

# Construction Stormwater Pollution Prevention

Preserving the quality of fish bearing water  
during your construction project

- There are approximately thirty five Federal and twenty six Washington State laws that affect your construction project in Washington state.
- Construction Storm Water Pollution Prevention requirements are based on Washington Department of Ecology, Stormwater Management Manual, Chapter 7.
- Violations brought by State and Federal entities have resulted in stiff fines and even prison sentences.
- It is extremely important to have the Storm Water Pollution Prevention Plan (SWPPP) in place before construction begins.

# \* Why you need a plan:

- To be prepared for unknown weather events.
- To prevent stream pollution from uncontrolled sediment.

## **Examples to avoid:**

- Placing straw bales in an undesired location or in water flow.
- String silt fence at the top of the hill or perpendicular to the slope.
- Cover everything in site with plastic and cover with dirt.

# Know the difference between Sediment Control and Erosion Control.

- Erosion Control is the prevention of soil particles from becoming dislodged.
- Sediment Control is capturing soil particles that have been dislodged.
- Controlling erosion and preventing sediment and other pollutants from leaving the project site during the construction phase is achieved through implementation of selected **Best Management Practices** (BMPs) that are appropriate to the site and to the season during which construction activities take place.
- Soil erosion and resulting sedimentation produced by construction impacts the environment, damaging aquatic and recreational resources as well as aesthetic qualities.

## Twelve elements to consider for development of a Construction SWPPP:

1. Mark clearing limits. These can include BMP c101; Preserving Natural Vegetation. BMP c102; Buffer Zones. BMP c103; High Visibility Plastic or Metal Fence. BMP c104; Stake and Wire Fence.
2. Establish Construction Access. BMP c105; Stabilized Construction Entrance. BMP c106; Wheel Wash. BMP c107; Construction Road/Parking Entrance.
3. Control Flow Rates. BMP c240; Sediment Trap. BMP c241; Temporary Sediment Trap.
4. Install Sediment Controls. BMP c230; Straw Bale Barrier. BMP c232; Gravel Filter Berm. BMP c233; Silt Fence. BMP c235; straw wattles. BMP c241; Temporary Sediment Pond.
5. Stabilize Soils. BMP c120; Temporary and Permanent Seeding. BMP c122; Nets and Blankets. BMP c123; plastic covering.

6. Protect Slopes. BMP c120; Temporary and Permanent Seeding. BMP c130; Surface Roughening. BMP c200; Interceptor Dike and Swale. BMP c201; Grass Lined Channels. BMP c208; Triangular Silt Dike (Geotextile-Encased Check Dam).
7. Protect Drain Inlets. BMP c220; Storm Drain Inlet Protection.
8. Stabilize Channels and Outlets. BMP c202; Channel Lining. BMP c209; Outlet Protection.
9. Control Pollutants. BMP c151; Concrete Handling. BMP c152; Sawcutting and Surfacing Pollution Prevention.
10. Control De-Watering. Some disposal options, depending on site constraints may include: infiltration, transport off site for legal disposal, on site chemical treatment or sanitary sewer discharge with approval.

11. Maintain BMP's. Temporary and permanent erosion and sediment control BMPs shall be maintained and repaired as need to assure continued performance of their intended function. Temporary BMPs shall be removed within 30 days after final site stabilization is achieved or after the BMPs are no longer needed.
12. Manage the Project. Plan phasing of the construction where feasible in order to prevent transport of sediment from the construction site. Be aware of seasonal work limitations that may be imposed by local jurisdictions. These may be based on local weather conditions, site conditions or permitting.

BMP C103, purpose of fence is to: (1) restrict clearing to approved limits. (2) prevent disturbance of sensitive areas. (3) limit construction traffic to designated areas. (4) protect areas where marking tape may not provide adequate protection.

BMP c233; Silt Fence. Reduces the transport of coarse sediment from a construction site and reduces the velocities of overland flow.



BMP C122. Erosion control nets and blankets are intended to prevent erosion and hold seed and mulch in place on steep slopes and in channels so that vegetation can become established. Jute mat shown. Usually biodegradable materials such as Jute, Coconut or Straw weave.



BMP C105. Construction entrances are stabilized to reduce the amount of mud and sediment that can be tracked onto paved roads by vehicles or equipment by constructing a stabilized pad of quarry spalls at entrances to construction sites.



BMP C235. Straw wattles are temporary erosion and sediment control barriers consisting of straw wrapped with biodegradable plastic or similar encasing material. Usually 9"-10" diameter and 25' to 30' long.



This is an example of Sediment and Erosion control at a bridge installation over a fish bearing stream utilizing jute mat and straw wattle.



# Spill Prevention and Response Plan

- Plan is part of the Storm Water Pollution Prevention Plan (SWPPP).
- Immediately upon discovery; stop, contain and clean up spills.
- If pollutant materials are stored on-site, have spill containment and clean up kits readily accessible.
- If spill has reached or may reach a sanitary or storm sewer, ground water or surface water, notify Ecology and local jurisdiction immediately.
- Collect and treat contaminated absorbent materials as solid waste and dispose of appropriately.



# Questions?

