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Title: **Storm Water Best Management Practice/Control Measure Basics, Poster, Individual Permit for Storm Water, NPDES Permit No. NM0030759**

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Intended for: Public

Purpose: This poster was prepared for the May 2011 Individual Permit for Storm Water (IP) public meeting. The purpose of the meeting was to update the public on implementation of the permit as required under Part 1.I (7) of the IP (National Pollutant Discharge Elimination System Permit No. NM0030759). The poster will be available on Los Alamos National Laboratory's (LANL's) public website.



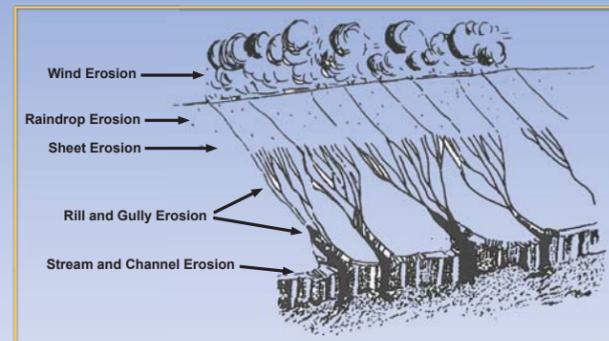
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Storm Water Best Management Practice/Control Measure Basics

What's the difference between sedimentation and erosion?



Types of Erosion



Stream bed erosion is the attrition of stream banks or bottoms by rapidly flowing rivers or creeks.

Rill Erosion refers to the development of small, ephemeral concentrated flow paths, which function as both sediment source and sediment delivery systems for erosion on hillslopes.



Gully erosion occurs when the power of runoff is strong enough that it cuts a well defined channel. These channels can be as small as one centimeter wide or as large as several meters.

Sheet erosion is the overland transport of runoff without a well defined channel. In the case of gully erosion, large amounts of material can be transported in a small time period.

Erosion Control

Practice of preventing or controlling soil disturbance and transport by wind or water.

Erosion Control Classes:

- Established Vegetation
- Seed and Mulch
- Channel/Swales
- Gabions/Riprap
- Caps
- Rolled Erosion Control Products



Hydroseeding is a planting process which utilizes a slurry of seed and mulch. An alternative to the traditional process of broadcasting or sowing dry seed, hydroseeding promotes quick germination and inhibits soil erosion.



Gabions are engineering controls used to reinforce steep streambanks and prevent erosion.



Concrete lined swales are used to divert run-off away from sites or to transport storm water across a site without picking up contaminated soil.



Mulch provides short-term soil protection and a more favorable environment for seed germination and establishment. The ultimate goal is to establish a self-sustaining vegetation cover to reduce rainfall impact and surface water velocities.

Sediment Control

Function to remove and retain sediment from storm water.

Sediment Control Classes:

- Berms
- Sediment Traps and Basins
- Check Dams
- Fiber Rolls
- Silt Fence



Rock check dams reduce the velocity of concentrated storm water flows and are an effective aid in trapping sediment particles by virtue of the ability to pond runoff.



Gabion sediment traps prevent offsite sediment migration.

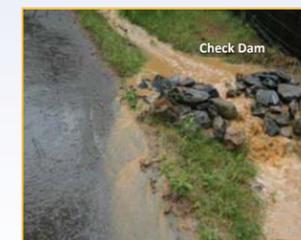


Silt fence is a temporary sediment barrier consisting of filter fabric entrenched into the soil and attached to supporting posts.



Detention basins manage storm water runoff by temporarily storing water after a storm which limits downstream erosion and controls some pollutants such as suspended solids.

Failed BMPs



Improperly sized check dam



Silt fence installed in concentrated flow path



Silt fence failure due to improper maintenance



BMP should extend length of eroded channel

What is a BMP?

Best Management Practice

- Procedures, practices, physical structures or controls
- Minimizes the potential for pollutant transport
- Can be temporary or permanent



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