


 splash!

quick facts on...

## Sensible Sprinkling in South Florida

### **The South Florida Water Management District**

is a regional, governmental agency that oversees the water resources in the southern half of the state. It is the oldest and largest of the state's five water management districts.

**Our Mission** is to manage and protect water resources of the region by balancing and improving water quality, flood control, natural systems, and water supply.

### **Saving a Little Saves a Lot**

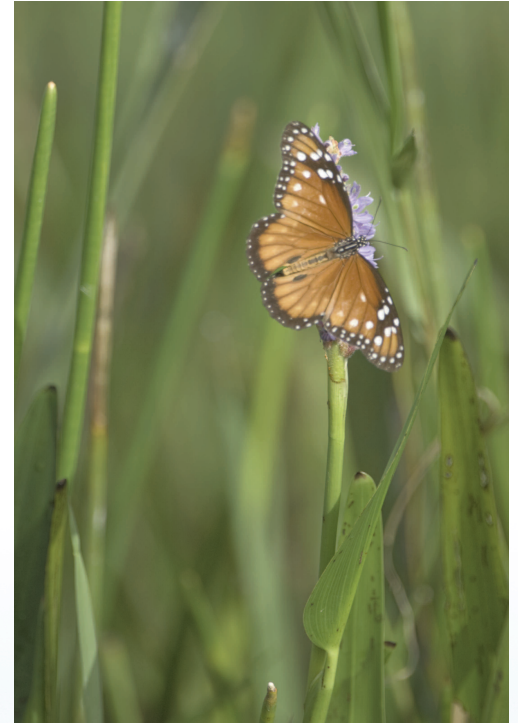
For home and business landscapes, many South Florida residents irrigate to keep grass green year-round and tropical plantings looking tropical. Typically, 50 percent or more of home water use is for outdoor watering or irrigation. However, it is not uncommon for residents to apply twice the amount of water actually needed to maintain a healthy landscape — or more.

Whether sprinkling water comes from a municipal supply, a well or another source, it's still ultimately drawn from one big South Florida "pool." To share the resource, South Floridians need to conserve water. Overwatering your landscape wastes both water and money.

### **Do All Lawns Need Irrigation?**

All plants need water. Rainfall provides enough for Florida's native plants growing in the wild. During Florida's normally dry winters, these native plants thrive in the residential landscape as well. However, limited areas of turf grass, flower beds and accent plants usually need added water at some times during the year. When irrigating turf grass, water thoroughly to reach deeper portions of the soil. In South Florida's typical sandy soils, 3/4 of an inch of water will penetrate to a depth of about 9 inches and promote deep root growth. Healthy turf with deep roots is able to withstand drought much better than turf with a shallow root system.

Overwatering can promote undesirable weeds, create the need for additional fertilizer and other expensive lawn chemicals and cause both runoff and leeching of chemicals below the root zone. Runoff containing lawn chemicals is a major contributor to surface water pollution. Fertilizers or other lawn products that have leached below the root zone become unavailable to turf and contribute to groundwater contamination.



*Selecting the right native plants can not only save water but also attract wildlife to South Florida landscapes.*

### **What Plants Make the Most Sense... and Scents?**

Many plants have low irrigation requirements and, once established, need very little water even during periods of drought. Choose your plantings wisely. Seek input from your county's extension agent and other resources including the [South Florida Water Management District](#) and the [Florida Native Plant Society](#) websites.

Many native plants can make your landscape wildlife friendly. Plants that attract and nurture butterflies add tremendous appeal to your yard. Ideas can be found at the North American Butterfly Association's website, which includes gardening suggestions for different regions of the country including a list of South Florida plants that grow well and attract native butterflies.



*Simple steps, such as checking the alignment of sprinkler heads, can improve the efficiency of automatic irrigation systems and ensure the right amount of water goes where it is needed.*

## Keep Your Landscape Thriving and Save Water

There are many ways to water your landscape — from hose “dragging” to automatic sprinkling. There are benefits to using the hose. Water can be directed to specific plants within a bed that need it, sprinkled on seedlings or applied deeply to planted trees or shrubs. Additionally, hose “dragging” can lead to increased efficiency because it is natural for residents to not water during periods when rainfall is sufficient for plant needs. To conserve water, always use an automatic shut-off nozzle at the end of the hose. Using drip and soaker hoses also reduces evaporation and conserves water.

To save time and effort, many residents install automated sprinkler systems. Depending on how they are used, automatic sprinkler systems can either help save water or be a tremendous water waster. Systems vary widely in complexity and their ability to help manage water use efficiency. Many older irrigation timers operate simply as a clock, applying water at a programmed interval regardless of natural precipitation or the actual water needs of the

plants being irrigated. Unless they are properly managed, these older “set it and forget it” irrigation timers waste both water and money.

### Tips for All Outdoor Water Users

To use water most efficiently, water in the early morning when winds are usually light and the ground is cool and receptive.

Using mulch helps save water, too. Mulches in the landscape:

- Shade soils from direct sun so they stay moist longer.
- Protect soils from erosion.
- Limit weed growth.
- Slowly decompose, adding nutrients in the process.
- Provide habitat for beneficial soil organisms.
- Are appealing, adding a clean and unifying appearance.

The best mulches for Florida come from non-native trees, recycled waste wood, including wooden pallets, and your own recycled yard clippings. These are regularly available from home supply stores and should always be sought.

### Improving Existing Irrigation Systems

Enormous amounts of water are wasted in Florida by incorrectly adjusted automatic sprinkler systems. Check your system and find out how (or who to call) to put the right amount of water where it is needed. Help is available from irrigation specialists trained in water efficiency by credible organizations, such as the Irrigation Association or the Florida Irrigation Society. County extension offices and garden centers also have experts on hand to answer questions about proper irrigation of Florida yards.

The first step to greatly improve an automatic sprinkler system is to install a rain sensor. Why water your lawn when nature is doing it for you? Home supply stores stock wired rain sensors for \$15-25 and wireless models for \$25-70. Rain sensors can be used with most existing irrigation timers and work by interrupting the system when rains have already provided adequate water. When drier conditions return, the rain sensor automatically restores the system to normal operation. Although different types of rain sensors are available, they all achieve the same results — saving significant amounts of water.

Other simple steps to improve the efficiency of your existing irrigation system include:

- Checking the alignment of existing sprinkler heads to assure that water is directed away from impervious surfaces, such as driveways and sidewalks.
- Promptly repairing broken sprinkler heads and leaks.
- Removing plant materials that have grown over or otherwise block spray heads.
- Capping or disabling irrigation zones or heads for established areas that no longer require supplemental irrigation.



*“Smart” irrigation controllers determine the right amount of water needed by your landscape based on a variety of factors — helping to reduce how frequently your water meter runs.*

For additional steps to “tune-up” your existing irrigation system, please visit: [manatee.ifas.ufl.edu/lawn\\_and\\_garden/water\\_wise/pdfs/IrrigationTuneup.pdf](http://manatee.ifas.ufl.edu/lawn_and_garden/water_wise/pdfs/IrrigationTuneup.pdf).

### Get “Smart” to Save Water and Money

Some new irrigation controllers, known as “smart” controllers, save water “by monitoring and using information about site conditions (such as soil moisture, rain, wind, slope, soil, plant type, and more) and applying the right amount of water based on those factors,” according to the Irrigation Association. While these controllers were once limited to large applications such as golf courses and parks because of their high cost, home-based controllers are now becoming available for \$200 or less. Initial research by the University of Florida shows irrigation savings with smart controllers up to 70-90 percent under normal Florida rainfall conditions and 30-40 percent under dry conditions.

Smart irrigation controllers set the amount of water needed by your landscape by using one or both of the following

technologies:

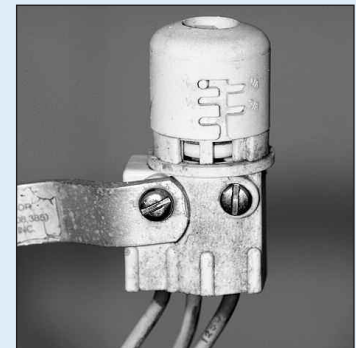
#### Evapotranspiration Controllers

Evapotranspiration (ET) is the sum of evaporation and plant transpiration from the Earth's land surface to its atmosphere. Simply put, ET measures how much water a landscape actually uses. ET controllers calculate the amount of water needed based on local conditions using temperature, rain, wind, slope, soil, plant type or other factors. Weather conditions that the controller receives are obtained from one of three sources:

- **Weather data through a wireless signal from a local data provider.** The data provider calculates ET based on local weather data collected from public and private sources. The ET value is then transmitted to the controller, which automatically adjusts the irrigation run time based on local conditions. The data provider typically charges the irrigation customer a nominal monthly fee for providing this service.
- **Pre-programmed historical ET**

**data for the region.** The local historical data may also be modified through the use of a sensor that measures temperature or solar radiation. Historical ET controllers typically are the least expensive type of ET controller because they do not require a sophisticated on-site weather station or the ability to communicate wirelessly with a weather data provider.

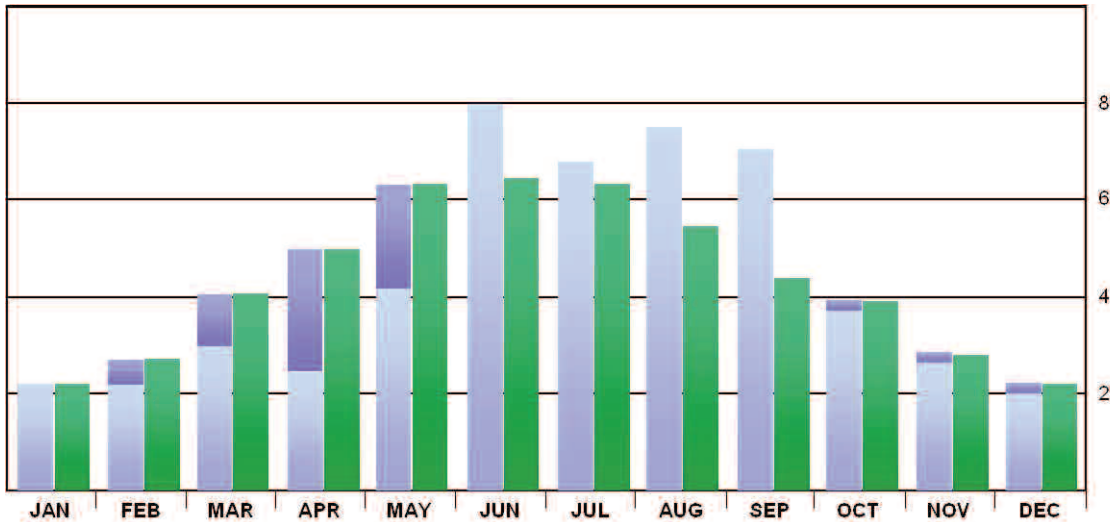
- **A dedicated on-site weather station.** Because weather events such as rain showers can be highly localized, an on-site weather station provides the controller with the most accurate weather data possible to calculate the amount of water needed. These ET controllers have typically been used on large irrigation systems — such as those found in golf courses or large parks — because of the added initial cost of installing an on-site weather station. However, homeowner-oriented models with simplified weather stations are becoming



### Rain sensors make sense, plus it's the law!

Florida Statutes (Ch. 373.62) require that “any person who purchases and installs an automatic sprinkler system shall... install a rain sensor device or switch which will override the irrigation cycle of the sprinkler system when adequate rainfall has occurred.”

These devices are inexpensive, easy to install, and will work with most existing irrigation controllers. There is no excuse for running your irrigation system in the rain!



*Typical wet season rainfall from June to October is often more than enough to keep South Florida landscapes healthy and green. Additional water from irrigation is more necessary to fulfill plant needs during the dry season, particularly from March to May.*

**■ Plant needs    ■ Typical rainfall    ■ Extra water needed**

available.

The U.S. Environmental Protection Agency’s (EPA) WaterSense program has begun to label weather-based irrigation controllers that meet the program’s criteria for fulfilling the watering needs of a landscape without overwatering. For more information on irrigation controllers with the WaterSense label, please visit [www.epa.gov/WaterSense/products/controltech.html](http://www.epa.gov/WaterSense/products/controltech.html).

**Soil Moisture Sensor Controllers**

Soil moisture sensor (SMS) controllers use sensors placed in the root zone of the plants to regulate water use. On the most common type of SMS controller, the sensor acts as a simple bypass device that interrupts the normal irrigation schedule when water is not needed — similar to how rainfall sensor-based systems work. The threshold between “wet” and “dry” can be adjusted on bypass SMS controllers depending on the type of plant, soil and other conditions to meet plant requirements. Multiple sensors may be used to regulate different areas in the landscape.

An on-demand SMS controller initiates irrigation when the sensor detects a pre-programmed low soil moisture threshold and stops irrigation when the sensor determines adequate moisture has

been received. On-demand SMS systems often utilize multiple sensors placed throughout the landscape to detect varying conditions in the landscape. For example, one sensor may monitor conditions for areas of turf that require more water, another sensor may regulate areas with low water use plants, and still another may be used for bright sunny areas.

The University of Florida is currently conducting research on smart irrigation controllers. More information is available online at [irrigation.ifas.ufl.edu](http://irrigation.ifas.ufl.edu).

**Be a Watchdog for Water Conservation**

Whether irrigating a home lot or a large commercial property, everyone needs to closely monitor outdoor water use. Watering less frequently but thoroughly will help lighten the load on both pocketbooks and the shared regional pool of water. When developing landscape designs, keep water conservation in mind. Only constant water awareness will help maintain a constant water supply!

For more resources on efficient outdoor irrigation, please visit [www.savewaterfl.com](http://www.savewaterfl.com).



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[sfwmd.gov](http://sfwmd.gov)

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