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Orange County Home Building

Conserve Water Usage in Garden this Winter

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HydroPoint wants to save water. Its mission is to lead a broad-based partnership effort to protect, manage and save vital water resources and valuable landscape investments through intelligent weather-based landscape irrigation solutions. HydroPoint's WeatherTRAK real-time ET irrigation technology is capable of addressing many water-conservation and run-off reduction needs.

Evapotranspiration is the amount of water used by a particular plant species plus the amount of water evaporated from the surface of the soil under measured weather conditions. Usually the amounts are accumulated for short periods of time such as a day or a week and then expressed as an amount of rainfall (precipitation) that would be needed to exactly replace the amount used. If it doesn't rain enough, then irrigation is needed.

The WeatherTRAK irrigation controller uses the real-time ET data, sent daily from the HydroPoint Data Center, to internally design optimized irrigation schedules. The user does not have to bother with creating schedules and typing them into the controller.

ET is calculated by gathering various weather-driven data points and running them through an ET formula that determines the amount of water needed to replace the water that was lost from the soil and plant due to local weather conditions. There are several different ET formulas that utilize different weather data points. HydroPoint uses the Penman-Monteith equation which has been adopted as the worldwide standard for estimating plant water use by the Food and Agriculture Organization of the United Nations. The formula uses solar radiation, temperature, wind and relative humidity as the four weather data points that influence and determine ET.

Weather is dynamic, and regular adjustments need to be made to the irrigation controller to ensure that plants are not under- or over-watered. Sensitive plants and grasses can become stressed and die if under-watered for a single day. At the same time, regular over-watering promotes poor rooting and inadequate soil aeration leading to poor plant health and disease. Furthermore, over-watering unnecessarily increases water bills, depletes precious water supplies and adds to run-off pollution endangering local watershed areas and beaches.

Real-time ET uses actual weather readings in each installed controller's surrounding area to generate a new ET for each day, which generates a new irrigation schedule. Studies have shown average savings of 37 gallons of water a day for irrigated areas of roughly 1,240 square feet that used standard irrigation clocks/controllers before the installation of the WeatherTRAK. Actual savings depend on the size of the landscape area and the levels of over-watering caused by previously entered watering schedules.

WeatherTRAK is capable of automatic rain shut-off via an additional rain-sensor device or manual rain shutoff. In both cases the WeatherTRAK continues to receive ET data daily, and will resume automatic scheduling when the rain delay is over. ET is important for irrigation because typically users over-water. Few current technologies help users avoid the problem. WeatherTRAK automatically creates a schedule that conserves water and promotes healthy plant growth. In turn, you save money and protect your landscape. For more information, visit the Web site www.hydropoint.com.