

CASE STUDY

Badger[®] ORION[®]

Radio Frequency System



Badger Meter's ORION[®] Radio Frequency System

Badger[®] ORION[®] System Improves Accountability, Accuracy, and Efficiency for Galveston, Texas

By: Kevin Orfield

Like it says in the old Glen Campbell song, you can hear the sea winds blowing and the sea waves crashing in the City of Galveston. Located on the Gulf of Mexico 40 minutes south of Houston, the 32-mile long island is a major tourist destination and the largest cruise ship port on the Gulf Coast. With a permanent population of 57,000 and a growing population of people who are making it their second home, Galveston is the largest island community established on a barrier island.

Just a few short years ago, sea waves weren't the only thing crashing in Galveston. The City's water meters and related infrastructure were dilapidated and unreliable. Faulty readings and inaccurate counts had become commonplace.

By switching from an aging touch-read metering system to a mobile automatic meter reading (AMR) solution, the City believed it could recover a significant amount of revenue by identifying and recapturing unaccounted for water. After carefully evaluating meters, transmitters, and software from many manufacturers, Galveston selected Badger Meter's ORION system.

Since installation, the Badger ORION system has helped the city dramatically increase water accountability, accuracy, efficiency, and revenue, while minimizing stranded assets. The city estimates it will recover more than \$1.4 million annually in billing that was lost to the old metering process.

Badger ORION system reduces staff, recovers lost billing

Before the Badger ORION system, a wide variety of meters were in the ground, some almost 40 years old. Many meters were either not registering or under-registering up to 75 percent. An inordinate number of meter rereads were needed to verify customer claims, which was labor intensive and inefficient.

Installation of the Badger ORION system began in November 2004. Over 23,000 meters were installed over a 14 month period by a private contractor. After installation, the city was able to reduce its meter reading staff from thirteen down to three.

When the system went live, the benefits of the new system became immediately apparent. The system revealed that many of the old meters had been inconsistent, inaccurate, or not reading at all. It also revealed that significant revenue from

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GALVESTON CASE



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a handful of large, private, and governmental customers had previously gone undetected.

Read times reduced from several days to under an hour

Using the Badger ORION system, reads are picked up much faster.

Meter readers simply drive the route with their laptops, and the Badger ORION AMR system does the rest, automatically reading meters.

The optional GPS feature displays the exact location of each meter on a map. A color code displays whether a meter has been read, skipped, or has a possible leak.

Readers can now complete routes with over 600 meters in 45 minutes, instead of two or three days. Readers now have more time to spend on maintaining meters and customer service issues, such as turning water service on and off for seasonal residents.

The new “drive by” system is much easier on readers. “Our readers no longer have to walk three or four miles in the heat, cold, and rain,” said Michael Tolbert, Utility Foreman. “Imagine bending over 690 times to manually read meters carrying a two-pound handheld. Our readers got very tired.”

Accuracy has significantly improved. “The old hand-held meter reading system was highly inaccurate,” said Diane Millican, Customer Service Superintendent. “We often had to

send out readers to reread a meter after finding an error, doubling the work of readers and billing staff. the Badger ORION system ensures reads are picked up more quickly and accurately, with far fewer errors, estimated reads, and re-reads.”

Billing department gets CONNECTed to software

Billing staff have become much more efficient using the user-friendly Badger CONNECT software. Menu options are clearly displayed and easy to follow. Read data is easily transferred and historical reading data can be stored and archived. The custom report builder makes it easy to create and generate reports, including high/low read limits, number of reads sent to billing, unread meters, meters with/without tamper codes, meters with/without GPS coordinates, and more.

Using the optional leak detection feature, the Billing Department can monitor excess water consumption for individual meters. When usage increases dramatically during a particular month, the department alerts the customer to potential leaks.

“If a customer challenges the meter’s consumption accuracy, the meter profile proves that there was a leak or other issue that caused the consumption,” explained Eric Wilson, Assistant Director of Municipal Utilities. “As consumers become more aware of this technology, challenges will dramatically decrease.”

Badger CONNECT also provides the Customer Service Department with an accurate picture of a customer’s water usage. The software can indicate water usage in as low as 15 minute intervals, so staff can quickly determine the validity of billing discrepancies and easily resolve billing disputes.

The City is currently implementing Badger ORION’s data profiling feature, which allows them to graphically display water usage data. “This is a very valuable tool,” said Wilson. “It helps us evaluate where and why there is a spike in usage.”

Wilson has recommended the Badger ORION system to a number of other municipalities. “I highly recommend ORION to any entity that has low water accountability and spends excessive time in the data acquisition process,” he said.

“Anyone that is currently using a manual reading system should consider ORION,” added Millican. “It’s an excellent solution for more accuracy, faster meter reads, and easier operation.” ■