Wingo Water & Sewer Upgrades to ORION® Fixed Network (SE) System from Badger Meter

Located in rural Kentucky, the small town of Wingo may seem like an unlikely candidate to become the first city in the state to employ a complete Advanced Metering Infrastructure (AMI) system. However, when it came time to upgrade its meter reading system, the city wanted a comprehensive water utility solution and chose the ORION Fixed Network (SE) system from Badger Meter.

Nestled in the southwestern corner of the state, Wingo Water & Sewer is comprised of three people–its long-standing Mayor and water utility operator/superintendent, Charles Shelby, the police chief and one licensed water operator. Up until the summer of 2013, the city had been using the Recordall® Disc Series meters with a manual read operation for many years. This system required Mayor Shelby along with the city clerk, Cassa Gossum, to manually collect reads from the city's 325 services each month. Over time, this method proved to be increasingly difficult and time consuming given the town's limited resources, rural location and weather extremes.

Trusted and proven AMR/AMI technology for utility optimization

After receiving a grant, Mayor Shelby turned to Steve Townsend, his longtime Badger Meter distributor at HD Supply Waterworks in Kentucky, to explore how an AMI system could improve his city's operations.

"From constructing a new water treatment plant and clear water tower, to putting in a UV system for disinfection, we've made several improvements to our water system in recent years. Installing the AMI system was the natural next step–I knew radio reads would make our operations much more efficient," says Shelby.

Initially, the city considered implementing either a drive by or fixed network system. Because of Wingo's small size, flat landscape and perfectly situated water tower at the highest geographic elevation, one ORION network gateway transceiver could cover most of the city, making Wingo the perfect candidate for fixed network. Seizing the opportunity, Mayor Shelby selected the high-powered ORION Fixed Network (SE) system from Badger Meter to reduce data collection time, improve accuracy and enhance customer service.

Using only one ORION network gateway transceiver, Wingo Water & Sewer collects reads from over 300 services.

Water Utility Operator/Superintendent, Mayor Shelby, with an ORION Fixed Network Endpoint.

Preparing for installation

Although the city's current positive displacement nutating disc meters (Model 25 and LP residential meters) would easily transition to fixed network, their meter boxes dating back to the 1930's would not. To accommodate the radio frequencies and facilitate the signal strengths necessary in a two-way, fixed network, HD Supply Waterworks upgraded all meter boxes to a composite material. This critical step ensured the most accurate and effective gateway reads upon installation.

Simultaneous fixed network and mobile reading capabilities streamline operations, deliver data to fingertips

Shortly after installation, Wingo Water & Sewer secured a firmware upgrade to its ORION Fixed Network (SE) system, allowing for simultaneous fixed network and mobile reading capabilities.

Explains Shelby, "The flexibility of the ORION Fixed Network (SE) system allows us to capture readings in mobile mode at any time, including those that are extremely difficult to read."

The firmware upgrade also improved two-way data capture time to every hour. Using the trusted Badger Meter ReadCenter® Analytics software suite, the city can collect, organize and analyze data through an easy-to-use, fully customizable dashboard screen. Billing information, custom reporting, system management, and more are now accessible with a few clicks of a button.

"It's unbelievable what we are able to do–the software delivers precise data right to our desktops. We're able to access customer information right at our fingertips," says Shelby.

Data supports customer service and conservation goals

The system not only improves customer service, but also makes conservation efforts visible.

"Previously, when customers came in to pay their monthly bill, the standard response to higher than expected amounts would be, 'We didn't use that water, there's no way.' Now, we can pull up the customer's information and show them precisely how their water was used. It's amazing–when they see it, they believe it. This system is making everyone more conscious about their water use, whether it's turning off a garden hose or

spending a little less time in the shower," says Shelby.

Fast and accurate leak detection saves time and money

Wingo installed its new AMI system in the winter of 2014, and immediately it was put to the test.

"During the first really cold spell in January, a lot of people didn't cover their vents and, as a result, their pipes froze. Using the new software, we were able to pinpoint exactly which locations had leaks, as well as view how many gallons of water were being lost per minute." Continues Shelby, "In just a week, we were able to turn off the meters and fix the leaks, quickly making sure everything was running and back to normal. Before this system, we had no way of detecting leaks, much less reading meters, through snow and ice cover."

Year-round, the city foresees its proactive leak detection capabilities as an invaluable advantage, saving both Wingo and its citizens time and money.

Blazing the trail to improved utility operations

Wingo Water & Sewer looks forward to continually improving its operations, enhancing its customer service, and allocating the time it used to spend meter reading on its water conservation efforts, an increased focus.

"When we installed the AMI system, I didn't realize we were blazing a trail. I just wanted to streamline our operations and serve our customers to the best of our ability," says Shelby. "With Badger Meter and HD Supply Waterworks, that's exactly what we did–and more."

Wingo Solution

- ORION® Fixed Network (SE)
- Existing Badger Meter Recordall Disc Series meters (Model 25 and LP residential meters), ORION Fixed Network (SE) endpoints and ORION Network Gateway Transceiver
- Other system components include ReadCenter Analytics software

Results

- **Faster Data Collection Time**
  - Two-way fixed network system delivers precise meter reading data every hour.
- **Improved accuracy**
  - Trusted and proven AMR/AMI technology provides proactive intelligence for optimal utility management, including faster and more accurate leak detection.
- **Enhanced Customer Service**
  - Easy-to-use information is delivered right to the utility, improving customer service and helping settle billing disputes.

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