

# SWALE FACT SHEET



*Sussex*  
**conservation  
district**  
PREPARE. PROTECT. PRESERVE.



*Bioswale*



*Bioswale with Native Grass*



*Roadside Swale*

## What are Swales?

Swales are linear open grass channels that convey surface runoff to a point of discharge including catch basins, culvert pipes, and stormwater facilities.

## Why use grass channels vs. closed storm drain to convey stormwater runoff?

Vegetated swales convey stormwater runoff at a slower rate allowing suspended solids and pollutants to settle out and infiltrate into the flow channel, thus reducing stormwater discharges downstream. Vegetated swales are a preferred method of conveying stormwater runoff because of the water quality benefits from filtering and attenuating stormwater runoff.

Conventional stormwater conveyance systems use storm drains along with curb and gutter to convey surface runoff to a point of discharge. This method is effective in conveying water; however, it does not provide the environmental benefit of filtering and slowing velocity as in an open vegetated system.

## What is the functional expectation of a swale?

A swale is designed to collect and convey surface runoff during a storm event. Depending on the intensity and duration of a rain event there may be several feet of water in the open channel. The swale is a collection point which protects the road and properties from being flooded.

## What is a roadside swale?

Roadside swales are parallel to the road, located in a right-of-way and are intended to convey road runoff to a point of discharge. Many residential subdivisions in Sussex County have privately maintained roads which are built to Sussex County Code 99 Standards. The road and road ROW are reviewed and inspected by Sussex County Public Works. Once the road and swales have been approved and signed-off on by Sussex County, they become the responsibility of the Community HOA.

## Who owns roadside swales?

The roadside swale is located in a right-of-way owned by the developer until such time that it is dedicated to the community HOA. The swale is not owned by individual property owners.

## What is a bioswale?

Bioswales are known as “Green Technology” practices that are engineered to meet specific design standards including flow depth, slope, bottom width, side slopes, and contributory drainage area and residence time in order to adequately treat and convey surface runoff. Bioswales are located in community open space or in drainage/stormwater easements.

## Who is responsible for fixing the swales?

**Roadside Swales** - Sussex County will ensure that the developer properly installs the swale to the approved plan. The developer is responsible for making repairs until the project is closed out and turned over to the HOA.

**Bioswales** - The Sussex Conservation District (SCD) is the local delegated authority for the Delaware Sediment and Stormwater Regulations. The SCD will inspect to ensure bioswales are constructed per the approved sediment and stormwater plan. The developer is responsible for maintaining the bioswales until the project is turned over to the Community HOA.

**Rear & Side Yard Swales** - Swales located between and to the rear of homes are the responsibility of the property owner.

## Why is it important to maintain swales?

Routine maintenance will ensure optimum function of the swales in your community. Lack of maintenance can result in drainage obstructions that can affect individual properties or upstream drainage areas. In addition, lack of maintenance can also result in erosion of the flow channel which can contribute to sediment discharges. Property owners are encouraged to properly maintain the swales to ensure conveyance of stormwater runoff and to promote water quality benefits in the watershed.

## What should you do if water is sitting in the swale?

If your community is still under active construction and water sits longer than 48 hours after a rain event and dead grass is present in the roadside swale, then contact the Sussex County Public Works Office at (302) 855-7703. Rear and side yard swales and bioswales should be directed to the Sussex Conservation District at (302) 856-2105. The agencies will assess the situation and determine the appropriate action needed.

If you live in a community where the development is considered closed-out and has been approved by the local agencies, then either you as a homeowner or your community HOA would be responsible. It is recommended that you contact your HOA President to review community governance.

