The City of Bovina

R900® System Keeps track of City's Water Consumption — and More than Earns its Keep

A LONG DRY SPELL – OLD METERS, MISREADS, AND LOST REVENUE

The City of Bovina was incorporated in 1956, but its history goes back much further. Now home to approximately 1,900 residents, the City gets its name from its former status as "Bull Town", the world's largest cattle shipping site in the early 1890s during the reign of the XIT Ranch in the Texas Panhandle. Not far from the New Mexico border, Bovina has been faced with two major challenges in recent years – a poverty rate of 21 percent and the area's worst drought on record.

When a year goes by without measurable precipitation, water becomes an even more precious commodity. But with aging distribution lines and a water meter population dating to the 1950s and 1960s, the City had a tough time keeping track of the water and billing for it. According to City Manager Jana Pitcock, like many small cities, Bovina had been replacing infrastructure a little bit at a time as limited funds became available. This led to a mish-mash of meters from different manufacturers and different decades measuring flow for the City's 600 residential and 50 commercial accounts.

Director of Public Works Cesar Marquez said, "We were using logbooks to read different routes of the City, with two guys per book. We'd go meter by meter, open the lid, and one would call out the reading while the other wrote it down with a pencil. That led to a lot of mistakes." Just to collect the reads, it took six personnel two days. And those years when there was winter precipitation, Marquez said, "We used to have to get the metal detector to find meters in the snow – it could take a whole week."

Once the meter readings were written down and turned in, two clerks would each spend two days keying in the data. Becky Beekman, who manages the accounts payable and utility billing for the City, said, "In running the audit report, the usage would be way off. There was a lot of transposition of numbers – and a lot of rereads."

CUSTOMER

The City of Bovina, Texas

SERVICE TERRITORY

Bovina is a city in Parmer County, Texas, United States. The population was 1,868 at the 2010 census.

SOLUTION BENEFITS

Addressed high water bill complaints with E-CODER®)R900*i*™ consumption activity history

Saved water by increasing customer awareness of leaks so they can be fixed

Water usage from City's wells decreased while captured revenue increased

Revenue was 50% above budget, even for the winter months, during a drought-driven year

Read time reduced from two days to three hours

MAKING THE NEPTUNE® CONNECTION WITH R900 AMR

Bovina native Charlie Trimble also happens to be a Senior Territory Manager at Neptune Technology Group. "For years," he said, "I asked the City to look at automating their meter reading, but funding was a problem." By 2009, funding became available to address water infrastructure needs. OJD Engineering worked with Ray Richardson, System Specialist for HD Supply Waterworks, to assist the City of Bovina in creating the specifications for the project. Pitcock and her team then worked with Trimble and HD Supply to secure new water meters and E-CODER®)R900*i* ™ units, which combine the Neptune® field-proven solid state absolute encoder with a radio frequency transmitter – and offered leak, tamper, and reverse flow detection as well as consumption activity history.

"The reason we chose Neptune was because they had the best product," said Pitcock. To take advantage of the R900® System's mobile reading abilities, the City selected the Neptune handheld that the City used as a mobile data collector.

The City performed its own installation of the new meters and E-CODER)R900*i* units beginning in November 2010. To allow for the radio antennas, Marquez and his crew retrofitted the metal meter pit lids using a plasma cutter, saving the City thousands of dollars. The installation process was extended to six or seven months to allow Beekman time to enter the new components into the billing system.

As Bovina progressed through the changeout, it realized the extent of its old system's problems. "There were small leaks everywhere," said Marquez. "For every five meters we changed, at least one was leaking, both on our side and on the customer side."

In early 2012, installation was virtually complete. "We have a couple of big meters left to change at a school – but we're waiting until the end of their school year," Marquez said. "They've been getting millions of gallons of free water because of the old meter they have."

A TIME FOR A CHANGE FINDS EXTRA TIME, EXTRA CHANGE

With installation largely over, Beekman is impressed with the change: "It's unreal how much time I'm saving compared to before."

"It's freed up a lot of time for [the meter readers as well]," Marquez added. "Our read time went from a couple of days to just three hours. Now we have one person driving and another using the handheld."

"We've been able to reallocate personnel to other tasks like building roads," Pitcock said. "Before, a third of our streets were dirt. We've also freed our guys to use their talents in other directions. Already they've helped beautify parks, put crosses in the cemetery, put in new playground equipment, and started work on our new community center. They're really helping move the city forward." Not only that, but by taking care of these projects themselves, the City staff saves thousands of dollars that would have otherwise been paid to contractors to handle the work.

CONSUMPTION DATA IS CUSTOMER PROOF

It wasn't just savings that the City noticed. "We saw a jump in revenue right away," said Pitcock. By February of 2011, customers were calling the City to complain about the higher bills. Thanks to consumption activity history, Marquez can show them charts with usage by time of day that proves the bills are right on the money. "We have proof we're doing the reading of meters correctly," Pitcock added.

"There was one gentleman who had a two-inch meter on a sprinkler system that had registered 4,000 gallons a month," said Marquez. After that meter was replaced, the usage jumped to 19,000 and finally 32,000 gallons. "He said, 'I'm not using that much.' And I showed him, saying, yes, you are – and that's why your grass is so green."

Another complaint came from a woman whose husband had been overwatering their lawn. Beekman said, "We had their exact consumption, daily and hourly." Marquez added, "And this was during a drought; when you walked on top of her yard it was squishy." That was not her

only complaint. “She also thought the antennas on [the E-CODER)R900*i* units] were measuring the rotation of car wheels as they drove down her street, somehow spinning her meter faster and making her bills higher,” laughed Marquez.

Trimble relayed how his own father, who lives on the outskirts of town, questioned why his water meter was running at all hours. It turned out that the City was able to identify a continuous leak, with water seeping from one of his livestock tanks.

PAYBACK IS A BEAUTIFUL THING

“We’re giving our customers the opportunity to see leaks they have that need to be fixed,” Pitcock said. “We have a lot of really old homes dating back to the 1920s and 1930s – Charlie’s dad’s house is one of the newer ones, having been built in the 1970s – and a lot of people haven’t known about or upgraded problems in their own homes.”

A few customers aside, the majority of residents stopped watering their lawns and curbed their usage during the recent drought, Pitcock added. Marquez agreed, saying that in the past year, “Water usage went down from the wells – but revenue went up.”

In fact, revenue for the year after the conversion was way up. “We were 50 percent above budget, even for the winter months, during a drought-driven year,” said Pitcock. “If I knew then what I know now, we could’ve easily paid for the system a long time ago. Small cities need to know that the revenue increase they see in a year with Neptune could pay for their system.”

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