

CONSERVING WATER OUTDOORS



IN THE SUMMER, outdoor water use can account for up to 80 percent of home water use.

Unlike many Texans, the residents of Bentwater have never really experienced a shortage of water, so it's difficult to convince folks to conserve. The facts are we get our water from the Gulf Coast Aquifer and this source of water is slowly being depleted. As a result, we will likely be getting our water from Lake Conroe in the next few years and this is going to be expensive. So what may seem like little incentive today to reduce our water consumption will pay off big in the future.

Much of the water used outdoors is wasted through inefficient landscape watering practices. By reducing the amount of water we waste, we will save money today and protect the quality of life of the next generation.

Water Wise Conservation Steps

The amount of water required to keep your landscape healthy and green depends on many factors but experience in Bentwater shows that water consumption, in the summer months, exceeding about 18,000 gallons, or monthly water bills greater than \$60, probably means you are irrigating more than is needed. Reducing irrigation by following these steps can produce substantial savings in water and in your water bill:

- 1) Determine how much water your landscape needs to stay healthy.
- 2) Use water-efficient landscape practices, such as proper mowing, mulching, and fertilizing.
- 3) Design a water-efficient landscape by planting drought-tolerant grass and choosing plants that are native or well adapted to the climate conditions in the Houston area.

Water Wise Landscape

How often should I water?

Only when needed. We have demonstrated in Bentwater that **one inch of water per week** is all that is needed in the hot summer months to keep our grass and plants healthy. Less is required in the Spring and Fall.

Proper watering will help our Texas grass and shrubs develop deep roots (it is especially important to start this during the Spring when root growth is at its peak). Over-watered turf will have a short root system and will not be drought tolerant. **It is much better to irrigate your landscape no more than 2-3 times a week**, this encourages the root system to dig deeper for moisture. Short irrigation cycles, several times a week, keep most of the water at the surface and prevent the root system from going deep. It is also wise to divide your irrigation cycles into two steps, about an hour apart, to allow the water to soak in and minimize run-off. With the soils we have in Bentwater, deep rooted plants will thrive on little water. In contrast, the more we water, the more it takes and our plants don't even remain that healthy.

What time of day should I water?

Don't water 'til the sun goes down. Early morning or late evening during hot summer months. This is also when the wind is at its lowest. Otherwise, the water can simply evaporate between the sprinkler and grass.

What should I water?

This may seem obvious, but only your plants. Don't water the street and driveways. Make sure your sprinklers are hitting the target. And minimize the run-off by breaking your sprinkler cycles into two segments, about one hour apart, to give the water a chance to soak in and not run off into the street.

Water Wise Irrigation Equipment

What is the most efficient Irrigation System?

For the lawn, one that produces large drops of water close to the ground. Rotary sprinkler heads with adjusting flow rate insert nozzles are designed to accomplish this. Try not to use a sprinkler that produces a mist or fine spray.

For shrubs and flower beds, a drip irrigation system is the best. Soaker hoses are an easy and inexpensive alternative to drip irrigation. If you don't want to go to a drip system, make sure the sprinkler heads on your system are low to the ground with the water spray aimed at the roots of your plants. Spraying the tops of shrubs and letting the water trickle down to the ground is very inefficient as half the water evaporates before it gets to the ground.

How should I manage my automatic sprinkler system?

Based on testing in Bentwater, we have shown that 1 inch per week of irrigation is adequate to maintain a healthy and green lawn. For shrubs and flower beds, the water requirements are less. This level of watering will encourage the roots to dig deeper for water. As a guide, if you want to provide 1 inch per week irrigation to your landscape, you need to set your sprinkler system to deliver 0.62 gallons per sqft landscape for the week. You can determine this by measuring the quantity of irrigation water used in a week divided by your landscape area. ([You can find more information on determining sprinkler system flow rates and landscape area on the BCA website under **Water Wise – Calculations**](#))

Adjust the settings on your automatic sprinkler system as needed. Don't just set it in the Spring and leave it all season. The months of April and May probably require less watering, and this is a good time to encourage the roots to dig deeper. And when the Fall arrives, reduce the watering. Automatic sprinkler systems provide an efficient method of watering lawns. Their controllers use timers to turn off the system when a measured amount of water is used, and a rain shut-off device prevents watering when it rains.

It's up to you to set the times on the sprinkler system controller and in doing so manage the water delivered to each zone of your landscape. Not all plants have the same watering requirements. Reduce the run time of sprinklers on shrubs, which may not need as much water as lawns. Flowers require less water but need to be watered more frequently. Shady areas may not need as much water either. It will take a little trial and error to determine what's best for your landscape.

What maintenance is required for my automatic sprinkler system?

Check sprinkler heads regularly. Remove dirt or debris that may be clogging the nozzle and make sure the heads are working at the proper pressure and not leaking. Repair or replace broken heads, valves, seals, and pipes. Once a month, run the sprinklers for a short time on each cycle while you are observing to make sure they are working properly.

What features should I look for in an automatic sprinkler system?

The controller of your sprinkler system should have the following features:

- 1) A multiple scheduling option (Programs A, B, C)
- 2) A rain shut-off device
- 3) A water budget feature (which allows percentage adjustments without having to reprogram)
- 4) Tests functions

We have tested a more sophisticated device that actually controls the amount of watering to a set moisture in the soil. The UgMO System uses moisture probes buried in the soil and sends wireless signals to the sprinkler controller, telling it when it's time to water. As tested in Bentwater, the UgMO has controlled irrigation at 0.5-0.75 inches of water per week irrigation rate.

Water Wise Landscape Maintenance

When should I mow?

Only when the grass is dry. And don't cut more than one-third of its length at a time. Taller grass holds moisture better, encourages deep root growth, and is less susceptible to browning. Keep grass 3 inches tall during the summer (taller than 3 inches stresses the grass).

Use your grass clippings by mulching or composting them. Grass clippings break down quickly and provide valuable nutrients.

How can I conserve soil moisture?

Use lots of mulch. It will make your shrubs and young trees more tolerant to the scorching Texas heat.

By applying 1 to 3 inches of mulch, your soil

- retains moisture
- reduces runoff
- helps moderate soil temperature
- aids in root development
- reduces erosion
- slows weed growth
- prevents soil compaction
- makes your landscape beautiful

Place mulch directly on the soil or weed barrier fabric that can “breathe”. Avoid using plastic sheet in planting areas.

Apply a thin layer of compost to the lawn. It functions like mulch, increases organic content, and protects grass roots.

How can I improve my landscape?

Improve the soil. High quality soil helps reduce irrigation needs by retaining water better when added to the type of soils we have in Bentwater. You can improve your soil by adding more organic material such as mulch or compost. It’s easy to do on your lawn by using a mulching lawn mower. Another good way to improve the soil is by applying products such as “Medina *hazta gro*”; you will be amazed at the improvements in your lawn and plants.

Follow a regular fertilization schedule, using fertilizers recommended for our area. Proper fertilization helps develop good root systems to keep your lawn and plants more drought tolerant. Try to aerate the lawn once a year. And don’t forget to weed your lawn and garden as needed. Weeds rob plants of valuable water.

How do I design Water Wise landscape?

It goes without saying but plant water-efficient, well-adapted and/or native shrubs, trees and plants. Minimize areas that have grass and choose grasses that are drought tolerant.

How else can I minimize water use?

Don't forget your pools, spas, and fountains. You might be surprised but we have measured the evaporation from swimming pools in Bentwater and it is not as great as you might think. The larger source of evaporative losses is from waterfalls (that can be associated with pools) and from water fountains. Any device that creates free falling water will have significant losses and if you feel the need to operate these devices in the Summer months, try to restrict their use to the evening and early morning hours.

Backwashing the pool filter can also waste a lot of water and should only be performed as necessary.