

Life without lawns

Faced with an uncertain water future, California water agencies are using cash to entice homeowners to remove their turfgrass lawns.

BY **RON HALL** EDITOR-AT-LARGE

FOR 30 YEARS, and until the recent economic slowdown, California's Inland Empire (IE) was one of the fastest growing regions in the U.S. Comprised of portions of Riverside and San Bernardino Counties, its population ballooned from 1.55 million to 4.1 million between 1980 and 2008, including a 23% increase over the last decade. While growth has slowed since 2008, it's generally believed that robust growth will eventually return.

This vast, arid region of Southern California, at 27,000 square miles and approximately two-thirds the size of the state of Connecticut, is located 30 miles northeast of Los Angeles. Surrounded by rolling hills and mountains, it has just about everything one could desire in terms of a modern American lifestyle including year-round sunshine, modern infrastructure and plenty of recreational

opportunities. However, with all of these aforementioned amenities, the IE lacks one major core component in maintaining its enviable way of life and necessary for future growth and development. It faces an uncertain water future.

The region receives 11 in. to 15 in. of precipitation and rain annually, depending on geography, and available ground and surface water is not reliable enough to sustain its many bustling communities or allow future growth. Most IE communities supplement the water they draw from underground aquifers or nearby streams with imported water provided by the half-century-old State Water Project that brings water south through the San Joaquin Valley Delta. This is an expensive proposition, The transportation and delivery of this water (each gallon weighs 8.3 lbs.) to the Southern California area consumes

an incredible amount of energy. The State uses an estimated 19% of its available energy treating and transporting water.

The relative scarcity of regional water sources and the expense of providing outside water to this vibrant region of California will almost

certainly mean the downsizing of irrigated lawns and more landscaping with synthetic turf and native plants. Water agencies in the IE have been experimenting with ways to entice homeowners to replace their lawns with low water using plants that will remain healthy, or with synthetic turf or hardscapes. And, for the most part, these programs have been well received and successful, especially when coupled

CRITERIA FOR SELECTION

- Agree to pre- and post-site inspections
- No restrictions in plant type or site coverage
- No irrigation modification requirement
- Must install permeable surfaces
- No reinstallation of cool-season turfgrass

with financial incentives. This is an increasingly common strategy by water authorities throughout the arid U.S. Southwest.

Lisa Morgan-Perales, Water Resources Analyst II, IEUA, describes a 19-month project by the Inland Empire Utilities Agency (IEUA) to evaluate the public's interest in replacing turfgrass with low-water-use plants and surfaces. She says the program was patterned after similar programs implemented by the Southern Nevada Water Agency and the Crescenta Valley Water District.

The IEUA is a regional wholesale water supplier and wastewater treatment provider serving eight retail water agency members – the cities of Chino, Chino Hills, Ontario, Upland and the Cucamonga Water District, Fontana Water Company, Monte Vista Water District and the San Antonio Water Company.

The IEUA began developing the program in the spring of 2007 and launched it in December of the same year. It ran for 19 months, concluding in July 2009. Initially the program had been budgeted with \$50,000 to convert 30 residential landscapes. A year after its initiation it received additional funding expanding the budget to \$240,620 to cover the expense of 136 residential conversions. Participants were paid \$2 a sq. ft. per conversion with a minimum



BEFORE



AFTER

of 400 sq. ft. being converted. The maximum allowable rebate per property was \$2,000 or 1,000 sq. ft. removed.

Once a member agency received an application to be included in the project from a homeowner to be a part of the project, the agency did a pre-site inspection that included photographing the site. At the conclusion of the Program, the member agencies conducted post-site inspections of the participating properties, again photographing the sites to document the changes, and sent the information to the IEUA for final review and payment to the participants.

Morgan-Perales says the project resulted in 186,446 sq. ft. of turfgrass being replaced with low-water-use plants and approximately 28,320 sq. ft. of artificial turf and other low-water-using surfaces on homeowners' properties. This resulted in an estimated water savings of 26 acre feet per year. An acre foot of water is the amount of water it takes to cover an acre of flat land with a foot of water —325,851 U.S.gallons.

In assessing the project, Morgan-Perales describes how the converted properties were classified, using subjective visual criteria, into three categories:

▶ Models of Success, 61 properties, landscape design contains a high percentage of plant coverage or a mixture of plant and non-permeable materials

Water authorities in the U.S. Southwest are promoting smaller areas of maintained turfgrass on residential properties as evidenced by this conversion in Montclair, CA.

▶ Alternative Landscapes, 23 properties, landscape design contains a higher percentage of “other” plant (non-native plant) coverage and may contain a higher percentage of hardscape
▶ Made the Grade, 52 conversions, Landscape design contains a high percentage of permeable paving surfaces with minimal plant coverage.

Morgan-Perales says analysis of the results of the project suggested similarly focused future turf removal projects require each applicant to submit a mandatory site plan with live plants covering a minimum percentage of the design, require that participants modify their irrigation systems and require that eligible project areas include the front yard.

Beyond that, the IEUA would like to develop and circulate a “recommended plant/materials list” and increase the maximum conversion area while lowering the rebate amount, she says.

All in all, the project that ended in July 2009 was positive on several fronts, she adds, including building the IEUA's recognition and strengthening customer relations between agency staff and the public. **LM**

IN THE PROGRAM

- ▶ Encouraged to install low-water-consuming plant materials
- ▶ Encouraged to modify existing irrigation with drip or subsurface irrigation technologies
- ▶ Maintain converted landscaping for five years
- ▶ Agree to water usage monitoring for five years