

Appendix I-F

Stormwater Pollution Prevention Plan (SWPPP)

Submittal Requirements for Small Projects Pursuant to SCC 30.63A.810

Introduction

This appendix provides requirements for selecting best management practices (BMPs) for Stormwater Pollution Prevention Plans (SWPPPs) for small projects that meet the criteria set forth in SCC 30.63A.810. If required, applicants shall use the small project SWPPP drainage review forms provided by Snohomish County Department of Planning and Development Services.

These projects are required to comply with Minimum Requirement 2 - Stormwater Pollution Prevention, and a key criterion of these projects is that they do not require the stamp of a licensed civil engineer. Consequently, the applicant must be able to meet all requirements of Minimum Requirement 2 by using the erosion control BMPs listed in this appendix. The BMPs listed in this appendix do not require an engineer's stamp.

The following sections contain:

- A review of the twelve elements of Minimum Requirement 2, and the erosion control BMPs allowable for small projects to meet these requirements
- Required sequence of BMP implementation

Elements of Minimum Requirement 2 and allowable erosion control BMPs

The twelve elements of Minimum Requirement 2 are:

1. Mark clearing limits
2. Establish construction access
3. Control flow rates
4. Install sediment controls
5. Stabilize soils
6. Protect slopes
7. Protect drain inlets
8. Stabilize channels and outlets
9. Control pollutants
10. Control dewatering
11. Maintain BMPs
12. Manage the project

The measures used to meet these twelve elements must be described or shown in drawing form in the Stormwater Pollution Prevention Plan (SWPPP). For details on how these

elements are implemented on larger projects, see SCC 30.63A.445 to SCC 30.63A.510 and Volume II, Chapter 3.2.3.

SWPPP element 1: preserve vegetation/mark clearing limits

Minimize removal of existing trees and disturbance and compaction of native soils, except as needed for building purposes. The duff layer, native top soil, and natural vegetation shall be retained in an undisturbed state to the maximum degree practicable. Plan and implement proper clearing and grading of the site. Clear only the areas needed, thus keeping exposed areas to a minimum. Phase clearing so that only those areas that are actively being worked are uncovered. Soil shall be managed in a manner that does not permanently compact or deteriorate the final soil and landscape system. If disturbance and/or compaction occur the impact must be corrected at the end of the construction activity. This shall include restoration of soil depth, soil quality, permeability, and percent organic matter. Construction practices must not cause damage to or compromise the design of permanent landscape or infiltration areas.

Prior to beginning land disturbing activities, delineate or mark the following areas and features on the site:

- (a) Clearing limits;
- (b) All critical areas, and their setbacks and buffers;
- (c) Erosion or landslide hazard areas and their setbacks and buffers;
- (d) Existing and proposed easements;
- (e) Required landscaping, and tree retention and replacement areas;
- (f) Other areas on the site required to be preserved or protected including, but not limited to, drainage courses.

Relevant BMPs:

- BMP C101: Preserving Natural Vegetation
- BMP C102: Buffer Zones
- BMP C103: High Visibility Plastic or Metal Fence
- BMP C104: Stake and Wire Fence

SWPPP element 2: establish construction access

Construction vehicle ingress and egress shall be limited to one route if possible. A stabilized construction entrance or other equivalent BMP shall be installed to prevent sediment transport onto roads.

Streets shall be cleaned at the end of each day during dry weather and more frequently during wet weather. Street washing is only allowed after sediment is removed by shoveling or pick-up sweeping and transported to a controlled disposal area. Street wash wastewater shall be controlled by pumping it back on site or otherwise preventing its

discharge into systems tributary to the waters of the state or waters that would otherwise require enhanced treatment.

Relevant BMPs:

- BMP C105: Stabilized Construction Entrance
- BMP C107: Construction Road/Parking Area Stabilization

SWPPP element 3: control flow rates

Small projects shall meet this requirement by appropriate use of BMPs related to SWPPP element 4.

SWPPP element 4: install sediment controls

Remove sediment from construction site runoff by using appropriate sediment removal BMPs. Runoff from fully stabilized areas may be discharged without a sediment removal BMP.

Relevant BMPs:

- BMP C230: Straw Bale Barrier
- BMP C231: Brush Barrier
- BMP C232: Gravel Filter Berm
- BMP C233: Silt Fence
- BMP C234: Vegetated Strip
- BMP C235: Straw Wattles

SWPPP element 5: stabilize soils

Exposed and unworked soils and soil stockpiles shall be stabilized. Soil stockpiles shall be located away from storm drain inlets, drainage channels and other waters.

The time period of soil exposure allowed depends on the season. No soils shall remain exposed and unworked for more than seven days during the dry season, May 1 through September 30, or two days during the wet season, October 1 through April 30, unless the County places other restrictions on the project.

Locate excavated basement soil a reasonable distance behind the curb, such as in the backyard or side yard area. This will increase the distance eroded soil must travel to reach the storm sewer system. Soil piles should be covered until the soil is either used or removed. Piles should be situated so that sediment does not run into the street or adjoining yards. Backfill basement walls as soon as possible and rough grade the lot. This will eliminate large soil mounds, which are highly erodible, and prepares the lot for temporary cover, which will further reduce erosion potential

Remove excess soil from the site as soon as possible after backfilling. This will eliminate any sediment loss from surplus fill.

If a lot has a soil bank higher than the curb, a trench or berm should be installed moving the bank several feet behind the curb. This will reduce the occurrence of gully and rill erosion while providing a storage and settling area for stormwater.

Relevant BMPs:

- BMP C120: Temporary and Permanent Seeding
 - *NOTE: small projects shall only use methods in BMP C120 that do not require engineering.*
- BMP C121: Mulching
- BMP C122: Nets and Blankets
- BMP C123: Plastic Covering
- BMP C124: Sodding
- BMP C125: Topsoiling (for soil stabilization)
- BMP C131: Gradient Terraces
- BMP C140: Dust Control

SWPPP Element 6: protect slopes

NOTE: Cut and fill slopes may require engineering, pursuant to SCC 30.63B.110, SCC 30.63B.130, SCC 30.63B.200. In addition, most of the BMPs related to this SWPPP element require engineering. If cut or fill slopes are proposed, the applicant should verify that the project meets the small project criteria.

Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion and comply with the County's applicable critical area regulations. Cut and fill slopes shall be protected from erosive flows and concentrated flows until permanent cover and drainage conveyance systems are in place. Excavated material shall be placed on the uphill side of trenches, consistent with safety and space considerations.

Relevant BMPs:

- BMP C120: Temporary and Permanent Seeding
 - *NOTE: small projects shall only use methods in BMP C120 that do not require engineering.*
- BMP C208: Triangular Silt Dike (Geotextile-Encased Check Dam)

SWPPP element 7: protect permanent drain inlets.

All permanent storm drain inlets require protection from sediment and silt-laden water. Permanent storm drain inlets operable on the site during construction shall be protected so that stormwater runoff does not enter the conveyance system without first being filtered or treated to remove sediment. Inlet protection devices shall be cleaned or removed and replaced when sediment has filled one-third of the available storage or as specified by the product manufacturer. They may be removed once the site is stabilized.

Relevant BMPs:

- BMP C220: Storm Drain Inlet Protection

SWPPP element 8: stabilize channels and outlets

NOTE: Design and construction of stormwater conveyance systems requires an engineer per SCC 30.63A.400(3)(d). In addition, the BMPs related to this SWPPP element require engineering. The channel and outlet stabilization measures proposed herein are intended for protection of preexisting drainage systems on the project site, and the project applicant should verify with the County that the project meets the small project criteria.

Temporary and permanent conveyance systems shall be stabilized to prevent erosion during and after construction. Stabilization, including armoring material, adequate to prevent erosion of outlets, adjacent stream banks, slopes and downstream reaches shall be provided at the outlets of all conveyance systems.

Relevant BMPs:

- BMP C202: Channel Lining
- BMP C209: Outlet Protection

SWPPP element 9: control pollutants

Appropriate pollution source control measures shall be implemented in areas of: construction equipment maintenance or fueling; handling or storage of waste materials, construction debris, fertilizers, chemicals; and other activities that may contribute pollutants to stormwater. The following specific requirements apply.

- Cover, containment, and protection from vandalism shall be provided for all chemicals, liquid products, petroleum products, and other materials that have the potential to pose a threat to human health or the environment.
- On-site fueling tanks shall include secondary containment.
- Maintenance, fueling and repair of heavy equipment and vehicles shall be conducted using spill prevention and control measures consistent with Volume IV, Chapters 2 and 3.
- Contaminated surfaces shall be cleaned immediately following any spill incident.
- Application of fertilizers and pesticides shall be conducted in a manner and at application rates that will not result in loss of chemical to stormwater runoff. Manufacturers' label requirements for application rates and procedures shall be followed
- BMPs shall be used to prevent contamination of stormwater runoff by pH modifying sources. These sources include, but are not limited to, bulk cement, cement kiln dust, fly ash, new concrete washing approved treatment, curing waters, waste streams generated from concrete grinding and sawing, exposed aggregate processes, dewatering concrete vaults, concrete pumping and mixer washout waters.

Relevant BMPs:

- BMP C151: Concrete Handling
- BMP C152: Sawcutting and Surfacing Pollution Prevention
- BMP C 153: Material Storage, Delivery, and Containment

See also Volume IV of this manual

SWWP element 10: control dewatering

NOTE: Many of the BMPs related to this SWPPP element require engineering; however most small projects stormwater runoff will be dispersed on site to natural vegetation, to a containment vessel or sewer system with permission of the utility company. In these cases, this BMP may not be applicable. The project applicant should verify with the County that the project meets the small project criteria.

Turbid or contaminated dewatering water shall be handled separately from stormwater, and shall be collected for off-site disposal in a legal manner, or discharged to a sanitary sewer contingent on local sewer district approval. Uncontaminated or clean water from dewatering systems for trenches, vaults and foundations may be disposed by on-site infiltration or use of a catch basin insert or with outfall to a ditch or swale for small volumes of dewatering water.

Relevant BMPs

- BMP C220 - Storm Drain Inlet Protection

SWPPP element 11: maintain best management practices.

BMPs shall be inspected and maintained during construction and removed within 30 days after the County determines that the site is stabilized, provided that temporary BMPs may be removed when they are no longer needed.

SWPPP element 12: manage the project.

The SWPPP shall be fully implemented at all times and modified whenever there is a change in design, construction, operation, or maintenance at the construction site that has or could have a significant effect on the discharge of pollutants to waters of the state.

Sequence of BMP Implementation

Erosion control BMPs should be implemented in the following sequence:

- 1) Delineate or mark the following areas and features on the site:
 - (a) Clearing limits;
 - (b) Critical areas and their buffers;
 - (c) Erosion or landslide hazard areas and their setbacks;
 - (d) Easements;
 - (e) Required landscaping, and tree retention and replacement areas;
 - (f) Other areas on the site required to be preserved or protected including, but not limited to, drainage courses.
- 2) Install stabilized construction entrance and parking area stabilization.
- 3) Protect existing drainage systems on site.
- 4) Establish areas for storage and handling of polluted materials at which pollution source control BMPs will be implemented.
- 5) Install sediment controls.

- 6) Implement stabilization measures for disturbed areas, slopes, and material stockpiles.
- 7) Maintain BMPs until final site stabilization.