

Permanent vegetation shall not be considered established until a ground cover is achieved that is:

- ❑ Uniform
- ❑ Mature enough to survive
- ❑ Will inhibit erosion

**(4) Sediment Basins & Traps.** Sediment basins, sediment traps, perimeter dikes, sediment barriers, and other measures intended to trap sediment shall be constructed as a first step in any land-disturbing activity and shall be made functional before upslope land disturbance takes place.

**(5) Stabilization of Earthen Structures.** Stabilization measures shall be applied to earthen structures such as dams, dikes, and diversions immediately after installation.

**(6) Sediment Traps & Sediment Basins.** Sediment traps and basins shall be designed and constructed based upon the total drainage area to be served by the trap or basin as follows:

*Sediment Traps*

- ❑ Only control drainage areas less than three acres
- ❑ Minimum storage capacity of 134 cubic yards per acre of drainage area

*Sediment Basins*

- ❑ Control drainage areas greater than or equal to three acres
- ❑ Minimum storage capacity of 134 cubic yards per acre of drainage area
- ❑ The outfall system shall, at a minimum, maintain the structural integrity of the basin during a twenty-five year storm of 24-hour duration

**(7) Cut and Fill Slopes Design & Construction.** Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion. Slopes found to be eroding excessively within one year of permanent stabilization shall be provided with additional slope stabilizing measures until the problem is corrected.

**(8) Concentrated Runoff Down Slopes.**

Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume, or slope drain structure.

**(9) Slope Maintenance.** Whenever water seeps from a slope face, adequate drainage or other protection shall be provided.

**(10) Storm Sewer Inlet Protection.** All storm sewer inlets made operable during construction shall be protected so that sediment-laden water cannot enter the stormwater conveyance system without first being filtered/treated to remove sediment.

**(11) Stormwater Conveyance Protection.** Before newly constructed stormwater conveyance channels or pipes are made operational, adequate outlet protection and any required temporary or permanent channel lining shall be installed in both the conveyance channel and the receiving channel.

**(12) Work in Live Watercourse.** When work in a live watercourse is performed:

- ❑ Precautions shall be taken to minimize encroachment, control sediment transport, and stabilize the work area to the greatest extent possible during construction
- ❑ Nonerodible material shall be used for the construction of causeways and cofferdams
- ❑ Earthen fill may be used for these structures if armored by nonerodible cover materials

**(13) Crossing Live Watercourse.** When a live watercourse must be crossed by construction vehicles more than twice in any six-month period, a temporary vehicular stream crossing constructed of nonerodible material shall be provided.

**(14) Regulation of Watercourse Crossing.** All applicable federal, state and local regulations pertaining to working in or crossing live watercourses shall be met.

**(15) Stabilization of Watercourse.** The bed and banks of a watercourse shall be stabilized immediately after work in the watercourse is completed.

**(16) Underground Utility Line Installation.**

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

- ❑ No more than 500 linear feet of trench may be opened at one time
- ❑ Excavated material shall be placed on the uphill side of trenches
- ❑ Effluent from dewatering operations shall be filtered or passed through an approved

sediment trapping device, or both, and discharged in a manner that does not adversely affect flowing streams or off-site property

- ❑ Material used for backfilling trenches shall be properly compacted in order to minimize erosion and promote stabilization
- ❑ Restabilization shall be accomplished in accordance with these regulations
- ❑ Comply with applicable safety regulations

**(17) Vehicular Sediment Tracking.** Where construction vehicle access routes intersect paved or public roads:

- ❑ Provisions shall be made to minimize the transport of sediment by vehicular tracking onto the paved surface
- ❑ Where sediment is transported onto a paved or public road surface, the road surface shall be cleaned thoroughly at the end of each day
- ❑ Sediment shall be removed from the roads by shoveling or sweeping and transported to a sediment control disposal area. Street washing shall be allowed only after sediment is removed in this manner

**(18) Removal of Temporary Measures.** All temporary erosion and sediment control measures shall be removed within 30 days after final site stabilization or after the temporary measures are no longer needed, unless otherwise authorized by the program authority. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.

**(19) Stormwater Management.** Properties and waterways downstream from development sites shall be protected from sediment deposition, erosion, and damage due to increases in volume, velocity, and peak flow rate of stormwater runoff for the stated frequency storm of 24-hour duration in accordance with the following standards and criteria:

- ❑ Concentrated stormwater runoff leaving a development site shall be discharged directly into an adequate natural or man-made receiving channel, pipe, or storm sewer system. For those sites where runoff is discharged into a pipe or pipe system, downstream stability analyses at the outfall of the pipe or pipe system shall be performed.

- ❑ Adequacy of all channels and pipes shall be verified:
  - Natural Channels – use 2-year storm event
  - Manmade Channels – use 2- and 10-year storm event
  - Pipe and Pipe Systems – use 10-year storm event
- ❑ If existing natural receiving channels or previously constructed man-made channels or pipes are not adequate, the applicant shall provide channel, pipe, or pipe system improvement or provide a combination of channel improvement, site design, stormwater detention, or other measures that is satisfactory to the program authority to prevent downstream erosion.
- ❑ Provide evidence of permission to make the improvements
- ❑ If the applicant chooses an option that includes stormwater detention he shall obtain approval from the locality of a plan for maintenance of the detention facilities. The plan shall set forth the maintenance requirements of the facility and the person responsible for performing the maintenance.
- ❑ Outfall from a detention facility shall be discharged to a receiving channel, and energy dissipators shall be placed at the outfall of all detention facilities as necessary to provide a stabilized transition from the facility to the receiving channel.
- ❑ Increased volumes of sheet flows that may cause erosion or sedimentation on adjacent property shall be diverted to a stable outlet, adequate channel, pipe or pipe system, or to a detention facility
- ❑ In applying these stormwater runoff criteria, individual lots or parcels in a residential, commercial or industrial development shall not be considered to be separate development projects. Instead, the development as a whole shall be considered to be a single development project.
- ❑ All measures used to protect properties and waterways shall be employed in a manner that minimizes impacts on the physical, chemical and biological integrity of rivers, streams and other waters of the state

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The complete, unedited version of the Virginia Erosion and Sediment Control Regulations (4VAC50-30) as codified in the Virginia Administrative Code is available through the Commonwealth of Virginia website at [www.vipnet.org/vipnet/portal/government](http://www.vipnet.org/vipnet/portal/government). Additional information on Virginia's Erosion & Sediment Control and Stormwater Management Programs is available on DCR's website at [www.dcr.state.us](http://www.dcr.state.us) or from DCR Watershed Offices.

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**Questions? Comments?**

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Department of Conservation & Recreation

CONSERVING VIRGINIA'S NATURAL AND RECREATIONAL RESOURCES

## Virginia Erosion and Sediment Control Regulations

### Minimum Standards

#### Section 4VAC50-30-40

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All land-disturbing activities undertaken on private and public lands in the Commonwealth of Virginia must meet the 19 "minimum standards" for erosion and sediment control (ESC) in Section 4VAC50-30-40 of the Virginia Erosion and Sediment Control Regulations. The applicant who submits the ESC plan to the program authority for approval is responsible for ensuring compliance with the minimum standards that apply to his/her activities. A condensed version of the minimum standards is provided below. Please refer to the Regulations for a complete, unedited copy of the minimum standards.

#### **(1) Soil Stabilization.**

- ❑ Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the site
- ❑ Temporary soil stabilization shall be applied within seven days to denuded areas that may not be at final grade but will remain dormant for longer than 30 days, but less than one year
- ❑ Permanent stabilization shall be applied to areas that are to be left dormant for more than one year

**(2) Soil Stockpile Stabilization.** During construction, soil stockpiles and borrow areas shall be stabilized or protected with sediment trapping measures. Temporary protection and permanent stabilization shall be applied to all soil stockpiles on site and borrow areas or soil intentionally transferred off site.

**(3) Permanent Stabilization.** Permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized.