Making the Grand River Watershed "Smarter"

Why the Grand River?

Why the Grand River? It's an urbanizing watershed with a unique mix of pristine, urbanizing, urban and agricultural land uses making it a perfect place for research and development.

In collaboration with IBM, the Southern Ontario Water Consortium has built a system that allows them to collect, store and analyze data from sensors in the Grand River Watershed in Southern Ontario.

Grand River Facts

The Grand River is the largest inland river system in southern Ontario supplying water to the Region of Waterloo, Brantford and Six Nations.

The Grand River comprises

25%

of the Canadian land area draining into Lake Erie and is approximately

300km

long with 750,000 people living within its watershed.

Platform Facts

The platform analyzes data collected every 15 minutes from meteorological, surface, subsurface and groundwater sensors, which monitor everything from rain- and snowfall, soil moisture, water turbidity, flow rates, temperature, to ground- and well-water quality.

600 data points per hour

streaming from more than

120 sensors

installed within 80 square kilometers of watershed that nourishes urban, agriculture and forested land along the Grand River.

Applying the Data

Using IBM hardware and software, the platform allows users to collect, store and analyze data unlike ever before, with the ability to react to environmental events to capture information that could otherwise have gone unrecorded.

This, in turn, will help researchers and others develop more sophisticated tools to predict floods, safeguard the drinking water supply and forecast the impact of growth and urbanization on vital ecosystems.