

Extra! Extra! Rainfall Waters Plants!

Recently it was announced that Minnesota is proposing legislation to require rain shut-off technology on any new irrigation systems. If this passes, it will be the third state to require these devices, after New Jersey and Florida. When you have a simple to install device that benefits the property with lower water bills, healthier landscapes, while conserving water, why was legislation needed at all?

Rain may not occur very often in our southwestern deserts, but we do get rain. Yet it is not always possible or practical to get the contractor or maintenance staff out to shut down the irrigation systems. Some landscapers don't think we get enough rain to justify their use, or refer to the rain as "extra water," but it is critical, especially in our dry climate where water is precious, that we remove the notion of "extra water" from our thinking. There is no such thing.

The Sonoran Desert gets two distinct rainy seasons in normal years, providing us with about 7-10 inches of water. The winter rains are generally slower, so more of it soaks into the root zones. Our summer monsoon "gully washers" are less effective since the rain comes down faster than the soil can accept it. If you've incorporated water-harvesting techniques in the grading of your properties, however, even these hard fast rains become useful.

How much water can be saved with rain shut-offs? One good rainfall of ½" or more will eliminate the need for at least one irrigation cycle or more depending on the time of year. This equates to about 25,000 gallons of water per acre of turf each time this occurs. If you add up all of the turf on all the properties you maintain, you'll start to appreciate the savings that can be achieved. Depending on the size of the landscape, one eliminated irrigation cycle may create enough savings to pay for the rain shut-off installation, which means you'll realize the full savings thereafter. Remember that rain will benefit your non-turf landscape areas and save water there, too. This can also help your property more easily meet it's landscape water budget projections.

The technology of rain shut-off devices has been with us for some time, so why aren't they used more often in the southwest where water is so limited? At first, rain shut-off devices were looked upon as an expensive component that could cause a system failure. In reality, these devices are low cost (\$20-\$100), easy to install, and when installed properly, should give years of trouble-free service.

The early style of rain shut-off devices consisted of a catch pan that would fill with rainwater. When the water fills to the probe's set point, it interrupts the controller signal to the valves. They continue to keep the system "shut off" until the water evaporates from the pan, mimicking the plant's water requirements. This keeps the system from running until the plants really need to be watered again. These are still available, but they sometimes catch debris that can cause them to interrupt the signal without any rainfall occurring. The newer styles have a material, usually in a disc shape, that expands when wet. Just like the catch pan type, it will interrupt the controller signal and continue to do so until the media dries out. These usually won't get clogged with debris, but the discs need to be replaced occasionally. Check with your local irrigation supplier for the replacement frequency. There are also soil moisture sensors available. When installed and set properly, these sensors allow the irrigation to occur only when needed by monitoring the soil moisture content. However, they react too slowly to shut down the irrigation system in response to rainfall.

The primary benefit of installing a rain shut-off device is easy to see. It's a low cost, easily installed device that will save water and money. A less obvious benefit is public perception. Water conservation offices are often asked why so many properties run their sprinklers in the middle of a rainstorm. The answer is simply that few properties utilize rain shut-off devices and are unable to easily shut their irrigation systems down.

Water management issues will continue to become more critical for all of us. Implementing sound water management practices demonstrates your company's commitment to the environment and to the future.