

# THE COMMUNITY BUILDER

## Going Green Series: Saving Water

### Did you know?

- Outdoor water use can account for up to 50% of total water use for a home during the summer months.
- Homes with automated irrigation systems are more likely to overuse outdoor water (wasted water running down the sidewalk or watering the sidewalk or streets).
- Over irrigation can damage plants and make them unhealthy
- Over watered plants are more susceptible to disease and pest infestation

### What you can do:

- Mulch - mulch holds moisture in the soil and prevents evaporation from soil surface. Fine-textured mulches (pine straw, mini nuggets, shredded hardwood) are more effective in conserving moisture than coarse-textured mulch. Apply to as large an area under the plant as possible.
- Deep watering - shallow frequent watering encourages a weak root system and reduces plant tolerance of drought. Deep watering is done for a longer period of time per zone, but not as frequently.
- Water roots, not Leaves - Wetting the foliage encourages diseases and results in water loss through evaporation
- Hand-water newly planted trees, shrubs, and thirstier plants. Again, deep watering is the best way to encourage a strong root system and drought tolerance.
- Use drip, trickle or soaker hose - Drip irrigation uses 50% less water than conventional sprinkler irrigation and applies water slowly and directly to the root system.
- Use the timer and Install a Rain Sensor on Irrigation System -Rain sensors are inexpensive extras that usually pay for themselves (in water savings) within 2 years.
- Adjust irrigation controller - according to the change in seasons and rainfall.
- Depend on rainfall as main outdoor water source when possible.



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## Rain Sensors

A rain sensor is a device actuated by rainfall. It is a water conservation device connected to an automatic irrigation system that causes the system to shut down in the event of rainfall.

Rain sensors for irrigation systems are available in both wireless and hard-wired versions, most employing hygroscopic disks (big word for basically a cork) that swell in the presence of rain and shrink back down again as they dry out - an electrical switch is then in turn depressed or released by the disk stack. Wireless and wired versions both use similar mechanisms to temporarily suspend watering by the irrigation controller or clock, specifically they are connected to the irrigation controller's sensor terminals or are installed in series with solenoid valve common circuit such that they prevent the opening of any valves when rain has been sensed.

## Soil Moisture Sensors

Soil moisture sensors measure the water content in soil. A soil moisture probe is made up of multiple soil moisture sensors and the newer ones are made of very durable materials with the sensors encapsulated in the material much like the defrosters in the rear window of your vehicle. Measuring soil moisture is important to also help manage irrigation systems more efficiently.

In urban areas, landscapes and residential lawns are using soil sensors to interface with an irrigation controller. Connecting a soil moisture sensor to a simple irrigation clock will convert it into a "smart" irrigation controller that prevents an irrigation cycle when the soil is wet.

Using a soil moisture sensor in conjunction with a rain sensor is the most efficient, effective means of delivering the appropriate amount of irrigation to your landscape. By employing these two inexpensive means of delivering the right amount of water for the area, you will save money by reducing the exposure of your landscaping to pests, disease and will maximize fertilization by not flushing it through the soil so quickly by overwatering.



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Whether you use city water (a huge cost); reclaimed water (a lesser cost, but still expensive) or a well (the electric costs to run the pump), you will save money. The smart "controller" will reduce the need for maintenance to constantly have to be monitoring the rain amount and turning on and off your system.

Moisture sensor and rain sensor usage in urban landscape irrigation will only increase over the next decade. Cities and states have already begun rebate programs for the installation of these devices on new properties as well as retrofitting on existing sprinkler and irrigation systems. In addition, cities and counties are introducing local legislation requiring the installation of these devices.

No matter where you live, there are experts in your local area that can provide the best information and products for your location and your system. Technology has improved these products tremendously and their cost can generally be recouped in a very short time.

Water is a precious and costly commodity. We need to use it wisely, effectively and efficiently.

