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# Erosion and Sediment Control Basic Course

# Module 5



## Virginia Erosion & Sediment Control Minimum Standards

# Module 5a



## Introduction



# ESC Regulations

**1990**

- **First Adopted**

**1995**

- **Revised**

**2012**

- **Integration Bill (House Bill 1065)**
- **Aligned with VSMP Law and Regulations**

**2013**

- **DEQ Move & re-codification**

# Minimum Standards

- Provide better understanding between the inspector, plan reviewer, and program administrator.





# ESC Regulations

- **Intended to be used as a clear-cut system to provide uniformity in the application of E&S standards on plans and in the field.**
- **Help to make enforcement more consistent statewide.**



# Scope and Applicability

**VESCPs**

**Plans Submitted to DEQ**

**Linear Projects**

**State Agencies with Annual Specifications**

**Federal Agencies**

**State Institutions of Higher Learning**

# Purpose of the Minimum Standards



**“To form the basis for the  
administration, implementation  
and enforcement of the Act.”**

# Purpose of the Minimum Standards



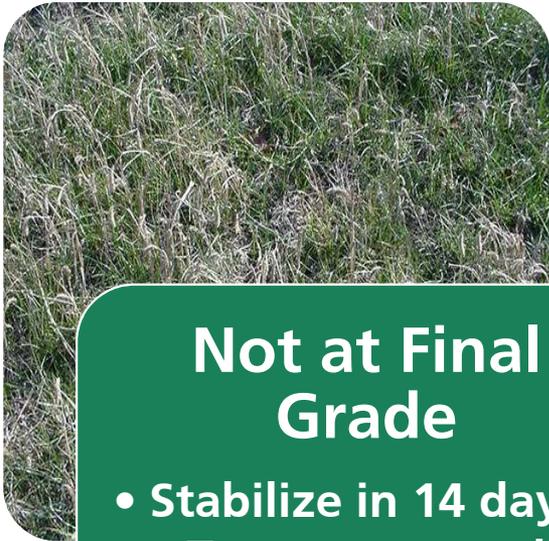
“The intent of this chapter is to establish the framework for compliance with the Act while at the same time providing flexibility for innovative solutions to erosion and sediment control concerns”

# Module 5b



## Minimum Standards 1-18

# MS-1 Stabilization



## Not at Final Grade

- Stabilize in 14 days
- Temporary seeding + Mulch
- Mulch
- Permanent stabilization if dormant > 1 year



## At Final Grade

- Stabilize in 7 days
- Permanent or Temporary Seeding + Mulch
- Mulch





# MS-2 Stockpiles and borrow areas

- Soil stockpiles and borrow areas shall be stabilized or protected with sediment trapping measures
- Applies to on and off-site stockpiles and borrow areas





# MS-3 Permanent Vegetation

- A permanent vegetative cover shall be established on areas not otherwise stabilized
- Permanent vegetation shall not be considered established until it is uniform, mature enough to survive and will inhibit erosion







# MS-4 First Step Measures (Perimeter controls)

- Sediment basins, traps, dikes and sediment barriers intended to trap sediment shall be installed as a first step measure
- They must be made functional before up-slope disturbance takes place





# MS-5 Earthen structures

- **Stabilization measures shall be applied to earthen structures immediately after installation**

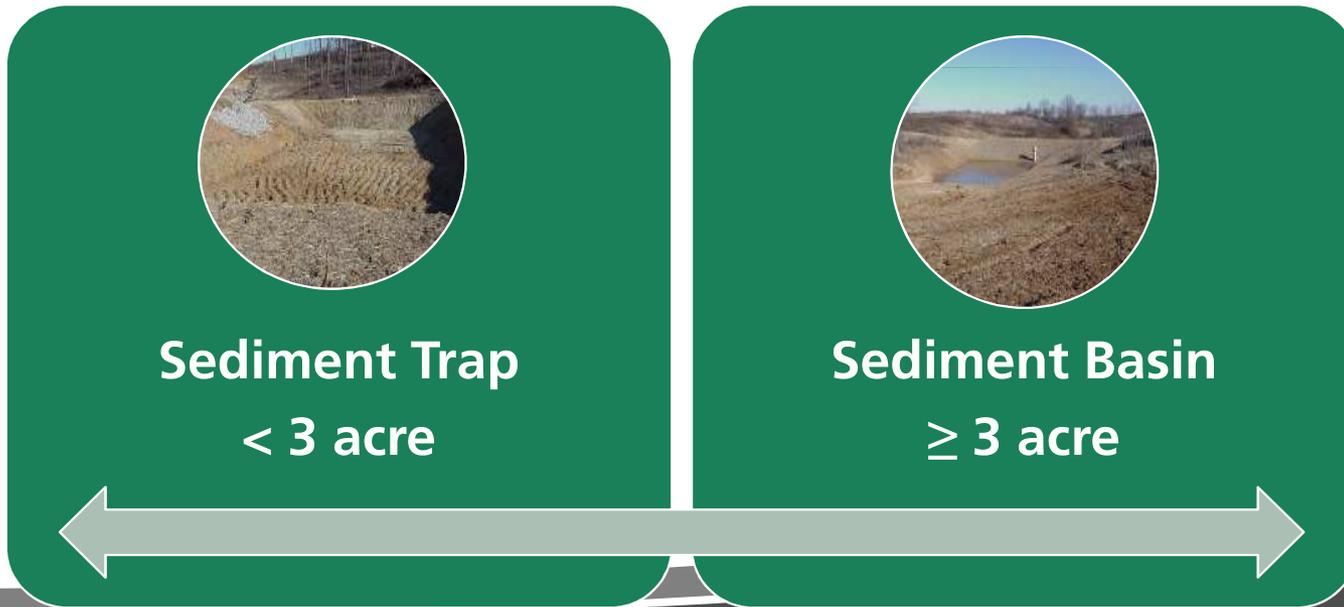






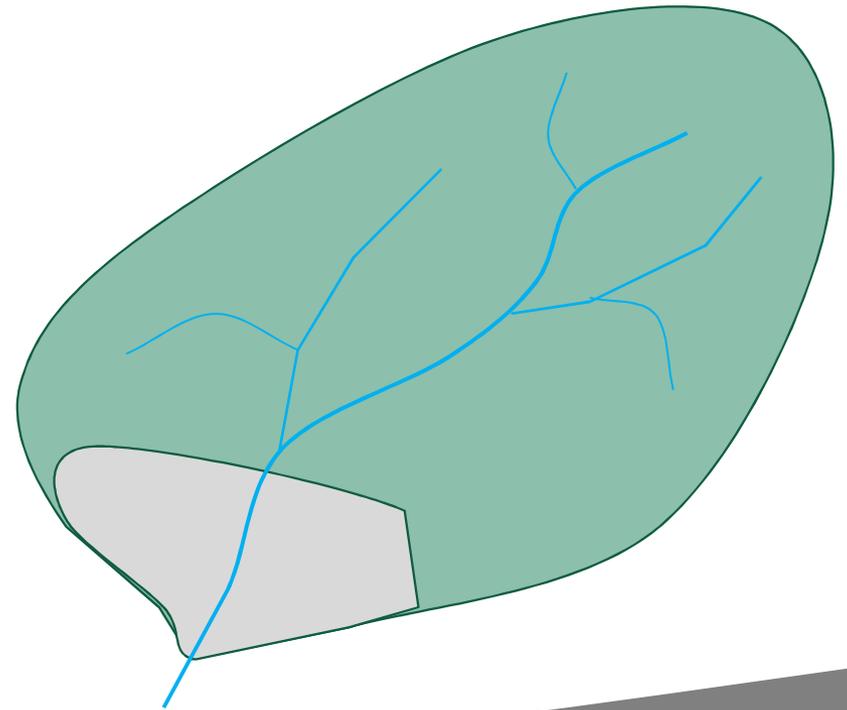
# MS-6 (Traps and basins)

Sediment traps and sediment basins shall be designed and constructed based on the total drainage area served by the trap or basin



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# MS-7 Cut and fill slopes

- **Cut and fill slopes shall be designed and constructed in a manner to minimize erosion**
- **Slopes found to be eroding excessively within one year shall have additional stabilization applied**





# MS-8 Concentrated runoff on slopes

Concentrated runoff shall not flow down cut or fill slopes unless contained in a temporary or permanent channel, flume or pipe







# MS-9 Water seeps

Whenever water seeps from a slope face, adequate drainage or other protection shall be applied





# MS-10 Inlet protection

All storm sewer inlets made operational during construction shall be protected so that sediment laden water cannot enter without first being filtered or treated to remove sediment

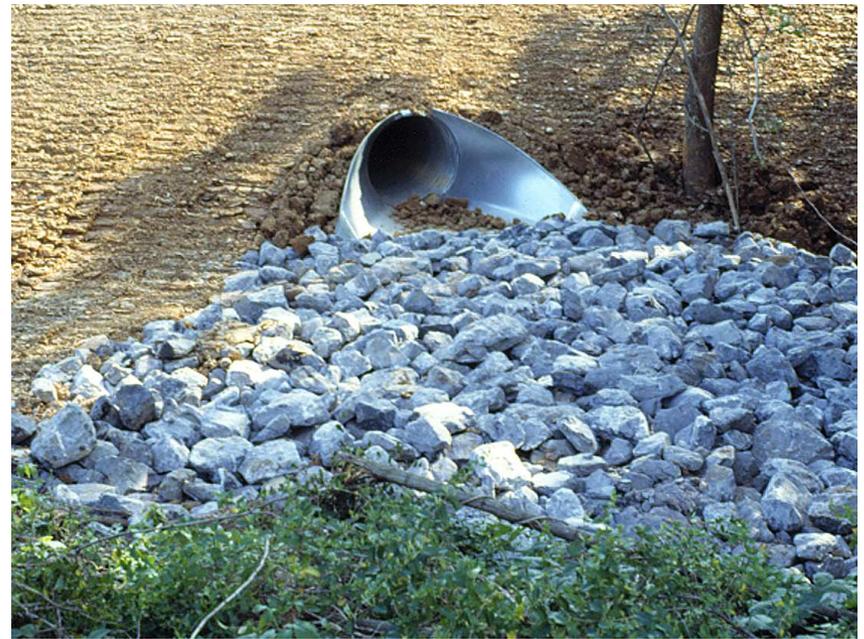






# MS-11 Outlet protection

Before newly constructed stormwater channels or pipes are made operational, adequate outlet protection, and any temporary or permanent channel lining shall be installed



# MS-12 (Working in a live watercourse)

- When working in a live watercourse, precautions shall be made to minimize encroachment
- Non-erodible materials shall be used
- Earthen fill may be used if armored by non-erodible materials









# MS-13 Stream crossings

When a live watercourse must be crossed by construction vehicles more than twice in a six month period, a temporary stream crossing shall be provided







# MS-14 Other applicable regulations

All applicable federal, state and local regulations pertaining to working in watercourses shall be met



# MS-15 Stream bank stabilization

The bed and banks of a watercourse shall be stabilized immediately after work in the watercourse is complete



# MS-16 Underground utility lines

Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:

- No more than 500 feet of open trench at one time
- Excavated material shall be placed on the up-hill side of the trench



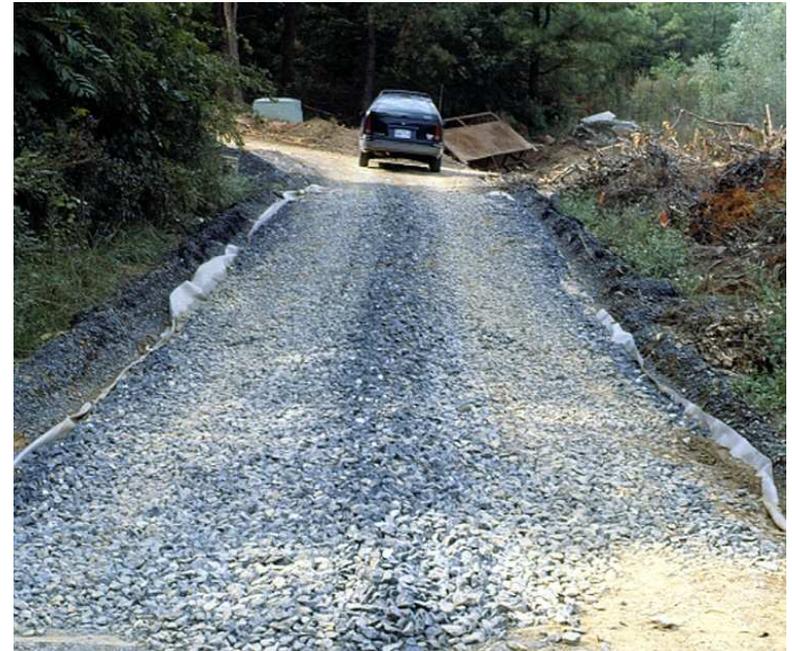


# MS-16 Utility Construction

- Effluent from de-watering shall be filtered or passed through an approved sediment trapping device
- Material used for backfilling shall be compacted to minimize erosion
- Re-stabilization shall be accomplished in accordance with these regulations
- Applicable safety regulations shall be complied with

# MS-17 Construction entrance

Where construction vehicle access routes intersect public or paved roads, provisions shall be made to minimize transport of sediment onto the paved surface







# MS-17 Construction entrance

When sediment is deposited on the road surface, it shall be removed by:

- Shoveling & sweeping
- Then disposal

Street washing is only done after shoveling and sweeping

Applies to single family dwelling lots !

# MS-18 Control Removal

All temporary erosion and sediment control measures shall be removed within 30 days of final stabilization or when no longer needed

