

Recommended Run-times for Automatic Irrigation Commercial Properties

Commercial landscapes are often overwatered due to client request or expectations. By considering the type of plant material, type of head, and sun exposure, commercial properties can be kept green and save water. Discussing the following watering tips and irrigation schedules with your client or landscape contractor should help you lower your irrigation water bills.

Use ET to water: Evapotranspiration (ET) is a measurement of the total amount of water needed to grow plants and crops. This term comes from the words *evaporation* (i.e., evaporation of water from the soil) and *transpiration* (i.e., transpiration of water by plants). Different plants have different water requirements, so they have different ET rates.

	Monthly Historical ET **	Monthly Historical Rainfall
Winter	2.2 inches	2 inches
Spring	5.7 inches	3 inches
Summer	8.2 inches	2.5 inches
Fall	4.7 inches	2.9 inches

** From the Landscape Irrigation Calculator, WaterWise Council of Texas. www.waterwisetexas.org

Watering Tips:

Adjust runtimes by 10%: All irrigation runtimes should start at the lowest minutes, be adjusted upward or downward 2-4 minutes as it gets hotter or cooler. Only areas that start to show stress should be increased. Shady areas should be watered much less than sunny areas.

Use multiple start times: Our clay, shallow soils cannot absorb water very fast. Runtimes over 15 minutes for sprays and 20 minutes for rotors should be divided into two cycles. For example a 10-minute runtime scheduled to start at 1 am and the second start time at 3 am will result in 20 minutes of watering. Most controllers have 2-3 start times on the same program. Runtimes should be further reduced if the area is sloped. For example 3 start times of 5 minutes each.

Winter—November—February

We do not recommend watering in the winter unless there is more than one month of no rain, or ET exceeds rainfall. Usually winter rainfall exceeds ET. The plants are dormant and have very low water requirements. Water only once if dry 50% of the summer schedule.

New landscape Installations

Do not water the entire landscape for new beds. File a variance for watering a new landscape. Set up a separate program for the installation schedule. With a variance, you may water everyday anytime the first 10 days after installation. The second 10 days, you may water every other day, but not between the hours of 10 am – 7pm. The third 10 days, you may water every 3rd day. The next 10 days must be watered on the two times per week schedule. Installation of new landscapes should be avoided in the summer time. Too much water is needed to keep the plants alive, and it is too hot for proper rooting at that time.

Install a rain shut-off device

This inexpensive, easy to install device can save thousands of gallons of water, improve your public image by not watering in the rain, and prevent water waste.

Reduce water use November through February.

This is the time of the year the City of Austin uses the average of the winter water consumption to determine the waste water charges for the rest of the year. The City assumes that the landscape does not need to be watered in the winter months, because of our typical rainfall and climate conditions. Therefore, all the water being used is going down the drain i.e.: indoor water use. That is why this time of year determines the wastewater limit for the rest of the year. During the summer months, any consumption above that winter average is not charged wastewater because it is assumed to be going on the landscape, or into the pool.

Watering Tip: Decrease run times in less visible areas

This is a “rob Peter to pay Paul” type of strategy. If there are areas that really need to be watered heavily during the summer for visual appeal, then decrease the run times in some of the less visible zones and increase the run time in a zone that really needs it. This is helpful in newly planted areas.

Mandatory Watering Schedule

You can always increase the run time on a station that needs a little help through the summer. Increasing the run times on individual stations that need the extra water will not drastically increase your water consumption. However, increasing the frequency of watering will increase the water consumption of all the stations on the system whether they needed the increase or not. Commercial properties are only allowed to water two days per week year-round. Unless a large property has applied for a variance, the watering days are Tuesday and Friday.

Determine the seasonal water needs from the list of common landscape, turf and plants below. Recommendations are based on seasonal ET (evapotranspiration) and precipitation rates of 2" per hour for pop-up sprays and .8-1" per hour for rotors. Recommendations for drip or low volume must be determined by the sq. footage and gallons per minute/hour emitters or flow rates. Consult the manufacturer.

Spring and Fall--- March, April, May, October

Set controllers for 1 cycle for all lawn types.

Plant	Exposure	Type of Head	Days	Runtime (min)
St. Augustine	sun	spray	as needed, max. 1x/wk	10 to 15
		rotor	as needed, max. 1x/wk	15 to 20
	shade	spray	rarely, 1x per 2 wks	15
		rotor	rarely, 1x per 2 wks	20
Bermudagrass	sun	spray	rarely, 1x per 2 wks	10 to 15
		rotor	rarely, 1x per 2 wks	20
	shade	spray	rarely, 1x per 2 wks	15
		rotor	rarely, 1x per 2 wks	20
Zoysia japonica (wide blade zoysia, El Toro, JaMur, Palisades)	sun	spray	as needed, max. 1x/wk	10 to 15
		rotor	as needed, max. 1x/wk	20
	shade	spray	rarely, 1x per 2 wks	15
		rotor	rarely, 1x per 2 wks	20
Buffalograss	sun	spray	rarely, 1x per 2 wks	10 to 15
		rotor	rarely, 1x per 2 wks	20
	shade	spray	rarely, 1x per 2 wks	15
		rotor	rarely, 1x per 2 wks	20
Common shrubs	sun	spray	rarely, 1x per 2 wks	10 to 15
		rotor	rarely, 1x per 2 wks	20
	shade	spray	rarely, 1x per 2 wks	15
		rotor	rarely, 1x per 2 wks	20
Common groundcovers	sun	spray	rarely, 1x per 2 wks	10 to 15
		rotor	rarely, 1x per 2 wks	20
	shade	spray	rarely, 1x per 2 wks	15
		rotor	rarely, 1x per 2 wks	20

Summer—June, July, August, September

Half the suggested run time to set controllers for 2 cycles for all lawn types. Minutes shown are for one cycle.

Plant	Exposure	Type of Head	Days	Runtime (min)
St. Augustine	sun	spray	Twice per week	10 to 15
		rotor	Twice per week	20 to 30
	shade	spray	Twice per week	8 to 10
		rotor	Twice per week	20 to 30
Bermudagrass	sun	spray	Twice per week	10 to 15
		rotor	Twice per week	20 to 30
	shade	spray	Twice per week	8-10
		rotor	Twice per week	20- 30
Zoysia japonica (wide blade zoysia, El Toro, JaMur, Palisades)	sun	spray	Twice per week	10 to 15
		rotor	Twice per week	20 to 30
	shade	spray	Twice per week	15
		rotor	Twice per week	20 to 30
Common shrubs	sun	spray	1x per week	15
		rotor	1x per week	20
	shade	spray	1x per week	10
		rotor	1x per week	15
Common groundcovers	sun	spray	1x per week	15
		rotor	1x per week	20
	shade	spray	1x per week	10
		rotor	1x per week	15

When to turn the system on:

Make sure the landscape actually needs water before you turn on your system. Let the soil dry out so that the water can be absorbed, but be careful not to stress your grass too much -- that can be just as harmful as overwatering. Grass needs water when you walk on it and the footprints remain, the grass leaves fold up, or when Bermuda grass turns dark green. By using a soil probe, screwdriver or trowel, check the soil moisture level 3-4 inches below the surface.

Irrigation Start Times:

Watering at 9:00 or 10:00 pm could keep the grass wet all night. Grass that stays wet for 10 hours could develop fungus. Water after midnight and before daylight if possible. Irrigation run times should be divided into two runtimes to prevent run-off.

Sprinklers Shouldn't Mist:

If the automatic irrigation system sprays a fine mist into the air, it is wasting water. Misting can waste 20-35%. Irrigation systems should be operated at the proper pressure to prevent misting. Call 974-2199 for a free irrigation evaluation: rebates may available for a pressure reducing valve, controller and other irrigation equipment.

Irrigation System Evaluations:

The property owner or landscape/irrigation contractor can call the Water Conservation office at 974-2199 to schedule a free irrigation evaluation. One of our experienced irrigation auditors will assist you in developing an optimum irrigation schedule for your property.

Water Waste Prohibitions

The following waste of water provisions are prohibited for all customers all year around:

- failing to repair a controllable leak including, but not limited to a broken sprinkler head, a leaking valve, or a leaking faucet;
- operating a permanently installed irrigation system with broken head, with a head that is out of adjustment and spraying more than 10% of the spray on a street or parking lot, or that is misting; and
- allowing a substantial amount of irrigation water to run off a property or to pond in the street or parking lot to a depth greater than 1/4 of an inch.

Commercial Properties Water Restrictions Year-round:

- Tuesday/Friday watering days (see variance info below)
- No watering between the hours of 10 am – 7 pm (Start irrigation after midnight on your watering day)
- Watering hours are midnight to 10am and 7pm – midnight on your watering day.
- Variance for new landscapes (more than ½ of the entire landscaped area or new construction. Does not apply to seasonal color changes) to water during the day for one week
<http://www.ci.austin.tx.us/watercon/summer.htm#variance>
- Variance required for additional watering days. (Large properties only)
<http://www.ci.austin.tx.us/watercon/downloads/largepropvariance.pdf> Variances will be reviewed and approved on a case by case basis. Variances will be granted to large properties to allow them to spread their watering over more than the two days given under the watering schedule. However, no portion of the property will be allowed to water more than twice a week.
- Hand watering allowed at any time

To report water waste, call our water waste hotline available 24 hours at 974-2199.