



# Groton Utilities Water Meters Section

## Reducing Estimated and Checked Reads while Collecting Finals Faster with Targeted Fixed Network

### TAKING ON MORE WITH LESS THROUGH MIGRATABLE AMR

The Groton Utilities Water Meters Section got its first real look at a Neptune® automatic meter reading (AMR) system in 2011, after having spent close to 20 years operating a competitor's manual system. That's the year the small Connecticut city took on the data collection of neighboring Ledyard, adding 1,200 services to Groton's existing 8,500. Ledyard had been using R900® radio frequency technology for mobile reading. Leader of Meter Technicians Russ Musante and his team liked what they saw and began looking at changes for Groton.

"We knew we had to change out our meters, first of all because of the NSF 61 lead standards [which became stricter in 2012]," Musante said. Learning that Neptune had met those standards years before with lead free meters impressed him and was the first of many key benefits he would experience by implementing a Neptune System in Groton.

After discussing options with Neptune distributor Kevin Tighe at Ti-SALES, the team sent representatives to Neptune headquarters in Tallassee, Alabama to learn more and tour the facilities. They also attended the Neptune N\_GAGE Users' Conference to see firsthand how the system worked and to ask questions.

Ultimately they decided to implement a mobile AMR system. According to Meter and Service Technician Jay Riotte, the goal is to leverage the migratability of Neptune R900 technology and move to fixed network in the future, taking advantage of features such as a web portal where customers can monitor their own water consumption. This transition will be one Groton can implement at its own pace, as time and resources permit. "There are just three or four of us, so it's not a mass installation," said Riotte.



### CUSTOMER

Groton Utilities Water Meters Section,  
Groton, Connecticut

### SERVICE TERRITORY

Groton Utilities Water Meters  
Section serves approximately 10,000  
customers in New London County.

### SOLUTION BENEFITS

Mobile AMR easily migrates to fixed  
network AMI

Commercial reading reduced to  
1.5-2 hours

Collect data without hiring new meter  
readers, save costs

Share detailed usage data with  
customers at their homes



## REDUCING WORKLOADS WITH A CHANGE OF (THEIR OWN) PACE

The City began its changeout in April 2013. Musante expects that what was originally planned as a 10-year project will instead be completed in six or seven years. To make installation easier for both the City and its customers, Groton has rolled implementation along with its already-scheduled ten-year testing of meters. Whole meter routes are being changed out at a time, and Musante's team has been able to tell customers that readers won't have to go on their property any more.

Regarding the move to mobile, Riotte said, "The meter reading crews were a little nervous at first about their positions [within the utility], but they love the mobile reads. We have no more weather issues, and we're saving a lot of time." As of August 2016, the City had changed out 2,200 of nearly 7,200 meters. Once the almost 700 pit-located meters are replaced, that will provide an additional safety benefit to readers.

Musante agreed, "Our meter reader in Ledyard did the residential, and we did the commercials at the end of the month. Now she can read all the commercial and residential accounts in Ledyard herself in five hours, freeing us to handle Groton's reads. Before, the commercial reads alone [in Groton] took us five hours. Now that's down to an hour-and-a-half, two at the most." He added that the time saved reading has enabled his crew members to do more, occasionally moving into the billing office for record keeping and other tasks.

The mobile data collection has also lifted another burden for Groton. With personnel preparing to retire in the next few years, the R900 System will enable the City to continue gathering data without the need to hire additional meter readers. "That provides us a cost savings," Musante said.

## CUTTING DOWN ON LEAKS THROUGH CONSUMPTION HISTORY

Since early 2016, Groton Utilities has been installing E-CODER®)R900i™ integrated absolute encoder/RF meter interface units. "Not having to attach boxes and change wiring has really helped us, and is even more cost-effective than having to rewire houses," Riotte said.

In the past six months, the integrated unit has made a major difference in tracking water usage. "We like the data logging," Musante said. "It's an invaluable tool. It makes our lives so much easier, it's unbelievable."

It's also making customers' lives easier, according to Meter and Service Technician Mauricio Duarte. "There was a lady who had a high water bill she didn't understand. She'd recently bought a house; and, when we looked at her hourly usage, we could see where water was coming on from two until four each morning. We then found an irrigation system she was completely unaware of, operating from her basement."

Larger customers appreciate the consumption activity history as well. "We provide it for six regional meters," said Musante. "Every month, those towns have to provide records of water consumption for their permits, and none of them can afford a full SCADA [supervisory control and data acquisition] system. With our system, we were able to see that one of those regionals had a lot of leaks they didn't know about. Finding these leaks helps small towns to take action on lost water."

## FIELD-PROVEN RESULTS AND RELIABILITY

"Everyone is excited about this technology," added Riotte. "When we presented our plans to the mayor and utility commission, they were enthusiastic. And it's been well-received by customers."

Using the Neptune NGO™ app on an ordinary Android tablet, and pairing it with the Neptune R900® Belt Clip

Transceiver, the meter and service technicians can set up appointments with residents to perform data logging of their water meter's data. Then, according to Duarte, they share detailed information of the homeowner's water usage – saving the City time and providing an extra level of customer service in the field.

For Musante, the greatest benefit he sees since Groton switched to R900 technology is the reliability of the

system. The City is proud of what it is accomplishing – so much so, that when the Water Section took part in the “City of Groton Night” downtown, the centerpiece of the booth was Neptune.

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