

Water Conservation Becomes a Way of Life



Caltrans photo by Scott Lorenzo

As California prepares for an arid future of recurring drought, Caltrans has adopted permanent water conservation strategies that have reduced its water use 62 percent since 2013, which has saved the state billions of gallons.

During the current drought, now in its fifth year, Caltrans has added more than 1,800 “smart” irrigation controllers that monitor soil moisture, track weather via satellite and alert water managers of malfunctions or leaks. These controllers can use about half

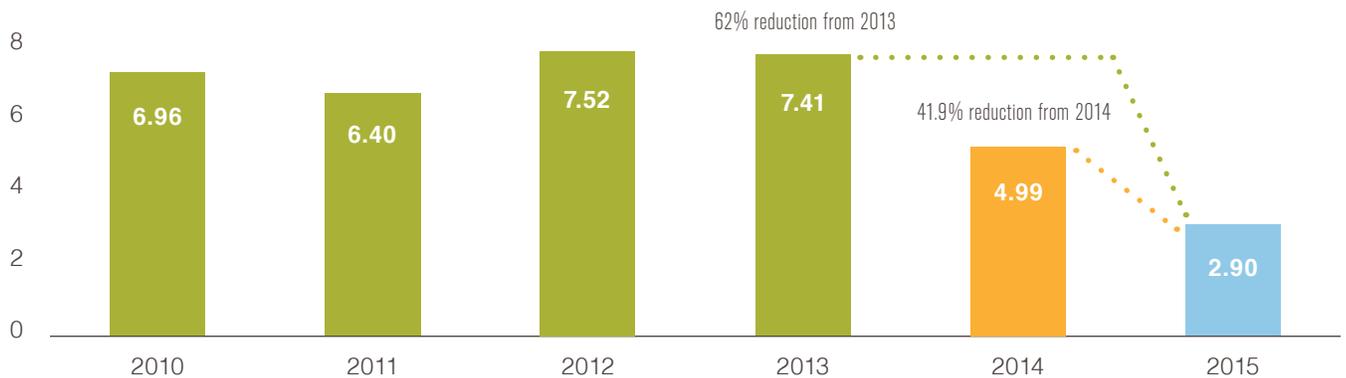
as much water as conventional systems.

The department also is installing new pipelines and replacing irrigation systems with ones that can accommodate recycled water. It is expected that nearly 30 percent of the water used on landscaping will soon be from recycled sources. That could save Californians more than 540 million gallons of drinking water each year.

The first year after Gov. Edmund G. Brown Jr. declared a drought state of emergency in January 2014,

Caltrans Statewide Water Use, in Billions of Gallons

Source: Landscape Architecture Program, Division of Design



In 2014, Caltrans used 4.9 billion gallons of water to irrigate 32,000 landscaped acres. In 2015, Caltrans irrigated the same acreage, but used only 2.9 billion gallons. That’s 92,333 gallons per acre, compared to about 163,000 gallons per acre in 2015.

Caltrans reduced its roadside irrigation by 2.4 billion gallons, or 32 percent. The following year, Caltrans cut back an additional 2 billion gallons. In those years, according to some estimates, Caltrans saved enough water to serve the annual needs of about 28,000 households in Los Angeles. In the last two years, Caltrans has cut its water use more than any other state department and has accounted for more than half of the water conserved by all state agencies combined.

In May, Gov. Brown issued an executive order calling for “long-term improvements to local drought

preparation across the state,” making water conservation “a way of life in California.”

To meet that order, Caltrans has adopted new procedures to ensure water availability for construction work, has updated its guidance and has coordinated its efforts with water purveyors on all projects. The department has set an aggressive goal to use recycled water for all of its landscaping needs by 2036. **MM**

Source: Jack Broadbent, Division of Design — Landscape Architecture Standards and Procedures

Caltrans Increases Recycled Water Use in 2015

Source: Landscape Architecture Program, Division of Design



Caltrans has trained almost 1,500 employees on efficient irrigation design, operation strategies and irrigation repair. Each of Caltrans’ 12 regional districts has been empowered to adopt their own drought action plans.

2015 Water Conservation Accomplishments

- Achieved 62 percent reduction between 2013 and 2015.
- Connected irrigation systems to recycled water sources on 20 projects.
- Increased recycled water use from 14 percent to 23 percent for highway planting.
- Installed 1,821 “smart” irrigation controllers.
- Trained almost 1,500 staff on efficient irrigation.
- Secured \$221 million in emergency funding for 109 projects, with 78 percent completed.
- Each district adopted specific drought action plans.
- Delayed \$70 million in proposed planting projects.
- Continued to install required biological mitigation planting work.
- Received approximately \$700,000 in rebates from water purveyors for irrigation efficiency.

