

## REPORT TO COUNTY COUNCIL

# Request for Project Approval – SCADA Master Plan Upgrade for Tavistock and Innerkip Drinking Water Systems

**To:** Warden and Members of County Council

**From:** Director of Public Works

## RECOMMENDATIONS

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1. That County Council approve the addition of the Tavistock and Innerkip Drinking Water System SCADA Upgrades project as part of the 2025 Capital Budget;
2. And further, that County Council authorize the transfer of \$24,855 from the Development Charges – Water – Tavistock reserve, and \$16,176 from the Development Charges – Water – Innerkip reserve.

## REPORT HIGHLIGHTS

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- The purpose of this report is to obtain County Council approval to include the addition of the Tavistock and Innerkip Drinking Water SCADA upgrades project as part of the 2025 Capital Budget, including accompanying funding in accordance with the County's Purchasing Policy.
- These systems are being added as replacements for two others which were originally planned for upgrades in 2025 but have been deferred to a future year to better align with other operational upgrades or construction work.
- The project is part of a multi-year Supervisory Control and Data Acquisition (SCADA) Master Plan (MP) to upgrade, replace, and standardize aging and obsolete hardware and software across the County's SCADA system, improve cybersecurity, enable seamless interconnection between remote sites, and enhance data collection, storage, and reporting for both water and wastewater systems.
- The proposed work will ensure that the Tavistock and Innerkip Drinking Water Systems, which includes the Tavistock Water Treatment Facility (the associated water tower and three wells) and the Innerkip Water Treatment Facility (the associated standpipe, two wells, and distribution monitoring station) meet the newly established SCADA Standards.

- This project is anticipated to begin in August 2025 and is targeted for completion in December 2026.

## IMPLEMENTATION POINTS

Upon County Council approval, a contract will be executed with the highest ranked qualified proponent to undertake SCADA upgrades for the Tavistock and Innerkip Drinking Water Systems (including two water treatment facilities, five wells, a water tower and standpipe) and the Innerkip Collection System (three sewage pumping stations, which were already planned for 2025). The proponents have been pre-qualified through a Request for proposal (RFP) for which the award is contingent on County Council approval of this report.

## Financial Impact

SCADA MP projects were approved as part of the 2025 Business Plan and Budget. An estimated \$666,000 in project costs were anticipated to be allocated towards Mount Elgin Water System (\$215,000), and Drumbo-Princeton Water System (\$451,000) upgrades. The Mount Elgin and Drumbo-Princeton water projects are being deferred to 2026 to realize other opportunities for cost savings and efficiencies.

The Tavistock and Innerkip water projects were originally anticipated to be undertaken in 2026. The Innerkip Collections SCADA upgrades were already approved in the 2025 Business Plan and Budget. Project costs and other associated costs and capital accounts for this project are summarized in the following table:

Table 1: Summary for Tavistock and Innerkip Drinking Water Systems SCADA Upgrades

Account / Description	Cost Estimate	Reserve – Water - Townships	Development Charges (DC)	DC Reserve Source
900016 – Tavistock Drinking Water System	<b>\$275,000</b>	\$250,145	\$24,855	<i>Water - Tavistock</i>
900016 – Innerkip Drinking Water System	<b>300,000</b>	283,824	16,176	<i>Water - Innerkip</i>
<b>TOTAL ESTIMATED EXPENDITURES</b>	<b>\$575,000</b>	<b>\$533,969</b>	<b>\$41,031</b>	

The projects are eligible for Development Charge (DC) funding in accordance with the 2024 Development Charges Background Study and addendums. The 2025 budgeted closing balance of the Development Charges – Water - Tavistock reserve is sufficient to fund the required DCs for the Tavistock Water System SCADA upgrades. Current revenue projections for the Development Charges – Water – Innerkip reserve appear to be insufficient at year end to cover the additional need. Available funds will be applied to the project costs with the remaining balance funded by DC revenue in a future year. Remaining unspent funds from the Reserve -

Water Township and Development Charge reserves for Water - Mount Elgin and Water - Drumbo will remain in the respective reserves for use towards future projects.

The remaining costs will be funded by the Water – Townships reserve using available funds from the deferral of the Mount Elgin and Drumbo-Princeton projects.




## Communications

Staff will continue to work with key internal stakeholders (County Management staff and Water and Wastewater staff) during the execution of this project as required to ensure the appropriate level of communication and outreach is maintained, further ensuring all parties involved are updated on project status and outcomes.

## 2023-2026 STRATEGIC PLAN

Oxford County Council approved the **2023-2026 Strategic Plan** on September 13, 2023. The Plan outlines 39 goals across three strategic pillars that advance Council's vision of "Working together for a healthy, vibrant, and sustainable future." These pillars are: (1) *Promoting community vitality*, (2) *Enhancing environmental sustainability*, and (3) *Fostering progressive government*.

The recommendations in this report support the following Strategic Plan pillars and goals:

		
<b>Promoting community vitality</b>	<b>Enhancing environmental sustainability</b>	<b>Fostering progressive government</b>
		<b>Goal 3.1</b> – Continuous improvement and results-driven solutions

See: [Oxford County 2023-2026 Strategic Plan](#)

## DISCUSSION

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### Background

The SCADA systems play a critical role in the management and operation of water and wastewater systems. These systems provide real-time monitoring and control of various operational parameters, ensuring the efficient and safe delivery of water services and the effective treatment of wastewater. The SCADA MP highlights the necessity for additional human resources to manage the growing volume of SCADA enhancement projects and to support the ongoing maintenance, asset management, and improvement of these essential systems.

SCADA systems are indispensable in modern water and wastewater operations for several reasons, as they provide:

- Operational Efficiency: SCADA systems automate many processes, reducing the need for manual intervention and increasing the overall efficiency of water and wastewater operations.
- Real-Time Monitoring: These systems provide real-time data on various operational parameters, allowing for timely detection and resolution of issues.
- Enhanced Safety: By monitoring critical parameters continuously, SCADA systems help ensure compliance with regulatory requirements.
- Data Management and Analysis: SCADA systems collect and store data.

The County's current SCADA system is fragmented and has components that are nearing their end of life. The SCADA MP was undertaken to determine the workplan to implement a modern, robust, financially responsible County-wide SCADA system, to standardize and optimize operations and to improve system reliability.

The County endorsed the implementation of the SCADA MP through Report [PW 2019-43](#) and approved an additional dedicated SCADA Technician to support the roll out of the MP as part of the 2025 Business Plan and Budget (FTE 2025-05). To date, the County has completed SCADA upgrades on the Thamesford Wastewater Treatment Plant, and the Beachville, Hickson, Dereham Centre and Lakeside Drinking Water Systems. Over the next seven years, the County will continue to manage an average of \$2.6 million in additional capital budget for the SCADA MP as the project team targets full implementation by 2031.

### Comments

To capitalize on cost-sharing opportunities, the Drumbo-Princeton SCADA project, originally planned for 2025, is being postponed until 2026 to align water and wastewater upgrades at the same time. As most infrastructure is located on a shared site, this approach will allow for the consolidation of control panels and associated cost efficiencies. In addition, the Mount Elgin water system is currently undergoing a review for optimization upgrades that must be completed to fully define the scope of work prior to beginning the SCADA project. As such, proceeding with the Tavistock and Innerkip water systems as an alternate SCADA upgrade at a location not impacted by these delays is a practical solution. This will allow the SCADA MP implementation

to continue advancing while balancing staff workload and preventing the extension of the overall project timeline.

Following Council approval of Tavistock and Innerkip water systems SCADA upgrades being added to the 2025 Capital Budget, staff will award a contract to the successful proponent. Following contract award, the successful proponent will proceed with the design and implementation of the SCADA upgrades. The scope of work includes developing Process Control Narratives (PCNs), Program Logic Control (PLC), and Operations Management Interface (OMI) graphics to ensure compliance with newly developed County SCADA standards. Additionally, the project involves configuring WIN-911 alarms to enhance system monitoring and response capabilities, the removal of outdated hardware, new PLC Panels (or backplane replacements depending on site), and additional site-specific needs outlined in the RFP. As part of the reporting framework, daily, monthly, and annual reports will be created for each location.

## **CONCLUSIONS**

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It is recommended that Council approve the above noted projects and use of available funding to complete the SCADA projects and prevent an extension of the overall project timeline.

## **SIGNATURES**

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### **Report author:**

Original signed by

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### **Departmental approval:**

Original signed by

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### **Approved for submission:**

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