

## Module 1: Introduction

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## Learning Objectives

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At the end of this module, you will be able to:

- Summarize the goal and history of Erosion and Sediment Control and Stormwater Management in Virginia
- Explain (and follow) the requirements for who must be certified
- Describe (and follow) the eligibility requirements for taking the certification exam
- List (and follow) the requirements for maintaining certification

## 1a. Virginia Erosion Program Overview

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### GOAL

The objective of the Virginia Erosion and Sediment Control Law (ESC Law) and the Virginia Erosion Stormwater Management Act (VESMA) is to effectively control soil erosion, sediment deposition, and non-agricultural runoff to prevent the unreasonable degradation of properties, stream channels, waters, and other natural resources ([§ 62.1-44.15:52](#) and [:28](#)).

#### NOTE

Soil loss rates from construction sites can be 1,000 times the average of natural soil erosion rates and 20 times that from agricultural lands (Keener et al. 2007).

### EROSION AND SEDIMENT CONTROL BACKGROUND



#### 1948 – Federal Water Pollution Control Act (FWPCA)

Congress passed the FWPCA. The Act was the first US law to address water pollution referring to clean water as a resource and introducing the importance of protecting water quality.



#### 1971 – Virginia studies the issue of sedimentation

Development in urban regions led to erosion and sediment deposition. Urban localities passed ordinances to address these issues. The Governor's Council on the Environment created a task force to study the issue which recommended a statewide program.



#### 1972 – Federal Clean Water Act (CWA)

Congress passed major amendments to the FWPCA: known as the Clean Water Act (CWA). The CWA established a basic structure for regulating pollutant discharges into the waters of the U.S. The CWA also consolidated the control of water pollution policy under the newly created Environmental Protection Agency (EPA) and established the National Pollutant Discharge Elimination System (NPDES) permit program.

ESC

**1973 – Erosion and Sediment Control Law**

The Virginia General Assembly passed the ESC law, requiring the statewide establishment of minimum standards, guidelines, and criteria for the effective control of soil erosion, sediment deposition, and non-agricultural runoff. All counties and cities in Virginia were required to adopt a local erosion program by July 1, 1974.



**1989 – Virginia Stormwater Management (SWM) Act**

The Virginia General Assembly passed the SWM Act to address water pollution, stream channel erosion, groundwater depletion, and more frequent localized flooding due to intensive land development and other land use conversions. Localities could establish SWM programs by ordinance, while state projects were required to follow the SWM Act.



**1990 – Adoption of ESC Regulations**

The General Assembly required the Soil and Water Conservation Board to promulgate regulations for the administration, implementation, and enforcement of the ESC law.

E  
SWM  
C

**2012 – The Integration Bill (Effective July 1, 2014)**

Under Virginia House Bill 1065, the General Assembly made significant changes to the ESC law and the SWM Act by aligning the two programs. The Bill also required that all localities with a Municipal Separate Storm Sewer System (MS4) program adopt and administer a local stormwater program. This is the basis for local stormwater programs.

VESMA

**2016 – The Virginia Erosion and Stormwater Management Act (Eff. July 1, 2024)**

The General Assembly combined the stormwater management requirements in the SWM Act and the ESC Law to create the Virginia Erosion and Stormwater Management Act (VESMA). With this statute consolidation, various chapters of regulations (840, 850, and 870) were also consolidated into one new chapter (875), creating the Virginia Erosion and Stormwater Management (VESM) Regulation.

Localities that only administer ESC programs will continue to operate under the ESC Law and Part III of the VESM Regulation as VESCP authorities.

Localities that administer both ESC and SWM programs will operate under VESMA and Part II of the VESM Regulation as Virginia Erosion and Stormwater Management Program (VESMP) authorities. This is addressed in Module 3.

## INTEGRATING STORMWATER AND EROSION AND SEDIMENT CONTROL

In 2013, additional amendments to the ESC law were passed to consolidate and move some of the programs from the Soil and Water Conservation Board and Department of Conservation and Recreation to the State Water Control Board and Department of Environmental Quality.

The movement of the stormwater program from the state level to the local level allows those localities who opted-in to integrate their stormwater management requirements with the requirements of erosion and sediment control, flood insurance (if applicable), flood plain management, and Chesapeake Bay Preservation Act (if applicable) into a unified program. This was intended to make the submission and approval of plans, issuance of permits, payment of fees, and coordination of inspection and enforcement activities more convenient and efficient for both the locality and the applicant.

Localities without a Municipal Separate Storm Sewer System (MS4) are able to opt out of adopting a stormwater program, therefore, deferring the stormwater requirements to DEQ to administer.

### Effects of stormwater runoff

#### Sediment

The removal of vegetation during construction makes soil susceptible to erosion. This erosion and resulting sediment transport often lead to water pollution.

This is why the regulation requires that construction projects use ESC minimum standards (MS), including structural and non-structural Construction Best Management Practices (C-BMPs) to keep sediment in place by capturing it before stormwater carries it off the site.



**Figure 1: Sedimentation resulting from missing Construction BMPs.**

## Other pollutants

During construction, stormwater runoff can also pickup and transport construction related waste and other pollutants that can contaminate waterways and property. In order to address this concern, regulated land-disturbing activities (LDA) that require Construction General Permit (CGP) coverage are required to develop and implement a stormwater pollution prevention plan (SWPPP) that consists of an erosion and sediment control plan, stormwater management plan, and pollution prevention plan. These plans must detail how C-BMPs and Post-Construction Best Management Practices (P-BMPS) will be implemented.



**Figure 2: Trash around construction site – pollution prevention measures not in place**

## Post-construction runoff

Even after construction, stormwater runoff remains a concern. The addition of impervious surfaces, such as pavement and roofs, decreases a site's ability to infiltrate rainwater. As a result, there is more stormwater runoff that can cause erosion, localized flooding, and property damage in and around waterways. P-BMPs are utilized to address stormwater quantity and quality to mitigate these concerns.



**Figure 3: Flooding of downstream properties from inadequate post-construction stormwater management**

Source: June Bailey, property owner

### Erosion & sediment controls

(Vehicle wash rack, C-BMP)



### Pollution prevention practices

(Concrete washout)



### Post-construction stormwater management

(Rain garden, P-BMP)



**Stormwater runoff – always a concern.**

## 1b. Training and Certification

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### REGULATORY REQUIREMENTS AND APPLICABILITY

[\(§ 62.1-44.15:52,:53; § 62.1-44.15:27,:30; 9VAC25-875-390\)](#)

The ESC law and VESMA require the staff of an erosion program authority to obtain and maintain a certification in the area of erosion and sediment control. Anyone who is contracted by a program authority to perform any or all of the functions of that authority must also obtain and maintain their certification. Entities with approved standards and specifications must have certified staff just as if the entity were a program authority. The certification requirements of personnel are outlined in Part IV of the VESM Regulation (**9VAC25-875-380 – 460**).

#### Law and Regulation References

The “§” symbol is a section sign referring to the Code of Virginia law. “VAC” means the Virginia Administrative Code, which contains the permanent regulations for the Commonwealth of Virginia.

### ROLES OF THE PROGRAM STAFF

[\(9VAC25-875-400\)](#)

There are four potential roles for a locality’s program staff. The following items are generally the day-to-day duties of each position.

#### Program administrator

- Ensures plan review and approval, inspections, and enforcement actions are conducted in accordance with the ESC-law or VESMA, regulation, and local ordinances
- Completes reports to be sent to DEQ
- Coordinates enforcement proceedings
- Keeps records, collects fees, and updates local ordinances as needed



Additionally, the program administrator ensures that other positions, such as inspectors and plan reviewers, are certified.



## Inspector

- Conducts regular inspections of active construction sites and post-construction sites to ensure proper construction, function, and maintenance of C-BMPs and P-BMPs.
- Documents inspections
- Initiates enforcement action when needed
- Ensures compliance to correct deficiencies or violations



## Plan reviewer

Responsible for review of ESC, ESM, and/or SWM plans to ensure plans adhere to the law, regulation, minimum standards, and local ordinances



## Combined administrator

Responsible for performing the combined duties of a program administrator, inspector, and plan reviewer

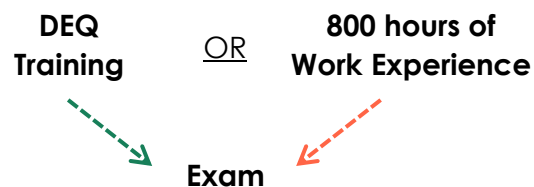


## EXAM ELIGIBILITY

(9VAC25-875-410.A)

There are two ways to be eligible to take a certification examination:

1. Complete DEQ training course(s)
2. Complete the DEQ Verification of Work Experience Form, with supervisor signature



## DEQ training courses

The following graphic illustrates the training courses needed for each certification through the traditional training and certification curriculum for either ESC or SWM. Those seeking both ESC and SWM certifications should complete the parallel ESC class first. Online prerequisites must be completed before enrolling in either live webinar or classroom certification courses.



**For information on DEQ Training and Certification, please visit:**

<https://www.deq.virginia.gov/our-programs/training-certification>

## Work experience

Individuals with at least 800-hours of on-the-job work experience as a program administrator, inspector, plan reviewer, or combined administrator may complete the Verification of Work Experience Form, instead of completing the DEQ training course(s).

The form is located under the Resources section of the DEQ Exam Information page:

<https://www.deq.virginia.gov/our-programs/training-certification/exam-information>

## PROVISIONAL CERTIFICATION

(9VAC25-875-410.A.2)

From the day you complete your first required training course, you have **one year** to complete all required training courses and obtain a passing score on the certification exam. This provisional certification allows individuals to continue working for an authority while they seek full certification. It is not a substitute for obtaining certification.

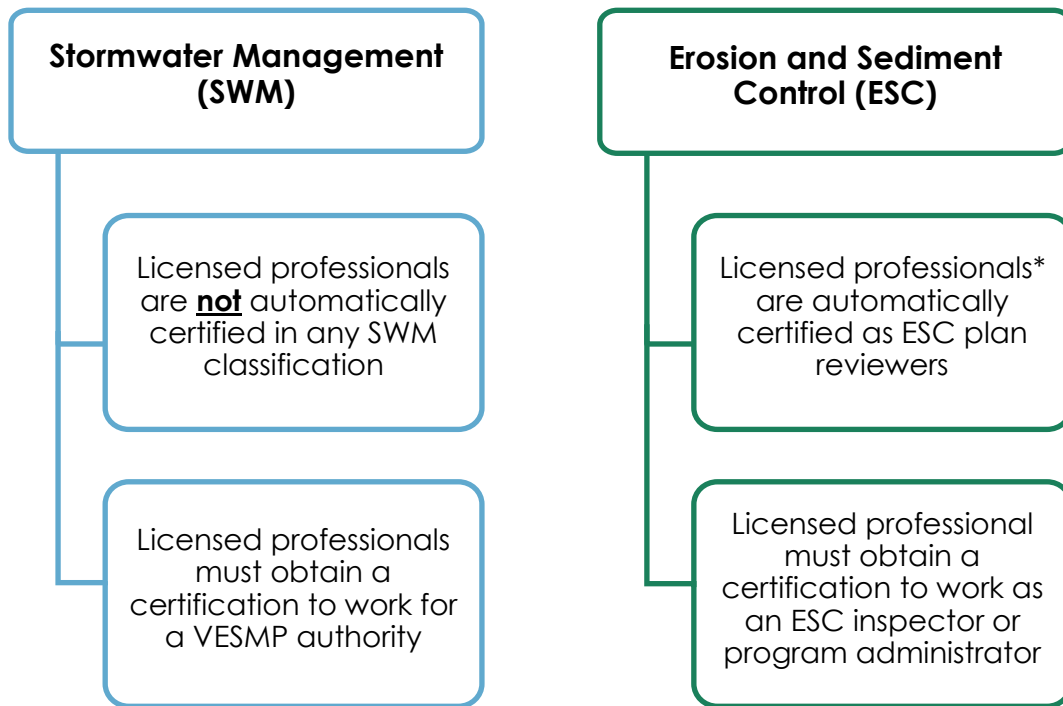
### NOTE

Individuals can only be provisionally certified once per classification.

If an individual does not obtain a certification within one year, they will not be considered certified until they pass the respective exam, which may include qualifying for the exam through 800-hours of work experience.

## LICENSED PROFESSIONALS

(9VAC25-875-400.D)



\*Professional engineer, architect, 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; or is a professional soil scientist as defined in chapter 22 (§ [54.1-2200](#) et seq.) of title 54.1 of the Code of Virginia.

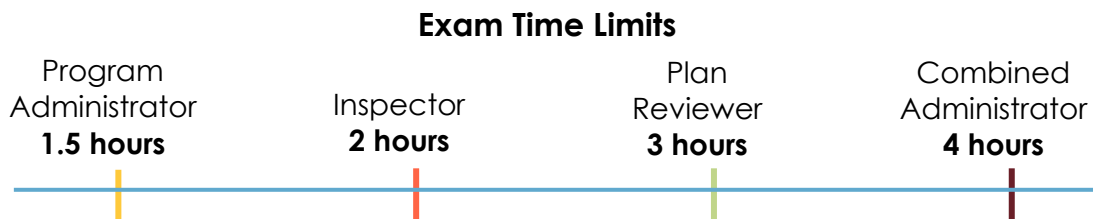
For more information, please see DEQ's Licensed Professionals FAQ at:

<https://www.deq.virginia.gov/our-programs/training-certification/frequently-asked-questions>

## EXAMINATIONS

(9VAC25-875-440)

All exams are administered by Pearson VUE. Visit: <http://www.pearsonvue.com/va/deq/> to register for an exam. The exams are multiple choice with four answer options and delivered on a computer. They are open book and have specific time limits.



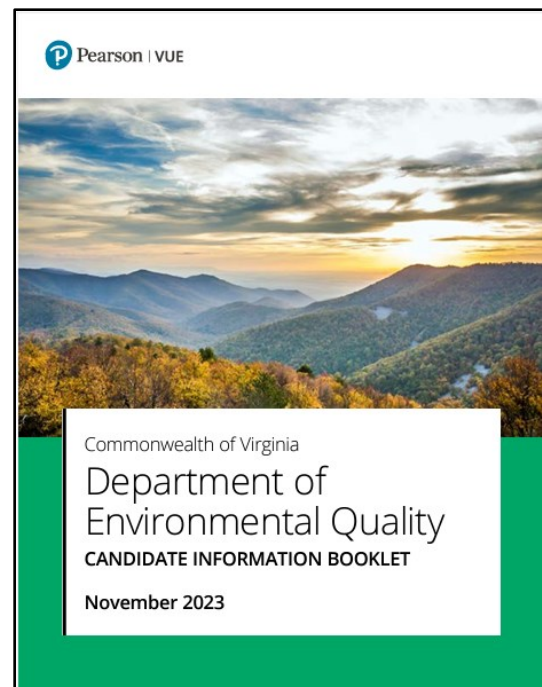
### Candidate Information Booklet

You are strongly encouraged to download and read the Candidate Information Booklet (CIB) before taking the exam. The CIB is available at: <http://www.pearsonvue.com/va/deq/>.

The CIB includes information about:

- Exam reservations
- Testing center locations
- What to bring into the exam
- What not to bring into the exam
- Candidate identification
- Course completion certificates
- Exam content outlines

Use the exam content outlines to help you study!



## Americans with Disabilities Act

Pearson VUE complies with the provisions of the Americans with Disabilities Act (ADA) as amended. Please refer to the ADA section of the CIB for full details. Pearson VUE provides reasonable and appropriate accommodations to individuals with documented disabilities who demonstrate a need for accommodations.


## English as a Second Language

Candidates for whom English is a second language may request additional time for the examination by sending the English as a Second Language (ESL) Request Form (found at the back of the CIB) to Pearson VUE. Candidates **MUST** include a letter from his/her English instructor or sponsoring company (on official letterhead if from a company) stating that English is not the candidate's primary language. Please refer to the ESL section of the CIB for full details.

Please wait to make any exam reservations until after hearing back from Pearson VUE about the accommodations' approval to ensure the appropriate accommodation will be available at the testing center.

## Examination results

You will be notified of your examination results at the examination center. You must attain a minimum score of **70%** to pass. If you receive a passing score on your exam, you will receive an email from DEQ prompting you to log into the DEQ Certification Accreditation Tracking System (CATS) to manage your certification.



It is very **important** that you activate your CATS profile!

Please keep your information current. CATS will send recertification reminders via email.

***If you do not pass the examination, you can reschedule another examination after 24 hours.***

## DUAL CERTIFICATIONS

(9VAC25-875-400.A 9-12, E)

Individuals who perform both erosion and stormwater program duties may obtain a dual certification by surrendering both valid certifications to DEQ and paying the required administrative fee. For instance, a person who holds a valid ESC Inspector Certification and obtains a SWM Inspector Certification may surrender both and obtain a Dual Inspector Certification. A person holding a dual certification meets the certification requirement for that role in a consolidated VESMP.

The dual certification will **expire three years** from the latest date of either certification being surrendered.

Erosion and Sediment Control		Stormwater Management		Dual Certification
ESC Program Administrator	+	SWM Program Administrator	=	<b>Dual Program Administrator</b>
ESC Inspector	+	SWM Inspector	=	<b>Dual Inspector</b>
ESC Plan Reviewer	+	SWM Plan Reviewer	=	<b>Dual Plan Reviewer</b>
ESC Combined Administrator	+	SWM Combined Administrator	=	<b>Dual Combined Administrator</b>

### Be aware...

According to 9VAC25-875-460, DEQ may revoke or suspend any certification, or refuse to grant or renew a certification, if fraudulent or misleading actions have been taken on the part of the certified individual.

## RECERTIFICATION

(9VAC25-875-410.B-C)

Recertification is tracked in CATS. Certifications are valid for ***three years***. In order to maintain your certification, you must recertify ***before*** your certification expires.

3  
Years

Recertification Options		
<b>Complete contact hours*</b>  1. Complete required contact hours by completing DEQ courses or other relevant training before certification expires.  <i>Program admin = 12 hours Inspector = 18 hours Plan reviewer = 21 hours Combined admin = 24 hours</i>  2. Enter contact hour information into CATS and pay recertification fee.	<b>Maintain professional license</b>  1. Keep professional license valid.**  2. Enter license number into CATS and pay recertification fee.	<b>Re-take exam</b>  Re-take and pass the certification examination with Pearson VUE before certification expires.

\*Review the DEQ Contact Hour guidance at:

<https://www.deq.virginia.gov/home/showpublisheddocument?id=1809>

\*\*Professional engineers, architects, land surveyors, and landscape architects may use their professional license to recertify for ESC, SWM, and dual certifications. Soil scientists may use their professional license to recertify for ESC roles only.

If your certification expires, you must re-take the certification exam. **It is your responsibility to enter contact hours into CATS and pay the recertification fee.** Contact hours can be entered anytime. *You may re-certify during the last 12-months of your valid certification without losing time. Three years will be added to the expiration of that valid certification. You do not lose time on your valid certification.*

Please send any questions regarding training and certification to [certification@deq.virginia.gov](mailto:certification@deq.virginia.gov).



## Summary

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This module provides an erosion inspector with the information and processes needed to:

- Discuss the overall goal and history of Erosion and Sediment Control and Stormwater Management in Virginia with the regulated community and other applicable stakeholders
- Understand and follow the:
  - i) Certification requirements,
  - ii) Paths for eligibility to take the certification exam, and
  - iii) Recertification requirements.