Brunswick-Glynn Joint Water and Sewer Commission

Getting the Most out of an AMI transition

When the Brunswick-Glynn Joint Water and Sewer Commission (BGJWSC) was formed in 2008, they had the unique task of joining together two separate municipalities, comprised of the City of Brunswick and Glynn County. Located between Savannah, Georgia and Jacksonville, Florida. BGJWSC has approximately 32,000 meters within its system across a 439 square mile service area.

Since 2008, BGJWSC had been running a drive-by AMR system to capture meter data. However, over the years, the process slowly became more and more difficult. Frustrated by numerous maintenance disruptions and issues reading the meters, BGJWSC decided it was time to find a new meter provider.

As part of the new partner selection process, Neptune listened to the Commission's needs and crafted a metering system to address and resolve each of their pain points. Neptune was able to offer a mix of T-10® mechanical meters for residential purposes and C&I MACH 10® ultrasonic meters for their larger customers. The meters were coupled with the R900® System endpoints featuring a LoRaWAN network sending all of their data securely into the Neptune® 360™ data management platform. Every component played a role allowing BGJWSC to optimize their capital and operational expenses and make deployment smooth.

TIME TO UPGRADE AN AGING SYSTEM

LaDonnah Roberts, Deputy Executive Director of the utility , shared the challenges their utility faced. With 32,000 meters, nothing is going to work perfectly all the time, and with a four-person field crew, it took all month to handle the billing cycle.

As BGJWSC's AMR system aged and got less reliable, they had occasional issues reading meters during drive-by readings. Normally this isn't the end of the world but with some of meters they had, there was not an alternative back up reading option.

CUSTOMER
Brunswick-Glynn Joint Water and Sewer Commission

SERVICE TERRITORY
32,000 meters across 439 square miles

SOLUTION BENEFITS
Increased meter accuracy and revenue, accelerated billing cycles, and eliminated estimated reads with T-10® mechanical and MACH 10® ultrasonic meters

Meters coupled with R900® System LoRaWAN radios and gateways reliably communicate data and insights to Neptune® 360™ software

R900 AMI drastically reduced drive-by meter readings, freeing up technicians for IT certification

Encouraged water conservation through usage monitoring in Neptune 360

Neptune® My360™ consumer portal empowers customers to monitor water use themselves, minimizing staff work

"Worst case scenario, you lift the lid, and you read it off the meter itself," Roberts explained. "This particular meter didn't have even that option. When the meter died, it was a paper weight. At that point, it was of no use to us whatsoever."

When BGJWSC was unable to read a meter, they charged a flat fee to the customer, leaving money on the table.

SUCCESS WITH NEPTUNE® MECHANICAL METERS AND THE R900® SYSTEM

Previous damaged meter next to new Neptune meter

Roberts says they started their partnership with Neptune with a residential pilot program in September of 2020. BGJWSC installed 250 Neptune T-10 mechanical meters specifically in the area where previous meters had failed to "quickly recover the revenue that was lost from those."

And Roberts confirmed that is what happened – the T-10 meters successfully logged water flow (and revenue), which previous meters from BGJWSC failed to achieve.

After the initial success of the pilot program, BGJWSC opted for a full installation plan with residential and intermediate T-10 meters, and Commercial and Industrial sized MACH 10 ultrasonic meters for their larger customers, such as the Federal Law Enforcement Training Center and an incoming Buc-ee's.

The meters were coupled with R900 System LoRaWAN radios and gateways, reliably communicating data and insights to Neptune 360. They initially encountered some signal issues due to their unique geography, but Neptune and Distribution partner Delta Municipal Supply were able to assess and then resolve the issue by installing a higher gain antenna, restoring the connection.

Roberts said in addition to the improved meter accuracy, the R900 AMI system drastically reduced the need for their technicians to do drive-by meter readings, freeing up their time to focus on other projects. So much so, that the commission encouraged its meter technicians to pursue IT certification, which they received, making them that much more valuable to the utility.

The new AMI system also encouraged water conservation efforts through the usage monitoring available in Neptune 360. BGJWSC was able to quickly alert customers to issues, resulting in smaller volumes of water loss and fewer days of continuous consumption, along with fewer leak adjustments needed. The data insights provided by Neptune 360 helped meet the requirements from the State necessary for project funding and to uphold the Commission's values of good water stewardship.

CONTINUING TO EVOLVE

The success of the Neptune partnership has encouraged BGJWSC to plan for new applications and improvements to their system. BGJWSC is exploring the use of Neptune meters for District Metering Areas and Water Loss Audit analysis, evaluating the use of Neptune R900 System endpoints to remotely monitor sewer flow meters, and in December of 2024 they implemented the Neptune® My360™ consumer portal, which now provides consumption data directly to customers to monitor water use themselves, minimizing some of the work required for their staff.

"Neptune has provided a quality product with dependable functionality that supports BGJWSC in our commitment to our customers and our community," Roberts said. "Their team members are knowledgeable and professional, and they understand the needs of a utility."

NEPTUNE TECHNOLOGY GROUP

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Neptune Technology Group
1600 Alabama Highway 229
Tallassee, AL 36078
800-633-8754 f 334-283-7293