

## Water Use in Urban Lawns and Landscapes

Urban-municipal use is the second largest category of water use in Texas. Within this use category, lawn and landscape water use is a significant component. Based on a conservative estimate of 14.2 inches of irrigation per acre, 1.898 million acre-feet is used annually for landscape watering in Texas. For comparison, one acre-foot is equal to 325,851 gallons of water.

### Tips to Reduce Lawn and Landscape Water Use

Use of automatic irrigation systems can save you time and money if that system is correctly designed, installed, and maintained. Proper watering is a simple step, but it is one of the most important things you can do to keep your lawn healthy and reduce your water use. Here are some tips to help you see to it that you're watering correctly:

#### Divide By Irrigation Zones

Divide your yard into separate irrigation zones so the lawn can be watered separately and more frequently than groundcovers, shrubs and trees. Similarly you can divide the lawn areas into separate hydro-zones. As an example, lawn in the sun would be one hydro-zone, the lawn in shaded areas would be another hydro-zone, and lawn in the sun on a windy hill-top would be yet another hydro-zone. The irrigation system is separated so that each hydro-zone area is watered by a different valve.

#### Measure Irrigation System Output and Uniformity

Place measuring cups in various places around your lawn and run the sprinklers for 15 minutes to give you an idea of how much water the lawn is getting. Measure the amount of water in each cup, checking for uniformity. Some minor variation is expected, but a noticeable difference between any two cups should be addressed by replacing or adjusting the sprinkler or relocating the sprinkler placement. About one to two inches evenly distributed, depending on the soil, is sufficient.

#### Cycle the Watering Times

The greatest waste of water comes from applying too much, too often as much of it will run off and never be absorbed. Most all brands and types of sprinklers apply water much faster than it can actually soak into the ground. Instead of watering for one long continuous session program your irrigation timer so that it waters in 2-3 short cycles rather than a single long period of time. This will let the water soak in while minimizing runoff.

#### Watch the Weather

Following a heavy rain, skip your regular watering day until the grass needs it again. Teach the family how to turn off an automatic sprinkler system in case a storm comes during the sprinkling cycle. You can also install a shut-off device that automatically detects rain or moisture. These devices are inexpensive and let you take advantage of nature's free watering service.

#### Watering Schedule

Water between 6 a.m. and 10 a.m.—when the sun is low, winds are calm and temperatures are cool. Midday watering tends to be less efficient because of water loss due to evaporation and windy conditions during the day. Watering in the evenings can lead to turf and plant fungus disease problems because the water sits on the plants all night, especially in humid climates. Watering in the morning gives the leaves a chance to dry out during the day.

### Seasonally Adjust The Irrigation System

Adjust your irrigation controller (timer) run time for seasonal changes in weather once a month. Making a monthly change to the irrigation operation times can save more water and money than any other thing you can do.

### Water Only What Grows

Relocate sprinklers so that they are between 4 and 6 inches from the edge of sidewalks, curbs, patios, etc. in lawn areas. This will reduce the amount of spray onto the paved surface and will not create a dry area along the edge of the lawn. Make sure the heads are adjusted properly to avoid watering sidewalks and driveways. A properly adjusted sprinkler head should spray large droplets of water, not a fine mist, to minimize wind drift.



### Consider Drip Irrigation

For watering individual trees, flowerbeds, potted containers or other non-grassy areas, you can apply water directly to the roots with low volume drip irrigation. Drip irrigation is about 20% more water efficient than sprinklers. This will reduce water waste through evaporation or runoff and reduce weed growth.

### Conduct Routine Inspections

Periodically check your sprinklers to make sure everything is working properly. Inspect for clogged heads and broken water lines, replace any broken or malfunctioning sprinklers, clean sprinkler head filters, straighten any sprinklers that are leaning, adjust the sprinklers so that they don't spray onto sidewalks or walls.

Contact the Gonzales County Underground Water Conservation District at 830.672.1047 for more information on conserving water.

### **References**

*Raul I. Cabrera, Kevin L. Wagner, Benjamin Wherley, Leslie Lee, Urban Landscape Water Use in Texas a Special Report by the Texas Water Resources Institute TWRI EM-116, 2013.*