



WATER RESOURCE CENTER

FACT SHEET

Southwestern Pennsylvania Commission

WATER RESOURCE CENTER

Mission

To promote regional collaboration on water topics; be a leader in facilitating coordination and education; and provide technical assistance to its member governments.

Two Chatham Center
Suite 500
112 Washington Place
Pittsburgh, PA 15219-3451
Voice (412) 391-5590
Fax (412) 391-9160
www.spcwater.org

VEGETATED SWALE STRUCTURAL STORMWATER BMPs

Vegetated Swales are shallow channels, planted densely with vegetation, designed to reduce the rate of stormwater and encourage infiltration. Additional stormwater management benefits of vegetated swales include improved water quality and volume reduction.

Vegetated swales can be incorporated into a variety of landscapes, including residential, commercial, industrial, and highways/roads. In areas with steep slopes, check dams can increase the effectiveness of vegetated swales by further slowing the rate of stormwater and therefore increasing opportunities for infiltration.



Vegetated swales can be incorporated into a variety of landscapes, including retrofit situations. Above is an example of a parking lot that was retrofitted with a vegetated swale to perform on-site stormwater management and improve aesthetics.

BMP Profile	
Name	Vegetated Swale
Type	Structural
Grouping	Volume and Peak Rate Reduction by Infiltration
Stormwater Management Benefits	<ul style="list-style-type: none"> ◆ Water Quality ◆ Peak Rate Control ◆ Volume Reduction ◆ Groundwater Recharge
Potential Applications	<ul style="list-style-type: none"> ◆ Residential ◆ Commercial ◆ Industrial ◆ Retrofit ◆ Highway/Road



In areas with steep slopes, check dams can be included in the design of a vegetated swale to increase stormwater management performance. The check dams attenuate the water, slowing the peak rate and allowing more time for infiltration.

Key Considerations for Vegetated Swales

- ◆ Better alternative to conventional conveyance systems due to ability to remove some pollutants and reduce speed of stormwater
- ◆ Utilize minimum of 24" of permeable soil beneath plants
- ◆ 12" – 24" of base rock layer should be placed below soil layer
- ◆ Plant with native vegetation that is tolerant of wet and dry conditions
- ◆ Maintenance plan is essential for long term success
- ◆ Can be designed to aesthetically enhance surroundings
- ◆ Should discharge to additional stormwater BMP or traditional stormwater infrastructure

This information was adapted from the Pennsylvania Stormwater Best Practices Manual. Check out SPC's other fact sheets to learn more about specific BMPs, flooding, and more.

Photos: lacreekfreak.files.wordpress.com & oseh.umich.edu

