



## CASE STUDY

# City of London wastewater treatment achieves safer operations with Octave Tempo Operations Management implementation

### Key facts:

**Company:** City of London

**Website:**  
[london.ca/living-london/water-environment](https://london.ca/living-london/water-environment)

**Industry:** Wastewater

**Country:** Canada

**Octave products used:**  
Tempo Operations Management (j5 Operations Management Solutions)

The City of London in Ontario, Canada, operates five wastewater treatment plants (Adelaide, Greenway, Oxford, Pottersburg and Vauxhall). The average daily water flow through all the wastewater treatment plants is approximately 270,000 cubic meters daily. The water flow to the plants comes from gravity sewers or force mains from thirty-six pumping stations. The wastewater treatment plants are located along the Thames River and use settling tanks to remove solids, use bacteria to consume organic material and convert ammonia to nitrates, use chemicals to remove phosphorous and use ultraviolet light to disinfect.

### The problem

City of London wastewater treatment previously used disconnected paper logbooks and spreadsheets to manage the vast amount of day-to-day information recorded across its five wastewater treatment plants and thirty-six pumping stations. Paper files were stored physically at various remote locations, and spreadsheets were stored electronically across various computer networks. Finding historical information was difficult, and operations personnel often had to travel by car to understand what was happening at each site.

This meant retrieving and reviewing old paper logbook entries became a chore,

discouraging good communication practices across the City of London wastewater treatment operations network. To examine specific information, operations personnel had to find the appropriate paper document – often buried in paper files – and then scan through these page by page.

During this process, duplicate information was often found because operations personnel perceived the time spent trying to find historical records was greater than creating a new record about the same issue that required investigation.

On top of this, the use of spreadsheets by multiple users also caused numerous problems including hard-to-find spreadsheet files, multiple versions of the same spreadsheet and missing data, making it even more challenging to keep track of operations activities and understand what happened on previous shifts.

Task and work planning were also managed manually, usually by issuing verbal instructions and/or paper checklists. Day-to-day across the City of London wastewater treatment sites, there was an overall problem of “who did what, where, when and why?” due to the regular use of inadequate and disconnected paper and spreadsheet communication tools.

## Key benefits:

- Significant time savings in retrieving information saving labor hours and lowering travel costs
- Compliance information for regulators is stored digitally and indefinitely
- All personnel has the same information across sites and shifts

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*"To have the digital information that was previously managed and recorded using paper logbooks and spreadsheets at five wastewater treatment plants and thirty-eight pumping stations available at any time, at any location and in one place makes a significant difference across our operations."*

**Randy Bartholomew**  
Supervisor III –  
Wastewater treatment  
operations



City of London wastewater treatment also must comply with Ontario Regulation 129/04: Licensing of Sewage Works Operators under the Ontario Water Resources Act, R.S.O. 1990, c. O.40, where there are numerous related log requirements. The use of paper and spreadsheets for these logs and record-keeping requirements made it difficult to retrieve information when required by regulators. To meet these regulations, wastewater treatment plant owners must also ensure that logs and other record-keeping mechanisms are accessible in the facility for at least two years after each entry so that they can be easily examined by the Ministry of the Environment, Conservation and Parks.

## How Tempo Operations Management solved the problem

City of London wastewater treatment invested in Octave Tempo Operations Management (formerly j5 Operations Management Solutions) - implemented by Octave partner InSource Software Solutions - to consolidate and digitize the information that was being managed and recorded across its sites in paper and spreadsheets. Operations personnel had used these inadequate tools for numerous years, and there was initial skepticism to change. However, they soon realized how easy it is to use Tempo Operations Management on desktop computers and mobile devices. This opened and encouraged communication across sites, eradicating many frustrating and unnecessary car trips.

Retrieving and reviewing historical Tempo Operations Logbook (formerly j5 Operations Logbook) entries is now quick using the filtering and search engine functionality, so even very specific information can be found easily when required. Recording duplicate information is no longer an issue with digital records, enabling the "single source of truth" concept. Operations personnel can now find any records related to the problem they are investigating with minimal effort.

Tempo Operations Management has also eliminated the problems experienced when operations personnel use spreadsheets for their operational tasks. There are no longer duplicate, scattered or missing spreadsheet files because the information is now recorded on a central web browser-based platform that can be accessed by multiple users simultaneously (who can even collaborate on the same Tempo Operations Management template in real-time using different devices across locations).

It is now easy to track operations activities across pumping stations, wastewater treatment plants and site offices. Tempo Operator Rounds and Routine Duties (formerly j5 Operator Rounds and Routine Duties) and Tempo Work Instructions (formerly j5 Work Instructions) are used to plan and manage operational checks and tasks, increasing accountability across all locations. Tempo Operations Management mobile capabilities allow field and remote workers to digitally record their task progress and any safety-critical events across shifts.

This allows for the quick escalation, investigation and resolution of issues across the operations team. Tempo Standing Orders (formerly j5 Standing Orders) are also used to broadcast site-specific or site-wide operational information and safety announcements, with acknowledgments from the appropriate workers recorded and tracked.

This digitalization of these key processes has also enabled a bidirectional connection to external historian databases, matching information collected during human procedures with process data collected from assets and equipment. Tempo Operations Management allows records to be created and tracked in the Tempo Operations Logbook when data retrieved from the historian database is outside safe operating limits. Implementing Tempo Operations Management has allowed operations personnel at the City of London wastewater treatment to clearly understand "who did what, where, when and why?" before, during and after operations shifts across forty-one locations.

This is helping the City of London wastewater treatment comply to Ontario Regulation 129/04: Licensing of Sewage Works Operators under the Ontario Water Resources Act, R.S.O. 1990, c. O.40 in relation to 19. For example, Tempo Operations Management dashboards and reports can be efficiently used when there is a request from regulators such as the Ministry of the Environment, Conservation and Parks to submit copies or summaries of records. As these records are stored digitally, they can be kept indefinitely for compliance purposes.

## Benefits of Tempo Operations Management

Since the implementation of Tempo Operations Management the City of London wastewater treatment has gained numerous benefits. **The time saved retrieving information has led to better-utilized labor hours and lower travel costs**, which alone – over time – will justify the financial cost of the implementation. These better-utilized labor hours are now more efficient, with operations personnel accessing information centrally. This has allowed them to respond to issues quickly and has increased safety awareness due to the higher sense of accountability associated with transparent digital records.

**Operations personnel are now not worried about where the logbooks are, where to store them and who is writing them.** This allows an increased focus on other, more important responsibilities. Operations supervisors can monitor the tasks that remote workers are undertaking without having to always physically go out to the field or travel to other sites. Using Tempo Operator Rounds and Routine Duties connected to an external historian during equipment rotations and inspections has made these processes more visible, with field workers provided with daily reminders and best practice guidance at the point of entry. This is particularly useful at remote sites, where operations personnel could be isolated – and as a result uninformed – when they previously used paper. With Tempo Operations Management mobile, they can now quickly understand the current state of the process when dealing with diverse tasks at various remote sites.

**Knowledge and expertise transfer across generations has also been significantly increased**, and this allows new hires to understand daily tasks quicker and allows experienced operations personnel to highlight areas for improvement in a formal and structured manner. To enhance this further, Tempo Shift Handover will be used to ensure the different parts of the City of London wastewater treatment operation are performing as they should be day-by-day and shift-by-shift.

## About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property and assets – for any scope, at any scale. For decades, we've partnered with customers to sharpen performance, elevate efficiency and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what's possible from day one onward.

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