



# CASE STUDY | Ontario Clean Water Agency

## Integrated Water Data Collection & Data Management

### ABOUT KISTERS

KISTERS is a global software solutions and technology firm dedicated to effective long-term management of water resources. Our environmental experts help clients achieve organizational goals through the deployment of powerful and flexible software.

Water Information Systems  
KISTERS (WISKI) provides quick and powerful access to manage and edit time series water data. Water resource professionals enjoy the capability of handling large volumes of data and calculating cumulative impacts of urban development while web service users can view and download data with ease.

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## Outgrowing Legacy Systems in Water Data Collection and Times Series Data Management

Ontario Clean Water Agency (OCWA), a Crown Agency of the Province of Ontario, Canada, operates more than 750 water and wastewater treatment facilities, pumping stations and other associated infrastructure. It operates approximately 75% of Ontario's outsourced Operations and Maintenance (O&M) services for water and wastewater treatment, predominantly under contract with municipal clients. In addition to municipalities, the OCWA services First Nations, industrial, commercial and institutional organizations. Learn more at [www.ocwa.com](http://www.ocwa.com)

### Challenge

As the OCWA's existing Process Data Collection System (PDC) was reaching the end of its useful life, another solution was required. The agency needed a reliable software platform capable of handling an enormous amount of times series water data, and also provide an efficient way for stakeholders to consume the information. Systems considerations included:

- Stream in excess of 20,000 SCADA tags daily
- Interface with more than 100 labs daily
- Track 50,000+ lab samples daily
- Integrate mobile data collection
- Allow > 1,500 operators to input/enter data
- Support 100+ compliance officers certifying data

A pilot project was required to provide a proof-of-concept and demonstrate that the WISKI Platform was an integrated solution capable of achieving OCWA's aims. This included:

- Streaming real-time data from SCADA, mobile devices and LIMS
- Enabling a user-specific configuration for site, station, parameter and time series relationships to manage all incoming data
- Providing two standard report formats to meet existing Ontario government reporting requirements.





## Solution

Two large facilities, Peel and Belleville, were selected for the pilot project. As the first sites to go into production, their challenges represented those across all other facilities. Multiple workshops were scheduled to determine the best way to present the information required by OCWA and its stakeholders. It became clear that the WISKI Platform had to look-and-feel like the existing PDC for its operators to adopt and implement the new solution. KISTERS accommodated operator needs by extending the customizable WISKI Input Mask and Launch Pad, which provided operators the ability to easily and efficiently fulfill day-to-day tasks from data entry to reporting.

## Results

For the pilot test, WISKI was configured to run automatically and notify more than 100 compliance officers of more than 20,000 daily SCADA tags. Consequently the WISKI Platform provided automated daily alerts to threshold exceedances, allowing for more rigorous assessment of real-time data quality. After the completion of the pilot project in March, 2013 a successful rollout across 750 facilities and training with more than 1,800 users was conducted by December, 2013.

*“OCWA staff find WISKI 7 extremely easy to use, and are impressed with its outstanding graphing and calculations engines. WISKI 7 has more than satisfied our needs, and I look forward to a continued collaborative relationship with KISTERS.” - Cindy Spencer, Special Projects Manager, OCWA*

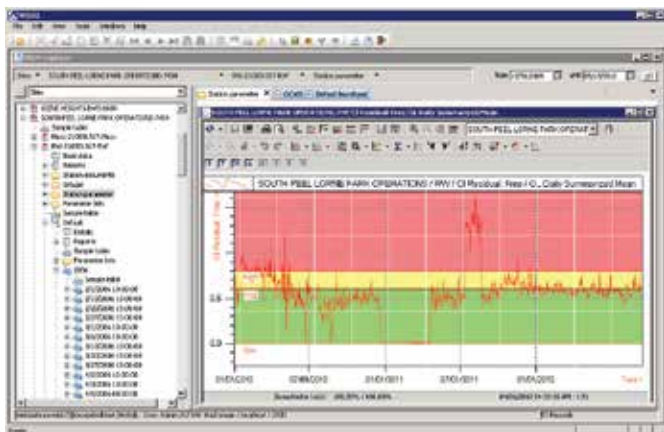


Figure 1: WISKI Platform facilitates alerts and threshold monitoring

## TECHNOLOGY DEPLOYED

Water Information Systems KISTERS (WISKI) represents the culmination of more than 25 years of experience developing data management software solutions for the water industry. WISKI is a proven platform that integrates numerous application modules with powerful statistical, data analysis, modeling and visualization features.

- WISKI is a n-tier architecture with a data layer, presentation layer, and business logic layer.
- All calculations are managed by the business logic layer (WISKI Time Series Management) providing a thin client that optimizes the time required to process data.
- WISKI is able to store any time series data type with resolution down to a 1-second data raster.
- This single system is capable of managing both time series and discrete sampling data.
- Automated and customized report options are available.
- WISKI offers a flexible and user-configurable data workflow.
- The platform can integrate with mobile devices.
- The robust data historian functionality is able to store, analyze, and report in less than 1 day.

## WISKI | Water Resources Data Management

