

WATER CONSERVATION

Austin Water

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# IRRIGATION

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Water Conservation



[WaterWiseAustin.org](http://WaterWiseAustin.org) • [watercon@austintexas.gov](mailto:watercon@austintexas.gov) • 512-974-2199

# IRRIGATION EVALUATION

Austin Water offers free irrigation evaluations for its residential customers.\* During the evaluation, a licensed irrigator will provide an overview of your system's performance and make recommendations for scheduling changes and equipment upgrades. Services provided include:

- Controller settings check
- Inspection of components during operation
- Flow rates and recommended usage for each station
- Suggestions for improvement

To schedule a free evaluation, call **512-974-2199** or schedule online at [WaterWiseAustin.org](http://WaterWiseAustin.org).

\*Eligible customers must show water use of 20,000 gallons/mo. for a two month period or 25,000 gallons in one month.

## Watering Efficiently

- Perform system evaluations on a regular basis looking for proper coverage. Install a rain sensor if you don't have one.
- Stressed areas in the landscape can often point to deficient areas in the irrigation system or a pest or disease problem. Refer to the Grow Green Diagnostics or Lawn Problem fact sheet ([www.growgreen.org](http://www.growgreen.org)) and check the irrigation coverage in that area before increasing station times.
- Hand water stressed areas and high water need plants. Even the best irrigation systems apply more water in some areas than they do in others. Use a hose to put water where you need it.

## Keys to Irrigation Scheduling Success

Proper seasonal scheduling of your irrigation system is just as important as the condition of the system. Follow these simple steps to apply just the right amount of water your landscape needs:

- **Get to know your controller.** Most controllers have multiple start times, multiple programs and seasonal adjustment capabilities. These can be used to your advantage, but watch out for accidental excessive scheduling.
- **Start low and, if needed, increase incrementally.** Use the suggested run times listed below as a starting point for scheduling your controller. Infrequent, deep waterings help increase root health; make sure your schedule is in line with the current water restrictions.
- **Base your station times on plant material, sun exposure, and what type of emitter is watering that area.**
- **Match your watering to the season.** Plants will need less water in the spring and fall, and almost no additional watering in the winter when most plants go dormant. In fact, it's a good idea to turn your irrigation system off in the winter months.

Suggested Run Times

PLANT TYPE	SPRAY HEADS	ROTOR HEADS	MULTI-STREAM	DRIP
Turf grass	8-18 min.	18-35 min.	30-40 min.	30 min.
Planter beds	6-10 min.	10-15 min.	15-20 min.	20-30 min.

# A DO IT YOURSELF (DIY) GUIDE TO IRRIGATION EVALUATIONS

Performing an **Irrigation System Evaluation** can help residents set a seasonal watering schedule and identify the need for system repairs and upgrades.

## You Will Need

- Irrigation Evaluation template on the next page
- Calculator
- Stopwatch
- Marker flags  
(*optional, can buy at hardware stores*)

## Directions

- 1. Open the meter lid and clear any debris away from the meter face.** Be careful. Meter lids are heavy. Hardware stores sell keys to help lift them.
  - On most meters, each number around the meter face represents one gallon of water. You may have a leak if the meter turns when you are not using any water in the house.
- 2. Log current controller settings** on the evaluation template including: scheduled days to water, station start times, and program start times (*refer to your manual for help*).
  - Controllers typically have scheduling capabilities that allow multiple programs and start times. Check each program (A, B, C, D) thoroughly to see if other programs and/or start times are running.
- 3. Start a test program** that will run each station for 1 or 2 minutes.
  - Many controllers have a “test” feature. If yours does not, set a program with one minute station times and run that program manually.
- 4. Go to the meter and use a stopwatch to get the gallons per minute (GPM)** of each station as the test program runs.
  - After a station pops up, time the meter for 30 seconds. Multiply that number by 2 to get the GPM for that station. You may notice a rush of water during station transitions. Wait to time the meter until the transition is complete and the heads are fully popped up.
- 5. Go back to the controller** and start another test program.
- 6. Check each station.** Make notes about plant material, sun exposure, and head type.
  - Also note any problems, including areas of deficient coverage, misting (*which can mean high operating pressure*), and direct overspray onto impervious areas.
- 7. Use the above information to develop a seasonal schedule** for the landscape and calculate how much water it will use. Be sure to follow the current water restrictions.
  - Start with the suggested run times below and make changes as needed. Try decreasing time for shady, native and adapted areas or turn those off for now. Add time (*if necessary*) for plants with higher water needs.
- 8. Make any necessary repairs and install system upgrades.** Rebates may be available for water efficient upgrades.

# IRRIGATION EVALUATION

Evaluation Date:		Current Schedule					Notes
		Program	Start Times & Watering Day				
		A					
		B					
Station #	Plant Material / Sun Exposure / Head Type	GPM	Run Times		Gallons Per Cycle		
			Program A	Program B	Program A	Program B	
1		x			=		
2		x			=		
3		x			=		
4		x			=		
5		x			=		
6		x			=		
7		x			=		
8		x			=		
9		x			=		
10		x			=		
11		x			=		
12		x			=		
13		x			=		
14		x			=		
15		x			=		
16		x			=		
<p><b>Texas Occupations Code, Chapter 1903,</b> states that only a licensed irrigator or the property owner may work on a property's irrigation system.</p>		Cycle Total		=		<b>Additional Notes:</b>	
		Cycles Per Month		=			
		Program Total		=			
		Monthly Combined Use		=			



# IRRIGATION DEVICES

Device	Best used for	Pros	Cons
Drip Irrigation	Planter beds	<ul style="list-style-type: none"> <li>• High application efficiency (no overspray)</li> <li>• Required for areas with less than 6' between impervious surfaces on new residential installs (i.e., between sidewalk and curb)</li> <li>• No runoff</li> </ul>	<ul style="list-style-type: none"> <li>• Emitters may be covered with mulch so it is difficult to detect problems</li> <li>• Emitters tend to clog</li> <li>• Only effective when emitters are close to the plant's root zone</li> </ul>
Bubblers, Flood or Stream	Flat bedding areas and tree wells	<ul style="list-style-type: none"> <li>• Can be used under shrubs and dense foliage</li> <li>• Good for establishment period of trees (2-3 years)</li> <li>• No overspray</li> </ul>	<ul style="list-style-type: none"> <li>• Do not distribute water very far which requires heads to be spaced near each other</li> <li>• Have the potential to distribute large amounts of water, often causing runoff</li> <li>• Not effective at reaching root zone once trees are established</li> </ul>
Spray Heads	Small irregular turf areas	<ul style="list-style-type: none"> <li>• Distribute water at a fast rate</li> <li>• Relatively easy to repair</li> <li>• Best for irregularly-shaped areas</li> </ul>	<ul style="list-style-type: none"> <li>• Lowest distribution uniformity</li> <li>• Often need more maintenance</li> <li>• Narrow range of operating pressure</li> </ul>
Rotor Heads	Large turf areas	<ul style="list-style-type: none"> <li>• Can operate at higher pressure</li> <li>• Low application rate minimizes runoff</li> <li>• Good uniformity of coverage</li> </ul>	<ul style="list-style-type: none"> <li>• Not suited for smaller turf areas</li> <li>• Easily obstructed as plants grow taller</li> </ul>
Multi-stream / Multi-trajectory Rotors	Moderate to large turf areas	<ul style="list-style-type: none"> <li>• Best uniformity of coverage</li> <li>• Low application rate reduces runoff</li> <li>• Can compensate for high system pressure</li> </ul>	<ul style="list-style-type: none"> <li>• Not suited for small beds</li> </ul>

# ESTABLISHING A LANDSCAPE

Are you planning on changing your landscape? Newly transplanted plants go through a lot of stress and need moist soil to get established. Here are some guidelines for using an irrigation system to establish a landscape; be careful, irrigation systems can apply a lot of water very quickly.

- ◆ If you are planting only a few plants, use a hose and apply the water right where it's needed.
- ◆ Don't mix high water need plants into an area of low water need plants. You want plants with similar water needs all on the same station.
- ◆ As a general rule, water frequently at the beginning and as plants establish, decrease the frequency of watering and increase the depth of watering.
- ◆ Unless there is a dedicated tree bubbler, don't rely on your irrigation system to establish a tree.

Austin Water offers a new landscape variance to customers to establish landscapes outside of the normal water restrictions. This variance is dependent on Austin's current drought response stage; [waterwiseaustin.org](http://waterwiseaustin.org) contains applications and information about new landscape variances.



## Water Use Compliance

The City of Austin has adopted a water conservation code to ensure the efficient and responsible use of water in Austin. The code limits landscape irrigation based on the combined storage of Lakes Travis and Buchanan and permanently prohibits water waste. You can always find up-to-date information including Austin's current drought response stage, watering violations and fines, and applications for variances at [WaterWiseAustin.org](http://WaterWiseAustin.org).

### Water waste defined:

1. Failure to repair a controllable leak;
2. Operating an irrigation system that is misting due to high pressure, spraying directly onto an impervious surface or that has a broken head; or
3. Allowing irrigation water to runoff greater than 50 feet or pond to a depth greater than 0.25 inches.

### Helpful exemptions from restrictions through Drought Response Stage III:

- using a hand-held hose or refillable watering vessel
- using drip irrigation
- watering trees using an automatic bubbler system or soaker hose placed within the drip-line of the tree canopy
- watering vegetable gardens with a soaker hose

WATER CONSERVATION












# AUSTIN IS IN CONSERVATION STAGE WATERING RESTRICTIONS\*

Please note that watering days and times and other restrictions have changed with the passage of the new Water Management Plan in August 2016. Five drought stages ramp up water use restrictions during times of drought to maximize water conservation. These stages are aligned with drought triggers such as lake levels and water consumption. Conservation staff enforce the Water Use Management Ordinance and can issue violations.

\*Check [WaterWiseAustin.org](http://WaterWiseAustin.org) or call Water Conservation at **512-974-2199** for the most current water restrictions.



## CONSERVATION STAGE

RESIDENTIAL	COMMERCIAL/ MULTI-FAMILY	PUBLIC SCHOOLS
 <b>AUTOMATIC IRRIGATION</b> Even Address: <b>Thursday</b> Odd Address: <b>Wednesday</b>	 <b>AUTOMATIC IRRIGATION</b> Even Address: <b>Tuesday</b> Odd Address: <b>Friday</b>	 <b>AUTOMATIC IRRIGATION</b> <b>Monday</b> Athletic Fields Exempt
 <b>HOSE-END SPRINKLERS</b> Even Address: <b>Thurs, Sun</b> Odd Address: <b>Wed, Sat</b>	 <b>HOSE-END SPRINKLERS</b> Even Address: <b>Tuesday</b> Odd Address: <b>Friday</b>	 <b>HOSE-END SPRINKLERS</b> <b>Monday</b> Athletic Fields Exempt
 <b>HOURS FOR BOTH</b> Midnight - 10 AM 7 PM - Midnight	 <b>HOURS FOR BOTH</b> Midnight - 10 AM 7 PM - Midnight	 <b>HOURS FOR BOTH</b> Midnight - 10 AM 7 PM - Midnight
 Home Car Wash Allowed with Bucket or Auto Shut-Off Hose	 Tree Bubblers, Hand-Held Hose, and Drip Irrigation: Any Day/Any Time	

