



Badger Meter

Bethpage Water District upgrades to AMA system to gain better system visibility, improve customer service and boost efficiency

High quality products, strong track record and proactive utility management approach are key reasons for selecting Badger Meter

When Bethpage Water District (BWD) began its quest to improve its water metering system three years ago, its primary motivations for upgrading from its touch-read system (circa 1988) to Badger Meter Advanced Metering Analytics (AMA) were to improve efficiency and customer service with more advanced technology and gain more visibility into its operations via Badger Meter ReadCenter® Analytics software. BWD selected Badger Meter because of its proactive utility management approach to AMI through AMA, high quality products and strong track record.

“The driving force behind our upgrade was to better serve our customers,” says Michael Boufis, superintendent, BWD. “We wanted to be able to detect potential leaks quicker, so we can alert customers faster. We also wanted to be able to respond to customer billing questions with more detailed consumption information to avoid disputes.” Boufis adds that the new system is providing proactive management tools and economic benefits through more accurate meter data and meter reading efficiency.

BWD serves an area of five square miles on Long Island including Bethpage, Old Bethpage, Plainview, Farmingdale, and Levittown. Unlike New York City, Bethpage does not use reservoirs, and water comes from eight wells, six plant sites/pumping stations and three large storage tanks.

District accelerates system deployment to reap benefits more quickly

BWD is replacing all of its 9,300 endpoints with Badger Meter products and installing an ORION® Advanced Metering Analytics system. It is using 5/8 inch Recordall® Disc Series Meters and 1 inch, 1 ½ inch and 2 inch E-Series® Ultrasonic Stainless Steel Meters with Badger Meter High Resolution Encoders as well as Badger Meter Compound, Turbine and Fire Service Meters. Other components of the system include gateways, ReadCenter® Analytics Pro and the Trimble Ranger handheld with ORION transceivers to confirm endpoint installations. “Initially, we had planned to stretch the process over five to seven years, but we’ve decided to accelerate it, because we’re seeing such great results,” says Boufis. “Before installing the new system, it took two meter readers ten working days to read

(continued)



(left to right) Andrew Manley, David Kelly and Andrew Panetta handle meter installation at BWD.



Michael Boufis (center), superintendent, provides training and troubleshooting tips to BWD team members.



The AMA upgrade at BWD includes replacing all of its 9,300 endpoints with highly accurate and efficient Badger Meter products.

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the district's meters. With just 1,500 new meters installed, the reading time is already shorter and the staff can start to focus on other projects." Boufis says the district plans to install about 1,000 more endpoints by the end of 2013, 3,000 more by the end of 2014, and completion is slated for the end of 2015.

Boufis adds that he appreciates the system's flexibility. Even after the fixed network is fully deployed, it can revert to mobile reading, if desired. For example, if there is a problem that knocks out the Internet for an extended period (Internet service was down for a week after Hurricane Sandy), BWD could drive the entire meter route in about a day.

ReadCenter Analytics Pro enables faster leak detection

A major benefit of the new system is that it helps BWD detect leaks more quickly and easily. "We can set up an alarm condition to trigger if there is continuous use for three days," explains Boufis. "If that condition occurs, the system sends an email alert and service personnel can investigate whether or not there is a leak."

The district also is using this technology to alert it to potential water issues when residents are out of town for extended periods. "We have a lot of residents who go to Florida during the winter," says Boufis. "Generally, they let us know they are going to be out of town for a few months and there shouldn't be any water use. We've had problems in the past where someone's heat went out and their pipes burst. Now, we can set an alarm condition to trigger when there is usage and we can investigate."

BWD also plans to use data loggers on water main valves and tie them into the system to detect potential leaks. In addition, Boufis says the system's two-way functionality streamlines final billing, because it fully automates the process, and it can be handled remotely. This makes it more efficient and convenient for customers and the utility, because it is no longer necessary to set an appointment for a final manual reading and disconnection.

The bottom line: Accuracy pays

With new, more accurate meters in place, BWD is already capturing more revenue. For example, at a laundromat where BWD installed a new E-Series Meter, it paid for itself within one billing cycle. "We had a similar situation when we changed out the meter at a car wash," says Boufis, "and we've been targeting other large users that are easy to manage and tackling those first." Hourly data provided by the system can also be used to detect when meters are under-registering and when accounts become inactive.

Overall, Boufis estimates that with the labor efficiencies and added revenue from more accurate metering, the system will pay for itself within five years.

In addition, BWD appreciates the ability to gather and analyze more granular measurement data. "Operationally, it helps me generate better reports," says Boufis. "We'll be taking monthly reads on every account, and then we'll compare them to our totals from our pump stations to determine our lost water. We'll do this monthly and annually. The numbers are going to be much more accurate than they have been in the past."

Bethpage Solution

- 9,300 ORION SE endpoints
- Recordall Disc Series Meters, E-Series® Ultrasonic Stainless Steel Meters with Badger Meter High Resolution Encoders, as well as Badger Meter Compound, Turbine and Fire Service Meters
- ReadCenter® Analytics Pro
- Other components including gateways and the Trimble Ranger handheld with ORION transceivers

Results

- **Better customer service**
 - More detailed usage information reduces billing disputes
 - Faster leak detection
 - Convenient final billing, disconnection and connection
- **Meter reading efficiency**
 - Automated system enables staff to perform other tasks
- **Added revenue generated by more accurate meters**
- **Improved reporting**

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