Polk County, Florida’s fourth-largest county, spans 2,010 square miles of swampy lowlands between Tampa and Orlando. Known as the lightning capital of the Western Hemisphere, Polk County experiences numerous hurricanes, thunderstorms and a large portion of the state’s one million cloud-to-ground lightning strikes per year. Together, the flat terrain, climate and large geographical area make water service a challenge. Gravity-driven distribution doesn’t work, and power outages frequently disrupt pump operation. Most of the county’s 600,000 residents get their water from municipal utilities, but the 57,000 people in dispersed, outlying regions depend on Polk County Utilities (PCU) for fresh, clean water and wastewater treatment. With a growing population, an aging infrastructure, a small staff and 1.5 hours of driving time between some lift stations, it has become increasingly difficult to provide continuous service.

A tenuous connection to a broad infrastructure
PCU’s expansive infrastructure includes 307 lift stations, 60 water production facilities and four regional wastewater facilities. The organization’s electrical maintenance supervisor, James Robinson, has spent his time focused on keeping the pumps and other assets up and running. For many years, the Polk County team used 300 alarm autodialers to monitor the equipment, but this approach proved unreliable. The autodialers reported by exception only, so James had to dial in to each one every day just to verify that the unit itself was still operational. If his call didn’t go through — which happened often, due to storm-related interruptions — he had to get the phone company involved, but they were understaffed and couldn’t always respond right away. Without that constant connection to his equipment, James felt like he couldn’t stay in control.

Finding reassurance through RACO
A few years ago, Polk County began searching for a more reliable solution and found it in RACO’s AlarmAgent.com® wireless, web-based monitoring, alarm notification and control system. Over the next four years, PCU replaced half of its landline-based autodialers — 150 units — with AlarmAgent.com remote terminal units (RTUs). The units feature a watchdog system, which calls PCU every day to verify proper operation, instead of James and his team having to do the calling and checking. Plus, through testing, James found that AlarmAgent.com sends an alarm notification within one minute of a triggering event. This speedy response and daily verification of proper operation help James stay on top of any maintenance issues. “When there’s a RACO alarm, I know I’d better send somebody,” James said. “And when something goes wrong, I know I can get it operational by the end of the day. I couldn’t count on that before.”

Complete control of a complex system
PCU uses AlarmAgent.com as the primary monitoring and alarm notification system at its lift stations and water production facilities, and as a redundant system for the wastewater facilities that run on PCU’s SCADA system. AlarmAgent.com monitors many channel inputs, including pump status, run status, operating hours, pump fault, start fault, power fail, loss of 24 volt, chlorine residual, low and high pressure, pH out of...
range, generator failure and emergency generator running. James appreciates the system’s centralized online dashboard, where he can pull reports and monitor alarms across his six territories — and troubleshoot problems before dispatching technicians to the lift stations and facilities. He can manage storm-related power outages much more efficiently this way, allowing his team to restore water service as quickly as possible.

Thanks to AlarmAgent.com, James always knows the status of all his lift stations and facilities, and he’s better able to stay on top of any maintenance issues. He plans to replace the remaining 150 autodialers with AlarmAgent.com RTUs over the next few years. “With AlarmAgent.com, we control everything,” he said.

Polk County’s waste water pump stations can be controlled with the help of AlarmAgent.com’s web-based monitoring, alarm notification and control system.