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

**From:** Clinton Harper  
General Manager

**Subject:** 2020 Emergency Preparedness Scenario at LAWSS.

## Recommendation

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It is recommended that:

- 1) The LAWSS Joint Board of Management **ENDORSE** the 2020 emergency preparedness scenario as outlined below.
- 2) The LAWSS Joint Board of Management **AUTHORIZE** the LAWSS General Manager's request for Member Municipality participation in the 2020 emergency preparedness scenario.
- 3) That LAWSS Joint Board of Management **AUTHORIZE** AECOM to proceed with hydraulic modeling in the amount of \$6746+taxes to combine Lake Huron Primary Water Supply System (LHPWS) hydraulic water model with LAWSS hydraulic water model to measure LHPWS ability to support LAWSS.
- 4) That LAWSS Joint Board of Management **AUTHORIZE** hydraulic water modeling in relation to the 2020 emergency preparedness scenario, including system wide recommissioning, to an upset limit of \$83,231.11

## Background:

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At the LAWSS Technical Group Meeting on February 14, 2019 a table top emergency scenario was discussed for 2019. The discussion centered around exploring a "Loss of Service" event that required response and involvement of all the local Community Emergency Management Coordinators (CEMC).

On March 21, 2019 a brief presentation was made to a local group of CEMCs at a meeting called by County of Lambton to introduce the Lambton County's new Community Emergency Management Coordinator and have a general discussion on emergency preparedness. The presentation outlined the following scenario that was based on and expanded on what was originally discussed by the technical group. Due to other commitments made by the various groups the scenario was postponed to 2020.

### **Proposed Scenario**

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- Loss of service resulting in threat to Public health.
- Ongoing source water contamination.
- “Do not use” water advisory issued to area supplied by LAWSS.

### **Proposed Scenario Timeline**

1. Initial Event- Ongoing source water contamination due to marine traffic incident near LAWSS primary and secondary intake.
2. Primary and secondary LAWSS intake closed to protect the WTP and Distribution Network.
3. Water users serviced by LAWSS are asked to conserve. System storage is slowly and eventually depleted. Unable to sustain minimum pressure in distribution network.
4. “Do not use” water advisory issued by Lambton Public Health for the LAWSS at the recommendation of OCWA and the MECP 72 hours after initial event. All Member Municipalities and “preferred customer” Alvinston affected.
5. Establish alternative drinking water and fire protection concurrently with spill containment and cleanup operations.
6. Once source water is restored, re-commissioning of LAWSS will begin. Re-commissioning will be completed concurrently with supply of alternative drinking water and fire protection.
7. Re-commissioning of LAWSS complete.

### **Comments:**

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Preliminary meeting between the County CEMC, Lambton Public Health, County Fire, OCWA, and LAWSS in the beginning of 2020 has re-confirmed that the group wished to explore this type of scenario this summer. The scenario has been tentatively scheduled for November 24, 2020. Through the County CEMC, the local CEMCs will be contacted and asked if they would like to participate in the scenario.

In this type of County wide event the responsibility of supplying potable water to the residents of Lambton County would inevitably fall to the CEMCs as LAWSS-OCWA and the LAWSS member municipalities and their operating authorities work to re-commission the distribution/transmission network. Executing the recommissioning of the major LAWSS infrastructure after this type event will take time but is relatively straight forward. Due to the complexity of the member municipalities subsystems recommissioning of these systems is expected to be much more complicated.

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While the group is confident that they can respond to this type of event in an emergency and effectively recommission their respective systems, hydraulic water modeling can be used to develop the best systematic approach for LAWSS and its Members to efficiently recommission the transmission/distribution network safely.

Since LAWSS controls the major infrastructure that feeds the Member systems, and since LAWSS also has a water model that contains the entire transmission/distribution network for both LAWSS and its Members, it is recommended that a project of this type originate at LAWSS. In consultation with the LAWSS Technical Team Members, staff will develop a scope of work and attempt to secure x3 bids.

It is recommended that the following information be sought:

- 1) Plan for systematic recommissioning of the LAWSS and its Municipal Members' subsystems. Among other things, this part will include sequencing and timeline.
- 2) Model neighbour's ability to pressurize the LAWSS and its Municipal Member's subsystems. (Chatham-Kent, Petrolia, Lake Huron Primary Water Supply System)

The Lake Huron Primary Water Supply (LHPWS) and LAWSS share a connection point at what is referred to as the Ravenswood interconnect. The interconnect is regularly operated to allow LAWSS to provide additional water to the LHPWS portion of the Lambton Shores subsystem. OCWA Operational staff are unaware of a situation where the interconnect operated in the reverse direction and provided support to LAWSS. Currently the LHPWS hydraulic water model is also housed with AECOM. A quotation in the amount of \$17,722+taxes total cost was provided by AECOM to make the necessary updates to the LHPWS model, make the two hydraulic water model compatible and to provide a report that details LHPWS ability to support the LAWSS system. Of the quoted amount, LAWSS' portion is \$6,746+taxes. I have confirmed that LHPWS is prepared to issue a PO for the remaining amount if LAWSS wishes to proceed.

## Consultation:

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This report was prepared in consultation with the LAWSS Technical Team and OCWA Operational Staff. An effort was also made, with the assistance of AECOM and representatives at LHPWS, to provide the cost fir modeling between LAWSS and LHPWS.

## Financial Implications:

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This type of focused hydraulic water modeling was not included in the 2020 LAWSS budget proposal. A cost estimate to complete this type of modeling would not be expected to exceed \$100,000. In advance of the March meeting of the LAWSS Board,

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staff will attempt to finalize a scope of work with the members, tenders and secure x3 bidders. Please consider the following:

<b>2020 Engineering Studies</b>	<b>Budgeted</b>	<b>Awarded (includes non-refundable portion of H.S.T.)</b>	<b>Difference</b>
Master Plan Update:	\$250,000	\$202,614.34	\$47,385.66
Addendum: Twinning & Grid Reinforcement Class EA:	\$105,000	\$62,408.55 (Pending Approval)	\$42,591.45
LHPWS Study:			-\$6,746
		Total:	\$83,231.11

It is requested that the Board permit staff to proceed with this work if the preferred proposal is quoted less than what remains in the budget between the Master Plan Update and the Twinning & Grid Reinforcement Class EA Addendum minus the work related to the LHPWS modeling. Otherwise, staff would bring the proposals to the Board at the next regular meeting for review.

This report was prepared by Clinton Harper, LAWSS General Manager

Attachment(s): none