

AGENDA

LAWSS Board Meeting



Thursday August 16, 2018

9 am

County of Lambton Administration Building - 787 Broadway St, Wyoming ON N0N 1T0

1. Declaration Of Pecuniary Or Conflict Of Interest

2. Approval of Regular Agenda Minutes

A copy of the minutes for the July 17, 2018 meeting is attached to this agenda.

"That the minutes of the July 17, 2018 LAWSS Board Meeting be adopted."

Moved by:

Seconded by:

Carried/Defeated

3. LAWSS Monthly Financial Statements

A copy of the May and June 2018 LAWSS budget statement and cash balance sheets are attached for review and approval.

"That the Board accept the financial statements and cash balance sheets for May and June 2018."

Moved by:

Seconded by:

Carried/Defeated

4. OCWA Operational Statements

The Monthly Operations Report, and other materials from OCWA for June 2018 are attached.

"That the Board accepts the June 2018 operational statement and other materials from OCWA."

Moved by:

Seconded by:

Carried/Defeated

5. Operational/Capital Update

The following presents the Operational/Capital Update.

Summary of the capital and major maintenance projects including purchase orders (POs) issued and money spent for May and June are attached.

a) Generator Replacement Project (2018) - \$4,000,000+ \$250,000:

The engineering portion of LAWSS Generator Project was awarded to EXP Engineering by the LAWSS Board at Regular Meeting on July 17, 2018.

A start-up meeting was held at the LAWSS WTP on Wednesday July 25th between EXP's Project Manager, OCWA Operational Manager and LAWSS Water System Engineering Technologist. A more detailed discussion that included EXP Engineering's Structural and Mechanical leads took place on August 1, 2018. At these meetings a number of information gaps and items were identified that are critical to the success of the project. With OCWA's assistance, LAWSS staff is currently working to provide the missing information.

At this time EXP Services is preparing two reports for consideration by LAWSS.

- The first report for LAWSS' consideration is a comparison of three generator models capable of achieve LAWSS requirements. LAWSS will be asked to provide direction on the preferred model. Once the model is selected, EXP will proceed by building their design around the generator selection. Generator unit cost estimate will be presented to Board at the upcoming meeting.
- The second report for LAWSS' consideration includes options for repairing the existing louver system on the generator room's north wall. This selection is much less critical to the overall project but will still affect some aspects of design going forward.

"Motion to grant authority to LAWSS Water System Engineering Technologist to select preferred generator model and provide letter of intent to purchase"

Moved by:

Seconded by:

Carried/Defeated

"Motion to grant authority to LAWSS Water System Engineering Technologist authority to select preferred louver repair option for integration onto LAWSS Generator Replacement Design and upcoming Request for Quotation.

Moved by:

Seconded by:
Carried/Defeated

b) Radio/PLC Upgrade & Replacement - \$150,000 (2018) - \$83,000 (2017):

The City of Sarnia Purchasing Department was hired to tender LAWSS Radio/PLC Replacement Project by motion of the LAWSS Board at Regular Meeting Held on July 17, 2018.

The contract documents and drawings were published on sarnia.bidsandtenders.ca on July 30th and is currently underway. A site meeting for the project was held on August 15, 2018. It is expected that a General Contractor will be recommended to the Board at the Regular Board Meeting in September.

c) Forest Standpipe Repainting - \$1,400,000:

A PO has been issued and work has been requested to proceed as soon as possible. Cope is expected to begin work by mid-September.

d) Major Maintenance & Schedule "Q" Updates:

(Work critical to Operation is included)

- MM18-05 Bisulphite Pump Replacement: Work ongoing by OCWA team. Currently the new unit is wired for power and programmed. Testing and commissioning to begin mid-August.
- Summary of 2018 Security Audit (Schedule Q: Annual Full Inspection-Water Tower):

In 2018 PW Markar was subcontracted by OCWA to completed the annual Water Tower inspections as required under Schedule "Q" in the Management, Operations and Maintenance Agreement.

PW Markar identified approx. 30 actionable items during the 2018 inspection. Of the 30 actionable items OCWA will be able to correct 18 almost immediately. 11 of the items identified will need to be corrected during a major maintenance or capital project and will included in the 2019 budget discussions.

The remaining item identified in the inspection involves Port Lambton SP. This year the inspector observed a concave area approx. 1.5m in dia. on the SP roof. The depression does not appear in 2017 photos of the same area. Ultrasonic thickness testing is recommended to determine if there is a thinning of the steel material at the subject area. LAWSS staff is working to secure three quotes for this work.

- Schedule Q: Annual Calibration of Raw Water Flow Meter

In 2018 Endress + Hauser was subcontracted by OCWA to completed the annual calibration of raw water flow meters as required under Schedule "Q" in the Management, Operations and Maintenance Agreement. All calibrations completed as of August 1st.

- Schedule Q: Annual Calibration of Distribution System Flow Meter

In 2018 Endress + Hauser was subcontracted by OCWA to completed the annual calibration of the distribution system flow meters as required under Schedule "Q" in the Management, Operations and Maintenance Agreement. All calibrations completed as of August 1st.

- e) Twenty-Year Conceptual Engineering Design Options and Cost Estimate:

Work ongoing. AECOM has submitted their DRAFT Technical Memorandum #2. The DRAFT was reviewed by LAWSS technical staff. Once updated it will be forwarded to Member municipalities for a complete review.

"Motion to accept items c) through e) as information"

Moved by:

Seconded by:

Carried/Defeated

6. Ongoing Items:

Water Flows: The water flow sheets for April 2018 are attached.

- a) Admin HVAC Ongoing Issues:

A DRAFT Admin Office HVAC Assessment report prepared by Building Innovations is attached. The major key findings with respect to the existing system are as follows:

1. The cooling loop does not contain a large volume of water, which contributes to short cycling of compressors.
2. The system currently uses once-through water for heat rejection in both heating and cooling seasons. It is estimated that approximately 30,600-m3 of treated water is used for annual operations.
3. For the majority of hours, a single compressor of the WSHP can handle the full building cooling and heating loads, which explains the short cycling, and why the second compressor rarely operates.
4. In heating season, the WSHP requires source water that is warmer than the available treated water due to ratings of equipment. An electric boiler heats the water to the minimum temperature and the water is then dumped to

drain.

5. No balancing reports were found to demonstrate coordination between outdoor air volumes and exhaust air volumes.

The original system was designed to accommodate approx. 2000 cubic feet/minute exhaust volume. Ventilation requirements for a facility fitting LAWSS characteristics should be closer to 500 cfm. This is the origin or one of the main contributing factors to why there are issues with the original system. For this reason, a dedicated ventilation assessment and ductwork modification costing is built into each repair Scenario and is considered to be necessary.

The Scenarios outlined in the report are summarized below for the Board's consideration.

Scenario #1 – Water Source Heat Pump Repairs	\$114,750
Scenario #2 – Water Source Heat Pump Reconfiguration	\$148,500
Scenario #3 – Rooftop Air Cooled Chiller Addition	\$239,625
Scenario #4 – Rooftop Air Handler Addition	\$202,500

Scenario #1- Water Source Heat Pump Repairs
AND

Scenario #2- Water Source Heat Pump Reconfiguration

The success of these two scenarios relies heavily on precisely modifying an already complex system even further from its original design. Neither scenario is considered as a suitable option because, while precise modification may be possible, many of the issues identified in the assessment will not be corrected. The idea of modifying the existing system is further complicated by required ductwork modifications that will likely push the already oversized compressor even further out of range.

Scenario #3 – Rooftop Air Cooled Chiller Addition

This scenario involves demolishing the water source heat pump. The existing boiler will be reconfigured to provide the necessary heating. A new air-cooled chiller unit will be installed to provide the necessary cooling. This scenario will greatly improve system control and will completely eliminate the need for once-through water. With this system there is a level of complexity similar to the WSHP. This scenario also represents the highest cost option reviewed by Building Innovation. All items in the key findings list will be addressed.

Scenario #4 – Rooftop Air Handler Addition

This scenario involves demolishing the water source heat pump, air handler, pumps, and heat exchanger. The boiler will be reconfigured to provide the necessary

heating and new rooftop air handlers will be installed to provide the necessary cooling. A system of this type is a simple approach that is easy to operate and maintain. This scenario will also greatly improve system control and will completely eliminate the need for once-through water. All items in the key findings list will be addressed.

Conclusion:

Once Building Innovation's report is finalized the next step in is to hire an Engineering Consultant to complete a Ventilation Assessment of the LAWSS Admin area. Once that is complete an RFQ can be developed that incorporates the selected scenario with the necessary ductwork modifications recommended in the Ventilation Assessment.

It is recommended that the Board select Scenario 4 and replace the existing Water Source Heat Pump with a Rooftop Air Hander and reconfigured boiler. The engineering portion of this work, which would include system design, RFQ development and the ventilation assessment is conservatively estimated at \$40,000.

As per the LAWSS procurement policy, the Board may waive the requirement for a competitive bid for purchases between \$20,000 and \$100,000 when the extension or reinstatement of the existing contract would be the most cost effective or beneficial method and is in the best interest of the municipalities. Once a finalized Admin Office HVAC Assessment has been submitted, it is recommended that Building Innovations be asked to prepare a quote to provide the engineering portion of the work and, if quoted is below the estimated amount, be granted the exception stated above.

"Motion to hire Building Innovations to complete Engineering portion of work involved in LAWSS HVAC Admin rebuild including Ventilation Assessment, Scenario 4 System Design complete with duct work modifications, RFQ Development and Site inspection if quoted price is below \$40,000 budgetary estimate"

Moved by:

Seconded by:

Carried/Defeated

b) Municipality of Chatham-Kent Interconnection

The Municipality of Chatham-Kent Public Utility Commission (PUC) is preparing to complete major upgrades to the Wallaceburg Water Treatment Plant. Work is proposed to be staged over several years and will involve many primary/major Plant components.

Between Monday May 28th and Friday June 1st LAWSS supplied Chatham-Kent with approx. 20782m3 of water over 93 hours through the Whitebread Line interconnect. The water was supplied as part of a test to assist Chatham-Kent PUC in gauging LAWSS ability to provide the municipality water during the various phases of upcoming project.

On Thursday July 19, 2018 LAWSS-OCWA staff met with representatives from St. Clair Township and the Chatham-Kent PUC to discuss the results of this test and to discuss the existing agreement between LAWSS and the Chatham-Kent PUC. At the meeting the Chatham-Kent PUC verbally agreed to include the installation of a meter of adequate diameter at the Whitebread Line interconnect location.

Attached is the existing agreement established in 2011 with respect to water usage from the respective networks. The main items are follows:

- There is no obligation to supply water or continue to supply water. The supply of water is at the LAWSS sole discretion.
- Chatham-Kent agrees to indemnify LAWSS against any action which may be brought against it by reason of the supply of water or any interruption, lack of continuity, or variation in pressure, etc.
- The water rate can be amended annually as required. This is subject to advanced written notification and agreement by both parties.

The current water rate is \$1.13 per cubic meter and was established at the signing of the original agreement. This rate is inline with what LAWSS charges Booke Alvinston and the Town of Petrolia for their usage. Additional research is needed to determine if this rate is suitable for a connection of this type.

“Motion to accept as information”

Moved by:

Seconded by:

Carried/Defeated

7. IN-CAMERA Meeting

The Board will adjourn to an in-camera meeting if necessary.

8. Chair to Rise and Report on the Matters of Public Concern from the In-Camera Session

The Chair will report as required.

9. Adjournment/Next Meeting

"That the LAWSS Board adjourn this meeting to its next board meeting to be held on Thursday, September 27, 2018 at 10:00 am at the LAWSS water treatment plant."

Moved by:

Seconded by:

Carried/Defeated

pdf Attachments:

Minutes of LAWSS Board Meeting July 17, 2018
LAWSS Financial Statement – May 2018
LAWSS Financial Statement – June 2018
LAWSS Cash Balance Sheet – May 2018
LAWSS Cash Balance Sheet – June 2018
OCWA Monthly Operations Report – June 2018
OCWA Data Report for LAWSS – June 2018
OCWA Health and Safety Work Order Status June 2018
OCWA Health and Safety Work Order Status Jan – June 2018
OCWA Work Order Status June 2018
OCWA Work Order Status Jan – June 2018
LAWSS Project List – May 2018
LAWSS Project List – June 2018
LAWSS Flows June 2018