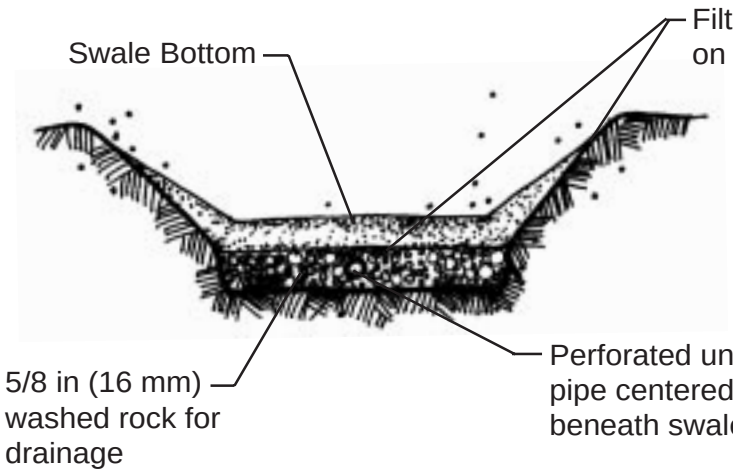
PRIMARY USE: To treat stormwater runoff from small sites such as driveways, parking lots, and roadways.
ADDITIONAL USES:

BASIC BIOFILTRATION SWALE

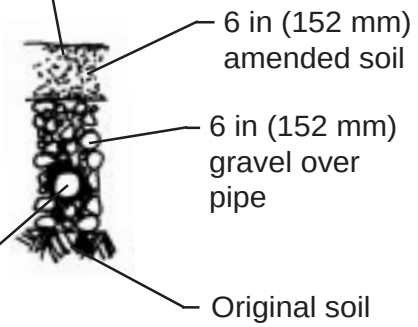
What is it? The basic biofiltration swale is an open and gently sloping vegetated channel designed for treating stormwater runoff for sites having less than five acres (two hectares) of impervious surface.

Purpose

Biofiltration swales are a relatively low cost means of simple treatment of stormwater runoff for sites typifying much of the built environment, i.e., those less than five acres (two hectares) having parking, roadways, driveways, and similar impervious features. Careful attention to location and alignment of swales can lend a pleasing aesthetic quality to sites containing them.



Dry Bioswale Section View



Dry Bioswale Section View Enlargement

Limitations

Biofiltration swales are not suitable for continually wet or shady conditions (less than six hours of sun per day) because grasses would die or struggle under such circumstances. Swales must be able to dry between storms. This allows air into the soil and root zone of grasses and vegatation.

Materials

Grass suitable for the soils, climatic, and irrigation limitations of given sites; perforated underdrain and drain rock for slopes less than 1.5%.

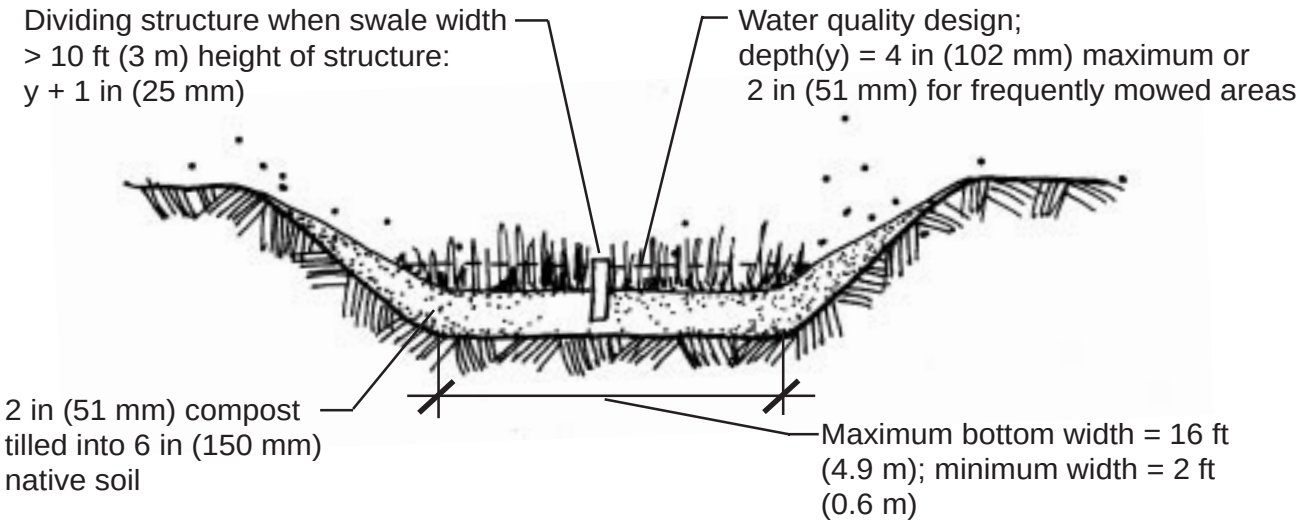
Installation

Avoid sharp curves in swale design. If swales are installed prior to or during the site construction phase, they must be free of sediment and reseeded as necessary. Good upstream erosion control must be in place as these swales are designed for modest sediment loads from stable sites. Runoff flows should be diverted around swales until grass has become established. Erosion control fabric should be installed where flow diversion is not practical. Irrigation is necessary until grass has become established. Sod may be used only where proper installation and regular maintenance will occur.

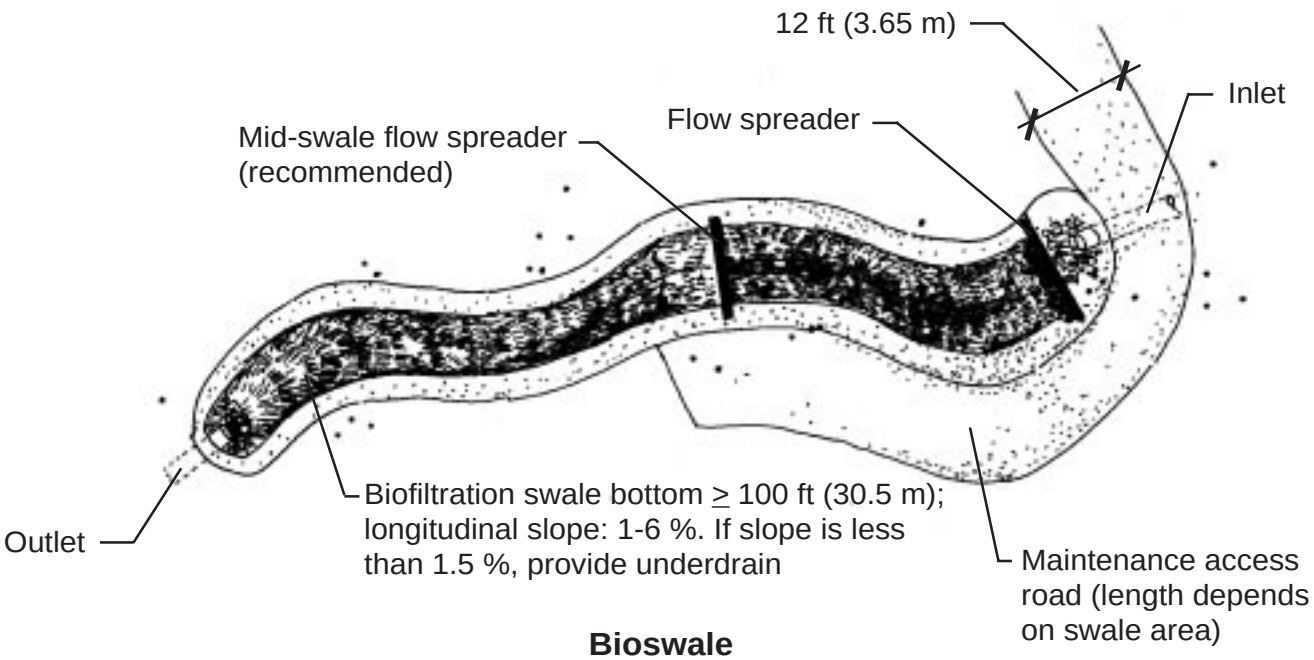
Source: Surface Water Design Manual; King County, Washington.

BASIC BIOFILTRATION SWALE

Additional Drawings:



Bioswale with Flow Divider (Spreader)
Section View



Bioswale
Plan View

Source: Surface Water Design Manual; King County, Washington.