

CONSTRUCTION BEST MANAGEMENT PRACTICES

Courtesy of the DEQ

Nonstructural BMPs

- A. **Establish Temporary Vegetation With Seed** - the purpose of this practice is to establish short-lived vegetation (generally annuals) on areas subject to erosion in order to stabilize the soil and reduce erosion of sediment to adjacent water bodies. This management practice is applicable on graded or cleared areas, which are subject to erosion for a relatively short period of time (one year or less). The species of plants suitable for temporary vegetation include:

Ryegrass	Wheat	Oats
Rye	Browntop millet	Sudangrass

- B. **Establish Permanent Vegetation With Seed** - the purpose of this practice is to establish long-lived grasses and/or legumes (perennial or combination of perennial and reseeding annual species) on areas subject to erosion, in order to stabilize the soil and reduce erosion of sediment to adjacent water bodies. This management practice is applicable on graded or cleared areas, which are subject to erosion and where a permanent, long-lived vegetative cover is needed. The species of plants suitable for permanent vegetation include:

Common burmuda grass	Pensacola bahia grass
St. Augustine	Centepede grass
Carpet grass	Tall fescue

- C. **Mulching For Temporary and Permanent Seeding** - the purpose of this practice is to apply to the soil surface plant residues or other suitable materials not produced on the site, in order to conserve moisture, prevent surface compaction or crusting, reduce runoff and erosion, and to help establish desired plant cover. This practice is applicable on soils with slopes of 3 percent or greater and/or slow infiltration rates. The types of materials that are suitable for mulching include:

Wood Waste and Shredded Residues	Upholster's Burlap
Wood Cellulose Fiber (Hydromulching)	Straw or Hay
Commercial Mulch	

- D. **Establishing Permanent Vegetation With Sod** - The purpose of this practice is to establish long-term stands of vegetation using grass sod to stabilize the soil and reduce damage from sediment loss and erosion.

Structural BMPs

- A. **Armour Plating** - the purpose of this practice is to utilize rock riprap or cellular concrete blocks to protect the soil surface from erosive forces. The practice is applicable to soil-water interfaces where soil conditions, water turbulence and velocity, expected vegetative cover and ground water conditions are conducive to erosion due to flow conditions. Examples include storm drain outlets, channel banks and /or bottoms, roadside ditches, drop structures and shorelines.
- B. **Concrete Block Retaining Wall** - the purpose of this practice is to provide lateral support of an embankment with a temporary vertical wall built of concrete blocks in order to prevent earth slides. This practice is applicable at sites where vertical earth banks or unstable slopes are left after excavation occurs.
- C. **Dikes** - the purpose of a dike is to provide a temporary earthen ridge for interception and/or diversion of storm runoff from upland areas and direct it from an exposed slope to an acceptable outlet. There are several types of dikes designed for specific purposes. They include diversion dikes, interceptor dikes, and perimeter dikes. They are applicable to disturbed areas where prevention of erosion or transport of sediment-laden water to a sediment trap is desired.
- D. **Earthen Diversions** - the purpose of an earthen diversion is to provide a drainageway for diversion of water from low lying areas, steep slopes, construction sites, buildings and residences, or active gullies. They reduce the slope lengths and reduce the velocity of water to non-erosive rates of flow.
- E. **Grade Stabilization Structure (Chute)** - the purpose of this practice is to provide a temporary channel, lined with bituminous concrete, portland cement concrete, cellular block mattresses, riprap comparable non-erodible material for conveyance of surface runoff down steep slopes. This practice is applicable to an area where concentrated flow of surface runoff needs to be conveyed down a slope to prevent erosion.
- F. **Grassed Waterway** - the purpose of this practice is to provide a natural or constructed waterway or outlet with suitable vegetation established to convey surface runoff from the development area without damage from erosion or flooding. This practice is applicable to sites where added capacity or vegetative protection or a combination of both are required to control erosion resulting from concentrated runoff.
- G. **Hay Bale Dike** - the purpose of this practice is to provide a temporary barrier, constructed with hay bales that will intercept and detain small amounts of sediment from unprotected areas of limited extent. The bales are installed across the toe of the slope and provide protection for a period of approximately 3 months or less.
- H. **Surface Roughening** - the purpose of this practice is to scarify slopes to provide less erosive surfaces that reduce water velocity and increase infiltration rates. Rough slope sites hold water, seed, and mulch better than smooth slopes. Grooves created by construction equipment should run horizontally across the slope.

- I. **Level Spreader** - the purpose of this practice is to convert a concentrated flow of sediment-free runoff, through diversion outlets constructed at zero percent, into sheet flow and to outlet it onto areas stabilized by existing vegetation without causing erosion.
- J. **Pipe Slope Drain** - the purpose of the pipe slope drain is to convey surface runoff safely down slopes, through a flexible tube or rigid pipe, without causing erosion. This is applicable to areas where the conveyance of a concentrated flow of surface runoff needs to be conveyed down a slope to prevent erosion.
- K. **Sediment Basin** - a sediment basin is a temporary dam constructed across a drainageway to intercept and retain sediment and other waterborne debris. It provides a temporary means of detaining sedimentladen runoff long enough for the majority of sediment to settle out. Special consideration needs to be given on depth of water table when this practice is used in order to ensure that infiltration of pollutants do not contaminate ground water aquifers.
- L. **Sediment Trap** - A sediment trap is a small temporary ponding area formed by constructing an earthen embankment to intercept sediment-laden runoff from a small disturbed area long enough to trap and retain it to settle out. This practice should be installed at points of discharge from disturbed areas for a maximum period of 18 months. Special consideration needs to be given on depth of water table when this practice is used in order to ensure that infiltration of pollutants do not contaminate ground water aquifers.
- M. **Silt Fence** - A silt fence is a temporary barrier made of burlap or polypropylene material which is water permeable but will trap waterborne sediment from unprotected areas of limited extent. The silt fence is used during the construction period near the perimeter of a disturbed area to intercept sediment while allowing water to percolate. It should remain in place until the disturbed area is permanently stabilized. It should not be used where there is a concentration of water in a channel or other drainageway.
- N. **Stabilized Construction Entrance** - the purpose of the stabilized construction entrance is to reduce or eliminate the flow of sediment onto public rights-of-way. It is constructed of crushed stone and is located at the entrance or the exit of a construction site, public right-of-way, street, alley, sidewalk, or parking area.
- O. **Swales** - A swale is an excavated drainageway that is constructed adjacent to or across a construction site to intercept or divert storm runoff within the site or to prevent offsite runoff from entering the construction site. The purpose of the swale is to prevent erosion or to transport sedimentladen water to a sediment trapping device. The swale is a temporary structure that should remain in place until the disturbed area is permanently stabilized.
- P. **Topsoiling** -The purpose of topsoiling is to spread fertile topsoil over a disturbed area in order to provide a suitable soil medium that is favorable for vegetative growth. This practice increases the success of establishing adequate vegetation for reduction of erosion. The practice is applicable in areas where texture and quality of the exposed soil material is not adequate for plant establishment, or where the soil is extremely acidic or contains materials toxic to plant growth.