

CASE STUDY

ORION®

Radio Frequency System



LWSD Manager Rick Russell (right) discussing the ORION® CONNECT® software with Tony Reed, water operator (left)

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ORION® Meets The Yellowstone

By: Ted Schaar

The legendary Yellowstone River originates in Wyoming, flows through the Yellowstone National Park and Shoshone National Forest, and then enters the Big Sky Country of Montana. About 185 miles to the northeast, it encounters Billings, Montana, and one of its suburbs, Lockwood, a community of about 5,000. The Lockwood Water and Sewer District (LWSD) draws water from the Yellowstone River and distributes it to residents and businesses.

Transitioning to ORION

In March, 2003, the LWSD began modifying or replacing the community's approximately 1,530 meters as part of the process of installing a Badger Meter ORION mobile radio frequency AMR system.

LWSD Manager Rick Russell said the district issued a request for proposals, but because many of the existing meters - some relatively new - were Badger Meter products, it was a natural to select the ORION system. "We've been very satisfied with Badger and its local distributor, Industrial Systems, Inc., and the cost was competitive," he said.

Russell also spoke with peers at other utilities that were using Badger® AMR systems, including officials in Hamilton, Sidney, and Billings Heights, Montana, and Aurora and Greeley, Colorado. He was impressed by their unanimous satisfaction with their Badger AMR systems.

Pits, basements, and mobile home parks

Lockwood has a combination of pit-set meters and meters housed in basements. In addition, it has more mobile home parks than most communities, some with up to 300 residences. "The trailer parks have their own distribution systems," said LWSD Assistant Manager Richard Koehn. "We supply water through six-inch-diameter Badger meters, and they pay us based on the amount that flows in. They then bill individual mobile home owners."

LWSD personnel are performing the meter upgrades to accommodate the ORION system. "In some cases, we install new meters to replace older devices; in others, we modify existing meters. We're doing about 50 accounts per month and are about a third of the way through."

Koehn said that when the change-out process began in March, "We still had snow on the ground, so we began with the commercial accounts and pit meters; this way, we didn't have to worry about tracking slush into the homes of residents."

Many reasons for switching to AMR

LWSD Manager Rick Russell stated the primary reason for installing ORION, in a letter to customers. "Once the radio read system is completely installed," he wrote, "meter reading will be accomplished in approximately three to five hours each month by an employee who drives the



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system, while the radio read equipment downloads the information from your meter." This is in stark contrast to the previous way of obtaining reads, which required two workers to spend four to five, eight-hour days per month.

Russell's letter also listed other benefits the ORION system will bring the community: "It reduces human error, vehicle maintenance costs, and emissions; eliminates home or business intrusion by meter readers; produces reductions in billing adjustments; reduces exposure of employees to bad weather; insures greater safety of employees and property owners; and helps reduce accidents and injuries that might result in Worker's Compensation claims or liability."

Redeployment of personnel and other advantages

Because the LWSD takes water directly from the Yellowstone River, it also operates a filtration plant capable of processing about three million gallons per day. "One of the



LWSD Board of Directors: Rich Koehn, Carl Peters - President, Nancy Belk, Merrill Walker, W. Stuart Deans, Dan Jones, Rick Russell - Manager

great things about ORION is we're going to be able to have our personnel spend more of their time tending to the technical needs of the filtration plant instead of walking around getting readings," Russell said. "We think that is a much more valuable use of their skills."

Data entry and account billing are also greatly simplified by the new system. "ORION's CONNECT® software has

interfaced very well with our billing application from Black Mountain Software," Russell explained. "Previously, our data entry person had to do a lot of manual inputting but now, for the most part, it's a simple download. In addition, we have found the ORION laptop and global positioning system very easy to use."

Enthusiastic customers Residents have responded favorably to the new system. "We haven't had any complaints," Russell said. "We've even received calls from residents who want their meters modified or replaced as soon as possible, so they don't have to worry about strangers entering their yards."

Russell has two messages for other utilities: One, moving to an AMR system will produce "great savings" and two, the ORION system and the personnel of Badger Meter and distributor Industrial Systems, Inc. "have provided excellent service to Lockwood." ■