

ACHIEVING OPERATIONAL EXCELLENCE

HOW PIPE::SCAN TRANSFORMED WATER QUALITY MONITORING AT UNION WATER SUPPLY SYSTEM



Union Water Supply System (UWSS) has emerged as a trailblazer in adopting new, innovative water technologies and practices. Through implementation of the pipe::scan, UWSS has achieved: water conservation, precise and consistent results, reduced maintenance costs, and real-time data monitoring for 10 parameters. This cutting-edge monitoring solution not only enhances distribution water quality and management, but also improves drinking water safety through its real-time alarm capabilities and enhanced event detection software.





Dale Dillen, Senior Operations Manager at UWSS, OCWA Essex East Hub, emphasizes the remarkable impact of the pipe::scan, stating, “We transitioned from monthly to quarterly calibrations, resulting in fewer operator interactions, reduced consumable parts, and comprehensive monitoring of a greater number of parameters, while also eliminating water waste.” Dillen further expresses his enthusiasm, saying, “Given all of its benefits, it’s difficult to find a reason not to have a pipe::scan! From transforming legacy processes to providing invaluable information, this device is truly indispensable. In fact, we were so impressed by its capabilities that we decided to acquire two of them.”

The drilling team hot-tapped the pipe for the pipe::scan without taking the pipe offline. The Albuna Water Tower has a 24” stainless steel pipe that is used for filling and distribution.



Smart cities harness cutting-edge technologies like pipe::scan to achieve a holistic assessment of water quality throughout the entire distribution network, spanning from source to tap. High-density distribution monitoring enables utilities to detect and respond swiftly to specific events.

BACKGROUND

UWSS, an Ontario Clean Water Agency (OCWA) managed facility, is responsible for servicing 66,800 residents in the Leamington area with water sourced from Lake Erie. Covering an expansive service area of approximately 780 km² and delivering water through 900 km of watermains, UWSS plays a crucial role in providing clean and safe water to its customers.

COLLABORATION WITH AQUATIC LIFE LTD

To successfully implement the pipe::scan, Aquatic Life Ltd assisted UWSS and the Ontario Clean Water Agency (OCWA) in various aspects, including equipment specification, installation, calibration, and staff training. Leveraging remote connectivity, Aquatic Life also provided ongoing technical support to ensure seamless operations.

INSTALLATION AND EXPANSION

The first pipe::scan installation took place at the Albuna Water Tower, located near Leamington, Ontario, in April 2022. Recognizing its tremendous value, UWSS extended the implementation by installing a second pipe::scan at the Cottam Booster Station. Both locations now monitor crucial parameters, including: pressure, turbidity, free chlorine, pH, UV₂₅₄, TOC, DOC, temperature, color, and SUVA.

ADVANCED MONITORING CAPABILITIES

The adoption of distribution monitoring represents a significant advancement in the smart water sector. It instills consumer confidence in water quality while enabling utilities to operate more efficiently and gain a comprehensive understanding of their water distribution, from source to tap. Traditionally, this level of integrated remote distribution monitoring has not been feasible.

KEY FEATURES AND BENEFITS

The pipe::scan, developed by s::can in Austria, is an exceptional distribution water quality monitoring device:

- It is designed for hot installation on pipes under pressure, offering remote real-time monitoring of up to 10 parameters and eliminates water waste by returning it into the pipe.
- The maintenance interval is up to 6 months and does not require taking the pipe offline.
- The elimination of water waste, reduced maintenance requirements, and precise data collection make the pipe::scan a game-changer for today’s utilities.
- In the case of UWSS, each pipescan marks a reduction in 1.3 million liters of water wasted annually, and a 66% reduction in maintenance per location.



Pictured above is the finished pipe::scan install at Albuna Water Tower. It measures pressure, turbidity, free chlorine, pH, UV254, TOC, DOC, temperature, color, and SUVA. Maintenance was reduced by 66%, along with 1.3M liters of water saved annually, and virtually no consumables used.

CONCLUSION

UWSS's adoption of the pipe::scan has revolutionized their distribution water quality monitoring practices. With remarkable achievements in water conservation, precise monitoring, and reduced maintenance costs, UWSS has once again demonstrated their commitment to adopting innovative practices and technology. The partnership with Aquatic Life has been a showcase of agile project planning, integration, and a Canadian centric vision for utility advancement.

ADDITIONAL DETAILS AND RESOURCES

For more information on the pipe::scan and its capabilities, please visit the product page. You can also explore UWSS's rich history and operations.



PRODUCTS



HISTORY &
OPERATIONS

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