



Big Sky, Montana Water District Enhances Operations with Xylem

SMART TECHNOLOGY HELPS UTILITY ADVANCE LEAK DETECTION AND CUSTOMER SERVICE GOALS



CHALLENGE

Gain visibility into water usage trends

SOLUTION

Deploy a smart utility network from Sensus, a Xylem brand

REACH FARTHER

Use pressure monitoring to detect water loss

Big Sky, Montana attracts skiers, mountain bikers and nature lovers to the Rocky Mountains. The [gateway community](#) to Yellowstone National Park has become a hot spot for seasonal residents and visitors who come from all over the country for breathtaking views and an abundance of outdoor recreation.

"As the community water utility, we're probably the closest thing there is to a town government here," said Big Sky Water & Sewer District General Manager Ron Edwards. "We might be a small community, but that doesn't mean we're not expected to provide service worthy of the name 'Big Sky'."



"We call the Xylem system our Swiss Army knife. It gives us a full range of tools with many purposes to help us best serve our customers."

RON EDWARDS *General Manager, Big Sky Water & Sewer District*

Big Sky Water & Sewer District aims to deliver a five-star experience for their 2,800 customers on par with any major resort town in the country. Their drive for excellence and enthusiasm for innovative technology puts them well on their way.

Getting smarter

Monitoring water systems can be difficult in a community like Big Sky with a large seasonal population, extreme weather and elevation changes. Leaks and other issues may occur in residences when no one is there to notice. The District also bills quarterly, which makes finding problems early on even more critical for customers.

"Costs can really add up if a leak goes undetected for long," said Edwards. "We need to be able to identify these types of things before they become big problems for customers or lead to non-revenue water issues."

Edwards and his staff envisioned a virtual metering program that would allow the utility to aggregate meter data and better pinpoint where water is flowing. The utility deployed a smart utility network from Sensus, a Xylem brand, to provide remote system monitoring that yields advanced leak detection and quick response to customer needs.

A big impact

Big Sky's technology investment combined Sensus iPERL® residential water meters with the two-way FlexNet® communication network and Sensus Analytics to bring in reliable, near-real-time data from across their service area. The system promptly validated its potential when it helped technicians spot a pumped sewer service line backup that caused a 170-gallons-per-hour leak at one home.

"We connected with the customer and resolved the issue within a day," said Edwards. "Of course the homeowner was thankful to avoid the cost and potential damage that could have come with a prolonged leak."

In another instance, the team detected when underground lines froze beneath a condominium, a frequent occurrence in this renowned ski resort town. They had to wait until spring to fix the service line and instructed the homeowner to allow a trickle of water from one sink.

"We dispatched technicians with steam machines to help thaw the pipes before the situation could escalate," said Edwards. "Without our network, we would not have had the information to respond so proactively or adjust the water bill accurately."



Relieving pressure

Elevation helps form quality ski slopes in Big Sky, but it also makes monitoring water pressure important as flow moves from high to low altitude. As an extension of their technology-driven system, the utility deployed the [Sensus® Smart Gateway Sensor Interface](#) to monitor distribution across the District's ten pressure reducing valve (PRV) sites. The battery-powered Smart Gateway is a FlexNet-enabled device that connects to a variety of applications in locations where no power or land-based communications are available.



The battery-powered [Sensus Smart Gateway Sensor Interface](#) connects a variety of applications in locations where no power or land-based communications are available.

"We've installed the gateway devices at three sites so far and are already experiencing benefits," said Edwards. "The ability to see the volume of water coming through these sites allows us to better understand where we may have service area leaks."

The Sensus network and software also allows the District to virtually group meters and quickly see daily water demand below the PRV vaults. The difference between the PRV meter flow against the virtual meter for the service area gives them the ability to narrow leak detection efforts.

Big Sky Water & Sewer District understands the role they play in preserving resources as a utility governed by [Western water rights law](#). Edwards said their smart infrastructure is a major asset to improve water loss reduction.

"One day we'll be able to adjust the pressure so it's not as high during non-peak nighttime hours," said Edwards. "Having the right technology allows us to add these types of applications, which will only increase our level of control down the road."



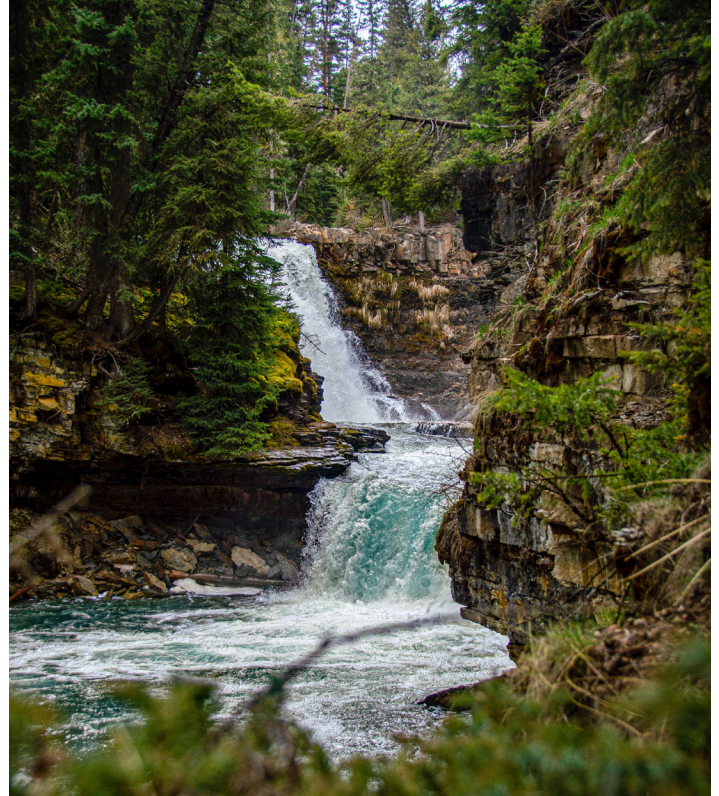
The future is wide open

Big Sky's team now has a virtual database to collect and organize the network data. The information helps them counsel their customers.

"We have irrigation customers and hotels that are itching for insights," said Edwards. "We can run the analysis for them right down to their hourly usage so they can get smarter with their own water goals."

Whether the District is overseeing meter data or consulting with customers, the technology investment will continue to be instrumental in their smart water journey.

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The right data helps the District and their customers conserve water.

ABOUT SENSUS

Sensus, a Xylem brand, provides remotely-managed products and solutions that deliver the right data at the right time for investor-owned utilities, cooperatives and municipalities. As part of Xylem's digital portfolio, our smart devices and advanced applications connect with a variety of communication technologies to help customers make timely decisions that optimize electric, gas and water systems. Learn more at sensus.com.