

CASE STUDY

Badger[®] ORION[®]

Radio Frequency System



Badger Meter's ORION[®] Radio Frequency System

Badger[®] ORION[®] System Saves Bartow County, Georgia Time and Money, While Reducing Injuries

By: Kevin Orfield

Located 45 miles northwest of Atlanta, Georgia, Bartow is one of the largest counties in the state, encompassing 470 square miles. The county's population of 85,000 is rapidly growing at a rate of 4 percent per year.

Located within the Coosa River Basin, Bartow is characterized by steep ridges and broad valleys. The mineral-rich area is blessed with warm summers and moderate winters, with little or no snow. "It's a nice place to live," said Gene Camp, superintendent, Bartow County Water and Sewer Department (Bartow CWSD).

During the twentieth century, Bartow CWSD has transitioned from an agrarian to industrial economy. Likewise its water system has transitioned from rural to urban.

The Badger ORION system is clear choice over other AMR systems

Bartow CWSD's aging water system was extremely outdated, comprising approximately 20,000 meters of a variety of makes, models, and ages, some dating back to 1969. Fifteen to 20 year old meters were operating at approximately 60 to 80 percent accuracy, while meters older than 30 years old were approximately 50 to 60 percent accurate.

Meters are spread out along roughly 1,000 miles of water lines, and many are located in rural areas and are difficult to access. Commercial meters often require readers to open iron lids and climb into concrete vaults, presenting safety issues.

About five years ago, Bartow CWSD began the process of standardizing manual read meters by conducting a pilot study of different manufacturers' systems. Two hundred meters of each manufacturer were installed in different subdivisions; Bartow CWSD tracked problems and service calls and selected Badger Meter. Over the next few years, approximately 6,000 Badger Meter manual read meters were installed.

Two years ago, Bartow CWSD decided to transition from a bimonthly to monthly billing cycle. Doing so would require either doubling meter reading staff or converting to an automatic meter reading (AMR) system. "Going with a new technology made all the sense in the world," explained Camp.

After evaluating several different systems, Bartow selected the Badger ORION system because its read system performed better, it offered more interface options, and its units offered longer, better battery life. "I've dealt with a number of manufacturers," said Camp. "Badger Meter is by far the most responsive to our

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BARTOW CASE



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needs and addresses our issues more efficiently than anyone. Their sales and technical staff are fantastic to work with.”

Proof is in the numbers

Installation began in January 2006 and was completed in August 2006 by a contractor. Approximately 14,000 meters were replaced with Badger Meter ORION-equipped meters, while 6,000 Badger Meter manual read meters were retrofitted, a simple process of changing out a manual read head with a radio read head. Interfacing with the billing system went smoothly.

During installation, the contractor took a read from each old meter, which was stored in the billing system. Badger Meter tested and certified all new meters, and sent Bartow CWSD the data.

“Most of our customers are aware of the transition and have bought into it,” explained Camp. “But if a customer who had been getting small bills for years calls and complains about their new bill being larger, we can pull up the meter data for them and that pretty much takes care of it.”

Using the Badger ORION system, Bartow CWSD is able to read much faster and more accurately than ever. Before the Badger ORION system, a crew of two men read 300 meters per day. Using Badger ORION, a crew can now read 2,000 meters per day, with time left over to perform service calls and address customer complaints.

Readers simply drive by each meter, and the Badger ORION system

does the rest. Using the optional GPS mapping feature, the location of each meter is displayed on the laptop. Color coding flags any missed reads. The GPS feature also allows Bartow CWSD to customize



Gene Camp, superintendent, Bartow County Water and Sewer Department (Bartow CWSD) stopped in Milwaukee, Wisconsin on his Harley to visit Badger Meter on his ride to Toronto as he participated in the Ride With Purpose charity ride to benefit the “Water for People” organization.

read and service call routes to create the most efficient routing.

The Badger ORION system has improved safety, too. With Badger ORION system, almost all meters can now be read without the reader having to climb around residential properties or enter pits and raise box lids on commercial sites. Bartow has seen a dramatic decrease in workman’s comp claims for poison oak, spider bites, and back injuries.

Badger® CONNECT software is very easy to use. “It’s a simple program to run with clear steps to follow,” said Camp. “The optional leak detection feature flags unusual readings, so we can inform customers of possible leaks before billing. It’s a really proactive approach that heads off customer complaints and rereads later. We

have a reader who did nothing but rereads, but now he has time to take on a lot of other duties.”

“CONNECT also monitors usage and alerts us to possible tampering with disconnected accounts, which is a problem in some parts of the county. In the past, this could go on for months and not be detected.”

Bartow CWSD appreciates Badger Meter’s exceptional customer service. “Our folks love Badger Meter customer service,” explained Camp. “They can be reached anytime and are always extremely helpful – more like a training center. They not only provide a solution quickly, but teach you to understand it so you can prevent similar problems in the future.”

With the Badger ORION system in place, Bartow CWSD will begin to transition from a bimonthly to a monthly billing process. This will help them to improve revenue flow and water loss accountability. Bartow CWSD estimates revenue will increase 6.5 percent using Badger ORION. With the additional revenue and cost savings, it expects a return on its investment of \$4 million within six years.

Bartow CWSD would recommend the Badger ORION system to other utilities. “It’s a great system that saves time and money as well as wear and tear on vehicles and personnel,” said Johnny Moore, Customer Service Supervisor. “If any utility is interested in ORION, the proof is in the numbers: more meters read correctly than any crew could possibly complete manually.” ■