

# EROSION & SEDIMENT CONTROL FOR DEVELOPMENT SITES

SECOND EDITION, SEPTEMBER 2001



## Erosion is a costly problem

Eroding construction sites are a leading cause of water quality problems in Georgia. For every acre under construction, about a dump truck and a half of soil washes into a nearby lake or stream unless the contractor uses erosion controls. Problems caused by this sediment include:

**Local Taxes** - Cleaning up sediment in streets, storm drains and ditches adds extra cost to local government budgets.

**Dredging** - The expense of dredging sediment from lakes, harbors and navigation channels is a heavy burden for taxpayers.

**Lower property values** - Neighboring property values are damaged when a lake or stream fills with sediment. Shallow areas encourage weed growth and create boating hazards.

**Poor fishing** - Muddy water drives away fish that rely on sight to feed. As it settles, sediment smothers gravel beds where fish like small mouth bass find food and lay their eggs.

**Nuisance growth of weeds and algae** - Sediment carries fertilizers that fuel algae and weed growth.

## State Waters Buffers

- Land disturbing (clearing, grubbing or grading) within 25 feet of the banks of **ALL** creeks, streams, ponds, lakes, and wetlands is prohibited.
- Buffers shall be protected with “orange” plastic safety fencing; and two rows of state approved “Type C” silt fencing outside the buffer.

## Controlling Erosion

Erosion control is important for all construction sites. The materials needed are easy to find and relatively inexpensive—straw bales or silt fence, stakes, rock, slope drains, grass seed, mulch or geo-textiles.

Putting these materials to use is a straight forward process. Only a few controls are needed on most sites, however all erosion controls must be maintained regularly.

- **Preserving** existing trees and grass where possible to prevent erosion;
- **Revegetating** the site as soon as possible;

## Controlling Sediment

- **Silt fence or straw bales** to trap sediment on the down slope side;
- **Soil piles** located away from any roads or waterways and stabilized with mulch and or vegetation;
- **Construction exit pads** used by all vehicles to limit tracking of mud onto streets;
- **Cleanup** of sediment carried off-site by vehicles or storms;
- **Use of slope drains and stilling basins** on all vertical drops;
- **Use of rip rap** at the outflow end of all storm drains and stilling basins shall be installed.

## Penalties

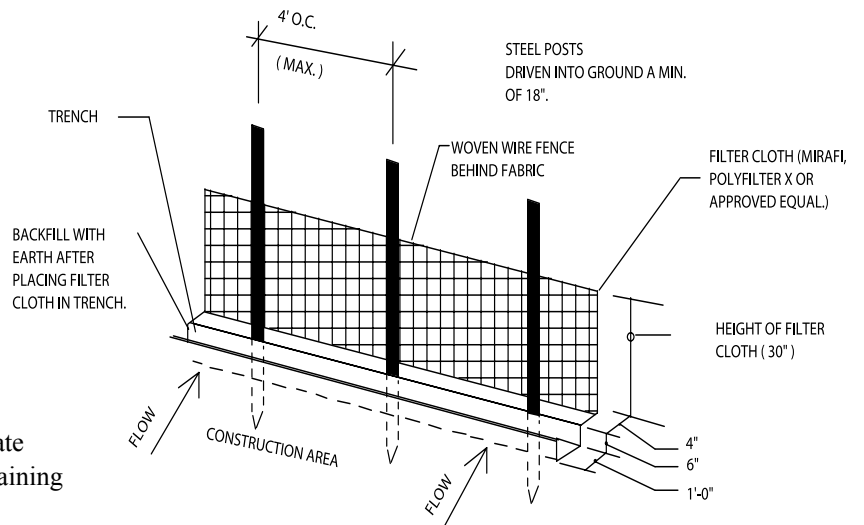
- Court imposed penalties for violations carry a minimum \$1,000 fine (for most sites), a maximum \$2,500 fine, or both a fine and jail term up to 60 days.

## Soil Piles

- Locate away from any down slope street, driveway, stream, lake, wetland, ditch, or drainage way.
- Stabilize with mulch and/or vegetation. Temporary seed such as annual rye or winter wheat is recommended for topsoil piles.

## Silt Fence

- Install prior to land disturbance.
- Install on down slope sides of site parallel to contour of land.
- Extend ends upslope enough to allow water to pond behind fence.
- Bury fabric in trench 6 inches deep with a 2 inch lip.
- Leave no gaps. Overlap sections of silt fence, or twist ends of silt fence together.
- Inspect and repair daily. Remove sediment if deposits reach half the fence height.
- Maintain daily until vegetation is established.
- Use 2 rows of Type C silt fence adjacent to state waters, lakes, wetlands, identifying and maintaining the State waters 25' buffer zone.
- Hay bales can be used for temporary erosion control in low flow areas. They should be removed within 30 days and silt fence should be installed for long term use.
- A mid-afternoon “walk through inspection” should be made at critical areas leaving time for repair.



## Preserving Existing vegetation

- Wherever possible, preserve existing trees shrubs and other vegetation.
- To prevent root damage, do not grade, place soil piles, or park vehicles near trees marked for preservation.
- Place plastic mesh buffer/tree save or snow fence barriers around trees at the dripline to protect the root areas below their branches.

## Sediment Cleanup

- By the end of each work day, sweep or scrape up soil tracked onto the road. Do not wash. Stabilize with mulch and/or vegetation on all areas at finish grade while maintaining normal erosion controls.

## Revegetation

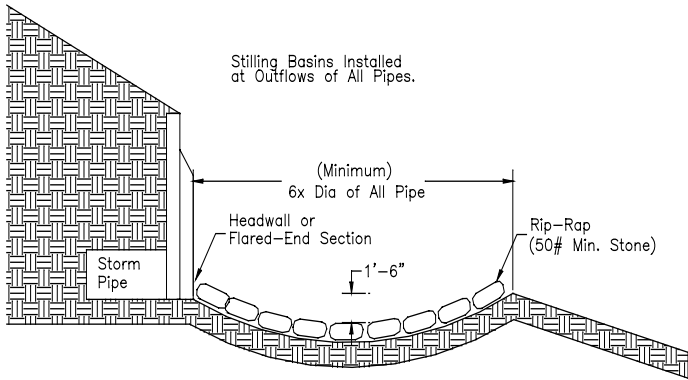
- Seed, sod or mulch bare soil as soon as possible. Vegetation is the most effective way to control erosion.
- Exposed areas left undisturbed for greater than two weeks must be vegetated. Mulch can be used during poor growing seasons.

**Warning!** Extra measures may be needed if your site:

- Is within 300 feet of a stream, lake, or wetland;
- Has a waterway or ditch;
- Is steep (slopes of 12% or more);
- Receives runoff from 10,000 sq. ft. or more of adjacent land;
- Has zoning or construction buffers;
- Has more than an acre of disturbed ground;

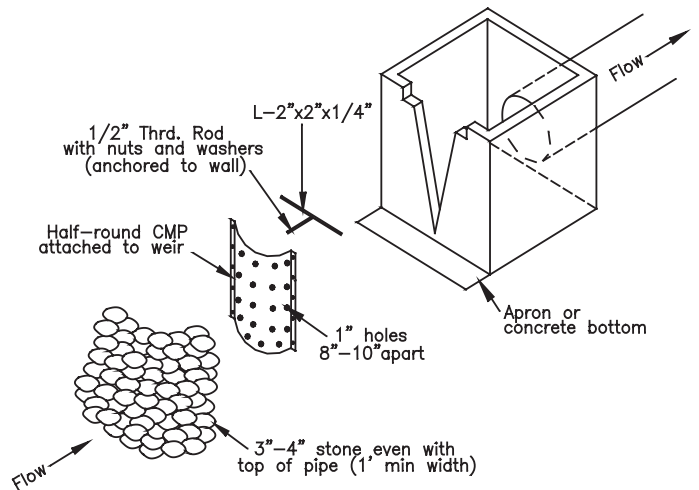
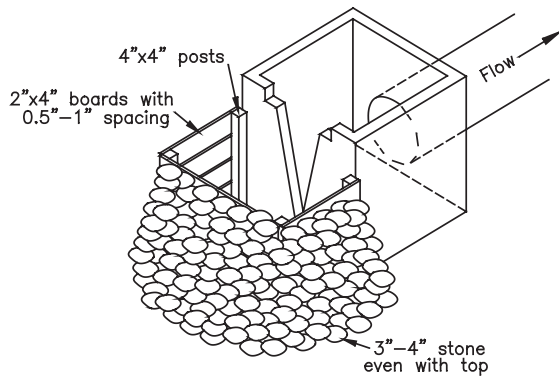
For information on appropriate measures for these sites, call the Development Inspections office at 770.822.7640.

# Basic Best Management Practice Procedures for Erosion and Sediment Control

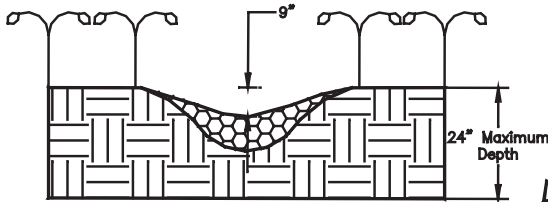
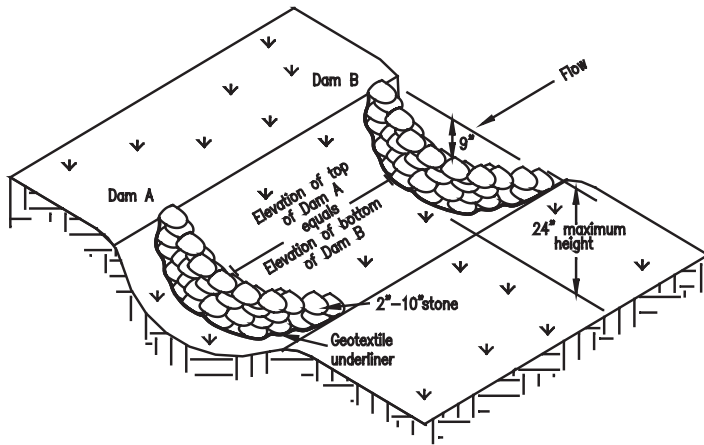


## All Detention Ponds Shall Be Retrofitted

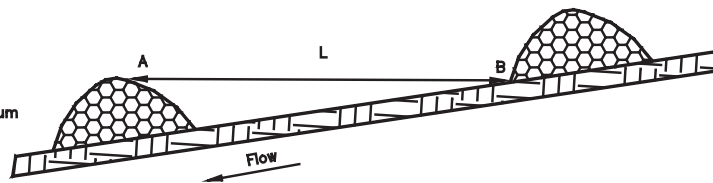
- Elevation for pond clean out should be marked on pond outlet structure.



# Stone Check Dams



L = The distance such that points A and B are of equal elevation.



## Construction Exit Pad

- Install a construction exit using 1.5 to 3.5 inch aggregate.
- Lay stone 6 inches thick and at least 20 feet wide minimum, from the back of the curb or edge of the pavement, minimum length or 50 feet.
- Use to prevent tracking mud onto the road by all vehicles.
- Maintain throughout construction.
- Use of a geo-textile under the stone for the entire pad is mandatory.

