

# SAVE THE SWALES

## WHAT IS A SWALE AND WHY DOES IT NEED SAVING?

Swales are everywhere and their main purpose is to convey rainwater. Most everyone has seen roadside ditches in the rural areas of Franklin, but swales are a different creature; one that could be lurking right in your own backyard! Much of Franklin Township's newest construction is designed with swales to carry surface water through backyards and between buildings. If you live in home built within the last 20 years or so and see a low, depressed channel in your yard, there's a good chance it was put there intentionally.

Ditches and swales both convey storm water from roads, driveways, parking lots and other hard surfaces, but that is where their similarity ends. Ditches are deep with steep sides while swales are low with gently sloping sides. Swales are designed, not only to carry water, but to treat it and reduce the amount of pollutants that enter our streams, rivers and oceans. They also help to infiltrate some of that rainwater back into the ground and into our aquifers. Here's how:

- Swales are wider than they are deep and they spread rainwater over a broader area, which slows the runoff and allows it to temporarily pond.
- The slower runoff rates allow vegetation to filter the rainwater and remove some sedimentation.
- Ponding of the runoff allows some of the water to soak into the soil, reducing the volume of water downstream (which helps control flooding) and the contaminants.
- The gradual slope of the swale is easier to vegetate and maintain, also reducing the amount of sedimentation downstream. In other words, swales provide cleaner water to our streams than muddy ditches do.

So, why should you care if Franklin's streams are clean or dirty? Well, one big reason is that water from our streams flows into the Millstone River, the Raritan River and the Delaware and Raritan Canal. These water bodies are used by the New Jersey American Water and North Brunswick Water Company to provide drinking water to thousands of homes throughout central New Jersey. Other obvious benefits are to the wildlife that inhabits these streams and the leisure opportunities that these natural areas provide to us. Franklin Township's natural areas are a draw to bikers, boaters, fishermen, hikers, birders, hunters and many other outdoor enthusiasts. Clearly, nothing ruins a day out in nature more than a dirty, trash-strewn waterway.

What can you do to help save the swales? Maintenance is the key. Keep your swale mowed, if it's in a lawn area. Remove debris such as trash, leaves, branches and grass clippings. It's also a good idea to minimize the use of fertilizers. Over-fertilized lawns produce nutrient-rich runoff water which, in turn, causes an overgrowth of plant life in streambeds, clogging waterways, not allowing them to perform naturally.

Don't park vehicles in swales; this compacts the soil thereby lowering its capacity to absorb rainwater. Don't construct items such as above-ground pools, patios and walkways or sheds in swales. These dam the swale and will cause ponding on your property and possibly your neighbor's property. Similarly, do not fill in swales with dirt or mulch.

Remember, swales are supposed to not only convey storm water; they are also supposed to hold pockets of rainwater. It can typically take 24-36 hours for the water to fully soak into the soil. Since it takes a minimum of 72 hours for mosquitoes to breed, there is no reason to be concerned if you see puddles in your swale for a couple of days after a rainfall.

In conclusion, swales are one of the engineered solutions to drainage problems that occur as land is being developed from its natural state. Treat them well, and they will treat you and your neighbors well.

*This article written by the Franklin Township Engineering Department and is based on a handout of the same name prepared by the Florida Department of Environmental Protection.*