

## Challenges

- Caring for several diverse landscapes in a short water window.
- Dealing with unpredictable levels of chlorine in the reclaimed water.

## Solutions

- Installing the Maxicom<sup>2</sup>® Multi-site Irrigation Central Control System.
- Installing valves engineered to withstand long term exposure to reclaimed water systems.

## Results

- The ability to centrally control water flow to 25 satellite sites, each with different needs.
- Cost savings from reduced labor needs and more efficient water usage.
- Long-lasting reclaimed water valves that reduce parts costs.



Each morning when he goes to work, Lupe Rivera faces no small challenge. He is responsible for the care of 128 acres of lush landscape and over 6,000 trees in the LEGOLAND® California family theme park. Not only is maintaining landscapes in the Southern California climate an “intense process,” as Rivera calls it, the plantings themselves are diverse and, for the most part, not native to the area.

“The landscaping is designed to go with the themed areas throughout the park,” says Rivera, whose title is Landscaping Supervisor and Irrigation Specialist. “For instance, in the Castle Hill area, there is an English garden theme, and on Dino Island the landscape is more tropical.”

Each area, therefore, has different irrigation needs. Rivera uses a Rain Bird Maxicom Central Control, which allows him to manage the 25 satellite sites and 14 points of water connection from three central control units. There is a weather station on the LEGOLAND site, which communicates with the Maxicom system.

“Having a central control system saves us so much time and effort, and it gives us the most efficient, flexible use of our water,” says Rivera, who began his work at LEGOLAND during its construction phase. “It’s very easy now to manage the Park’s irrigation needs, and we don’t need to hire a lot of people to make it work.”

The entire theme park, which opened in 1999, uses Rain Bird irrigation products. Rivera, who is a Maxicom expert and has given many presentations on the system, says he needs only a staff of three to handle the Park’s irrigation needs; without Maxicom, he says he would probably need to hire up to three additional full-time irrigation employees. “The water management system saves water as well as labor,” Rivera adds.





The Maxicom system in use since the park opened, “allows us to maximize the hydraulic capacity of our system, which makes us much more efficient with our water. We can also see the benefits of the cycle and soak feature, especially in our sloped areas.”

The Maxicom system is particularly effective in creating efficient irrigation schedules when only a short water window is available, like at LEGOLAND.

When there are several unique types of landscapes with different water needs, it can be especially difficult to accurately control water flow in a short watering window. The Maxicom system looks at valve-run times, water availability, and water needs, and then automatically groups valves to make sure the system is running at full capacity during the window.

Using reclaimed or recycled water (non-potable) effectively is another challenge at LEGOLAND, where 90 percent of the water used for irrigation is recycled. There are more than 1,000 reclaimed water valves, designed to trap debris inherent in recycled water systems.

As water becomes more and more valuable, especially in areas like Southern California, the use of reclaimed water increases. Reclaimed water has higher levels of chemical content, chlorine and debris. The nature of this treated water has been known to shorten the life expectancy of valves, so Rain Bird engineers worked with LEGOLAND to increase valve life in reclaimed systems. Rain Bird developed a reclaimed valve specifically constructed to withstand high chemical levels found in non-potable irrigation systems.

“The need to handle dirty water debris and high levels of chlorine will only increase, especially in places like Southern California, where water is a limited resource,” says Jim Fitzgibbon, Rain Bird Product Manager. “Having valves constructed of materials that withstand this chemical environment to provide years of uninterrupted service is important.”

Rivera says the Rain Bird reclaimed valves have made a significant difference in the systems valve life and reliability. Rivera adds that Rain Bird’s overall responsiveness to any problem takes much of the stress out of his job.

“Their engineers have done a lot of testing and trouble shooting for us,” says Rivera. “Even when an issue isn’t very big, they are always very supportive of my work and all of the Rain Bird products. That support, and the ease of using the Maxicom system, makes it so much easier to keep the park looking beautiful.”

## Products Used

### Controllers

Maxicom<sup>2</sup><sup>®</sup>  
WS-PRO2 Weather Station  
ESP-LX

### Valves

PESB-R Reclaimed Commercial Valves

### Spray Heads

1806 and 1812 Sprays with U-Series Nozzles

### Landscape Drip

Black Stripe Tubing

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