

HOME & DESIGN

'Smart' watering in drought

Irrigation systems deliver water based on weather data or moisture in the soil.

BY CAROL A. CROTTA

With summer heat and deepening drought upon us, the stringent outdoor watering restrictions adopted July 15 by the State Water Resources Control Board present many homeowners with a conundrum: how to keep their landscaping alive while staying compliant. The good news is that a new generation of "smart" irrigation systems, designed to increase water-delivery efficiency and minimize waste, is available today, often at reasonable cost.

This includes sophisticated controllers that read real-time site conditions and deliver just enough water to keep plants healthy. Sensors

THE CYBER RAIN XCI smart irrigation system can be operated from a computer or mobile device.

that deliver water based on the amount of moisture in the soil. Sprinkler heads that maximize penetration and limit drift and runoff. These innovations have enough potential to address the state's extreme drought that government agencies are willing to pay for homeowners to install them.

The Environmental Protection Agency has calculated that replacing the

standard clock timer controller found in most yards with one of its approved smart irrigation controllers can save an average home nearly 8,800 gallons of water annually.

The L.A. Department of Water and Power and other water providers, through the Metropolitan Water District's SoCal WaterSmart program, have gone a step further, offering rebates for



Cyber Rain

installation of their approved products. Lists of these are at www.epa.gov/watersense and www.socalwatersmart.com.

The most sophisticated of the smart systems are the weather-based irrigation controllers, or WBICs. These take in real-time weather data, either captured on-site through roof-mounted weather sensors or from historical and local satellite-fed data. The controller applies the information to the preprogrammed specifics of the garden — soil type, sun exposure, plant type, slope — to deliver a specific quantity of water. WBICs range in sophistication from ones that simply shut off when there is rain to a micromanager's delight, allowing a homeowner to control every move at every station from the convenience of a home computer.

A second option is a soil moisture sensor, or SMS. These measure the amount of moisture at root level and transmit the information to a controller, which adjusts watering accordingly. Since only one sensor is installed, SMS systems work best in yards that receive a uniform amount of light.

Of equal importance to the controllers are the sprinkler heads themselves, and there is improvement there too. Irrigation experts call the advent of Hunter's MP Rotator head revolutionary. Rotator nozzles deliver multiple, rotating streams of water at a slower rate than conventional sprinkler heads for better soil penetration, less runoff and up to 30% water savings.

Smart irrigation systems, including the rotator heads, often can work off an