Erosion Control Measures

Introduction:

Erosion control is the process of reducing soil in stormwater runoff and preventing or controlling soil loss caused by wind or water. There are several kinds of erosion control measures that can be implemented. The most effective and least expensive method for erosion control involves the stabilization of exposed soils with a low-maintenance ground cover. This should be applied as soon as possible after site preparation and grading. The owner should monitor, evaluate, and adjust the erosion control measures according to site changes. The erosion control used should be documented on the facility Site Plan and Best Management Practices (BMPs).

Discussion Points:

- The purpose of the erosion control measures.
- The Control Measures designed to minimize and prevent erosion.
- Treatments that are used to control the effects of erosion.
- Implementing the Erosion Control Measures as approved and according to the permit.

Discussion:

According to a James Environmental Management Environmental Specialist, there are basically three categories for Control Measures (or Structural Controls) that are designed to minimize or prevent erosion:

- Structural Controls designed to slow the velocity of stormwater. These include: check dams (straw bales or gravel), triangular silt diking, and vegetated swales. These serve to minimize soil loss in erosion prone areas such as areas with sandy soil, little vegetation, and less stabilized soils because the stormwater is flowing over exposed surfaces with less force.
- Structural Controls designed to stabilize areas prone to erosion. These include: crushed stone (gravel surface), vegetative covering, and paving over the soil. This provides reinforcement for vulnerable soil and areas with high-vehicle traffic (entrance ways) or along banks of ditches to provide support.
- Control Measures designed to convey stormwater away from erosion prone areas. These include: ditches or concrete swales. This erosion control measure is used to channel stormwater away from areas with sandy soil and little vegetation.

While not considered a control measure used to prevent erosion, treatment controls are used to address the effects of erosion. These include: sediment ponds, silt fencing, and sediment traps. These are used to minimize the effects (high TSS, metals, nutrients, etc.) of erosion on the quality of stormwater discharge.

As always, stay safe out there!