

CASE STUDY

Badger[®] ORION[®]

Radio Frequency System



A picturesque view of Cannon Beach, Oregon from Ecola Park.

Badger[®] ORION[®] System Speeds Reads, Improves Leak Detection for Cannon Beach, Oregon

By: Kevin Orfield

Located on the northern Oregon coast, Cannon Beach was named after an iron cannon that came ashore from a shipwrecked U.S. Navy schooner. The town marks the end of the trail for Lewis and Clark, representing the furthest point south and west the two journeyed on their expedition. Cannon Beach recently celebrated the 200th anniversary of their visit.

The view of the town from Ecola Park is one of the most picturesque in the world, which is one reason Cannon Beach is a popular vacation destination. It's also been a shooting location for many movies, including Goonies, Kindergarten Cop, 1941, and Point Break. Daniel Willyard, water specialist, City of Cannon Beach, appeared as an extra in Point Break. "I'm the second guy out of the helicopter," he says. "The one with the rifle."

Willyard has been reading meters for Cannon Beach since 1981. For seventeen years, he and other meter readers recorded reads with paper and pencil in twenty-four black three-ring binders.

"We had a reader who would complete the routes on his bicycle," he recalls. "One day a big wind blew his binders down the side of a cliff. Imagine trying to recover all those records. Things have definitely improved since those days."

The City began switching over its 1,700 meters to Badger Meter in 1990. "I'm really glad we made the switch to Badger Meter," explains Willyard. "They're always ahead of the curve, trying to make old and new equipment compatible and not simply sticking with outdated technology. I once examined a Badger Meter at my grandfather's cabin in Yosemite. The meter was from the early 70s but you could see that it can be fitted with new heads."

Badger ORION System more cost effective than touch-read system

The City transitioned from its manual read system to a touch-read system in the summer of 1998. Converting each meter cost half of what it would have cost to upgrade to a radio read system. However, the cost did not factor in the additional time and expense to prepare the lids to be wired.

"By the time you drill holes or buy custom-made lids, you've spent the money you thought you saved," says Willyard. "I wouldn't encourage anyone to go with a touch-read system. You're just throwing money away."

In addition, the lids require regular maintenance. "People are always dropping the lids and breaking the wires, so you're constantly repairing them," says Willyard. "With the ORION system, there's no wire attached to the lids, so we've never had a problem."

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About the Author:

Kevin Orfield is a freelance writer based in Milwaukee, Wisconsin.

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BadgerMeter, Inc.

P.O. Box 245036 • Milwaukee, WI 53224-9536
(800) 876-3837 • Fax: (888) 371-5982
www.badgermeter.com

Case Study: Badger® ORION® Speeds Reads, Improves Leak Detection for Cannon Beach, Oregon

Badger® ORION® system reduces read time, rereads

In the fall of 2003, the City of Cannon Beach began converting its meters to the Badger ORION mobile radio frequency (RF) system. To date, the City has changed out three quarters of its meters to the Badger ORION system.

With the drive-by Badger ORION mobile RF system, reads are automatically transmitted to a laptop computer in the vehicle. The entire town can be read in four to six hours, including any rereads.

“I expect that once we change the remaining meters to radio read, we will complete the reads in less than two hours,” he says. “It used to take me three days to do the whole town, plus one day for rereads. And that was really pushing it. Some of us have to get out and exercise more as we’re not walking as much.”

With the mobile system connected to GPS, Willyard can determine the most efficient routing. “On the laptop screen I can see where every meter is located and the best way to lay out the routes,”



City of Cannon Beach is a very popular vacation destination where many vacation homes are only visited a few months of the year.

he says. “The red meters are unread and the green meters are read.”

The Badger ORION system has helped to dramatically reduce the number of rereads. “The meters are accurate to a tenth of a cubic foot, which helps us determine if there’s a slow leak,” explains Willyard. “Now when customers call us to ask why their water bill is so high, we can explain that we’ve got a radio read system that shows us if their meter is turning 24 hours a day.”

A major selling point for the City of Cannon Beach is the Badger ORION system’s leak detection feature, which monitors water consumption for individual meters. If the transmitter unit attached to the meter sees that the meter is turning twenty-four hours a day, an alert is triggered. The alert is cancelled if the meter stops turning for at least one hour. Using Badger® CONNECT software, the City can print out an exception report indentifying all customers with a leak. This is extremely important for Cannon Beach residents, for many of these homes are occupied for only a few months of the year. If a leak is detected in an off-season, the owner of the residence is notified at their permanent residence, not to be discovered when they return to their vacation home in several months.

“As we started changing out meters to ORION, we noticed that one out of every ten meters showed up on the



Daniel Willyard, water specialist for City of Cannon Beach, using the Badger® ORION® handheld in front of Haystack Rock, a 235-foot landmark in Cannon Beach, Oregon.

leak report,” says Willyard. “Ninety-nine percent of these leaks are due to leaky toilets. Now when a customer appears on the leak report, we print right on the bill that they may have a leak. Leak detection is an invaluable tool for answering customer inquiries about high bills and fixing leaks.”

Willyard highly recommends the Badger ORION system. “If you are looking at upgrading, you can’t afford not to go with ORION,” he says. “It frees up manpower for maintenance and other activities besides reading. It’s well worth the investment.

“We’ve looked at other meter companies and no other company offers features that would make me consider them. Badger Meter has it all.” ■