



City of Bloomington Water Department

Streamlined AMR Reads 70 Percent of 30,000 Reads in a Day, Reallocates Workload

OLD, MIXED METERS MAKE A MESS OF BILLING

When Nick O'Donoghue joined the City of Bloomington, Illinois Water Department, its meter reading system faced a number of issues. First, the meters themselves were a mixed assortment from different manufacturers, and many were more than 30 years old. Needless to say, accuracy was a problem. Additionally, with the lack of a standardized system, the different types of meters, software, and collection devices led to billing errors.

According to O'Donoghue, communication between the office and the staff out in the field was also a challenge. Nearly 30,000 meters had to be read each 30-day billing cycle, with three full-time meter readers walking routes every day, 40 hours a week. "Sometimes we'd have to move employees out of their job classification to get those meters read," he said. "It was very taxing on them."

Water Meter Technician Sada McGee agreed. "It was difficult to keep up," she said. "The city continues to grow and it was getting harder and harder for us to walk from house to house and get those readings."

AMR ANSWERS INHOUSE AND IN THE FIELD

After investigating competitive radio frequency automatic meter reading (AMR) systems, O'Donoghue felt that Neptune[®] offered the most seamless transition to mobile AMR, along with the fastest data collection and the ability to have a complete AMR package from one source. "We knew with Neptune we would be using their products directly to read the meters as opposed to using a third-party system," he said. "We wanted to be able to do everything with what we currently had inhouse."

Following a pilot program using R900[®] radio frequency meter interface units, Bloomington began a transition to the E-CODER[®])R900i™, which combines the solid state E-CODER[®] register with the R900 radio. "Everything was integrated – that made such an easy install for our technicians," O'Donoghue said. Plus, the R900[®] System means not having to program meters in the field. "We weren't having to write readings down any longer, so transposition errors were eliminated."



CUSTOMER

City of Bloomington Water Department, Bloomington, Illinois

SERVICE TERRITORY

Bloomington is a city in McLean County, Illinois. The 2010 census showed the city had a population of 76,610.

SOLUTION BENEFITS

New meters from Neptune = increased revenue

Highly accurate, reliable mobile AMR allows 30-day billing cycle

City reads 70 percent of its 30,000 meters in a day

Former meter readers moved into more valuable positions

Water consumption activity history improved customer service

Unified system with backward compatibility and forward migratability

Thanks to the E-CODER)R900i's consumption activity of 96 days of hourly usage information, "our customer service is so much better," said McGee. "We have so many people that have high water bills and they can't figure out why ... but when you can pull that data and you can show them that graph, you can [say], 'Your water has been running constantly since this date,' or, 'You're having a spike at this time,' or, 'During this three-day period, your water ran non-stop'. Once they see it, they can understand it, and they can try and get the problem fixed."

Bloomington can share customer consumption in the field with Neptune's NGO™ app and the R900® Belt Clip Transceiver. The NGO app, in conjunction with the R900 BCT, enables the service tech to show the customer his or her usage patterns on a standard Android SmartPhone. Also, according to O'Donoghue, with the R900 BCT, "we're able to not only put it on the meter reader themselves but we're able to put it in other city vehicles such as garbage trucks, some of the fire trucks, to pick up meter readings while they were out doing their routes."

R900 MOBILE - ROLLING ON WITH READS AND REVENUE

The City also purchased an MRX920™ mobile data collector. With its 72 receiver channels, Bloomington is able to read 21,000 of its 30,000 meters within a day. "By being able to read those remotely by just driving by, we're able to keep a 30-day billing cycle. Our customers really like that," McGee said. "The MRX920 is pretty amazing. It's so fast. We are able to pick up readings from, ten, twelve blocks away sometimes. You can turn that thing on and, instantly, it's just, 'Ding-ding-ding-ding-ding.' You can hear them picking up. It just makes it so much faster for us."

Mobile AMR using the R900 is making a difference. "We've been able to take our former full-time meter readers and put them into positions that are more valuable to help in other areas of our utility – such as leak detection, being able to replace broken water

mains, replace pumps, and find locations for our valves," said O'Donoghue. "We haven't eliminated jobs, we've just put [personnel] in positions where there may be more responsibility."

By replacing its old meters with new (and lead free) meters as part of its Neptune System, Bloomington has seen an increase in revenue, allowing the water department to invest in other projects for the City.

INTELLIGENCE AT THE METER MEETS A FORWARD-MIGRATABLE SYSTEM

Speaking about Bloomington's two colleges and nearly 50,000 students, O'Donoghue said, "We're always going to have a lot of finals [reads] that need to be done, with a lot of people moving in and out." Whereas currently, technicians must visit the meters to obtain final reads, he anticipates being able to use R900® Gateway fixed network collectors to communicate those reads straight to the office. For now, the Department is happy with the results of its unified, streamlined AMR system from Neptune.

"The Neptune meter has become more than a meter. It's an intelligent device in itself," said O'Donoghue. "Using N_SIGHT® software, we're able to see how long it is going to take to read all the meters in our system. So we can base our support staff and what work they need to do upon that data. We can look at our whole system and be able to change our utility billing practices."

O'Donoghue continued, "Backward compatibility is very important. There are still accounts, for whatever reason, where we cannot get into the property, or get into the home to do an install, so being able to still do the walk-by reading is important right now." Equally important is forward migration down the road. "We'll still be able to use the existing meters that are in place," he said. That's valuable because if we [perform change-outs] in the future, with over 30,000 units, we will not be able to do them all at once. The backward compatibility with the new products going forward – that's invaluable."



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