Be Good to your Swale

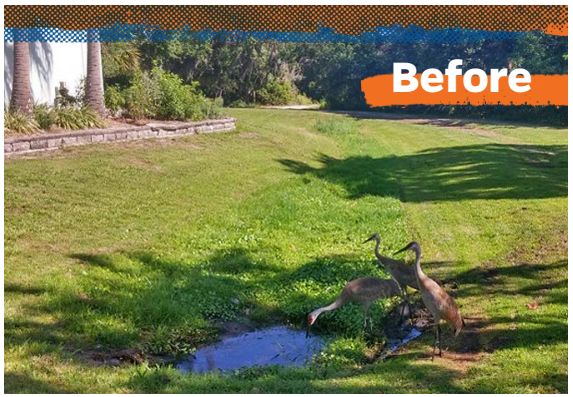
The way you treat your swale may be repeated by neighbors who follow your lead. If changes are done improperly or if maintenance is neglected, drainage problems are compounded. This hurts the drainage flow for everyone.

Maintaining Your Swale

- Remove and compost leaves and grass clippings.
- Do not pile garbage, trash, leaves, limbs or garden debris in swales. Anything in your swale drains into the water.
- Do not pave your swale. This will reduce percolation of stormwater runoff and send all debris to the water.
- Do not park vehicles in the swale. Parking vehicles in the swale compacts the soil and decreases water quality benefits.
- Let the water pond. Runoff should temporarily pond in the swale for 24-36 hours.

As the population of our county grows, the natural environment that once held great amounts of rainwater has diminished.

When our natural environment is hardened by development, rainwater can no longer infiltrate into the ground and, instead, runs down hard surfaces. These hard surfaces can easily transfer eroded soils, nutrients, pesticides and bacteria from our landscapes into our waterways. This type of runoff, known collectively as stormwater pollution, is considered the biggest threat to clean water. Stormwater pollution can trigger harmful algal blooms, damage sea grass, kill fish and other aquatic life, endanger human health, and damage our economy.



Visit our demonstration bioswale (pictured above) to see and learn more about a working swale, or contact us for more information at:

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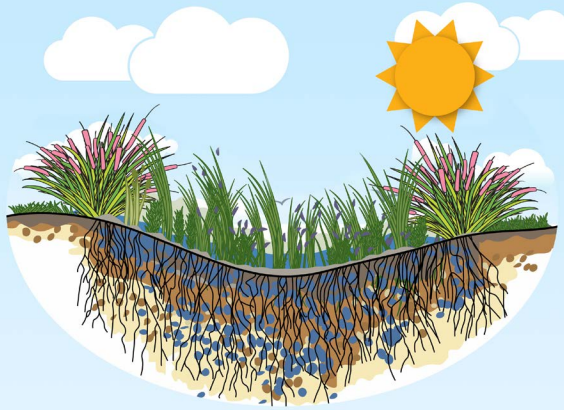
Publication conceived by Florida Waters Stewardship Class of 2018

Save the Swales



SARASOTA COUNTY CAN BENEFIT FROM BIOSWALES

861,000,000,000 gallons of rainwater fall on Sarasota County each year!

FLORIDA WATERS
STEWARDSHIP PROGRAM

UF | IFAS Extension
UNIVERSITY of FLORIDA

Sarasota County

How can we manage 861,000,000,000 gallons of rainwater and protect our water quality?

We Save the Swales!

Swales and bioswales are attractive, effective, low-cost solutions for managing stormwater and water quality.

Mean Estimated Load (kg) in Surficial Runoff per acre per year

Analyte	Curb and Gutter	Swale	Percent Reduction
Total Nitogen	9.6	0.69	93%
Total Phosphorus	1.53	0.27	82%

http://www.sarasota.wateratlas.usf.edu/upload/documents/Final%20SPLM%20Report%2012-10-10.pdf

What is a Swale?

A swale is a depression created in the ground that uses gravity to carry rainwater away from your home and property.

What is a Bioswale?

Bioswales are shallow depressions created in the ground that are planted with vegetation that aids in the removal of pollutants and provides habitat for pollinators. Like swales, bioswales are designed to capture, convey and temporarily store rainfall.

Why SAVE the Swales?

Swales are one of the most effective tools used to treat stormwater runoff from roadways, driveways, parking lots and other hardened surfaces.

A swale helps prevent flooding by capturing rainwater runoff and naturally filters oils, chemicals, nutrients (nitrogen and phosphorous), animal waste, plant matter and other pollutants before they enter our groundwater or downstream waters.

Swales Serve 3 Primary Functions:

Drain: Swales collect rainwater to help keep your property and roads dry, conveying stormwater to canals, streams and, ultimately, the bay.

Retain: Swales slow the flow of stormwater to allow the water to soak into the ground, thereby replenishing our aquifers.

Treat: By slowing the flow, swales allow suspended solids and impurities to settle out of the water so treatment is provided before the water flows downstream to natural bodies of water (bays, gulf, or ocean).

The Benefits of Bioswales

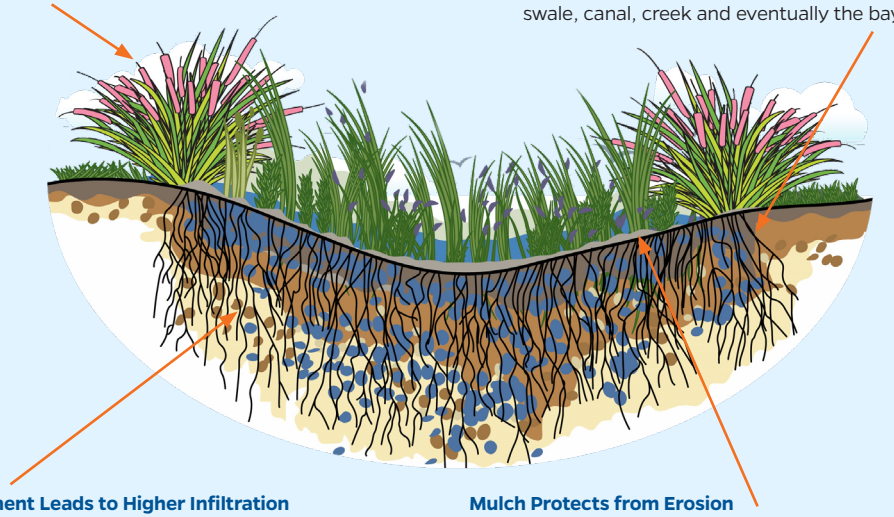
- Enhance water quality using soil, vegetation and microbes.
- Reduce total volume of stormwater runoff.
- Increase infiltration and groundwater recharge.
- Act as multi-functional conveyance systems.
- Aesthetic part of landscape
- Improve biodiversity by creating habitat.

Native Landscaping Provides Habitat

Deep-rooted native plants build soil structure and allow water to infiltrate into the ground more easily than nonnatives. Native plants are low maintenance, adapted to Florida climate and rainfall patterns, and resist local pests and disease. They also provide habitat for native pollinators, birds and other animals.

Cycling Nutrients and Reducing Contaminants

Native plants have a tremendous root architecture that builds soil quality and increases organic matter content. High organic matter content helps soil hold water like a sponge, allowing for chemical transformation, plant uptake and soil adsorption. These functions help to clean the water before it moves down-gradient to the next swale, canal, creek and eventually the bay.



Soil Amendment Leads to Higher Infiltration

Along with native plantings, soils topped with 2 inches of pea-sized gravel may be needed to facilitate infiltration. If 2 inches cannot be spread across the swale, consider a rock trench down the center of the swale. Water infiltrated through bioswales helps recharge groundwater, which supplies creeks, streams, and wetlands with a slow, purified seep rather than surges of polluted surface runoff from roofs and other hard surfaces.

Mulch Protects from Erosion

All natural coconut fiber mats can be installed along the banks of the swale to protect from erosion and to inhibit weeds. The coconut fiber mat will break down over a few months, just enough time to get your plants established. Pine straw makes a great bioswale mulch. Pine straw mulch also has a better ability to stay in place compared to no-float mulches, which can move down the slope with the water flow.