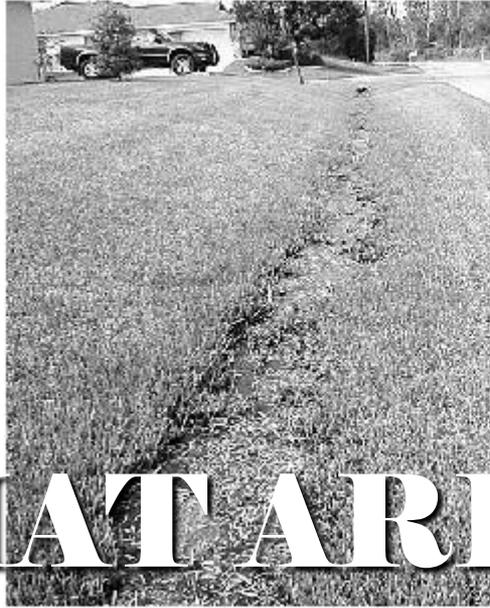


# Save the Swales

Your Guide To  
Understanding Your  
Stormwater System



ENGINEERING & STORMWATER DEPARTMENT



Channels that stretch

# WHAT ARE SWALES?



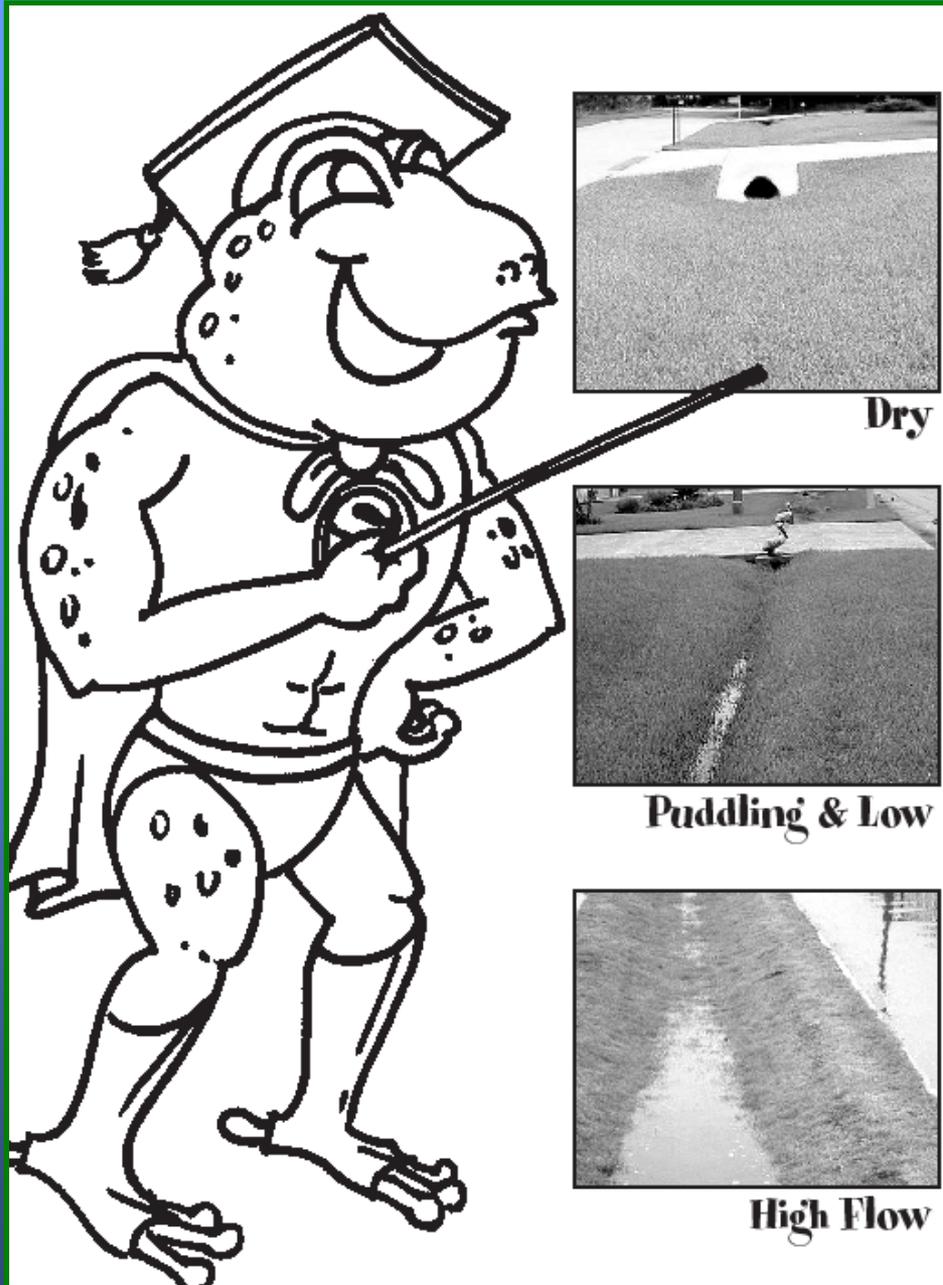


# Swales Serve Three Functions:

**To Drain:** Swales drain the lots and roadways to help keep them dry, conveying stormwater to ditches, canals and larger waterbodies. Swales are designed to keep the roadbed above the water table. This makes the road last longer.

**To Retain:** Swales slow the stormwater to allow water to soak into the ground. This also helps replenish the aquifer . . .the source of our drinking water.

**To Treat:** Swales allow suspended solids and pollutants to settle out of the water so treatment is provided before it is returned to natural water bodies.



**Dry**



**Puddling & Low**



**High Flow**

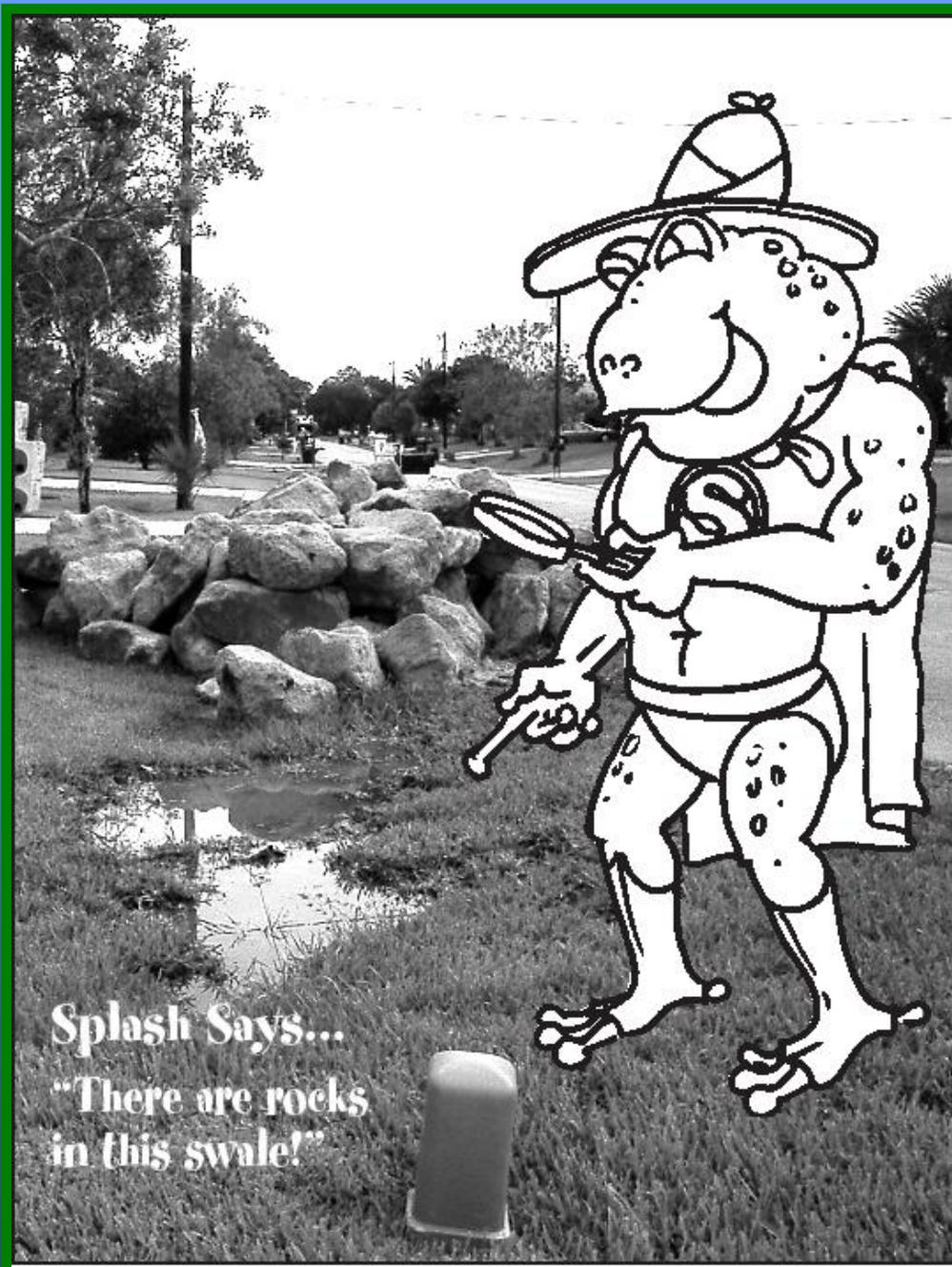
# Swales Have Four Functional States:

**Dry:** The swale is dormant and not functioning.

**Puddling:** The swale is in a normal state, with some residual water. This is typical for periods of three days to a week after rainfall.

**Low Flow:** Typical amount of water for the first three days or so, after a rainfall. The water will flow slowly along the swale in the general direction of the ditch. Usually only the center of the water will show any movement.

**High Flow:** The swale demonstrates its ability to remove stormwater at the capacity for which it was designed. The water may be flowing along the road surface because the road is designed to help the swales during high rainfall events. Swale capacity is calculated to handle certain statistical rainfall events efficiently and as quickly as possible.



**Splash Says...**  
"There are rocks  
in this swale!"

# **Remember . . .**

## **Standing Water in Swales is Often Normal...**

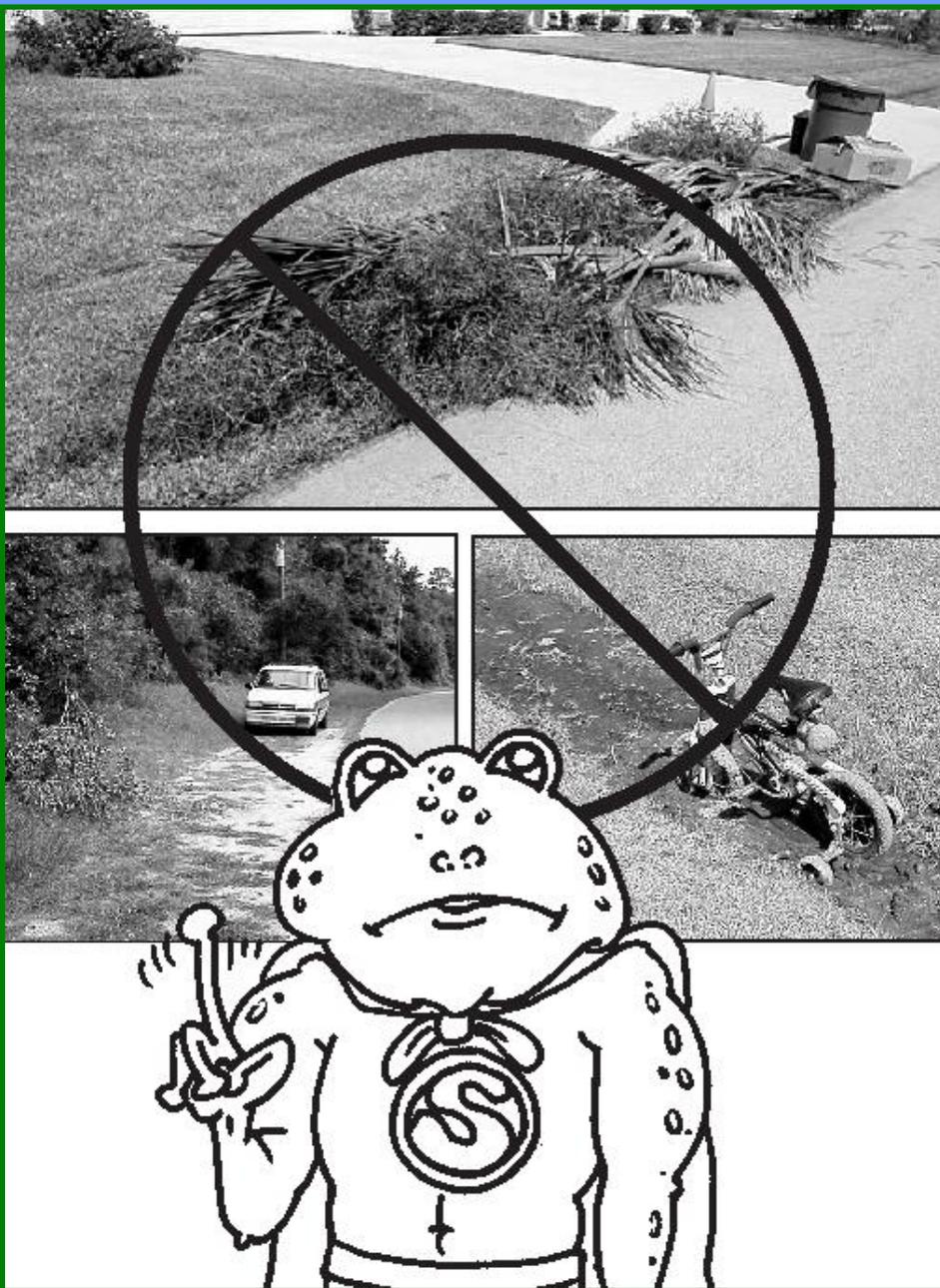
***unless there is a  
downstream blockage.***

*It may take three days to a week after a rain before stormwater is absorbed into the ground. Water remains in a swale until the water table subsides enough to absorb the water. Eventually, the remaining water will either evaporate or infiltrate into the soil.*

*If there is a significant amount of standing water in your swale and there has been no rain for several days or weeks, there may be a blockage downstream of your area. This may warrant investigation by a stormwater department inspector.*

# What Can You Do to Maintain Your Swale?

- Mow the grass in your swale to an acceptable height.
- Keep your driveway culvert clean.
- Remove leaves and excess grass clippings.
- Avoid parking vehicles in your swale to allow healthy grass to develop and to keep soil loose.
- Install plants away from the swale – at least 15-20 ft. from the road.
- Don't fill in your swale. This reduces its carrying capacity.
- Make sure your driveway design allows water to drain towards your swale. If you wish to replace, repair or add to your driveway, you must apply for the appropriate City permits and abide by City Codes.





# **Be Good to Your Swale**

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



*Drawings provided by Stewart Maxcy*



**For more information please contact:**

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