



# CHECKLIST FOR EROSION & SEDIMENT CONTROL PLANS

- Minimum Standards** – All applicable Minimum Standards must be addressed.

## NARRATIVE

- Project Description** – Briefly describes the nature and purpose of the land-disturbing activity (Chapter 4, VSMH).
- Total acreage of site
  - Total disturbed acreage
  - Include how many acres will be in permanent seed
  - Include all utility work (storm sewer and waterline)
  - Include work in live streams as defined by DEQ
- Existing site conditions** – A description of the existing topography, vegetation and drainage (Chapter 4, VSMH).
- Wetland type vegetation
  - Shrubs/tree line
  - Include all drainage swales
  - Identify any existing structures
- Adjacent areas** – A description of neighboring areas such as streams, lakes, residential areas, roads, etc., which might be affected by the land disturbance (Chapter 4, VSMH).
- Include all adjacent sensitive areas such as wetlands or water bodies
  - Address any possible traffic issues
  - Does it reflect actual conditions
  - Staging areas
- Off-site areas** – Describe any off-site land disturbing activities that will occur (including borrow sites, waste or surplus areas, etc.) (9VAC25-875-240, Chapter 4, VSMH).
- Does the site balance in regard to amount of cut and fill?
  - Will off-site areas be used as a borrow area or stockpile?
  - Include a note that the borrow area or stockpile location has not been identified with this plan, that a plan amendment will be required along with a bond estimate for the new disturbance if the borrow area and stockpile location is not permitted
  - Off-Site Soil Tracking Form
- Soils** – A brief description of the soils on the site giving such information as (Chapter 4, VSMH):
- Soil name
  - Mapping unit
  - Erodibility
  - Permeability
  - Depth
  - Texture
  - Soil structure
  - Type 1 Soil Map provided
  - Specify micaceous soils
  - Reference soils information in narrative to plan sheet
  - Specify high water table soils
- Critical Areas** – A description of areas on the site which have potentially serious erosion problems (Chapter 4, VSMH).
- Drainfields
  - Offsite SWM facility

- Micaceous soils – highly erodible soils
- Wetlands or water bodies
- Steep slopes
- Wet weather/underground springs
- Channels
- Traffic issues

**Erosion and sediment control measures** – A description of the methods which will be used to control erosion and sedimentation on the site (Controls should meet the specifications in Chapter 7, VSMH).

- Controls used should be specific to the project
- List E&S controls to be used – Reference to VSMH
- Provide detail for each control – Reference to VSMH
- Include the statement:  
*“The E&S inspector has the authority to add or delete E&S controls as necessary in the field as site conditions change. In addition, no sediment basin or trap can be removed without written authorization.”*
- Stream crossing installation (MS-12 through MS-15, C-ENV-03)
  - Type of diversion needs to be provided
  - How will the work be done in the dry?
  - What type of crossing will be used?
  - Removal process? Stabilization?

**Coordinate a Pre-Construction Conference with the Environmental Division after receiving the Land Disturbing Permit.**

**Management Strategies** (Chapter 4, VSMH)

- Discuss E&S Phase 1 and Phase 2
- Perimeter sediment trapping issues to be installed as a first step.
- Include the phasing of removal for each sediment basin and sediment trap, until all upslope areas are stabilized. Take into consideration utility installation, roadways, building locations, etc.
- Discuss conversion of sediment basins to its permanent stormwater facility for both wet and dry ponds.
  - **Procedure for Converting Dry Ponds:** (C-SCM-12)
    - Consult with the E&S inspector prior to beginning the conversion from sediment basin to dry pond to ensure the timing is appropriate for the conversion to take place.
    - Pump down basin – use approved dewatering measures. Effluent must be filtered.
    - Remove accumulated sediment (as needed) to establish the final grade of the pond.
    - Grade and roughen the bottom of the pond to prepare it for seeding.
    - Install debris/trash rack device on the low-flow orifice to prevent clogging.
    - Seed, mulch, and tack jute mesh or other suitable meshing to the bottom of the pond.
    - After the conversion is complete, prepare and submit as-built plans of the pond(s) to the Department of Community Development in conjunction with the bond release request.
  - **Procedure for Converting Wet Ponds:** (C-SCM-12)
    - Consult with the E&S inspector prior to beginning the conversion from sediment basin to wet pond to ensure the timing is appropriate for the conversion to take place.
    - Pump down basin – use approved dewatering measures. Effluent must be filtered.
    - Remove accumulated sediment (as needed) to establish the final grade of the pond. Sediment must be disposed of in an approved area.
    - Grade and roughen the bank of the pond to prepare it for seeding.

**Permanent stabilization** – A brief description, including specifications, of how the site will be stabilized after construction is completed (MS-1 through MS-3, and MS-5, Chapter 7, VSMH).

- Specify type of seeding, matting, sod or other types of stabilization that may be used.
- Include Table C-SSM-09-3 (temporary seeding guidelines)
- Include Table C-SSM-10-7 (permanent seeding guidelines)
- Include Table C-SSM-11-5 (mulching guidelines)

- Stormwater runoff considerations** – Will the development site cause an increase in peak runoff rates? Will the increase in runoff cause flooding or channel degradation downstream? Describe the strategy to control stormwater runoff (MS-19).
  - The first paragraph of MS-19 has been included.
  - List what type of permanent stormwater facility will be installed on the project.
- Calculations** – Detailed calculations for the design of temporary sediment basins, permanent stormwater detention basins, diversions, channels, etc. Include calculations for pre- and post-development runoff. (VAC25-875-560, MS-19, Chapter 4, VSMH)
  - The following information must be submitted when a Temporary Sediment Basin is used for the project (C-SCM-12, MS-6, VSMH):
    - Temporary Sediment Basin Design Data Sheets
    - Time of concentration flow path (broken up into sheet, shallow concentrated, and channel flow). When a Tc of 5 minutes is used, the flow path is not required
    - Stage/storage elevation information in graph format
    - When using TR-55, all worksheets must be included in submittal.
    - When using the Modified Rational method (for drainage areas less than 20 acres) a “C” factor of 0.6 must be used.
    - A schematic for each sediment basin must be provided showing dimensions and elevations.
    - Show the length of the flow path from the inflow at the wet pool to the outflow to ensure that the length to width ratio is adequate.
    - Emergency spillway dimensions and calculations.
    - Include this note that a stake or spray paint marker on riser for cleanout elevation will need to be in place for sediment basins and sediment traps.
  - The following information must be submitted when a Temporary Sediment Trap is proposed for the project (C-SCM-11, MS-6, VSMH):
    - Embankment heights (H), Outlet Height (Ho), and Minimum Top Widths (W), Wier Length
    - One detail for multiple traps is sufficient
    - Provide dimensions for wet and dry storage
    - Provide wet and dry storage elevations
    - Provide cleanout elevation
    - Include this note that a stake or spray paint marker on riser for cleanout elevation will need to be in place for sediment basins and sediment traps.
  - The following information must be submitted with a Temporary Stream Crossing (Std. C-ENV-03, MS-12 through MS-15, VSMH)
    - If a crossing is to remain in place up to 14 days, must carry a 2-year storm
    - If a crossing is to remain in place for 14 days to 1 year, it must be sized to carry a 10-year storm
    - A profile for the crossing and all calculations used must be submitted
    - Drainage size shown
    - Does pipe diameter provided coincide with drainage area?
    - Temporary culvert crossing should not exceed 40 feet
- Maintenance** – A schedule of regular inspections and repair of erosion and sediment control structures should be set forth. Please include maintenance information for each control proposed to be used (9VAC25-875-300)
  - Add a note that RLD reports can be audited by the E&S inspector at any time. If RLD reports are not provided, the E&S inspector can report this to DEQ. A follow-up inspection may take place by DEQ.

## SITE PLAN

- Vicinity map** – A small map locating the site in relation to the surrounding area. Include any landmarks which might assist in locating the site (Chapter 4, VSMH).
  - Directions
- Indicate North** – The direction of north relating to the site (Chapter 4, VSMH).

- This is to be shown on each plan sheet, including on the vicinity map
- Scale** – The E&S plan should be at a scale of at least 1" = 50' (Chapter 4, VSMH).
- Limits of clearing and grading** – Areas which are to be cleared and graded. All areas involved in the construction of the project should be included (Chapter 4, VSMH).
  - Construction entrances must be included at all access points
  - Include "staging areas"
  - Include stockpile/borrow areas
  - Areas that may have safety fence but will not be disturbed
  - Phase 1 E&S controls – give spot elevations to show drainage
  - Off-site stockpile areas
  - Trails
  - Well installation
  - Storm sewer installation
  - Waterline installation
  - Power line installation
  - Stream crossings
  - Drainfields
  - Drip lines for trees to be retained
- Existing contours** – The existing contours of the site (Chapter 4, VSMH)
  - Does this reflect the actual current condition of the site?
  - Show sufficient elevations
- Final contours** – Changes to existing contours, including final drainage patterns (Chapter 4, VSMH)
- Existing vegetation** – The existing tree lines, grassed areas, or unique vegetation (Chapter 4, VSMH)
  - Does this reflect the actual current condition of the site?
- Soils** – The boundaries of different soil types (Chapter 4, VSMH)
  - Show on the E&S Phase 1
- Existing drainage patterns** – The dividing lines and the direction of flow for the different drainage areas. Include the size (acreage) of each drainage area. (Chapter 4, VSMH)
  - Show drainage areas and acreage for pre-development on phase 1.
  - Show drainage areas and acreage for post-development on phase 2.
- Critical erosion areas** – Areas with potentially serious erosion problems (Chapter 4, VSMH)
  - Identify critical areas with \* on the Phase 1 & 2 E&S plan
- Site development** – Show all improvements, such as buildings, parking lots, access roads, utility construction, etc. (Chapter 4, VSMH)
 

**NOTE:** On smaller subdivisions, where lots are to be sold to individuals prior to home construction and individual contractors are obtained by the property owners, then the buildings and driveways do not need to be shown on the plans.

  - The following information needs to be included in the plan and on each plat:  
*"At the time of building permit application, the individual owner is responsible for preparing an erosion and sediment control plan for review or applying for an "Agreement In Lieu of" at the discretion of the County prior to any land disturbing activities beyond what is shown and bonded on the approved final construction plans."*
  - The following language needs to be included in the construction plan:  
*"No erosion and sediment control plan review was done for the individual lot improvements beyond what is shown on the approved final construction plans. At time of building permit application, the individual lot owner is responsible for preparing an erosion and sediment control plan for review or applying for an "Agreement In Lieu of" at the discretion of the County prior to any land disturbing activities."*

- Sediment basins and sediment traps need to stay in place until upslope areas are stabilized, take into consideration utility installation, lots, and buildings.
  - Roads and lots need to be shown on Phase 1 and 2.
  - Actual lot numbers and road names need to be shown on phase 2
  - Target areas to be stabilized ASAP
  - Consider phasing of a project
  - All engineered plans require a phase 1 and 2 E&S plan
  - Sanitary sewer, water line and storm sewer must be shown on the Phae 2 E&S plan. Structure numbers must also be shown. While these are not required to be shown on the Phase 1 E&S plan, the perimeter E&S controls for Phase 1 must take the construction of these utilities into account.
  - Keep all of Phase 1 E&S controls on Phase 2 E&S plans
  - Show stockpiles – with appropriate E&S controls
  - Are stockpiles located above sensitive areas?
- Location of practices** – The locations of erosion and sediment controls and stormwater management practices used on the site. Use the standard symbols and abbreviations in Chapter 7 of the Virginia Stormwater Management Handbook.
- Use standard symbols to identify controls
  - Provide a legend
  - When micaceous soils are found on a site, rock check dams and silt fence should be used in conjunction with sediment traps and sediment basins in those areas.
- Off-site areas** – Identify any off-site land disturbing activities (e.g. borrow sites, waste areas, etc.) (9VAC25-875-240, Chapter 4, VSMH)
- Does the site balance in regard to the amount of cut and fill required?
  - Is it on the same property as the project? If so, it needs to be included in the LOC. Show access.
  - Show off-site stockpile
  - Show location of erosion controls
  - Off-site Soil Tracking Form
- Detail drawings** – Any structural practices used that are referenced to the Stormwater Management Handbook or local handbooks should be explained and illustrated with detail drawings. (Chapter4, VSMH)
- Include details of structural practices and reference them to the VSMH.
  - If any E&S structural practices are proposed that are not included in the VSMH, then a detail and a request for a variance must be submitted to the County (plan approval authority).
- Provide Comment Response Letter** – Please provide a comment response letter identifying how each comment is addressed with the current plan submission. This will greatly assist in the review of all future plan submissions.