



Case Study: Solving today's irrigation challenges

RAIN BIRD SERVICES CORPORATION SOLUTIONS RESULT IN MORE ATTRACTIVE LANDSCAPES, MONEY SAVED AND IMPROVED SCHEDULING EFFICIENCIES.

The City of Tustin, California, a long-time customer of Rain Bird Services Corporation, struggled with unique challenges and requirements. They needed to keep their community parks and recreation center landscapes green and well-maintained, reduce their spending for irrigation water, improve their irrigation system's scheduling efficiency and provide more technical training for their staff. They called on Rain Bird Services Corporation to help.

At Rain Bird Services Corporation, we take a scientific irrigation management approach that delivers the right amount of water to the landscape when, where and how it's needed. We deliver a wide range of training and onsite services as well as a unique, customized set of service solutions and irrigation products designed to solve our customers' irrigation problems—all driven by our commitment to the Intelligent Use of Water™.

Family-Centered Community Expects High-Quality Parks and Recreation Facilities

The City of Tustin is located in Central Orange County, California and is home to nearly 75,000 residents.

These statistics give a better view of the city:

- 80% of the residents are younger than 54-years old
- 60% of residents are younger than 34-years old
- The median household income is \$56,000
- Family households comprise 67% of the population

With a very young population consisting of mostly families, public access to high-quality park and recreation facilities is critical—and expected. The city operates 12 community parks as well as senior, youth and athletic facilities that have been maintained by a dedicated staff of professionals. During the last ten years, Tustin has invested more than \$16 million developing and improving these park and recreation facilities.



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Like many other cities in the State of California, the City of Tustin faced unprecedented economic pressures that created unique challenges, specifically meeting the public's expectation of high-quality public facilities with limited budgets and reduced staff.

In addition, significant water shortages in southern California have resulted in water conservation pricing from the water district. This pricing significantly rewards water use within calculated daily allocations and greatly discourages water use above the allocation. This pricing structure threatened the city's budget for water and could have led to negative impacts on the quality of the parks' and sport fields' landscapes. It also was a message from the water district that water use over the calculated daily allocation was "waste." City staff highly prioritized the elimination of "waste" or the appearance of "wasting" taxpayer money.

The Challenge: Keep Parks Green, Reduce Costs, Improve Efficiencies

In talking to the City of Tustin's Public Works staff, we realized that their prime concern was to maintain city-owned landscaped areas to a very high standard of quality.

Tustin explained their top four challenges and goals:



1. **Keep the parks' landscapes looking attractive** - The citizens have a high expectation for the appearance and utility of their parks. This requirement extended to 12 community and "pocket" parks and streetscapes. The City of Tustin clearly articulated the challenges in meeting this expectation to Rain Bird Services Corporation.
2. **Reduce the cost of water for irrigation** - The local water district was applying pressure on the city to reduce its water use by implementing a water conservation pricing strategy, which significantly discouraged water use over the calculated daily allocation. The water district also recently changed the formula for calculating this daily allocation. In the past, allocation was based on the water needs of cool season turf that is prevalent in the city sites. Now, daily allocation is based on the water needs of warm season turf—an estimated 15% reduction in water allocation.
3. **Improve irrigation schedule efficiency** - The city needed real-time water usage information to manage the irrigation system at the high efficiency levels they needed and expected. They needed flow-sensing equipment installation, repair and calibration to provide that information.
4. **Increase technical knowledge and training** - High-quality parks and recreation facilities could only be realized if the city invested in their group of dedicated employees so they would be better equipped and prepared for the new challenges ahead. They needed more knowledge and skills in irrigation as it relates to hydraulics and water efficiency. The city also wanted to ensure that changes and improvements would be persistent and not be degraded over time.



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Rain Bird Services Corporation's Project Solution

Clearly the City of Tustin was faced with significant challenges. After an initial thorough analysis, we offered specific solutions to the city's concerns, and created a step-by-step process to meet its needs. Our solution began with Site Assessment Training and Site Assessment Service.

Site Assessment Training - The Site Assessment Training consisted of two days of maintenance personnel training on how to collect field data essential to the optimal performance for its water management program. The classroom training covered the basics of irrigation efficiency, calculating irrigation schedules, understanding hydraulic limits and how to maintain the system. Then, staff completed eight hours of Rain Bird Services Corporation field training to ensure they could successfully complete future site assessments on their own.

Site Assessment Service - Rain Bird Services Corporation also conducted a Site Assessment to provide comprehensive reporting of the system's performance and operating condition. This assessment also reported recommended repairs, changes and upgrades designed to promote system utilization at a level that serves the needs of site management.

Database Programming - After the studies were conducted, Rain Bird Services Corporation then provided Database Programming Services. These services optimized management of irrigation scheduling to take full advantage of their Rain Bird-Maxicom central control system.

Irrigation Management Services - Once the central control system was optimized, the city then asked Rain Bird Services Corporation to operate the irrigation systems on five parks. The city later expanded that management to twelve sites, including some of the sites that were the most challenging for the city.



BEFORE: Camino Real Park, Tustin, CA (7/31/10)



AFTER: Camino Real Park, Tustin, CA (8/01/11)

Our partnership with the City of Tustin resulted in meeting the city's objectives of keeping the parks looking good, reducing the cost of water for irrigation, improving system efficiency and educating staff about the irrigation system



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The Results - Our partnership with the City of Tustin resulted in meeting the city's objectives of keeping the parks looking good, reducing the cost of water for irrigation, improving system efficiency and educating staff about the irrigation system.

1. *Attractive Parks* - Monthly site walks to assess the appearance of the parks using a jointly devised assessment system as well as constant weekly communication with city staff ensured the city's highest priority goal was met. The city's goal of scoring a "3.5" on a 5.0 visual appearance scale was met.
2. *Manage Irrigation Water Expense* - The city performed weekly water meter readings and provided them to Rain Bird Services Corporation to ensure that the allocated amount of water was not exceeded. Water use on the five sites managed by Rain Bird Services Corporation for a full year was 40% lower than allocation. *The amount of water saved in one year compared to the allocated amount would fill a swimming pool the size of a football field 55 feet deep.*
3. *Improve Irrigation Scheduling Efficiency* - Improvements were made to the flow sensing capabilities of the irrigation systems to improve the available management information. This provided great improvement in irrigation scheduling efficiency, which drove the improved appearance of the parks and significant water savings.
4. *Increase Technical Knowledge and Training* - The city staff's training has equipped them to sustain the improvements through appropriate system maintenance and repair and to improve their management of the irrigation systems. The city believes they are well prepared to continue achieving these great results.

All in all, the city is thrilled with the results they received from working with Rain Bird Services Corporation. They are "raving fans" and enthusiastically share their story.

Total of Sports, Camino Real, Citrus Ranch and Heritage Parks



The Intelligent Use of Water™

We believe it is our responsibility to develop products and technologies that use water efficiently. Our commitment also extends to education, training and services for our industry and our communities. Rain Bird products and services make the most of every drop, delivering superior results with less water. Keeping the world beautiful. That's The Intelligent Use of Water.™

About Rain Bird Services Corporation

At Rain Bird Services Corporation, we help our customers provide green grass and safer, attractive landscapes. Together we improve operational efficiency, public perception and facilitate compliance with environmental regulations. Rain Bird Services Corporation offers training, central control products and system operation services to efficiently achieve customers' desired landscape quality.

Our service offerings are varied—from onsite audits to turnkey projects. For more detailed information about any of our products, services, or initiatives and to schedule an on-site needs assessment, please call **(888) 444-5756 option 3** or send us an email at: rbcs@rainbird.com.