

Micropollutant removal

GF champions water stewardship by supporting cutting-edge water treatment

H₂O Innovation, Canada



Canadian company H₂O Innovation relies on GF's process expertise to remove micropollutants from municipal wastewater.

GF's flow solutions help bring water reuse to the forefront



In order to close the water gap — the discrepancy between supply and demand — by the end of the decade, reuse will have to quadruple, according to the World Bank and McKinsey. Canadian company H₂O Innovation, which provides solutions for drinking water, wastewater and water reuse applications in several market segments, is therefore pursuing an innovative approach. Its trailer-based reuse system converts wastewater from an effluent into potable water by removing a wide range of micropollutants. The trailer, featuring automated valve solutions by GF, serves as a mobile laboratory and encourages innovation in the field of water treatment.

Project background

Quebec City relies on two water treatment plants to purify 400,000 m³ of domestic and industrial wastewater per day, with Quebec City's East End plant managing roughly 60% of the volume. While the treated water would usually be sent back into the St. Lawrence River as effluent, water solutions company H₂O Innovation has developed a system that brings a part of the plant's water back to potable levels – a first in Canada. The system is part of the sustainability project Carrefour de l'eau, which aims to turn Quebec City into a leader in the field of water recycling, treatment and sanitation.

A pioneering treatment approach

The self-contained system is housed inside a trailer and is fully automated, allowing it to be positioned wherever it is needed and to be monitored and controlled remotely. Using treatment methods such as ultrafiltration, reverse osmosis, and ultraviolet advanced oxidation, it is capable of removing micropollutants such as PFAS from the plant's wastewater and turning it into an unconventional, yet high-quality source of potable water. GF supplied the necessary valves for the treatment process as well as automation solutions.

By leveraging cutting-edge technology from sponsors such as GF, H₂O Innovation is advancing research to secure the world's water supply and raising awareness for this issue. "Water reuse is something that should be done everywhere," comments Guillaume Clairet, Chief Operating Officer at H₂O Innovation. "Resources are always limited, and it is important to incorporate unconventional resources like wastewater in order to have a circular water economy. GF is helping us achieve the greater goal of bringing water reuse to the forefront of treatment practices."



H₂O Innovation's trailer is a mobile and automated solution for removing micropollutants.



Various processing steps remove all micropollutants, turning wastewater into potable water again.

Where next?



GF's flow solutions

H₂O Innovation's trailer relies on the Ball Valve 546 Pro and Pneumatic Actuator PPA, both part of GF's growing product family of state-of-the-art and interoperable solutions for industrial valve automation. Thanks to a modular design and largely maintenance-free operation, the combination facilitates the long-lasting and reliable control of fluids.



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