

Antea Group

OVERVIEW

Environmental consulting company uses RFgen Mobile Foundations to collect drinking water samples in the field from public water systems.



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SNAPSHOT

INDUSTRY:
Environmental Consulting

ENVIRONMENT:
Legacy System - Microsoft Office Access Database

APPLICATIONS:
• Field Service
• Inventory Control

GOALS ACHIEVED

- 1 Ensures the correct samples were collected at each public water system.
- 2 Tracks the chain of custody of water samples from collection to delivery at the lab.
- 3 Collects signatures and provide printed receipts for the samples on-site.
- 4 Eliminates two weeks per month of data entry and management at the central office.

“ [With RFgen] there has been incredible time savings. For the data manager who had been doing the data entry, it was all done. That shaved off two weeks of that person's time each month. ”

- Patrick Marty, Project Manager
Antea Group

THE CHALLENGE

Collecting water samples from every public water system is a huge job. Just 20 field samplers gather 40,000 to 60,000 water samples each year, across a vast state with a climate that can be harsh. Antea Group used an entirely paper-based system for sample collection.

Each water sample required the sampler to fill out a form in four copies. “They would handwrite the forms out in the field,” explained project manager Patrick Marty. “They would give one copy to the

water system. One copy would follow the sample to the lab. One copy would stay with the sampler to go to the central office. Then one copy would go to the state. Once the form got to the central office, data would be manually entered into our database.”

“Typically, all of the data would not get entered into the database for up to two weeks after the end of each month. If you wanted to work on any kind of sample statistics or collection rates, you were

always two weeks behind,” acknowledged Marty.

Marty estimated that the state’s laboratory rejected about one percent of Antea Group’s water samples. Sometimes transcription errors occurred. Other times paperwork was turned in with data missing. Either way, these paperwork errors caused the entire sample to be rejected, so the sampler would have to return and recollect the sample.

“About 400-600 samples per year get rejected, and 95-percent of the rejections are due to paperwork errors. It is just ridiculous to continue to use paper, if that is what is leading to the overwhelming majority of rejections,” he added.

THE SOLUTION

As the price of wireless tablet devices came down, Marty and the team at Antea Group started to explore how to use this technology to collect the sample information in the field and submit it to the central office without the tedious quadruplicate paper form. All they needed was a software solution to help them collect the right data.

“From a data standpoint, it made more sense to look at it from an inventory control

perspective as opposed to software specifically designed for environmental sampling,” explained Marty.

The team looked at several potential solutions and selected RFgen because of its ease of use, flexibility and affordability. “A lot of the data we collect needs to meet quality assurance and quality control parameters,” said Marty.

“ Having the ability to have that [RFgen] logic built into the software during the data collection process really enhanced the accuracy of that sample record.

- Patrick Marty, Project Manager
Antea Group

With RFgen deployed on their tablets, samplers in the field can see only the locations that are eligible for sampling that day—a quality control measure to prevent them from resampling a water system prematurely. They select a location and receive a list of available samples on the tablet. They collect samples, noting the time and other measurements. RFgen has built in logic to perform some quality control

checks on the measurements. For example, samplers must enter a valid pH value between 1 and 14, or the system refuses the entry.

When sampling is finished, the sampler gets a signature from a representative of the water system being sampled on the tablet and prints a receipt on a portable printer. Depending on whether the sampler is within Wi-Fi range, RFgen transmits the sample data to the central office database or stores the information on the tablet to be uploaded to the database once the sampler is back at the office.



ABOUT ANTEA GROUP

Antea Group is an international engineering and environmental consulting firm with over 100 offices on six continents. The firm works with clients in the petroleum and industrial sectors, as well as environmental regulatory groups. One of the firm’s clients, a state environmental regulatory agency, uses Antea Group to collect drinking water samples from local public water systems and deliver samples to a laboratory, that analyzes the samples for compliance with federal drinking water standards.