#8: Reduce Stormwater Runoff

FILTER RAIN THROUGH YOUR LANDSCAPE TO PROTECT WATERWAYS AND REPLENISH THE AQUIFER

A rainstorm can wash exposed soil, landscape debris, oil, fertilizers, and pesticides off your landscape—all of which then become a part of stormwater runoff. Ultimately, every yard and neighborhood is connected to water resources. This connection may be immediate and obvious, like in a waterfront community, or gradual and unnoticed, through the flow of storm drains, ditches, streams, rivers, and groundwater. Either way, the decisions you make in your lawn and garden actually directly influence the health of Florida's waters.

HOW WATER WORKS

No matter where you are in Florida, chances are there's a body of water nearby—a river, lake, creek, or canal. These surface waters are actually connected to Florida's groundwater supplies through sinkholes, springs, drainage basins, and other pathways. Groundwater comes from the aquifer, an underground cave system made of porous limestone called karst. It is the source of almost all of the water we use in our daily lives, both in our homes and in our yards.

Because Florida's groundwater is so close to the surface, the health of our groundwater is directly linked to the health of our visible water bodies, and the ways we maintain our landscapes can have a powerful impact on both groundwater and surface waters. Pollutants can enter water bodies through stormwater runoff, which is rain that flows off roads, roofs, gutters, and yards into stormwater drains, retention ponds, and surface water bodies. As it travels to the nearest body of water, stormwater runoff can pick up contaminants from landscapes such as excess fertilizer and pesticides.

The nitrogen and phosphorus found in fertilizers fuel the excessive growth of algae, which smother natural vegetation, deplete oxygen, and kill fish. Nitrogen and phosphorus can also cause invasive weeds to flourish, changing Florida's natural plant communities. Common household pesticides and fertilizers can also run off into our water supply, potentially damaging aquatic life and harming people.

A healthy, properly maintained lawn and landscape can absorb and/or filter stormwater runoff, helping to protect Florida's waters. Following Florida-Friendly Landscaping™ guidelines will reduce pollution coming from the landscape.

KEEP IT IN THE GROUND

One of the basic concepts of a Florida-Friendly yard is that the rain that falls in your yard should soak into your yard. After all, rainfall is an excellent water source for your landscape, and reducing runoff reduces impacts to waterways. But retaining rainfall long enough for it to percolate through soil is challenging in neighborhoods built on compacted fill soils. Consider these ways to reduce the amount of rainfall that runs off your yard. Keep in mind that you may need to get permission from your homeowners' association before adding any of these features.

RAIN GARDENS

Rain gardens are an easy and attractive way to reduce the amount of stormwater runoff that leaves your landscape. These shallow areas are planted with grasses and other plants to filter water before letting it flow naturally into the ground. Water kept within a landscape this way returns to the aquifer, helping to replenish Florida's water supplies.

Rain gardens work best when they're placed at the bottom of downspouts or in places where water tends to puddle. They're especially good for diverting runoff from paved surfaces but can also be placed in turf areas. They can be any size or shape, and can attract wildlife.



Rain gardens filter stormwater runoff before it soaks into the ground.

The plants you choose for your rain garden should thrive in wet conditions, but also be drought tolerant for the times between rains.

DOWNSPOUTS

If your roof has rain gutters, aim the downspouts at a porous surface so water can soak into soil. If the soil is compacted, you can improve drainage by periodically aerating it. To prevent water from pooling

Direct downspouts to porous areas, including rain gardens.



next to your home's foundation, extend downspouts further out into the yard and create a depressed area to collect storm-water for infiltration. See the "Rain Gardens" section of this chapter for more information about helping stormwater drain into your landscape.

POROUS SURFACES

Whenever possible, use bricks, gravel, turf block, mulch, pervious (permeable) concrete, or other porous materials for walkways, driveways, and patios. These materials allow rainwater to seep into the ground, helping to recharge



Consider using mulch or other porous materials for walkways.

groundwater and filter pollutants and reducing the amount of runoff from your yard. In some cases these porous materials may even cost less to install than concrete or asphalt.

EARTH SHAPING

Swales (small dips in the ground) and berms (raised earthen areas) located perpendicular to the slope can help capture or slow runoff that would otherwise rush from your yard,



Swales encourage stormwater to soak into the ground.

giving it time to soak into the ground. In a waterfront yard, use a berm-and-swale combination, placed above the high water line and parallel to the shoreline, to reduce stormwater runoff. Add a maintenance-free zone of native wetland plants to the swale to make your yard more waterfront-friendly.



Berms also help slow runoff.

Minor alterations to the lay of the land won't require permits or engineers, but any major earthwork should have a professional touch and will require regulatory review. Always check with your local Florida Department of Environmental Protection office and other local governmental agencies before making any changes to shorelines.

RAIN BARRELS & CISTERNS

When it rains in Florida, it often pours. Wouldn't it be great if you could save some of that rain and use it on a dry day to water your plants? Rain barrels are a great way to lessen your impact on our natural resources.

Rain barrels can capture a significant amount of water and can have a tangible effect on your water bill—especially when two or more rain barrels are connected together. Best of all, they're fairly easy to find in stores and to make!

Installing a spigot on a rain barrel makes it easy to fill a watering can for handwatering plants. A rain barrel can also be hooked up to seep irrigation systems. Your rain barrel can (and should) be made mosquito-proof with a tight-fitting lid and mesh screen, and can be painted or hidden by foliage or a trellis to make it more attractive.

Contact your county Extension office to see if they offer workshops on how to make a rain barrel. The Internet also has a lot of information about buying or making rain barrels.

Cisterns also catch rain, but can hold hundreds or thousands of gallons and require more engineering than rain barrels. Keep in mind that your community or county may require a permit for cisterns.

Cisterns can be located above or below ground.

