

ARB® UTILITY MANAGEMENT SYSTEMS™



CITY OF GULF SHORES

CLIENT

GULF SHORES, ALABAMA

LOCATION



Neptune Radio System Makes AMR a Day at the Beach

Getting Up to Speed with Neptune's ARB® Mobile™

Alabama has a limited amount of coastline, but what it has is beautiful – soft, sugar-white sands, palm trees gently swaying in the warm Gulf breezes, and emerald waters lapping the beaches. The main artery to this semi-tropical paradise runs through the City of Gulf Shores, located on the Gulf of Mexico off the eastern side of Mobile Bay in Baldwin County, Alabama.

Having served its residents for more than 40 years, the Utilities Board of the City of Gulf Shores provides water to more than 9,500 metered customers – 70 percent of whom are single-family residential and 30 percent of whom are condominium, commercial, and apartments. According to Manager of Finance and Customer Service Rhonda Butler, for the first two decades, the utility read its meters manually without the benefit of electronics, sending readers to walk by the meters and record on paper what they saw. Although the customer base was approximately only 25 percent of today's meters, writing down the information and performing calculations for each account was a laborious, time-consuming process prone to human error.

When the city moved to handhelds to collect its readings, it still had to deal with the problems of visual inspection and manual keying of information. With the assent of the Board of Directors, the utility began working with Neptune Territory Manager Kevin Smith in 2006 to convert to radio frequency automatic meter reading (RF AMR) technology. As of September 2010, approximately half of the roughly 9,500 meters have been changed out to R900® RF technology.

The utility continues to perform installations in-house, the vast majority being E-Coder®R900i™ integrated encoder/meter interface units (MIUs), with some R900 MIUs fitted to E-Coder® Solid State Absolute Encoders, and a very few to ProRead™ encoders. Butler expects completion of the project between 2013 and 2015.

Butler added that the installation has been eased by the fact that, where the utility had Neptune meters in place, all her team had to do was retrofit them with new encoders. "It sped up the process considerably in these areas," she said. That hasn't been the only thing to accelerate, either. In the areas now outfitted with Neptune's ARB® Mobile™ System, one reader using the MRX920™ Mobile Data Collector can collect an entire route's reads in just seven hours, as opposed to the three days taken by four readers using handhelds. "This gives our office staff a chance to get diagnostics and check reads much quicker and with better accuracy," Butler added. "We have more time to review accounts before we submit our monthly billing, and we're more confident that the reads we have are correct."

The Calm in the Middle of Hurricanes

Gulf Shores continues to add more R900 RF infrastructure each month, targeting neighborhoods and residences in storm surge zones first. As hurricanes Ivan and Katrina proved in 2004 and 2005, the area remains vulnerable to these periodic intruders. After Hurricane Ivan, the utilities board had the tedious task of locating every meter subject to storm surge to determine if it was still operable. With nearly 4,000 meters in these areas, outside contractors were required, resulting in tens of thousands of dollars in additional expense. In contrast, Neptune's ARB Mobile System allows the utility to go out after a storm and collect meter readings and confirm operational status of the meters. The utility can then focus on the problem meters. First tested in 2009 with Hurricane Gustav, the AMR system proved a vital asset to Gulf Shores' operations.

AMR helps address a related situation. When a storm strikes, pipes under homes are often damaged, while residents often aren't allowed back for days or weeks. Water that runs continuously can hamper the utility's efforts to meet system demands while substantially impacting customer billing. Now, using Neptune's AMR technology, the Utilities Board can obtain

readings promptly after the storm; review reports to determine those individual addresses affected; find evidence of major continuous leaks; and shut off water to prevent any further loss. And even before a storm hits, ARB Mobile provides added safety to the utility's personnel by allowing a reader in a truck to quickly drive into an area, collect the reads, and then get back out long before the arrival of any approaching storm.

Keeping an Eye on Things for the Neighbors

With customer service a large part of her job, Butler is proud of what her utility has been able to accomplish for residents. "Over the last few months, we've been fully utilizing our radio read reporting. As a good portion of our customers are owners of second homes and vacation homes, they're often down here just once a month or every couple of months. That was the case with a customer from Tuscaloosa, who was gone when we found evidence of continuous usage through AMR reporting. We shut off their meter and called them. They came down that weekend and found a plumbing problem [causing the leak]. They thanked us graciously for notifying them so promptly and preventing severe damage to their home."

Butler said that the E-Coder)R900's datalogging capability is a useful tool in resolving customer inquiries about high water bills. "You can dial down to the hour for actual consumption," she said. "We were able to show one customer that for a period of two weeks, they had a lot of consumption between 10 a.m. and 2 p.m. every day." In another instance, the utility detected excessive usage from a customer whose irrigation system was watering once an hour instead of once a night. The customer was then able to correct the timers. With detailed consumption information in hand, "customers can better manage their own use," added Butler.



Steve Readman

ARB Mobile Inspires Confidence – and Ensures Accuracy

"[With Neptune's AMR,] we now have a lot more confidence in the numbers we get from our meter reading," said Butler. "We know there are no transposed numbers, no digits added or left out. It makes our financials more reliable from a revenue standpoint."

ARB Mobile has also given the Utilities Board flexibility when it comes to collecting meter readings. The MRX920 gives a single reader the ability to capture several days' worth of information in hours, while the CE5320 handheld, which also has a built-in receiver, often proves useful. "We have a few areas in our system that consist mostly of manual-read meters but also have a few AMRs. By



Meter Readers, L-R: Tom Hillman, Chad Underwood, Clay Parker, Randy Weeks, Brian Turley, and Steve Readman.

utilizing the CE5320, our meter reader can pick up those AMR readings while he is reading the manual reads in those areas as well," Butler said.

What's down the road for Gulf Shores Utilities? Butler is looking forward to reallocating the time and human resources spent meter reading to maintenance issues, including doing more diagnostic work and working with Neptune to start a large meter maintenance program. "We've been trying to dig deeper into what our new system can do for us, and I can't say enough about how helpful Neptune has been. Their staff is very knowledgeable and has been extremely easy to work with."

The same goes for ARB Mobile, with which Butler is extremely satisfied. "From a customer service manager's viewpoint, [the main benefit] is the accuracy of it – being able to pinpoint a customer's issues and being better able to shepherd their account."

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