

SUGAR CREEK SCOOP



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Choosing Measures and BMPs to Apply

To choose an appropriate Best Management Practice (BMP), it is essential to determine in advance the objectives to be met by the BMP. BMPs selected for water quality improvement are generally categorized as being either preventative or remedial in nature.

Preventative measures reduce the likelihood that new watershed problems such as water quality degradation will arise or that existing problems will worsen. Preventative techniques generally target new development in the watershed and are geared toward protecting and preventing degradation of existing resources. Planning, regulatory, and administrative programs and alternative site designs are examples of preventative measures. Prevention also includes measures that protect the natural drainage system through land acquisition and conservation management.

Back to Basics – What is a Best Management Practice (BMP)?

As a general rule, non-point source pollution is best controlled at the source. The measures and practices used to control non-point sources of water pollution are collectively referred to as Best Management Practices (BMPs).

There are three basic types of BMPs: land use planning, non-structural controls, and structural controls. While prevention and source reduction are high priority practices, they are limited in their overall capability to control and reduce runoff pollution due to the fact that they are more difficult to quantify and therefore more difficult to regulate. As a result, most of a community's

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Remedial measures are used to solve known watershed problems or to improve current watershed conditions. Remedial measures include retrofitting drainage system infrastructure such as detention basins and stormsewer outfalls to improve water quality, adjust release rates, or reduce erosion. Water quality problems can be addressed by installing measures that improve infiltration and reduce runoff.

Based on what is in the best interest of improving water quality conditions, reducing pollutant loading and enhancing land use practices, the Steering Committee has elected to pursue implementation of both preventative and remedial BMPs in the Sugar Creek Watershed.

storm water management is through control and treatment practices which are structural in nature.

BMP selection is based on site-specific factors including: land availability, soil type, topography, infiltration rates, pollutant treatment requirements, and design feasibility. Many sites will implement several BMPs in series (treatment train) to address different needs and maintain better storm water quality results.

The following article, *Best Management Practices: From Your Watershed to Your Backyard*, profiles several structural BMPs.

BEST MANAGEMENT PRACTICES:



RAIN GARDENS

What is it?

A landscaping feature that has native perennial vegetation used to manage storm water runoff from impervious surfaces such as roofs, driveways, sidewalks and parking lots.

Where is it commonly used?

- As a natural filtration feature in your front or backyard.
- Around buildings and parking lots.
- Around or near any impervious area to promote infiltration.

How does it help?

- Absorbs storm water runoff and promotes infiltration.
- Reduces area of inundation during rainfall.
- Creates habitat for birds and butterflies.

Maintenance Requirements

- Watering of plants for initial growth.
- Once a year clean-up.
- Addition of mulch to keep the surface moist.
- Removal of weeds and invasive species.



FILTER STRIP

What is it?

A strip of grass, native vegetation, trees or shrubs that filters runoff and removes contaminants before they reach water bodies or water sources such as wells.

Where is it commonly used?

- As a buffer zone along the edges of streams.
- As a buffer zone between impervious areas and water sources.
- As a buffer zone between agricultural fields and water sources.

How does it help?

- Reduces rate and volume of runoff from a site.
- Removes suspended solids through settling and filtration.
- Traps and removes pollutants as runoff infiltrates.

Maintenance Requirements

- Repair of eroded areas as needed.
- Removal of accumulated sediment as needed.



PERMEABLE PAVERS

What is it?

Permeable surfaces that can replace asphalt and concrete to reduce impervious surfaces, creating less storm water runoff. They can be used for driveways, parking lots, parks, school playground areas, and walkways.

Where is it commonly used?

- As an alternative to conventional asphalt or concrete in parking lots, driveways, parks, and walkways.
- To increase storm water storage.
- As soil reinforcement and stabilization.

How does it help?

- Promotes infiltration of storm water runoff and ground water recharge.
- Reduces rate and volume of runoff from a site.

Maintenance Requirements

- Regular vacuuming and washing of the surface to keep the voids from clogging.
- If grass pavers are used, regular mowing of the surface.

FROM YOUR BACKYARD TO YOUR WATERSHED



BIO-SWALE

What is it?

A storm water runoff conveyance system consisting of a constructed drainage way made out of rock, amended soils to facilitate infiltration, and native vegetation.

Where is it commonly used?

- As an enhancement to existing drainage ways.
- Within or around parking lots and other impervious area.
- As an alternative or an enhancement to traditional storm sewer pipes.

How does it help?

- Allows the frequent, low intensity rains that account for the majority of annual precipitation to infiltrate.
- Promotes groundwater recharge.
- Improves water quality.

Maintenance Requirements

- Removal of weeds and invasive species.
- Removal of accumulated sediment as needed.



CONSTRUCTED WETLAND

What is it?

An existing marsh or depressional area designed and constructed to mimic pollutant removal attributes of natural wetlands. Additional storm water runoff storage capacity can be provided above the existing marsh or depressional area water level.

Where is it commonly used?

- As a treatment mechanism for runoff from agricultural fields.
- As a treatment mechanism for runoff from roadways.
- In conjunction with storm water detention facilities.

How does it help?

- Removes pollutants and sediment from storm water runoff.
- Provides additional storage capacity which can reduce flooding.
- Improves water quality.

Maintenance Requirements

- Removal of weeds and invasive species.
- Removal of accumulated sediment as needed.



VEGETATIVE SHORELINE STABILIZATION

What is it?

Native plants that have an extensive root system used on shorelines. These plants build soil quality and prevent erosion by stabilizing the shoreline.

Where is it commonly used?

- Shorelines of lakes and ponds.
- Stream banks.
- Naturalized detention basins.

How does it help?

- Prevents erosion of lake shorelines, stream banks, and naturalized detention basins.
- Dissipates energy generated from waves or increased velocities in channels.
- Creates habitat for wildlife.

Maintenance Requirements

- Removal of weeds and invasive species.

Upcoming Sugar Creek Meeting Dates

Upcoming meetings for the watershed planning groups are listed below.

November 7, 2008: Steering Committee Meeting
4:30–7:00pm, Hancock County SWCD, 1101 W Main St, Greenfield, IN 46140

December 11, 2008: Steering Committee Meeting
3:30pm–5:30pm – Hancock County SWCD, 1101 W Main St, Greenfield, IN 46140

January 15, 2009:

Steering Committee Meeting 4:00–6:00pm

Public Meeting 7:00–9:00pm

Greenfield Public Library, 900 West McKenzie, Greenfield, IN 46140, Phone: 317–462–5141

February 12, 2009: Steering Committee Meeting
6:00–8:30pm, Mohawk United Methodist Church, 2045 W 400 N, Greenfield, IN 46140

March 12, 2009: Steering Committee Meeting 6:00–8:30pm, New Palestine Town Hall, 42 E Main St, New Palestine, IN 46163, Phone: 317–861–4727

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Sugar Creek Hydrology

Sugar Creek Cleanup Day

Don't forget, the Sugar Creek Cleanup Day is

Saturday November 8, 2008!!

Cleanup will be held from 8:00 am– 1:00 pm. Meet at the Hancock County SWCD, 1101 W Main St, Greenfield, IN 46140 **at 7:45 a.m.!!**

Volunteers Needed!!

Bring your work gloves!!!



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