



SUCCESS STORY

CITY OF SMYRNA, GA BOOSTS REVENUE BY \$2.6M OVER 9 YEARS USING MASTER METER'S MULTI-JET TECHNOLOGY

BACKGROUND

The City of Smyrna, Georgia sits in the northwest corner of the Metro Atlanta area. Incorporated in 1872, the city operates under a Mayor-Council form of government. An appointed City Administrator handles the city's day-to-day operations.

With a population of 54,000, the city, a past winner of the Urban Land Institute's Award of Excellence, promotes smart growth and sustainability.

Smyrna's Utility Services Department manages all utility billing activities for 14,500 metered customers.

CHALLENGE

Water suppliers face increasing pressure to keep costs low while providing excellent service. Meeting budget constraints is an ongoing challenge. And water loss has a significant impact on both expenses and revenue.

"Real" water losses, such as water leaks, add costs for unnecessary treatment and pumping. In addition, water resources are stretched thin and cannot afford to be wasted.

"Apparent" losses, like incorrect utility bills, affect revenue. When the city's "cash registers" fail to charge for the water used, less money is available for needed infrastructure improvements, operation and maintenance.

In 2004, the city's then 13,000 meters were read manually. The aging meters were inaccurate, resulting in apparent water loss.



As a forward-thinking city, Smyrna's goal was to reduce lost revenue caused by inaccurate meters and minimize real water losses. At the same time, city management hoped to improve overall efficiency and customer service within the Utility Services Department.

Smyrna's managers initiated a thorough investigation of metering technology to find the best solution to these problems. Funding methods were part of the decision as well.

Johnson Controls, Inc. approached the city, and tested a representative sampling of meters to determine their accuracy. JCI determined the city could significantly increase billing revenues by replacing the meters. In addition, automated meter reading (AMR) with drive-by technology would increase operational efficiency.

One of the city's concerns was to ensure fairness to existing employees. With AMR technology, staff could be reduced, but the city wanted to avoid laying off technicians. The city offered to transfer employees whose jobs would be lost, and reduce staff through attrition.



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After evaluating options, Smyrna entered a performance contract with JCI. Performance contracting allows cities to complete improvements over a short time period, while financing the projects with future guaranteed cost savings.

As part of the contract, JCI introduced Smyrna to Master Meter to provide the new metering infrastructure.

SOLUTION

The 2004 performance contract financed the purchase of Master Meter's Bottom Load Multi-Jet Meters with 3G AMR Drive-By radios to replace the existing water meters. The JCI contract guaranteed the city a total of \$3.5 million from increased billable water usage over a 13-year period.

Overall, the project went smoothly. JCI provided a contractor to complete the year-long meter replacement project. Meter Technician Foreman, Dan Martin noted the city provided quality control in the field during the transition. His team would verify the last manual readings were entered correctly on each home's account to ensure accuracy. Dan rode along with the contractor to closely monitor activities.



In 2014 (Year 10 of 13, of the performance contract), Smyrna wished to upgrade their existing Master Meter 3G registers to take advantage of new features, like data logging and upgraded software. Greg Van Antwerp, Utility Services Manager, stated, "Because of the excellent weighted accuracy we were seeing from the JCI testing and past performance of our multi-jets... we were confident that the meters would hold their accuracy. We were able to amend the JCI contract to have the registers changed as opposed to having the meters tested" over the two-year project to change them out.

RESULTS

REDUCED WATER LOSS AND INCREASED REVENUE

The combination of new, more accurate meters and electronic reads that eliminate human error resulted in increased revenue. And the new 3G registers added functionality including alerts for possible theft or tampering. As of 2013 (year nine of the 13-year contract), JCI and Smyrna reported a \$2,606,035 increase in billable water usage — more than the amount guaranteed based on an annual average. The guaranteed revenue increase based on annual average would have been \$269,231/year — but Smyrna's actual increase was \$289,559/year.

The Master Meter software also helps to identify system and customer leaks, to reduce actual water losses.

The Utility Services Department staff are very happy with the water loss numbers of 10 to 11% (unadjusted for actual losses like leaks, breaks, hydrant testing or fire-fighting).

REDUCED OPERATIONAL COSTS

By moving to Master Meter's 3G drive by AMR technology, Smyrna was able to reduce the number of meter readers and vehicles by 50 percent. Smyrna currently employs one Meter Technician Foreman and two Meter Technicians — reduced from six people in 2004. Eliminating three trucks also saved the costs of vehicle purchase, insurance, maintenance and fuel.

In addition, the meters are easy to maintain, ultra-reliable and accurate, reducing meter maintenance costs. Master Meter's software includes meter malfunction notification for quick resolution of any problems.

IMPROVED CUSTOMER SERVICE

With the upgraded 3G registers, Smyrna can now provide customers with usage logs and personal consumption profiles to address questions or complaints. Dan Martin explained, "When you have a customer that uses 3,000 gallons per month and all of a sudden they use 10,000 gallons and they want to know why — with the new registers we can show them in a bar graph."

Also, meter information is available to Smyrna's Utility Services staff, so they can respond to issues quickly.



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SAVINGS FROM METER LONGEVITY

Dan Martin noted the city is very pleased with the meter accuracy of the Multi-Jet meters. "For us to be this many years into the contract and we're still obtaining [AWWA] New Meter Accuracy — that's saying something."

Greg Van Antwerp stated that in 2013, meter testing results showed a weighted average of 99.5% accuracy. Preliminary results for 2016 are still at 99.4%. "We're very, very pleased — these are the original meters installed in 2004. That was the main factor in switching to the new registers, and the fact that we could leave the meter bodies in the ground because they were measuring so accurately. It's pretty incredible."

Because of their longevity and endurance, Smyrna's Utility Services Department will save costs on meter replacement. In addition, they will enjoy the reduction in water loss afforded by these meters, which have the longest accuracy warranty in the United States.

SERVICE AND RELIABILITY

Smyrna has a trusted partner in Master Meter, whose products have proven endurance. Dan Martin says, "You can't go wrong with a Multi-Jet Master Meter."

Per Greg Van Antwerp, "We have a great relationship with Master Meter and their distributor for our area, Consolidated Pipe and Supply. I'm very impressed with both companies' customer service. They've not sold us a product and forgotten us. They're always available if we have any questions. We're just very impressed with the accuracy results we're still receiving — and very pleased with the system overall."

CONTACT INFORMATION

To learn more about how Master Meter can help your utility, visit us at www.MasterMeter.com or call us at 1-800-765-6518.

CUSTOMER DETAILS

City of Smyrna, Georgia www.smyrnacity.com

CHALLENGE

Aging, inaccurate, manually read meters causing loss of revenue and overall inefficiency.

SOLUTIONS

Master Meter 3G AMR Drive-By Technology

RESULTS

- Improved, accurate metering technology increased billable usage, with revenue increase of \$2.6 million over 9 years
- Software provides automatic alerts for leaks, tampering or theft to reduce actual water loss
- Drive-by AMR reduced operational costs for personnel and vehicles by 50%
- Master Meter 3G technology allowed staff to resolve customer issues quickly and provide them with printed bar graphs of usage
- Meters maintain AWWA New Meter accuracy results after 11 years, reducing costs for meter replacement and repair
- Dependable service from Master Meter and distributors provide peace of mind.