

Snow Covered Water Meters: How a Smart Water Network Uncovered Money and Time for Pinetop Water

Case Study

BACKGROUND

Pinetop, Arizona is a town known for snowy winters and lakeside retreats during the summer. As the snow falls on the town's lakes and rivers during the cold winter months, many residents cozy up inside of their homes. Quite a few of the town's residents spend the winter in the Arizona desert and only return to Pinetop for the summer. For Pinetop Water, the winter was once a treacherous time spent navigating icy roads, buried water meters and fluctuating well and tank levels.

Pinetop Water cares about the people of the town — they want to ensure that citizens have reliable access to water year round. They also want to detect leaks to conserve water and protect the homes of citizens who are not there in the winter. Pinetop Water also cares about its employees, seeking a solution that would get meter readers off the icy roads.

Pinetop Water chose the Sensus smart water network solution to resolve these issues. The utility is now able to remotely manage and monitor water tanks and wells using automation technology. This ensures reliable water access to its customers. They also read meters at their office, only seeing snow through the windowpane. "It takes about five minutes for me to read the meters each day," said Carol Benson, office manager at Pinetop Water. "And staff that previously spent four days each month reading meters are now doing proactive upgrades to our system."

CHALLENGE

Pinetop has five water sites, including wells and tanks that must be monitored daily. This monitoring requires staff time, transportation and constant attention. Pinetop sought an automation technology solution for these sites. Automation equates to fewer overtime hours, less travel and carbon emissions and ensures customers always have water. Prior to the automation technology, a Pinetop employee visited water sites seven days a week to check water levels, turn wells on or off and check that there are no power outages.

Manual meter reads are time-consuming for water utilities and can also be:

- Costly
- Subject to human error
- Environmentally harmful due to carbon emissions
- Dangerous for employees, especially in inclement weather



Pinetop is a beautiful retreat for residents and visitors alike

Pinetop knew the cost of continuing manual meter reads. With a staff of only five people, the utility required a solution that would maximize efficiency, safety and ultimately, utility revenue.

"Wintertime often meant difficult meter reads or missing reads altogether," said Benson. "Summertime was also hectic as that's the busy tourism season."

SOLUTION

Pinetop Water selected the smart water network solution from Sensus. This system hinges on the open standards-based, multi-application FlexNet™ communication network and includes automation for monitoring well and tank levels. Pinetop also plans to change out or retro-fit their entire meter fleet with Sensus smartpoints.

Automation, once only associated with electric utilities, enables the water utility to have constant access to water from the safety and comfort of their office using a computer, tablet or even smart phone. Water tanks are a key system component, holding water pumped from the well prior to customer use. Sensus automation technology turns wells on or off based on how much water is in the tanks and sends alerts when the water levels hit a certain level. Alerts are also sent about power outages — a downside of frequent heavy snowfalls in the region.

“Water utilities worldwide are implementing smart water networks, but Pinetop is among the first to improve operational efficiency and conservation with automation technology,” said Doug McCall, director of marketing at Sensus. “Within the next decade, approximately two-thirds of the world’s population, or 4.6 billion people, will experience water stressed conditions meaning the time is now to implement smart water technology.”

Pinetop also relies on Sensus’ data centers for its meter data management. The amount of data a smart water network provides is useful, but sometimes overwhelming for small water utilities like Pinetop. By pairing their smart water network with Sensus network hosting services, Pinetop Water is able to simplify billing and account management, network management functions and data warehousing all through one system. This solution also includes the support of Sensus engineers — a team of experts monitoring Pinetop’s communication base stations and meters 24/7 to identify issues and rapidly deploy solutions.

Pinetop Water is a long time Sensus customer. While they selected the Sensus smart water network solution for a number of reasons, return on investment is an important priority.

Pinetop Water’s business case for implementing a smart water network relied on saving man hours and ultimately, labor costs.

RESULTS

Wintertime still comes to Pinetop, but Pinetop Water no longer curses the snow. They are able to read meters from their office and complete system maintenance that was once postponed. There is no lag in customer billing and no fear that leaks will go undetected in customer’s homes while they are on vacation.

When Pinetop Water justified this implementation with a business case, they anticipated return on investment from man hours saved. What they did not anticipate is the increased revenue from water usage detection.

“We saw the benefit of the Sensus FlexNet system almost immediately,” said Benson. “Many of our older meters were not picking up low flow water usage. Now we are able to charge customers for all of their water usage, and keep a better eye on leaks.”

Remote water tank and well monitoring also conserve water for Pinetop. Manual monitoring often resulted in overfilled tanks and therefore, wasted water. With automation, water tanks are only filled when necessary and Pinetop Water can focus on serving customers with confidence, knowing that water levels are constantly monitored.

With a staff of only five people, outsourcing data management enables Pinetop to reap the full benefits of a smart water network and automation without requiring additional staff time or a significant IT investment. Outsourcing network services saves staff time and overhead costs. Pinetop has also never experienced a system outage due when using this system.

The Sensus smart water network solution is a comprehensive approach to water management for Pinetop, creating a better life for employees, residents and future generations.