



City of Waterloo

The City of Waterloo, Ontario, Canada is responsible for the distribution of water to over 137,000 customers within the Regional Municipality of Waterloo (RMOW) as one of the cities within the upper tier municipality.

The distribution system is divided into seven (7) areas, with over 441km (275mi) of watermains consisting of older ductile and cast-iron pipes as well as PVC pipes more recently installed.

The city has utilized the hydrant.AI solution for leak detection, pressure monitoring, and transient capture since 2019. The initial program was funded through the Canadian Water and Wastewater Fund (CWWF), which included the Government of Canada, Province of Ontario, and City of Waterloo as funding partners.

In 2025, the decision was made to focus the units in an area of known issues, and to find an ROI related to the installation of the solution.

\$67,000 Savings



The City of Waterloo relocated the hydrant.AI units in their system into a specific area to determine the ROI on having the units spaced such that the leak locations identified on the map would lead to successfully finding the leaks within the system before digging. The city then confirms the presence of the leak location using correlators prior to digging.

Based on just two (2) leaks being found in the area, the city was able to realize an ROI for 2025 on the system in less than 6-months.

Leak 1: Identified on May 6, 2025, and repaired June 12. The estimated flow rate of this leak was 224lpm (54usgpm) and the cost to the city during the period the leak ran (37 days) was \$11,000.

Leak 2: Identified as a pre-existing leak when the system was deployed. Repaired October 21, 2025. The estimated flow rate of this leak was 160lpm (42usgpm) and the cost to the city was \$55,830.

“This is the reason we had selected the hydrant.AI solution from the outset. Having a permanent leak detection system within our water distribution network pays for itself, not only in the leaks it can identify, but in the time saved by not having to undertake lift-and-shift surveys throughout the system which only give us the condition on the day they were completed.”

– Scott Donelle, Manager, Water Operations and Maintenance