



# Montgomery Water Works & Sanitary Sewer Board

## Building on a Pioneering Success — Utility Plans go Further with the R900® System

### FINE-TUNING READING AND BILLING EFFICIENCIES THROUGH R900 RADIO

Marconi. Tesla. Sarnoff. Add one more name to the list of these pioneers of radio technology: Morgan. In 1999, Buddy Morgan, General Manager of the Montgomery Water Works and Sanitary Sewer Board, oversaw the field testing of the new Neptune® R900® pit radio frequency meter interface unit (RF MIU) for the capital city of Alabama. During this time, Morgan's team also implemented a new customer information system (CIS). After seeing how the two technologies integrated seamlessly, in January 2001 the Board began a complete changeout of 82,029 water meters across the system – each with a ProRead™ absolute encoder and R900 MIU.

The results exceeded the Board's expectations, not only allowing the move from bi-monthly to monthly billing and more timely leak identification but also reducing read times so dramatically that it was able to cut the number of full-time staff needed to read meters from nine to four – who now only read meters part time. Re-reads and work orders were also reduced because of the reading accuracy. And by replacing so many meters that were 10 years or older, unaccounted-for water usage (Non-Revenue Water) dropped by three percent.

### WITH EACH METER READ, EACH DOLLAR COUNTS MORE

Since 2004, when the Board was last profiled by Neptune, it has continued its successful mobile AMR program with R900 RF technology. In 2009, it upgraded its MIU population from the R900 v1 to the even more powerful R900 v3. In order to balance the generation and mailing of bills, collections, and cash flow, Montgomery intentionally reads only a portion of its meter population daily – about 5,000 meters each day. The meter readers actually read meters about three to four hours per day and the rest of the day they



#### CUSTOMER

Montgomery Water Works & Sanitary Sewer Board, Montgomery, Alabama

#### SERVICE TERRITORY

Montgomery is located in Montgomery County in central Alabama. As of the 2010 census, the population was 374,536.

#### SOLUTION BENEFITS

- Bi-monthly to monthly billing
- Unaccounted-for water dropped by three percent
- More timely leak identification
- Read times reduced so dramatically that full-time meter reading staff cut from nine to four
- Re-reads and work orders reduced because of reading accuracy
- Planned migration to fixed network AMI

spend time on other service work. "The ability to stagger the work load allows for the best use of personnel and resources," said Morgan.

Neptune's value as a partner to Montgomery has only increased over the past decade. The highly-efficient R900® System the Board has in place has helped save money. "You have to be conscious of every dollar, every penny, to give your customers the best value for their dollar," said Morgan. "It comes down to fiscal responsibility – running your system as a business. We're very proud of the fact that we don't have to borrow money and that we're one of only two or three water utilities in the country with a triple-A bond rating." Through careful planning of projects, taking advantage of technologies, and keeping the entire team informed and involved, the Board gets the most from its existing assets – including its AMR system – and is able to keep offering water rates among the lowest 10 percent in the nation.

#### TOWARDS AMI – TAKING STEPS TO ELIMINATE DRIVES

Morgan and his team have already started the next phase of their meter reading and billing program. "We're updating our billing systems and software to get them more in-sync with our AMR," he explained. "We want to be more proactive, to get more use from the data we get from the meter. We want the ability to detect leaks, to monitor pressure changes across the system, and to even get time-of-use data. Our ultimate goal is to have total remote reads within the next three to four years."

While the Board is implementing the infrastructure that will allow data integration across all departments, from meter reading to billing to customer service, it's also working with the City to shore up and expand access points to Montgomery's WiFi network so that the Board's meter reading program will benefit from a system-wide backhaul.

#### PLANNING THE FUTURE BY SEIZING THE DATA

Morgan said that with everything in place, the Board will be ready to explore the value that more data will provide. He is particularly interested in installing Neptune's E-CODER® solid state absolute encoder, whose high resolution, 8-digit encoding makes leak, tamper, and reverse flow detection possible at measurements down to a tenth of a gallon. "We want to give people answers," he said, "and to be able to point to the exact times when water went through the meter."

He also pointed to the future use of the Neptune R900® Gateway fixed network data collectors as a game changer for the Water Works and Sanitary Sewer Board. "We're not interested in data for data's sake," he said. "We want to know, 'What value will the data provide?' And with a 30-day breakdown of data [made possible through the Gateway], that means becoming more customer service oriented." Of course, the Gateways will integrate with the City's WiFi network to deliver reads without the need to send out readers. "I'm looking forward to not dispatching a truck," Morgan added.

As the Board readies for its migration within the R900 System, Morgan sees the difference Neptune has already made. "Neptune has done what they said they would do. They've listened to specific problems and provided specific solutions in their systems," he said. "You can't have a one-size-fits-all answer. You have to have a unique vision before you move forward. We're proud to say that Neptune shares our vision."

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- Buddy Morgan, General Manager, Montgomery Water Works & Sanitary Sewer Board*



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