CONSTRUCTION ENTRANCES
Using gravel and filter layers to trap sediment from construction vehicle traffic before it is transported onto public roadways.

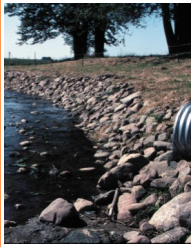
FIBER ROLLS
Erosion control devices that are made from natural materials, rolled into tubes, and wrapped with biodegradable netting.

FLOATING TURBIDITY BARRIERS
Temporary silt barriers that are constructed of weighted filter fabric extending down from buoyant tubes.

GRASSED SWALES
Vegetated open channels that filter runoff and promote infiltration.

GRAVEL/SANDBAG BERMS
Gravel or sand bags that are used to intercept sheet flow and provide flood and erosion protection.

RIPARIAN BUFFER
Vegetated areas of restricted development along a shoreline or wetland.



Riprap lining is an effective means of channel protection

RIPRAP CHANNEL LINING
Heavy rocks that are used to line the sides or bottoms of waterways to prevent erosion.

ROCK FILTER BERM
Temporary gravel ridges that filter and redirect runoff flow.

SAND FILTER SYSTEM
Sub-surface sand layers that filter pollutants from runoff.

SEDIMENT BASINS/ROCK DAMS
Man-made or natural depressions that are associated with earthen embankments that retain and slowly drain runoff.

SILT FENCE
Filter fabric stretched between anchored posts that are used to control sediment transport.

STORM DRAIN INLET PROTECTION
Excavation or inlet barriers that prevent soil and debris from entering storm drains.

STRAW BALE SEDIMENT TRAP
The implementation of straw or hay bales as check dams, outlet protection, or perimeter controls.

WATER QUALITY INLETS
Underground storm water retention systems that remove pollutants and sediment from runoff.

WET DETENTION PONDS
Basins that collect and retain storm water allowing for sediment and pollutant removal through settling.

If you want more information or if you would like to request a copy of our complete 'Best Management Practices (BMPs) for Coastal Louisiana Nonpoint Source Pollution: Urban Storm Water Runoff' manual please contact:

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Photos Provided Courtesy of :
Alabama SWCC
USDA NRCS
The City of High Point Stormwater Services
and
Providence Engineering and Environmental Group, LLC

BEST MANAGEMENT PRACTICES (BMPS) FOR COASTAL LOUISIANA NONPOINT SOURCE POLLUTION

URBAN STORM WATER RUNOFF

DEQ LOUISIANA

Prepared by:

PROVIDENCE

Minimizing the Coastal Impact from Developmental and Residential Activities

Urbanization creates impermeable surfaces. Establishing vegetation will help treat runoff.

Urban development has had a profound impact on the quality of groundwater and surface waters in the Louisiana Coastal Zone. Uncontrolled storm water runoff in urban areas has lead to flooding, erosion, and contamination of Louisiana waters. The *Louisiana Coastal Nonpoint Pollution Control Program (CNPCP)* is responsible for implementing management measures that address the control and prevention of nonpoint source (NPS) pollution in urban areas. The overall goal of CNPCP is to protect, maintain, and sustain Louisiana coastal waters and wetlands. The recommendations provided are based on cost efficiency, effectiveness, relevant usage in other coastal states, and ease of design and construction.

What are we discussing?

Best Management Practices (BMPs) – Educational and procedural activities that can resolve or reduce specific water quality resource problems if followed and implemented according to their established guidelines.

Nonpoint source (NPS) pollution - Diffuse pollution that is generated from an indirect, unspecific source. NPS pollution is commonly a result of storm water runoff and is generally difficult to control.

Urban storm water – Runoff from developed and undeveloped urban areas that is discharged into coastal receiving waters.

What are common water pollution sources?

- *Sediment* – soils and other particulate matter that are transported and deposited
- *Fertilizers and Nutrients*—Inorganic salts and eroded soils
- *Hydrocarbons*—Carbon and hydrogen based compounds (including oil and grease by-products)
- *Pathogens*—Disease causing organisms and materials
- *Pesticides*—Chemicals used to control organisms or vegetative growth
- *Metals*—metallic contributions from non-metal products

Household/Construction Site Preparation and Maintenance BMPs

FERTILIZER AND PESTICIDE CONTROL

Consider alternatives before relying on chemicals. If application is necessary, it is important to follow product application instructions and use caution in their handling and disposal.

GOOD HOUSEKEEPING

Regular and strict compliance with state and federal laws and regulations. Some examples of good housekeeping practices include proper solid waste collection and disposal, proper product handling, storage, recycling, and disposal and proper disposal of yard waste.

STREET SWEEPING

Collecting and removing various pollutants, including sediment, debris, trash, road salt, and trace metals from roadways and parking lot surfaces.

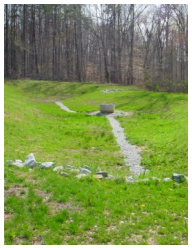
TOP SOILING

Removing, stockpiling, and preserving the existing soil surface (topsoil) in construction/remodeling areas for immediate or future use for vegetation.

Surface Stabilization BMPs

CHEMICAL STABILIZATION

The use of chemical adhesive materials, such as vinyl, asphalt, or rubber emulsion, that can be used for quick, easy, and temporary stabilization of soil surfaces.



Dry detention ponds drain completely in between storm events.

DRY DETENTION PONDS

Basins that collect and detain storm water runoff and allow for slow and controlled drainage through pond outlets.

DUST CONTROL

Reducing soil surface activity and air movement that can lead to dust generation.

EROSION CONTROL BLANKETS

Using protective coverings made of environmentally-friendly, biodegradable materials.

MULCHING

Applying materials such as grass, hay, straw or wood chips to soil surfaces can provide immediate erosion control and improve water infiltration.

OUTLET PROTECTION

Structurally lined aprons or other energy dissipating devices at the outlet of pipes, culverts, or paved channel sections can protect against erosion.

PRESERVATION OF VEGETATION

Whenever possible, construction or household projects should protect natural vegetation because established vegetation provides inherent erosion control and biofiltration.

SEEDING

Where there is no established vegetation, seeding can provide temporary or permanent stabilization. Fast-growing annual vegetation can be used to provide temporary stabilization until permanent vegetation can be established.

SODDING

When vegetation is difficult to establish from seed, continuous vegetative cover (grass sod) can be transplanted to the surface.

TEMPORARY WATER CROSSING

During construction, transport across waterways should be avoided. When it is necessary for equipment or materials to cross a waterway, a non-permanent bridge, culvert, or ford can provide bank stabilization and minimize sediment loading and the risk of damage to a ditch or channel.

TREES, SHRUBS, VINES AND GROUND COVER

Other vegetative cover can be used when establishment or maintenance of seed or sod is difficult.

VEGETATIVE FILTER STRIPS

Pre-established strips of vegetation can be used to treat sheet flow runoff and help filter sediment and pollutants.

Runoff Conveyance BMPs

Check dams are often used in series in long channels

CHECK DAMS

Small temporary structures that can be constructed across areas of concentrated flow in a swale or channel that will slow velocity and reduce erosion.

DIVERSIONS AND DIVERSION DIKES

Natural or man-made structures, such as gutters or swales with earthen levees, that can collect and divert runoff. Usually used around site perimeters.

POROUS PAVEMENT

Pavement surfaces made of coarse materials with little filler to allow for runoff to gradually infiltrate into the subsoil. Particularly useful in preventing flooding in parking lots or other low-traffic areas.

SLOPE DRAINS

Flexible conduits that can be used to divert slope runoff to temporary alternate outlets.

UNDERDRAIN AND STORM WATER FILTER SYSTEMS

Porous conduit that is installed below a site to collect and convey runoff after soil infiltration.

Sediment Control BMPs

BRUSH/FABRIC BARRIER

Retaining structure of natural, woody debris that is stabilized with filter cloths and used to provide a sediment basin at the outlets of small drainage structures.