SAVE
THE
SWALES

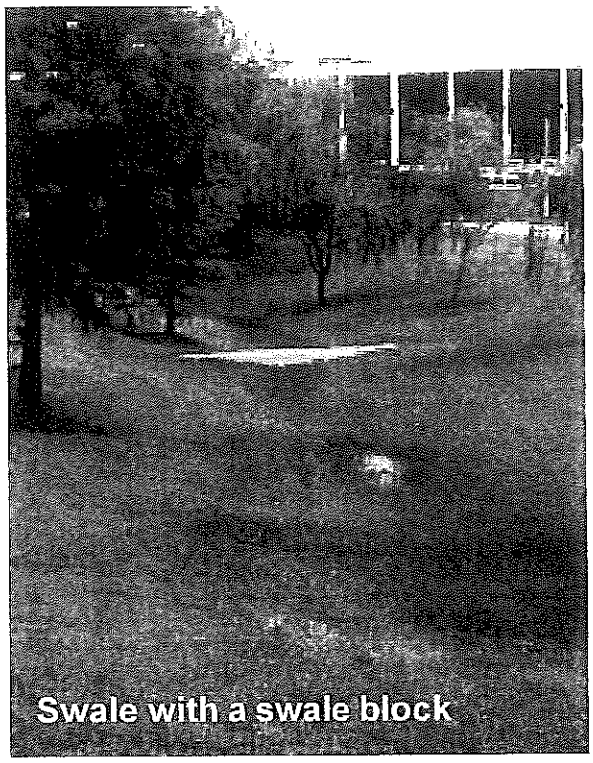
WHY MANAGE RUNOFF?

When land is converted from its natural state to other uses, especially urban land uses such as roads, homes, and shopping centers, many impervious or paved surfaces are created. Rainfall can no longer soak into the ground. Instead it becomes stormwater or runoff.
As land is developed the volume, speed of flow, and pollutant loading of runoff increases. To minimize downstream flooding and protect lives and property, and to reduce pollution of water bodies, stormwater management practices are used to retain, detain, and/or filter the runoff.

WHAT IS A SWALE?

Swales are one of the most commonly used stormwater practices. For many years they have been used along rural highways and residential streets to convey runoff. Today, swales not only convey stormwater but also help to treat runoff to reduce pollutants.
Like ditches, swales collect stormwater from roads, driveways, parking lots and other hard surfaces.

Unlike ditches, swales are not deep with straight sides. They have gently sloping sides and are wider than they are deep.


Swale with a swale block

They are vegetated to prevent the slopes from eroding and to help filter pollutants during and after rainstorms.

WHY ARE SWALES IMPORTANT?

Because swales are wider than they are deep (usually a 6:1 ratio), the rainwater is spread over a broader area. This slows the water and allows the runoff to temporarily pond.
Reducing the water's speed allows the vegetation to filter the rainwater and remove sediments, heavy metals and hydrocarbons such as oil and grease.Ponding of runoff in the swale allows the water to soak into the soil, helping to reduce the volume and amount of pollutants.


Trash in swale

The gradual sloping sides of the swale make them easier to maintain and vegetate. This decreases erosion that causes sedimentation of streams, lakes and wetlands.

Swale blocks or raised driveway culverts sometimes are used to promote ponding of runoff in the swale, especially when the swale has a steep slope. Swale blocks or check dams can be made of soil, wood, or concrete.

HOW CAN YOU REDUCE POLLUTED RUNOFF?

MAINTAIN YOUR SWALE

- Mow the swale but be careful to not damage swale blocks.
- Remove and then compost leaves and grass clippings.
- Keep good grass growth.
- Minimize use of fertilizers, pesticides, and herbicides.
- Aerate soils to restore percolation rate


Swale and berm system

DO NOT MISUSE YOUR SWALE

- Do not pile garbage, trash, leaves, limbs or garden debris in swales - this adds pollutants which can wash into downstream waters.
- Do not pave the swale - this reduces percolation of runoff.
- Do not park vehicles in the swale - this compacts the soil so less runoff soaks in.

LET THE WATER POND

- Runoff should temporarily pond in the swale for 24 to 36 hours.
- Don't damage or remove swale blocks or check dams.
- Don't increase driveway culvert sizes.
- Don't lower driveway culverts.

ADD SWALES TO YOUR YARD

- Waterfront property owners should build a swale and berm system to intercept runoff and pollutants from their yard.
- Swales can be used between lots and at the rear of lots to intercept and retain runoff.
- Swales can be used on residential and commercial land uses to collect roof runoff.

TALK TO ELECTED OFFICIALS

- Help "Save the Swales". Local regulations often require the use of curbs and storm sewers and prohibit the use of swales. Why should they?
- Don't complain when water ponds in the swale for 24 to 36 hours - mosquitos won't breed until water ponds for 72 hours or longer.
- Let local officials know if water ponds so long that swale vegetation begins to die.

IF YOU WANT MORE INFORMATION ABOUT SWALES AND STORMWATER TREATMENT, CONTACT:

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
Stormwater/Nonpoint Source Management Section
2600 Blairstone Road, Tallahassee, FL 32399
Phone: 850-921-9472