

Environmental Management Practices



Activity: Sediment and Erosion Control

EMP No. D-1

Description:

To prevent or reduce impacts during construction activities

Targeted Activities:

Building construction
Utility construction
Pavement removal and installation
Bulkhead renovations and installation

Development EMPs:

- Minimize the amount of time an area is without cover.
- Minimize the quantity of soil exposed at one time
- Prevent runoff from off-site areas from flowing across disturbed areas.
 - Install berms or dikes
- Maintain original vegetation as much as possible. Mark, flag, or fence areas where vegetation should be preserved
- Do not locate construction routes, stockpiles, etc, where significant adverse impact on existing vegetation may occur
- Plant grasses, shrubs, or ground cover plants in drainage pathways to slow erosion
- Use mulching after disturbing soil.
 - Addition of a cover of gravel, wood chips, or straw will help to minimize erosion processes.
 - Consider use of netting or mats as a supplement to mulching.
- Create buffer zones between construction area and storm drain/receiving water. Buffer zones should have established natural vegetation to remove sediments.
- Use water (as appropriate) to control dust in dirt and debris pile areas.
- Minimize use of high pressure/low volume water sprays
- Store dry materials under cover, away from drainage areas
- Do not wash sweepings into the street or storm drain
- Consider the use of structural sediment and erosion control devices including:
 - Earth dikes
 - Drainage swales



Potential Pollutants:

Sediments
Dust

Target Environmental Media:

Surface water
Air

US Regulatory Requirements & Guidance:

40 CFR 122 NPDES Regulations for Stormwater Discharges
40 CFR 260-262, 268, and 270-272 Hazardous Waste Management
49 CFR 171-173, 175, and 177 Department of Transportation (DOT) Regulations
EPA Guidance - Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices
Pitt, R. Manual of Practice for the Design of Construction Site Erosion and Stormwater Runoff Controls. Prepared for the NPS and Land Management Section, Wisconsin Department of Natural Resources, Madison, Wisconsin, 1986 26 pp.
Urban Storm Drainage Criteria Manual: Volume 3 - Best Management Practices, Urban Drainage and Flood Control District. Denver, Colorado, September 1992
California Storm Water BMP (Construction Activity BMP) Handbook, March, 1993
Stormwater Water Quality Best Management Practices for Construction Activities, North Central Texas Council of Governments. December 1992

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Development EMPs *continued*:

- Interceptor dikes and swales
- Temporary storm drain diversion
- Subsurface drains
- Silt fences
- Straw bale barriers
- Brush barriers
- Gravel or stone filter berms
- Storm drain inlet protection
- Minimize off-site vehicle tracking of sediments
 - Stabilize construction entrances, construction roads, parking areas, and other on-site vehicle transportation routes to ensure reduction of off-site tracking of mud, dirt, and rocks, and maintain these areas throughout the project
 - Designate wash-out areas for trucks where washwater can be contained and isolated from stormwater run-on. The hardened residue can be disposed of as construction debris or fill. Several designated wash-out sites located at strategic areas may be needed to serve large construction sites.
 - Train truck drivers to clean and maintain their equipment in a responsible manner both before coming onto port grounds and at the site where the materials are used. Drivers should use only the designated wash sites to clean out their trucks
 - Paved roadways used for access to the construction site should be swept regularly to remove any excess mud, dirt, or rocks tracked from the site.

Considerations:

- Train workers to minimize water use and clean equipment in a manner that minimizes discharges to receiving waters
- All disturbed areas of the construction site and all material storage areas should be inspected and maintained.
- All erosion and sediment controls implemented at the construction site should be inspected regularly to ensure effectiveness
- Watering to control dust may require frequent, often daily, attention.
- Maintaining original vegetation requires planning and may not be possible based on the required uses of the site
- Shrubs, grass, and trees planted to control erosion must be watered and cared for
- Stabilized roads and entranceways must be maintained on a regular basis to control their erosion, and must be inspected weekly and after each rain.