Construction Pollution Prevention

Minimum Requirement # 2

Fact Sheet B

13 Elements of Construction Stormwater Pollution Prevention

Projects that result in less than 2,000 square feet of new plus replaced hard surface area, or disturb less than 7,000 square feet of land are not required to prepare a Construction SWPPP (Stormwater Pollution Prevention Plan), but must consider all of the 13 Elements of Construction Stormwater Pollution Prevention and develop controls for all elements that pertain to the project site.
- Stormwater Management Manual for Western Washington (2014 Amendment), Vol. I, Section 2.5.2

ELEMENT 1: PRESERVE VEGETATION / MARK CLEARING LIMITS

Purpose: To prevent unnecessary or accidental clearing and grading and/or soil compaction of areas reserved for stormwater runoff infiltration.

Application: Before beginning land disturbing activities, including clearing and grading, clearly mark all clearing limits, sensitive areas and their buffers, and trees that are to be preserved within the construction area. Retain the duff layer, native top soil, and natural vegetation in an undisturbed state to the maximum degree practicable.

ELEMENT 2: ESTABLISH CONSTRUCTION ACCESS

Purpose: To minimize sediment mobilization and prevent unnecessary ground disturbance.

Application: Limit construction vehicle access and exit to one route, if possible. If sediment is tracked off site, clean the affected roadway thoroughly at the end of each day, or more frequently as necessary (for example, during wet weather).

ELEMENT 3: CONTROL FLOW RATES

Purpose: Protect properties and waterways downstream of development sites from erosion and the associated discharge of turbid waters due to increases in the velocity and peak volumetric flow rate of stormwater runoff from the project site.

Application: Where necessary, construct stormwater retention or detention facilities as one of the first steps in grading. Assure that detention facilities function properly before constructing site improvements (e.g., impervious surfaces).

ELEMENT 4: INSTALL SEDIMENT CONTROLS

Purpose: To minimize the discharge of pollutants.

Application: Design, install, and maintain effective erosion and sediment control BMPs (sediment ponds, traps, filters, etc.) as one of the first steps in grading. These BMPs shall be functional before other land disturbing activities take place.

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ELEMENT 5: STABILIZE SOILS

Purpose: To minimize soil erosion, sediment mobilization, stormwater pollution, and slope de-stabilization.

Application: Stabilize exposed and unworked soils by application of effective BMPs that prevent erosion. Applicable BMPs include, but are not limited to: temporary and permanent seeding, sodding, mulching, plastic covering, erosion control fabrics and matting, soil application of polyacrylamide (PAM), the early application of gravel base early on areas to be paved, and dust control. Soils must not remain exposed and unworked for more than the time periods set forth below to prevent erosion:

- During the dry season (May 1 - Sept. 30): 7 days
- During the wet season (October 1 - April 30): 2 days

Stabilize soils at the end of the shift before a holiday or weekend if needed based on the weather forecast.
Stabilize soil stockpiles from erosion, protected with sediment trapping measures, and where possible, be located away from storm drain inlets, waterways and drainage channels.
Minimize the amount of soil exposed during construction activity. Minimize the disturbance of steep slopes.
Minimize soil compaction and, unless infeasible, preserve topsoil.

ELEMENT 6: PROTECT SLOPES

Purpose: To minimize soil erosion, sediment mobilization, stormwater pollution, and slope de-stabilization.

Application: Design and construct cut-and-fill slopes in a manner to minimize erosion. Applicable practices include, but are not limited to, reducing continuous length of slope with terracing and diversions, reducing slope steepness, and roughening slope surfaces (for example, track walking). Divert off-site stormwater (run-on) or ground water away from slopes and disturbed areas with interceptor dikes, pipes and/or swales. Off-site stormwater should be managed separately from stormwater generated on the site.

ELEMENT 7: PROTECT DRAIN INLETS

Purpose: Back-up inlet protection devices/measures should be installed to protect the downstream network if on-site operational and structural stormwater management measures employed failed or were to be overwhelmed.

Application: Protect all storm drain inlets made operable during construction so that stormwater runoff shall not enter the conveyance system without first being filtered or treated to remove sediment. Clean or remove and replace inlet protection devices when sediment has filled one-third of the available storage (unless a different standard is specified by the product manufacturer).

ELEMENT 8: STABILIZE CHANNELS AND OUTLETS

Purpose: To minimize soil erosion, sediment mobilization, stormwater pollution, and slope de-stabilization.

Application: Design, construct, and stabilize all on-site conveyance channels to prevent erosion. Provide stabilization, including armoring material, adequate to prevent erosion of outlets, adjacent stream banks, slopes and downstream reaches at the outlets of all conveyance systems.

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ELEMENT 9: CONTROL POLLUTANTS

Purpose: Prevent stormwater contamination.

Application: Handle and dispose of all pollutants, including waste materials and demolition debris that occur on-site in a manner that does not cause contamination of stormwater. Provide cover, containment, and protection 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 must include secondary containment. Apply fertilizers and pesticides in a manner and at application rates that will not result in loss of chemical to stormwater runoff. Follow manufacturers' label requirements for application rates and procedures.

Assure that washout of concrete trucks is performed off-site or in designated concrete washout areas only. **Do not wash out concrete trucks onto the ground, or into storm drains, open ditches, streets, or streams.** Keep spill clean-up materials on-hand and clean contaminated surfaces immediately following any spill incident.

ELEMENT 10: CONTROL DE-WATERING

Purpose: Highly turbid or otherwise contaminated dewatering water shall be handled and treated separately from stormwater.

Application: Discharge foundation, vault, and trench de-watering water into a controlled conveyance system before discharge to a sediment trap or sediment pond. Other treatment or disposal options exist.

ELEMENT 11: MAINTAIN BMPS.

Purpose: To assure the continued performance of their intended function of all BMPs.

Application: Maintain and repair all temporary and permanent erosion and sediment control BMPs as needed in accordance with BMP specifications. Remove all temporary erosion and sediment control BMPs within 30 days after achieving final site stabilization or after the temporary BMPs are no longer needed.

ELEMENT 12: MANAGE THE PROJECT

Purpose: To ensure sufficient consideration, implementation, maintenance, and management of stormwater related issues and management measures throughout the life of the project.

Application: Phase development projects to the maximum degree practicable and take into account seasonal work limitations. Inspect, maintain and repair all BMPs as needed to assure continued performance of their intended function. Continually assess the site conditions and construction activities for issues that could impact the quality stormwater. Periodically evaluate the effectiveness of erosion and sediment control measures implemented. Review and revise your stormwater management plan as the project progresses.

ELEMENT 13: PROTECT LOW IMPACT DEVELOPMENT (LID) BMPS.

Purpose: To prevent areas reserved for stormwater infiltration from being compacted by equipment or silted-in by muddy stormwater run-on that would reduce the infiltration ability of the soil or facility.

Application: Physically protect all bioretention and rain gardens from sedimentation and compaction. Physically protect completed lawn and landscaped areas from compaction due to construction equipment. Control erosion and avoid introducing sediment from surrounding land uses onto permeable pavements. If damaged, restore the infiltration rate using appropriate methods (e.g. pressure washing, excavation, tilling, ect.).