Smart Irrigation Month is a public awareness campaign hosted by the Irrigation Association to promote efficient water use. Using water wisely:

- Saves on your utility bill
- Nurtures green spaces that deliver real environmental benefits.
- Protects your community's water supply for generations to come.
- Minimizes needed investments in infrastructure to store and carry water, Which must be paid for by property taxes or municipal bonds.

The articles this month will deal with water-wise methods of irrigation.

Smart Irrigation: Technologies that Use Water Efficiently

July is Smart Irrigation Month, and the start of summer is a great time to improve the efficiency of your outdoor irrigation system or install a water-efficient automatic irrigation system. There are many "smart" technologies available today that allow you to maintain beautiful landscapes while maximizing water efficiency. Here are some to consider whether you do it yourself or through a professional contractor.

Rain/Freeze Sensors

Rain sensors prevent irrigation systems from running when it is raining and right after rain events when irrigation is unnecessary. Rain/freeze sensors add the ability to stop irrigation when temperatures approach freezing to prevent ice on landscapes and hardscapes. These devices can reduce irrigation water usage up to 35 percent and help extend irrigation system life. Sprinkler systems should never run in the rain, and rain sensors can put an end to those wasteful situations.

Weather-based Controllers

Weather-based controllers actually adjust irrigation schedules based on local weather conditions. These climate-based systems gather local weather information and some even factor in your exact landscape (types of plants, soils, slopes, etc.) to make irrigation run-time adjustments so your landscape always receives the appropriate amount of water. There is a wide range of products in this category with various weather input options and landscape-specific adjustment factors. The water savings can be substantial and the convenience of these self-adjusting controllers is another great benefit.

Sensor-based Controllers

Sensor-based controllers rely on soil moisture sensors placed below ground in the root zones of lawns and landscapes to determine if and how long to water. Soils may be maintained between lower and upper target moisture levels for optimal plant health. Alternatively, a simpler decision is to schedule the regular irrigation program to run based on the soil moisture. Weather-based and sensor-based control products are available as stand-alone controllers or add-on devices to existing controllers. Each has been shown to reduce irrigation water usage up to 70 percent without sacrificing the quality of your landscaping.

Pressure Regulation

All sprinklers operate best at a certain water pressure. At those pressures the water distribution is most uniform over the target area. That allows shorter run times because for an entire lawn to be green you basically end up setting a schedule to provide sufficient water to the driest spot. Reducing high pressure also eliminates problems such as misting sprinklers and potential irrigation system damage. And for every 5-point reduction in water pressure you actually use 6 to 8 percent less water. Those savings can add up quickly. Water pressure regulation devices are easily added to valves to control a whole irrigation zone or can be added to individual sprinklers.

Low Precipitation Rate and High-Efficiency Nozzles

Many great sprinkler nozzles are on the market today that use lower precipitation rates to reduce run-off or offer improved water distribution uniformity. Distribution uniformity is very important to reducing watering run times. Again, you want the entire area being watered to receive sufficient water to maintain green lawns and colorful plants, so the more uniform the water distribution, the shorter the watering run time will be for the driest spot. Be sure to inquire about these critical considerations when selecting sprinklers and nozzles.

Drip Irrigation

Drip irrigation systems are very different from pop-up sprinkler systems. Rather than spraying wide areas, they generally utilize point emitters to deliver desired volumes of water to particular locations at or near plant root zones. Water drips slowly from emitters either onto the soil surface or below ground. Less water is lost to wind and evaporation as a result and weeds can also be reduced. Drip irrigation systems are very water-efficient and customizable for even different plants in a small area.

All of these water-efficient products can reduce water use and your water bills without sacrificing plant and landscape health. You can still enjoy all of the benefits associated with attractive and enjoyable landscapes on your property while helping to conserve a precious natural resource. Please take advantage of these cost-saving ideas that are good for you and good for the planet.

Smart Irrigation Month is an initiative of the Irrigation Association, a non-profit industry organization dedicated to promoting efficient irrigation. Learn more at www.smartirrigationmonth.org. *Additional water conservation information can be found at the Tuolumne Utility District website at http://www.tudwater.com/water-conservation/ and the Central Sierra Cooperative Extension website at http://cecentralsierra.ucanr.edu/Master_Gardeners/Drought_Resources/.*

This article was was submitted by the University of California Cooperative Extension Master Gardeners of Tuolumne County.