Suggested Watering Guidelines for Florida Lawns

How Frequently to Water

Irrigation of many Florida lawns is controlled by a preset automatic sprinkler system. While automation is increasingly necessary in many areas of our lives***, automatic sprinkler systems often lead to overwatering*** which is undoubtedly the single greatest contributor to lawn demise. It is important to remember that, on average, we receive 50 or more inches of annual rainfall in most parts of Florida, and that the majority of this rainfall occurs between June and October. When rainfall is adequate to meet plant transpiration needs, supplemental irrigation systems should be turned off. How do you know what the grass transpiration needs are? University of Florida guidelines call for watering lawns on an "as-needed" basis. This can be determined by observing the grass for signs of drought, which indicate that transpiration needs are not being met. The signs that you need to look for are:

- Leaf blades are folded in half lengthwise in an attempt to conserve water (Figure 1).
- The grass takes on a blue-gray tint rather than maintaining a green color.
- Footprints or tire tracks remain visible on the grass long after being made.

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Figure 1.
Leaf Blades Folded in Half Lengthwise

When these signs of drought are seen on a large portion of the lawn, it is time to irrigate. The length of time needed between irrigations will vary depending upon grass species, soil characteristics, location in the state, time of year, temperatures, and any particular microenvironmental effects such as shade. If rain is forecast in the next 24 hours, delay irrigation.

When to Water

The best time for lawn irrigation is in the early morning hours. Watering during the day wastes water due to excessive evaporation and can scald the lawn when temperatures are high. Watering in late afternoon or late morning may be detrimental if it extends the time the lawn is naturally wet from dew. This extended "dew period" can accelerate disease occurrence.

It is important to adjust your sprinkler system seasonally, because turfgrass water requirements vary throughout the year. Table 1 lists some average irrigation frequency requirements for St. Augustinegrass in different parts of the state.

Table 1.

Number of days that St. Augustine grass with 6-inch roots can go between irrigation events*

	Pensacola	Gainesville	Miami
Winter	8 - 28	7 - 23	3 - 10
Spring	3 - 11	3 - 9	2 - 7
Summer	1 - 5	1 - 5	1 - 4
Fall	2 - 9	2 - 8	2 - 6

These frequencies will vary depending upon soil conditions, shade cover, fertilization, and other factors. These frequencies assume no rainfall occurs. Data based on Meyers and Horn, Florida Turf Grower, 1969.

How Much to Water

The amount of water applied should not vary throughout the year as should the frequency. How much you apply at any one time is determined by the water-holding capacity of the soil and soil drainage characteristics. An efficient watering wets only the turfgrass root zone, does not saturate the soil, and does not allow water to run off.

Florida soils are typically sandy and hold 1 inch of water in the top 12 inches of soil. If the roots are in the top 12 inches of soil and the soil is dry, then ½ to ¾ inch of water is required to wet the area thoroughly. Generally, turfgrasses require no more than 0.3 inches of water per day. Under extreme summer conditions, as much as 0.4 inches of water can be used per day. During winter, when grasses are not actively growing, water use may be only 0.05 inches of water per day. Light, frequent watering is inefficient and encourages shallow root systems. Excessive irrigation, which keeps the root system saturated with water, is also harmful to the lawn.

A simple watering schedule would apply ½ to ¾ inch of water when the turfgrass begins to show the water deficit symptoms discussed in the previous section. Once this amount of water is applied, do not apply any more until water symptoms are again noticeable. With no rain, 2 to 3 waterings per week in the summer and one every 10 to 14 days in the winter are generally adequate. If it rains, irrigation should be suspended until visible drought symptoms appear.

How to Uniformly Apply Water

Irrigation system installers are licensed in some Florida counties, while in other counties there is no regulation of installation at all. This may lead to inefficient or sloppy installation, resulting in water waste and non-uniform coverage of turf areas. Even with a professionally installed system, it is important to check coverage regularly because heads may become clogged, damaged, or off-center, and leaks in the line may occur. An easy way to check your irrigation system is to place small, straight-sided cans in a straight line from your sprinkler to the edge of the watering pattern and look for uniformity of coverage. If an area is not receiving water from one or more heads, or if a head is not providing complete coverage, dry spots can develop. This can lead to any of the problems associated with drought-stressed turf. While

checking uniformity with the coffee can method, you can also easily determine how long it takes your system to apply ½ to ¾ inch of water. Turn the water on for fifteen minutes and calculate the average depth of water in the cans. Multiply this number by four to determine the irrigation rate in inches per hour.

While checking for damaged sprinkler heads, replace any that are leaking or not providing uniform coverage. Also, check to ensure that valves open and close properly.

How Your Turfgrass Affects Your Landscape Plants

Its important to remember that a sprinkler zone may be irrigating not only turf, but landscape plants as well. These plants may have different irrigation requirements and may be over- or underwatered if irrigation is based on turfgrass needs. Turfgrass should always be on a separate irrigation zone from landscape plants.

Any Micro-Environmental Effects in the Landscape that Affect Irrigation Requirements

Not every part of your lawn will have the same irrigation requirements. For instance, if grass is planted close to the house, it will be in shade for some portion of the day. Trees or large shrubbery can also cause shade, and some mature canopies actually shade a portion of the lawn for an entire day. In these cases, it may be very difficult to grow an acceptable stand of turf, and a different groundcover may be a better choice. If you choose to grow grass in the shade, you must reduce irrigation to this part of your lawn. For more information on growing grass in the shade, refer to ENH 151, “Growing Turfgrass in the Shade.”

Soil conditions will also influence water requirements. Sandy soils do not hold water for long and dry out faster than soils with more mineral content. These lawns will generally require more frequent irrigations than those growing on less sandy soils.

Climatic conditions also influence water use. These conditions include amount of sunlight, wind, temperature, and humidity.

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