

CASE STUDY

Badger[®] ORION[®]

Radio Frequency System



Badger Meter's ORION[®] Radio Frequency System

Havre de Grace, Maryland Adopts Badger[®] ORION[®] as Part of Its Strategic Plan

By: Dave Marsh

Like many cities, Havre de Grace, Maryland has taken steps to manage drinking water as the valuable resource it is. When Larry Owen took charge of the water meter department he realized he faced a long and challenging job. Owen and water department management recognized that over the years the city had not taken a strategic approach to its water meter system and its meters had to be upgraded to help Havre de Grace operate the water utility as a business.

“We did an audit and discovered we didn’t even know where many of our meters were located. The only way to identify some of them was to travel out to the customer location and look into the pit,” said Owen. “Because these meters weren’t even in our computer system and there were no proper records of them, we had no way of charging some of our users. We had cases where some customers had been using free water for an extended period of time. The current system we had in place just wasn’t working. We had a mishmash of meters throughout the city... steel meters, plastic ones, meters we had to read manually and some we read with a handheld PI system.”

City Management endorsed a more business-like approach and adopted a plan to upgrade and standardize on the Badger Meter ORION Automatic Meter Reading (AMR) System.

Three city employees work on the water meter system. Owen and an assistant install, change out, and maintain meters. Another city employee serves as a full-time meter reader. The department is in the proverbial role of fighting off alligators at the same time it is working to drain the swamp. However, Owen is confident that the features of the new Badger ORION system will improve department productivity and help it gain the upper hand. One of the biggest benefits of the new Badger ORION system is how much faster meters can be read. With the old system, the meter reader can read only about 150 of the old meters in a day. But with Badger ORION AMR technology he can read the meters with a laptop computer as he drives down the street. His productivity

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will increase exponentially by reading with the Badger ORION system.

About 400 of the 4,000 meters have been upgraded to the Badger ORION AMR system. “Once we get all of these meters installed we will reduce our work load by about 80%,” said Owen. “Then we can implement the kind of routine meter maintenance program that this system has never had. There is little reason to believe that we can’t save \$25,000 to \$30,000 a year just by doing routine maintenance.”

Owen’s audit showed that meter maintenance was a critical issue. “We’re trying to bring everything up to the 21st Century. We’ve had meters in some industrial and school settings that have been there for 50 years and they have never been maintained. Some of those meters

haven’t worked for 15 years. Once we get everything changed over we can implement a maintenance schedule relative to how much water is being used, etc. and check the meters periodically just by doing a drive-by reading.”

One aspect of the Badger ORION system that has already paid big dividends is the leak notification feature. “We had one lady whose ORION equipped meter kept indicating she had a leak,” said Owen. “But nobody could find anything. She paid a water bill of \$700 and told us there was no leak; she just used a lot of water. But I’ve worked with Badger meters long enough to know that when a Badger ORION equipped meter tells us there is a leak, there has to be a leak someplace. She finally had a plumber come out and dig up her lawn and he found a hole in

a copper pipe that you could stick your pinky in. It was underground so there was no way of knowing it was there without the Badger ORION. It gives us a lot of satisfaction to tell a homeowner that their bill is \$200 instead of \$2,000, which is what it could get to without the Badger ORION system catching a leak early.”

Owen and his team have a lot of work ahead of them and they have many more meters to change out. But Owen is confident that the water department is on the right path, because like many other cities, Havre de Grace has taken the initial steps to manage its scarce water resource by adopting better business practices and state-of-the-art Badger ORION AMR technology. ■