

# Carlsbad Municipal Water District

Itron Technology Accelerates Efficiency Gains  
Delivering 3-Year Project Payback

## OVERVIEW

The Carlsbad Municipal Water District is located 25 miles north of San Diego, serving a mix of residential and industrial customers across a 32-square-mile, primarily urban service territory.

In 2008, the Carlsbad Municipal Water District embarked on a 15-year replacement program to upgrade its infrastructure to continue the delivery of water to residents. In addition, the district wanted to improve meter reading efficiency—specifically achieve a read rate above 98% and provide data for customer support, while leaving the door open for migration to future technology in support of further efficiency gains and conservation efforts.

## SOLUTION

Following collaboration between Itron and the Carlsbad Municipal Water District, the district was able to develop a plan accelerating their deployment, taking the replacement of endpoints from a 15-year project down to under five, while guaranteeing a three-year project payback.

Since Carlsbad has been an Itron customer for many years utilizing MV-RS and handhelds for manual water meter readings, the transition to an automated meter reading system (AMR) was seamless due to the staff's in depth understanding of MV-RS software.

Beginning in 2011, the Carlsbad Municipal Water District began installing the ChoiceConnect Mobile solution throughout its 29,000 endpoint service territory. Equipped with two mobile collectors, three FC300 handheld data collection devices and Itron's MV-RS meter reading software, the utility was able to exceed its desired 98% read rate—achieving a 99.9% read rate even before the project had completed in the first half of 2015.



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— Mario Remillard  
Project Manager

## CUSTOMER

» Carlsbad Municipal Water District

## SERVICE TERRITORY

» 29,000 residential and commercial customers across urban 32-square-mile service territory

## SOLUTION

» Itron ChoiceConnect® Mobile, Water ERT® Modules, Mobile Collections System & Field Deployment Manager



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## BENEFITS

Automation has allowed the district to read endpoints remotely in a fraction of the time it took to read the old ones, saving water and money. Rather than going door-to-door, staff now read meters by driving around the city in a vehicle equipped with Itron’s mobile collection technology. This has reduced the time it takes to read all of the district’s 29,144 meters from 329 to 55 staff hours. The system can pick up signals from a half-mile away, so readers can cover large parts of the city with a simple driving route.

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The final project cost was \$6 million. Besides cutting meter reading time, the new automated meters provide useful information for customers who want to track their water use. The meters record results at regular intervals throughout the day, which allows staff to tell customers when a spike in usage may have begun and what times of day usage increases.

In addition to exceeding endpoint read rate expectations by reading consistently at 99.9%, the city was able to benefit in the form of meter reading staff reductions, allowing existing staff to focus on other activities in the water district. The data collected from endpoints is being leveraged to improve customer service and aide in conservation—an area that is becoming of utmost importance as California is in its third year of drought.

“One advantage of this new system is when a customer calls with questions about increased water usage, we can call up the data and help solve the problem right then and there,” Remillard said. “We can tell them how much water they’re using day to day, and sometimes hour to hour. And we can visit them at their house and show them their usage history over a laptop.”

The system also gives the district a better picture of citywide consumption, allowing officials to compare purchases from the region’s wholesaler — the San Diego County Water Authority — with total consumption by customers. This ability to compare purchase data with overall usage data enables district engineers to spot discrepancies that may be caused by leaks in the delivery system, allowing the district to track down and repair them.

## WHAT’S NEXT?

After seeing rapid efficiency gains with its current solution, the city has already begun exploring options for migrating to Itron’s advanced metering infrastructure (AMI) technology. Since endpoints have already been upgraded, the evolution to AMI would extend system benefits by gathering readings over a network, thus eliminating the need to send out a van equipped with a mobile collector to gather meter readings. Additional usage information could also be collected across the network, facilitating even more proactive leak detection efforts and more detailed information for customer service representatives to share with end customers.



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### CORPORATE HQ

2111 North Molter Road  
Liberty Lake, WA 99019 USA

**Phone:** 1.800.635.5461

**Fax:** 1.509.891.3355

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