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**To:** Chair and Members  
Lambton Area Water Supply System Joint Board of Management

**From:** Clinton Harper  
General Manager

**Subject:** Fieldgate Network Upgrade – System Selection

## Recommendation

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It is recommended that the LAWSS Joint Board of Management increase the Fieldgate Network Upgrade budget by \$11,353.54 and authorize OCWA to complete a remote flow monitoring upgrade as outlined in Proposal dated July 7, 2020 for the quoted amount of \$84,860+HST.

## Background:

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In 2020, The LAWSS Joint Board of Management established a budget of \$75,000 for a Fieldgate Network Upgrade Project. LAWSS utilizes a network of 12 water meters to track how potable water is distributed throughout the LAWSS transmission/distribution network. The flow information is transmitted back to the LAWSS WTP in real-time over the existing domestic GSM cellular network. Flow information transmitted is the same information used to create the monthly flow summary sheets and eventually used to establish how budget cost is allocated between the Member Municipalities.

The GSM cellular network that the current communication system uses to transmit the information is scheduled to be discontinued by the provider at the end of the year. It is advisable that the cellular communication equipment owned by LAWSS at each of the 12 sites be upgraded to allow communication with the domestic LTE cellular communication system in advance of the GSM shutdown.

## Comments:

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The existing program installed at the LAWSS WTP that utilizes the GSM cellular network to send and receive flow information and arrange the information so it can be accessed is a propriety software called Fieldgate. The Fieldgate software was developed by Endress+Hauser and does not integrate with the SCADA Historian and cannot be accessed through the LAWSS SCADA network. Unlike SCADA historian which holds the information indefinitely, the Fieldgate system is limited and currently configured to a 3-month window after which time the data is no longer retrievable. While this retention

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time does not affect operations, it has a major impact on the development and planning of the System by limiting historic data review to month sized data chunks.

## Consultation:

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This report was prepared in consultation with the LAWS General Accountant and OCWA Operational Staff.

## Financial Implications:

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LAWSS was advised in 2019 of the upcoming requirements to upgrade the flow meter communication system to LTE and a quote was requested of Endress+Hauser to upgrade the existing equipment to accept the change. Endress+Hauser provided a quote for \$74,875+HST to supply and install all equipment necessary to ensure uninterrupted communication with the existing Fieldgate system. At the recommendation of staff, the LAWSS Joint Board of Management budgeted \$75,000 in 2020 to complete the upgrade ahead of the deadline.

Early in 2020, OCWA Engineering group was requested to review the flow meter communication requirements and provide an alternate solution, if possible, that would allow for the integration of the flow information into the existing LAWSS SCADA. The request came from LAWSS as a result of concern that the cost to upgrade of the Fieldgate system from GSM to LTE was excessive and would maintain the limiting propriety software. OCWA provided a quote for \$84,860+HST to complete the same work with the added feature of completely integrating the data into SCADA and building the HMI screens etc. needed. The main benefits of OCWA's proposal include:

1. Enhanced distribution flow monitoring.
2. Enhanced ability to detect and pinpoint watermain breaks in real-time.
3. Enhanced data storage.

The net cost of the OCWA project is \$11,353.54 above the 2020 budget and, if acceptable to the LAWSS Board, will be transferred from reserves to cover project cost.

This report was prepared by Clinton Harper, General Manager

Attachment(s): Appendix A: LAWSS' Remote Meters