

VTrans Erosion Prevention and Sediment Control Plan Designer Checklist (Non-jurisdictional and Low Risk Projects)

By completing this checklist the designer will provide the contractor with site specific background, risk evaluation information, and a conceptual Erosion Prevention and Sediment Control Plan satisfying the requirements of the VT DEC Low Risk Site Handbook.

The EPSC Plan Narrative, Existing Conditions, Construction and Final Conditions Site Plans shall be on separate sheets of the Project Plans.

1. EPSC Plan Narrative – An Example EPSC Plan Narrative can be found at the following link:

Designers: T:\CADD\WorkSpace\Projects\English\dgn\details\Erosion\EPSC_2009

Consultants: <http://www.aot.state.vt.us/CaddHelp/Download/Details/ErosionSedimentCtrl/ErosionSedimentCtrl.htm>

1.1. Project Description

Describe the location, scope, areas of disturbance and duration of the project. Give the reviewer a good idea of what will be happening during construction (temporary bridge; existing or new alignment; rehabilitation or replacement; widening; area of disturbance; and other differences from before to after).

List the area of disturbance which shall include limits of earth disturbance within the project as well as any waste, borrow or staging areas within or directly adjacent to the project limits.

1.2. Site Inventory

1.2.1. Topography

Describe the area within and surrounding the site. What is the area basically comprised of (vegetation, development, road surfaces, topography, etc.)?

1.2.2. Drainage, waterways, bodies of water and proximity to natural or man-made water features

Describe all streams (including intermittent/ephemeral), ponds, wetlands and how they relate (location) to project site. Describe approximately how far disturbed soils are from receiving waters.

1.2.3. Vegetation

Describe generally the vegetation (grass, shrubs, trees) found on the project site. Describe what types of vegetation will be removed and what those areas will be replaced with.

1.2.4. Soils

Describe the types of soils in the project area. One source for this is the USDA Soil Survey Data or the NRCS regional offices. You may also utilize information from borings. If in-situ soils are known to be engineered fills this information should also be provided. Include a discussion of the erodibility (k-factor) of the soils.

1.2.5. Sensitive resource areas

Include a discussion of sensitive areas that need to be protected (T&E species, archaeological sites, prime agricultural land, wetlands, critical habitat, etc.)

1.3. Risk Evaluation

A project using this checklist either falls under non-jurisdictional (<1 acre disturbance) or Low Risk. The example EPSC Plan Narrative offers two options. Choose one of the options based on the project earth disturbance determination.

Use the following guidance to help appropriately score Appendix A of the 3-9020 CGP Risk Evaluation:

- ☛ *Earth disturbance: Earthworks involving non-erodible materials (i.e. ledge) may not need to be calculated into the overall earth disturbance. However, ledge with overburden may need to be considered. Consultation with ANR can help in determining the right assessment.*
- ☛ *Part II- Detailed Risk Evaluation*

- *Criterion A deals with distance of earth disturbance from water resources. It should be answered “No” for road stream crossings, culverts and disturbance due to stormwater treatment facilities.*
- *Criterion E deals with earth disturbance on slopes greater than 15%. Take the slopes at existing conditions, then at final conditions and pick the greater of the two.*
- *Criterion F deals with soil erodibility or K Factor of disturbed soils. When the K Factor is unknown you must assume the worst K Factor (0.49) unless a K Factor can be determined through other means. When dealing with a scenario such as a fill section of a roadway you must use the K Factor of the original soil prior to the road being there, or you must test the roadway fill material to determine the K factor.*

1.4. Erosion Prevention and Sediment Control

Describe in general how the Plan and measures will be effective in preventing erosion and controlling sediment laden water from leaving the construction site. Emphasize those measures that must be implemented to maintain the designated risk evaluation.

All measures noted for use in this section of the Narrative shall be shown on the Plan sheets and a Detail shall be provided. Each measure shall be associated with a pay item in both the Quantity Sheets and the Detail sheets. If the measure is incidental to another pay item it shall be noted as such on the Detail sheet.

The example EPSC Plan Narrative shows an example of how this section might be laid out.

1.5. Sequence and Staging- This section will be filled out by the contractor

- 1.5.1. Construction Sequence
- 1.5.2. Off-site Activities
- 1.5.3. Updates

2. EPSC Existing Conditions Site Plan- Include all of the following

- 2.1. Existing topographic contours (5 feet or smaller interval) - *Recommend 2' intervals but use judgment. Be sure to label the contours. Slope indicators may be used to illustrate grades in lieu of contours if clarity is a problem.*
- 2.2. Drainage ways, water features- *Label all including wetland class. Show flow directions in all conveyances.*
- 2.3. General vegetative cover types (e.g. field, hardwood forest, grass, etc.)- *Label all vegetative types in proposed disturbance areas and areas receiving and treating runoff from the construction site.*
- 2.4. Resource areas- *Include information from the resource identification map supplied by the Environmental Unit. Label all resource areas (riparian buffer, buffer for Class II wetlands, T&E, arch, soils, waterways, etc).*
- 2.5. Structures, roads, utilities
- 2.6. North arrow
- 2.7. Scale
- 2.8. Legend

3. EPSC Construction Site Plan

- 3.1. Limits of soil disturbance- *Show limits 6-10 ft beyond toe/top of slope or as needed for working room using project demarcation fence and barrier fence. Decrease in sensitive areas to extent buildable. May coincide with silt fence location or just outside.*
- 3.2. Limits of riparian zone - *Show 50' riparian zone and label. Impacts within the zone shall be minimized.*
- 3.3. *Use symbols and line styles to show EPSC measures consistent with each detail drawing. When the plan becomes too cumbersome to include all measures on one plan sheet it may be beneficial to*

show phases of construction on multiple plan sheets. Indicating measures using stationing where it is inappropriate to show measures on the Plan is acceptable. Include notes for timeframe for stabilization and indicate restrictions on disturbed area if applicable.

3.4. North arrow

3.5. Scale

3.6. Legend

4. EPSC Final Conditions Site Plan

4.1. Proposed topographic contours and/or cross sections- *If cross sections are to be used to show changes in contours, a note referencing that fact shall be included. On linear projects along existing alignment, slope indicators may be used to illustrate grades in lieu of contours if clarity is a problem.*

4.2. Toe of fill and top of cuts- *Include cut and fill lines*

4.3. Proposed structures, roads, utilities

4.4. Boundaries for riparian zone - *Show 50' zone and label.*

4.5. North arrow

4.6. Scale

4.7. Legend

5. EPSC Detail Sheets

Include all EPSC detail drawings for measures included in the EPSC Plan Narrative and shown on the Plan. Three detail drawings will fit on one layout sheet.

5.1. Detail Sheet Resources

5.1.1. VTrans Designers can find the detail drawings at the following location:

T:\CADD\WorkSpace\Projects\English\dgn\details\Erosion\EPSC_2009

5.1.2. Consultant Designers can find the detail drawings at the following location:

<http://www.aot.state.vt.us/CaddHelp/Download/Details/ErosionSedimentCtrl/ErosionSedimentCtrl.htm>

5.2. *The symbol for each measure is shown in the upper right of each detail drawing. This should match the legend and symbology shown on the EPSC Plan sheets.*

5.3. *The seeding formula information should be included in this section of the plans. A detail drawing has been created to fit with the EPSC detail drawings.*

5.4. *Each detail drawing includes at the bottom how the measure is intended to be paid for. If measures will not be paid for directly then the detail drawing must convey that. In some cases measures have multiple pay items and they may not be applicable. For example for erosion matting, if only one type of matting is going to be used then clip out or line through the other erosion matting pay item.*