

## CASE STUDY

# Badger<sup>®</sup> ORION<sup>®</sup>

## Radio Frequency System



*Mike Shipman, Hung Nguyen, and Juan Angel from the Loudoun County Sanitation Authority*

## Loudoun County, VA Has the Vision to Choose Badger Meter AMR Technology for a Second Time

*By: Dave Marsh*

Fifteen years ago the Loudoun County Sanitation Authority launched its vision of adopting new technology to reduce the cost of providing higher levels of service to its water customers. Loudoun County, Virginia is a bedroom community of Washington DC, and when it installed the Badger Meter TRACE<sup>®</sup> Automatic Meter Reading (AMR) System it was among the first water utilities to adopt radio read meters that could be read from a vehicle driving by on the street. Back then the county anticipated its future growth and decided the time was right to make the investment.

“In the early 90’s we had 22,000 connections and we were looking into AMR because we were small enough that it wouldn’t be that big of an expense,” said Kirk Marsh, Manager of Field Services. “At that time we had 18,000 to 20,000 meters to replace and new installs would be paid for by the developer and builder.”

The TRACE System helped Loudoun County accommodate its explosive growth. “A decade later we were doing about 3,200 units a year as one of the fastest growing counties in the United States,” said Marsh. “Today we have about 57,000 connections.”

AMR technology has continued to advance and recently Loudoun County decided it was time to implement another phase in its technological vision by upgrading its AMR System. Loudoun County management did its due diligence and opened up bids to all manufacturers of AMR systems. However, in the end it again turned to Badger Meter to install its new ORION<sup>®</sup> AMR System.

Over the years Loudoun County learned that Badger Meter implements its own vision of technology. Badger Meter strives to protect customer meter investments as it develops and implements technological innovations. “One of the reasons we chose Badger was we didn’t have to change our meter bodies. One of the things we feel confident about is that Badger keeps up with technology and

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LOUDOUN CASE



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their meters can be adapted to the new technology without changing out anything in the ground,” said Marsh. “Unlike many other utilities we use short meter bodies on our large 1½ and 2 inch meters and Badger accommodated us. No other manufacturer would.”

As the population of Loudoun County has grown, water conservation has become an increasingly important priority. Two features of the Badger® ORION® System that Marsh uses to help his customers use less water are data profiling and meter monitoring.

“We’re using ORION’s data profiling to help both residential and commercial customers reduce consumption,” said Marsh. “For example, a high consumption homeowner may not know that their irrigation system is running as much as it is. We visit our customers in the field with a laptop computer and show them a graph created from actual data accumulated anywhere from 1 day to 2.7 years. Although we can’t tell them the cause of consumption spikes we can show them spikes and

long continuous water flow, which usually allows them to determine the cause, such as when their irrigation kicks on and how long it runs. We probably use this feature with homeowners a couple of times a week.”



*Hung Nguyen from the Loudoun County Sanitation Authority using the Badger® ORION® mobile AMR system.*

Loudoun County also offers its customers meter monitoring, a Badger ORION AMR system feature, to learn more about their water usage. Badger ORION Water Meter Monitors are small enough to fit in the palm of customer hands and can be attached to their refrigerator with a built-in magnet. At any time, the meter can be read from inside the house by pushing a

single button. Water usage can be determined by setting the monitor at zero, taking a second reading, and then comparing the two.

Loudoun County continues to look for new and innovative ways to

reduce costs and better serve its customers. For example Marsh intends to use ORION’s data profiling to reduce the time and costs of changing out customers. “We’re planning to use data profiling for a turn-on, turn-off read,” said Marsh. “Around here homes are rarely vacant for more than two weeks. We believe we can take a reading and bill a customer moving out on the 1st of the month and then use a reading on the 15th to start the customer that has moved in. Since

we bill on increments of a thousand gallons any water used during the vacant period won’t affect their bill.”

Loudoun County’s vision of using technology continues to evolve. But its reliance on Badger Meter to supply the technology hasn’t changed for many years. ■