



# It starts in California

What the Golden State is teaching the rest of us about landscape irrigation efficiency and water conservation.

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BY **CINDY GRAHL**

**R**ECENT LEGISLATION and weather patterns have made the Golden State a bellwether in reducing landscape water use.

One aphorism of the sustainability movement is that what happens in California — air quality, green building, auto emissions — will eventually spread to the rest of the country, be it in policies or practices. That state recently passed AB1881, or the Water Efficiency Landscape Use Act, which is creating great opportunity in the landscape industry. Key AB 1881 provisions include:

- › minimizing overspray and runoff;
- › creating landscape water budgets;
- › encouraging the appropriate use and groupings of plants;
- › encouraging the use of automatic irrigation systems and schedules;
- › soil assessment and management plans, including landscape maintenance practices, and
- › encouraging use of recycled water.

It applies to new large landscapes and large existing landscapes that must obtain permits.

Rain Bird's 11th annual Intelligent Use of Water Summit this year, held in partnership with the Smithsonian Institution, featured two speakers from California who are respon-

ing to that state's water-scarcity initiatives in ways that could benefit water managers everywhere.

One was Elizabeth Hurst, community outreach and education coordinator of the Inland Empire Utilities Agency (IEUA). The Chino, CA-based regional water wholesaler and wastewater treatment agency supplies imported and recycled water, among other services, to eight communities in Western San Bernardino County, southeast of Los Angeles. Hurst notes the area is traditionally a major center of agriculture that, since the 1970s, has seen many housing tracts built amidst the farmland. Approximately 65% of water there is used for outdoor irrigation.

The IEUA proactively responded to the California drought and the state's legislative response in AB 1881 by gathering municipalities, water suppliers, landscapers and others into a voluntary Inland Empire Landscape Alliance (IELA), a workgroup that wanted to be able to describe low-water landscapes and efficient irrigation, and work toward having both. A rebate-based pilot program resulted in 136 completed landscapes, eliminating 200,900 sq. ft. of grass and saving 26 acre-ft. of water a year. This would be enough to conserve about one-sixth of the regional water supply were these practices carried out throughout the area.

This pilot helped IELA develop a model upon which to draft a regional water-efficient landscape ordinance based on AB1881 and a water budget: the amount of water the landscape is allowed to use, calculated on location, rainfall and size, with adjustments made for using recycled water or having a garden or orchard.

That regional model ordinance was completed in February 2009 and adopted. Other initiatives include use of pervious concrete, storm water permits and a native plant manual.

The manual is a product of the Rancho Santa Ana Botanical Garden, one of the Landscape Alliance partners. Executive Director Patrick Larkin says the passage of AB1881 "has teeth behind it," mainly thanks to the efforts of the IELA. "Cities that do not have the expertise to deal with AB1881 now have a toolbox to use and don't have to deal with it on their own," he says.

Larkin notes optimal water use will be a result of both better system design and the technologies of the system itself. "I am impressed with what Rain Bird is doing," he explains. "Over the years, they have been thoughtful, responsible and out front."

The Botanical Garden's role, he adds, is to help citizens understand both plant choices and local precipitation patterns, such as the fact that the need for irrigation dials back in summer, contrary to much local thinking. "We are not a desert," he says. "We are a Mediterranean climate, and we

have a diverse plant palette." The garden's many educational ventures include work with PBS on a recent series, "Getting Native," which explored low-water landscapes.

One California landscape contractor featured on the series was Forrest Hill, of Swan Drought Tolerant Technology, in which Swan is an acronym for Smart Water Application Now. The five-year-old company is a spin-off of his landscape contracting business, Landscape Design, in Ontario, CA. Hill champions weather-based irrigation controllers as "easy to use," as well as maintenance-free tubing and the use of pozolla, a volcanic product that acts like mulch and releases water slowly. He has used it in drill and fill on two Barstow, CA, ball fields to test its effectiveness, but its use ranges from South Bend, IN, to Bahrain.

### Right of way

Also presenting at the Intelligent Use of Water Summit was Paul Goble, director of public works for Indian Wells, CA. His city was focusing on sustainability in the hopes to reduce water use by 60%, or 1.8 million gal./month, with

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\$104,000 saved per year. Indian Wells has 23 acres of grass and flowerbeds in its right of way, and the labor and equipment cost for those is now equal to that for shrub maintenance. Water use minimization is the key, he says, and that relies on having a well-trained and certified staff, with work done by licensed landscape contractors, pesticide applicators and a certified water manager.

Irrigation control, says Goble, comes from "proper water pressure, proper sprinkler spacing and heads, and the right amount of water for the right plants." But, he warns, "smart irrigators are needed with the use of smart controllers. These instruments need to be applied and managed correctly."

Smart irrigation controllers, Goble says, are those that get information and reset water use to meet specific climatic conditions. These were installed throughout the city, with 9 million gallons, or 27 acre-ft., saved each year. Steam irrigation with pressure regulation is used instead of spray irrigation, resulting in "better uniformity, an auto-match to precipitation, even after arc and radius adjustment, and reduced runoff on slopes and tight soils."

Indian Wells works with Vantage Associates, Bermuda Dunes, CA, as its landscape contractor. Vantage's president, Gregg Gritters, is certified as a California Landscape Irriga-

Elizabeth Hurst, standing, credits the broad-based Inland Empire Landscape Alliance with significant water savings.



tion Auditor, a Certified Water Manager of the California Landscape Contractors Association and Rain Bird's Maxi-Com Level 2.

Gritters notes evapotranspiration (ET) sensors that measure water lost from the soil surface and from the plant, which are tied into local weather stations, should allow installers to select the weather station to use, not those “based on zip codes.” In his area, he says, that’s important — ETs can vary up to 30% in one location, so precision is needed.

Goble adds other water-reduction methods need to be used in addition to irrigation technology in an integrated approach. Technology alone is not enough. Soil is also treated with worm castings and palm mulch to reduce water use by 15%.

Indian Wells credits its stream heads and the smart controllers each with 25% in water savings, and the overspray and pressure regulation with 5% each, for a total of 60% savings on water — which amounts to a net of \$8,700 monthly. The city won the 2009 Rain Bird Intelligent Use of Water-State of the Union Award for its use of smart controllers, as well as recognition on its reduction of the use of electricity.

### Training needed

“Savings are often due to past abuse,” adds Gritters. “The new equipment makes changes in water use, for sure, but a

smart irrigator can optimize any existing system. If you don’t have a skilled, qualified, conscientious installer, you won’t get full system benefits.”

In agreement with Gritters is one landscape contractor who closely followed the IELA initiative and the development of AB1881 in general. Robert Wade, owner of Wade Landscape, Chino Hills, CA, served on the study group for the new law and is a member of the California Landscape Contractors Association with Water Manager Certification. “We have been heavily involved in this,” he says. “The technology of smart controllers is good, but when things go wrong, the contractor needs to know what to do. Contractors aren’t as well trained as they have to be. We can’t go by what we’ve always done.” Planning,

he adds, includes thinking about root depths, clock settings and precipitation rates — a whole lot more than before.

“You don’t panic, and you don’t look for quick fixes,” he says. “Landscape contractors need to come up to speed and get on track. We need to become the good guys and help save water.” **LM**



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