



<h1>SWPPP</h1>
<h2>Stormwater Pollution Prevention Plan</h2>

Description

A Stormwater Pollution Prevention Plan is a site-specific, written document that describes methods used to prevent and reduce pollutants in stormwater runoff. Two basic types of SWPPPs for the purposes of this manual: Construction (temporary) SWPPP and Post-Construction (permanent) SWPPP. Basically a SWPPP includes the following:

- Identifies potential sources of stormwater pollution on a construction site.
- Practices to reduce pollutants in stormwater discharges from the site. Reduction of pollutants is achieved by controlling the volume and intensity of stormwater runoff.
- Procedures to be implemented to comply with the terms and conditions of state and local water quality permit.

Site Planning and Design

Climate

The frequency, intensity, and duration of rainfall are the principal factors influencing erosion from a construction site. Know the weather patterns in the area and, if possible, plan your soil disturbance activities for periods of historically lower rainfall.

NOAA Weather Observations for the Past Three Days – Chattanooga, Lovell Field
<http://www.srh.noaa.gov/data/obhistory/KCHA.html>

NOAA National Weather Service Enhanced Radar Image – Storm Total Precipitation and other maps, Huntsville Radar (shows Chattanooga)
<http://radar.weather.gov/radar.php?rid=htx&product=N0R&overlay=11101111&loop=no>

Topography

Longer, steeper slopes have greater erosion potential. Use practices such as 5.10 Slope Drains (SD), 4.3 Compost Filter Socks (CFS), and 5.4 Gradient Treatment/Terracing to break up long slopes. Consider minimizing soil disturbance activities on slopes.

Soils

Soil type can also impact erosion. Soil texture, structure, organic matter content, compaction, and permeability can all influence erosion rates.

Vegetative cover

Vegetative cover provides a number of critical benefits in preventing erosion; it absorbs the energy of raindrops, slows velocity of runoff, increases infiltration, and helps bind the soil. Soil erosion can be greatly reduced by maximizing vegetative cover at a construction site. Use temporary cover such as mulch or straw to reduce exposed soil area. This will contribute less pollutants in the runoff.

A SWPPP is more than just a sediment and erosion control plan. Most SWPPPs are written documents that describe the pollution prevention practices implemented on the site. It includes descriptions of the site and of each major phase of the planned activity, the roles and responsibilities of contractors and subcontractors, and the inspection schedules and logs. It can also be used to document changes and modifications to the construction plans and associated stormwater pollution prevention activities.

Record Keeping

It is very important to include in the SWPPP a list of all records that should be maintained by the site superintendent to be in compliance with state and local jurisdiction permits.

BMP Installation

Proper sequencing of construction activities is essential to maximize the effectiveness of erosion and sediment control measures. A construction schedule is recommended as part of the SWPPP with typical schedule formats described in the Construction Sequence BMP. The following erosion control activities provide a simplified outline that applies to the initial phase of most site developments:

1. Install a stabilized construction entrance and exit. Eliminate any sediment tracking into roads and streets.
2. Flag and mark the project boundaries. Flag the construction buffer zones, sediment traps or basins, construction storage areas, and equipment travel lanes.
3. Clear a path for the installation of perimeter erosion and sediment controls.
4. Install perimeter erosion and sediment controls. Evaluate effectiveness and adjust as needed.
5. Excavate any temporary sediment traps or sediment basins. For most small project sites, some proposed detention basin could also function as a temporary sediment basin with slight modifications.
6. Install outlet structures, protection and channel stabilization to reduce impact on sediment traps or sediment basins. Install slope stabilization measures such as grass sod or turf reinforcement mats.
7. Proceed with site grading and construction work. Establish either temporary or permanent vegetation cover on all disturbed areas within 14 days of completion of grading at the disturbed area. Provide temporary seeding on temporary soil stockpiles.
8. Local and State Water Quality / Stormwater Program Personnel will conduct routine inspections for erosion and sediment control throughout the construction phase. Erosion and sediment control complaints are also investigated by local and state staff. However, it is the contractor, property owner, or designees responsibility to conduct inspections, maintain records, and perform proper maintenance of BMPs.

Site, BMP and Maintenance Inspections

Throughout the construction phase, inspections of the erosion prevention and sediment control measures are required at least weekly and after any significant rainfall. During periods of prolonged rainfall, the erosion and sediment control measures should be inspected daily. It is recommended that an inspection checklist, either generic or project-specific, be used to perform the inspections and to record any needed maintenance.

An as-built inspection and review will be performed at the project site prior to termination of a Land Disturbance Permit, and release / reduction of a construction bond if applicable. All disturbed areas must be stabilized with a thick and healthy stand of vegetation, with no evidence of erosion or slope instability. Also, permanent BMPs need to be confirmed accordingly installed.

Record Keeping

It is very important to include in the SWPPP a list of all records that should be maintained by the site superintendent to be in compliance with a state and local permit. It is also recommended that rainfall data be collected, recorded, and kept at the construction site. Such data is needed for compliance with state and local permits.

Other Considerations

Employee training is very important in pollution prevention. Site superintendents or other site personnel familiar with the daily work conducted onsite are **required** to attend TDEC Level I Erosion Prevention and Sediment Control Workshop and have a current certification for the class.

Litter and construction debris should be disposed of properly and promptly to assure that it does not enter the drainage system. Spills of vehicle fluids or other liquids should be cleaned up immediately and disposed of properly. Materials stored onsite should be assessed for pollution potential and protected from rain exposure if needed.

References

USEPA (U.S. Environmental Protection Agency). 2007. Developing Your Stormwater Pollution Prevention Plan, A Guide for Construction Sites. EPA 833-R-060-04.