours following a measurable storm event (If event occurs when there are more than 48 hours between business days, inspection must be conducted no later than the next business day) • Where areas have been temporarily stabilized or LDA suspended due to continuously frozen ground conditions and stormwater discharges are unlikely the inspection frequency may be reduced to once per month <p>If weather conditions make discharges likely, regular inspection schedule resumes</p> <hr/> <p style="text-align: center;"><i>Impaired waterways and TMDL limitation</i> <u>(9VAC25-880-70 Part I (B)(4))</u></p> <ul style="list-style-type: none"> • 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 (If event occurs when there are more than 48 hours between business days, inspection must be conducted on the next business day) 	<ul style="list-style-type: none"> • During or immediately following initial installation of erosion and sediment controls • At least once in every 2 week period • Within 48 hours following any runoff producing storm event • Completion of the project before release of performance bonds • OR, alternative inspection program approved by Board 	<ul style="list-style-type: none"> • Periodically • In response to complaint
Inspection criteria	<ul style="list-style-type: none"> • Proper implementation and effectiveness of approved ESC and P2 plan • Completion of stabilization activities • Identification and documentation of any evidence of the discharge of pollutants prohibited by permit 	<ul style="list-style-type: none"> • Compliance with approved ESC plan 	<ul style="list-style-type: none"> • Compliance with Construction GP <ul style="list-style-type: none"> ○ Approved ESC plan ○ Approved SWM plan ○ Implementation of P2 plan ○ Implementation of additional control measures to address TMDL • Construction of BMPs in accordance with design specifications

Construction Inspections
State Stormwater Management Annual Standards and Specifications

Table 1a-3

	Construction GP Regulation <u>(9VAC25-880-70 Part II (F))</u>	ESC Regulation <u>(9VAC25-840-60)</u>	VSMP Regulation <u>(9VAC25-870-200)</u>
Inspector	Designated by operator	Designated by operator	DEQ
Frequency	<ul style="list-style-type: none"> At least once every 5 business days OR At least once every 10 business days and no later than 48 hours following a measurable storm event (If event occurs when there are more than 48 hours between business days, inspection must be conducted no later than the next business day) Where areas have been temporarily stabilized or LDA suspended due to continuously frozen ground conditions and stormwater discharges are unlikely the inspection frequency may be reduced to once per month If weather conditions make discharges likely, regular inspection schedule resumes <p align="center"><i>Impaired waterways and TMDL limitation</i> <u>(9VAC25-880-70 Part I (B) (4))</u></p> <ul style="list-style-type: none"> 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 (If event occurs when there are more than 48 hours between business days, inspection must be conducted on the next business day) 	<ul style="list-style-type: none"> During or immediately following initial installation of erosion and sediment controls At least once in every 2 week period Within 48 hours following any runoff producing storm event Completion of the project before release of performance bonds OR, alternative inspection program approved by Board 	<ul style="list-style-type: none"> Randomly In response to complaint
Inspection criteria	<ul style="list-style-type: none"> Proper implementation and effectiveness of approved ESC and P2 plan Completion of stabilization activities Identification and documentation of any evidence of the discharge of pollutants prohibited by permit 	<ul style="list-style-type: none"> Compliance with ESC plan developed in accordance with DEQ approved annual standards and specifications 	<ul style="list-style-type: none"> Compliance with Construction GP <ul style="list-style-type: none"> ESC & SWM plan developed in accordance with DEQ approved annual standards and specifications Implementation of P2 plan Implementation of additional control measures to address TMDL Construction of BMPs in accordance with design specifications

Post-Construction Inspections
(9VAC25-870-114 and 9VAC25-870-200)

Table 1a-4

	VSMP authority	Property owner	State agency
Inspector	<ul style="list-style-type: none"> • VSMP authority; or if allowed by the authority, inspection reports from: <ul style="list-style-type: none"> ○ Licensed professional engineer, architect, landscape architect, land surveyor; or ○ Person working under the direction and oversight of licensed professionals listed above; or ○ Person holding inspector certificate of competence from Board 	<ul style="list-style-type: none"> • Designated in the long-term maintenance agreement 	<ul style="list-style-type: none"> • Responsible state agency
Frequency	At least once every 5 years	<ul style="list-style-type: none"> • Set forth in the long-term maintenance agreement • Varies depending on BMP 	<ul style="list-style-type: none"> • Annually • After any storm which causes the capacity of the facility's principle spillway to be exceeded
Inspection criteria	<ul style="list-style-type: none"> • Whether BMPs are being adequately maintained as designed • Inspection criteria listed on the BMP Clearinghouse for BMPs constructed to meet IIB technical criteria and in the 1999 Stormwater Management Handbook for BMPs constructed to meet IIC technical criteria 	<ul style="list-style-type: none"> • Whether BMPs are being adequately maintained as designed • Inspection and maintenance criteria listed on the BMP Clearinghouse for BMPs constructed to meet IIB technical criteria and in the 1999 Stormwater Management Handbook for BMPs constructed to meet IIC technical criteria 	Effectiveness of stormwater management measures

1b. Purpose of Inspections

Construction inspections

During the construction process, there are two types of inspections that must take place:

1. Regulatory compliance inspections under the VSMP and ESC Regulations
2. Self-inspections by qualified personnel as designated by the permittee or operator under the Construction GP

Regulatory compliance inspections

Regulatory compliance inspections are performed periodically by the VSMP authority or randomly by DEQ ([Va. Code §62.1-44.15:37](#) and [9VAC25-870-114](#)). Regulatory compliance inspections are also conducted in response to a citizen complaint or to assess a non-permitted site.

The Virginia Stormwater Management Act (VSMA) allows a VSMP authority to enter into agreements or contracts with soil and water conservation districts, adjacent localities, or other public or private entities to carry out or assist with the responsibilities of the VSMA ([§62.1-44.15:27\(H\)](#)). Therefore, some localities' VSMP authority may not conduct their own inspections.

★A note about *periodic inspections*:

The VSMP Regulation provides the VSMP inspector the flexibility to determine when to inspect a particular site. This allows the inspector to prioritize their inspections based on the activities on the site. The VSMP and ESC Regulations and the Construction GP provide guidelines for what the inspector needs to look for:

- *Are the appropriate erosion and sediment controls in place in accordance with the approved ESC plan? Are the controls effective?*
- *Are pollution prevention measures in place and effective?*
- *Are BMPs being installed according to the approved SWM plan? Are they installed in accordance with the proper construction sequence?*
- *Are additional control measures in place to meet requirements of a TMDL?*
- *Are self-inspections being conducted and corrective actions taken in accordance with the Construction GP?*

Construction self-inspections

Under the Construction GP ([9VAC25-880-70 Part II\(F\)](#)), qualified personnel, as designated on the SWPPP, must conduct inspections at the construction site. During these inspections, the qualified personnel determine whether the site is being managed in accordance with the SWPPP including whether the erosion and sediment controls are effective.

If activities are not in accordance with the SWPPP or if the erosion and sediment controls are not effective, the qualified personnel recommend corrections to the operator. The qualified personnel are also required to complete an inspection report detailing the items laid out in [9VAC25-880-70 Part II\(F\)4](#).

★**A note about “qualified personnel”:**

According to the VSMP Regulation ([9VAC25-870-10](#)), “qualified personnel” means “a person knowledgeable in the principles and practices of erosion and sediment and stormwater management controls who possesses the skills to assess conditions at the construction site for the operator that could impact stormwater quality and quantity and to assess the effectiveness of any sediment and erosion control measures or stormwater management facilities selected to control the quality and quantity of stormwater discharges from the construction activity...”

Inspection reports

The VSMP inspector should review the inspection reports to verify inspections are being carried out, and if needed, corrective measures are in place and effective.

This will also help the VSMP inspector understand what activities are taking place on the site and what to look for:

- When did stabilization activities start?
- When did grading operations start/finish?
- Have there been any prohibited discharges?
- What corrective actions have been taken?

Post-construction inspections

Regulatory compliance inspections and self-inspections must also take place after construction.

Post-construction regulatory inspections

The VSMP Regulation ([9VAC25-870-114](#)) requires the VSMP authority to inspect BMPs at least once every five years (this includes projects grandfathered under [9VAC25-870-48](#)). The authority may allow for the use of the facility owner's inspection reports if the inspection is conducted by a person who is licensed as a professional engineer, architect, landscape architect, or land surveyor, or a person who works under the direction and oversight of those listed above; or a person who holds an appropriate certificate of competence from the Board.

The purpose of these inspections is to ensure the facilities are performing as designed.

★ ***A note about [state stormwater management annual standards and specifications](#)***

After construction, state projects conducted under annual standards and specifications must be inspected by the responsible state agency on an [annual basis](#) and [after any storm which causes the capacity of the facility's principle spillway to be exceeded](#) ([9VAC25-870-200](#)).

Remember! *State projects must submit a description of the requirements for maintenance of the stormwater management facilities, a recommended schedule of inspection and maintenance, and identify who will be responsible for maintenance as part of the state permit application ([9VAC25-870-160\(D\)\(5\)-\(6\)](#)).*

Responsibility for the operation and maintenance of stormwater management facilities shall remain with the state agency and [pass to any successor or owner](#) ([9VAC25-870-200\(A\)](#)).

Construction record drawings

Before permit termination, construction record drawings ("as-builts") for permanent stormwater management facilities shall be submitted to the VSMP authority with the appropriate seal and signature of a professional registered in the Commonwealth of Virginia, certifying that the stormwater management facilities have been constructed in accordance with the approved plan ([9VAC25-870-55](#)).

The drawings must be retained by the VSMP authority **until the facility is removed** ([9VAC25-870-126](#)).

Post-construction self-inspections

Before the Construction GP is terminated, requirements for the long-term responsibility for and maintenance of BMPs must be set forth in an instrument recorded in the local land records.

According to [9VAC25-870-112](#), the agreement must include at least the following terms:

- Stated to run with the land
- Provide for all necessary access to the property for the purposes of regulatory inspections
- Be enforceable by all appropriate governmental parties
- Provide for inspections and maintenance and the submission of inspection and maintenance reports to the VSMP authority

★ ***A note about [BMP maintenance and inspections](#):***

The specifications for the BMPs listed on the BMP Clearinghouse and in the 1999 Stormwater Management Handbook include suggested maintenance inspections and ongoing operations to ensure the BMP functions as designed.

1c. Documentation

Inspection documentation is a major component of any inspection program. For sites with compliance issues, inspection reports detail and document the compliance issues, and make recommendations to bring the site back into compliance. Any subsequent enforcement requires a well documented inspection.

Permittee documentation during construction

In accordance with the Construction GP, the permittee must retain the SWPPP, which is amended, modified, and updated throughout the construction process. Inspection reports and records are included within the SWPPP.

VSMP authority inspection documentation during construction

The VSMP authority construction inspection report is a legal document that can prove or support inspector claims of potential violations. Reports must be retained by the VSMP authority for **three years** after permit termination ([9VAC25-870-126](#)).



Five year post-construction inspection documentation

The VSMP authority must also complete an inspection report once every five years to ensure stormwater management facilities are being maintained. The authority may utilize the inspection reports of the owner as part of an established inspection program if conducted by a licensed professional, someone working under a licensed professional, or a person with a certificate from the board. Inspection reports must be retained by the VSMP authority for **five years** ([9VAC25-870-114](#)).

★ ***A note about reports and record keeping*** ([9VAC25-870-126](#))

A VSMP authority must keep records in accordance with the following:

- Project records, including approved stormwater management plans, must be kept for [three](#) years after state permit termination or project completion
- Stormwater management facility inspection records must be documented and retained for at least [five](#) years from the date of inspection
- Construction record drawings must be maintained [in perpetuity](#) or until a stormwater management [facility is removed](#)
- All Construction GP registration statements must be documented and retained for [at least three years](#) from the date of project completion or state permit termination