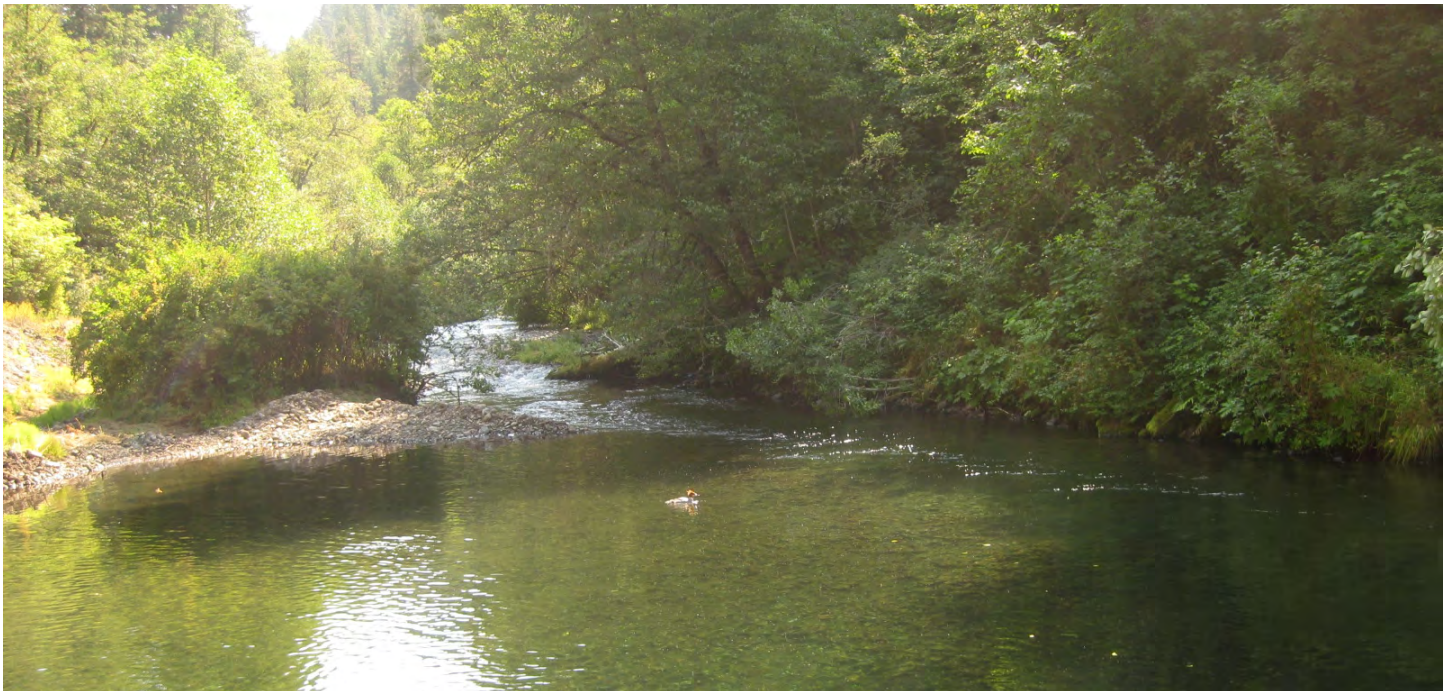
Walla Walla, Washington Extends Water Loss Control Efforts with Xylem

SENSUS SMART UTILITY NETWORK SETS THE FOUNDATION FOR LASTING IMPROVEMENT



CHALLENGE

Gain visibility into aging infrastructure to reduce non-revenue water

SOLUTION

Smart network with advanced leak detection and pressure monitoring capabilities

REACH FARTHER

Expand system with creek-level monitoring to enhance emergency management

Walla Walla, Washington, named by Native Americans in the nearby Columbia River region for its "many waters," provides fertile ground for agricultural development.

"Agriculture has always been a major contributor to our economy, culminating more recently with the growth of the Washington State wine industry," said City of Walla Walla Water Distribution Supervisor Adrian Sutor.

So they built a game plan with innovative technology to address aging infrastructure and non-revenue water (NRW).

SENSUS
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ADRIAN SUTOR *Water Distribution Supervisor, City of Walla Walla, Washington*

Water challenges in wine country

Walla Walla was losing 30 percent of its water annually due to failing pipes and aging meters when they decided to make changes to gain greater visibility across their service area.

"We're one of the oldest cities in the state, so water loss and aging infrastructure are complex issues that are linked," said Sutor. "We wanted a system that could help us approach the challenge from multiple angles."

Walla Walla began their journey toward long-term improvement by transitioning to a smart utility network from Sensus, a Xylem brand. The solution gave the utility better visibility across more than 11,000 water meters. Better yet, it gave Walla Walla a foundation that was scalable down the road.

Flexibility for the long haul

Walla Walla's initial smart network deployment combined Sensus iPERL® residential water meters and OMNI™ commercial meters with the two-way FlexNet® communication network. The system allowed the city to transition from monthly to hourly usage data with remote meter monitoring capabilities that improved leak detection.

"The system has helped us quickly detect everything from large water main breaks right down to running toilets or leaky faucets and work proactively with customers to address them," said Sutor. "The number of leak forgiveness applications we receive from customers has dropped by 75 percent as a result."

Advanced pressure monitoring captures a failing pressure reducing valve (PRV) and alerts the utility in near real-time so the issue can be addressed quickly and not become a costly problem.

As water loss improved and dipped below 30 percent, the utility team brainstormed the next phase of their smart water journey. City employees identified pressure monitoring as another effective avenue to reduce water loss and streamline customer service.

A pulse on pressure

Walla Walla's next move was to roll out Sensus ally® water meters coupled with the Sensus® Smart Gateway Sensor Interface for advanced pressure monitoring and management. This combination allows remote oversight of pressure and temperature. The wider view quickly paid off when technicians investigated customer calls regarding low pressure.

"We analyzed the data and determined that pressure was underperforming in one region during a specific time period," said Sutor. "It turned out to be a demand issue caused by a large irrigation customer and we were able to adjust our pressure settings to get the issues quickly resolved."

Comparing near real-time data with the utility's hydraulic model allows the utility team to deliver a high level of customer service around pressure monitoring. It also provides more detailed views into background leakage that's not visible and underground.

"Whether it's a leaky pipe or a failing pressure reducing valve, the technology lets us know if something is off with our system," said Sutor. "These data insights allow us to take action before any issues become costly problems."

Seasons change

Walla Walla relies on its smart technology to monitor pressure levels as they vary across zones throughout the day. The team analyzes the accumulated data to pinpoint their next strategic move. For example, when demand from irrigation customers drops during the winter, the system data tells technicians exactly how much to adjust pressure settings to optimize operations.

"Data takes out much of the guesswork," said Sutor. "It eliminates the need to send more trucks into the field, which helps reduce our carbon footprint and better conserve resources."

Constant creek-level monitoring in Walla Walla keeps authorities informed of rising water levels during heavy rainfalls.

Water level visibility

Walla Walla found their network and the battery-powered Smart Gateway sensors can enhance public safety by monitoring flood-prone regions. During one of their worst rainfall events in decades, creek-level monitoring came in handy.

"We installed sensors up and downstream that sent data back to our network on how quickly the creek was rising," said Sutor. "The constant remote monitoring helps us make truly informed decisions."

Walla Walla will explore more ways to use their smart utility network and improve operations. "Next-generation technology is opening doors for solutions no one even dreamed of," said Sutor.

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 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.

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