

# Agenda

## Lake Huron Primary Water Supply System Joint Board of Management

2nd Meeting of the Lake Huron Water Supply System Board of Management  
March 7, 2019, 1:30 PM  
Committee Room #5

	Pages
<b>1. Call to Order</b>	
<b>2. Adoption of Minutes</b>	
2.1 Minutes of the 1st Meeting held on Thursday, January 31, 2019	2
<b>3. Consent Items</b>	
3.1 Kelly Scherr, Chief Administrative Officer - Quarterly Compliance Report (4th Quarter 2018: October - December)	6
3.2 Kelly Scherr, Chief Administrative Officer - Environmental Management System and Quality Management System	9
3.3 Kelly Scherr, Chief Administrative Officer - Capital Status Report	18
<b>4. Items for Discussion</b>	
4.1 Kelly Scherr, Chief Administrative Officer - London Hydro Occupancy Agreement Renewal	23
4.2 Kelly Scherr, Chief Administrative Officer - LH1260 Flash Mixer Upgrade - Award	28
<b>5. Deferred Matters/Additional Business</b>	
<b>6. Upcoming Meeting Dates</b>	
June 6, 2019	
October 3, 2019	
December 5, 2019	
<b>7. Adjournment</b>	

# Lake Huron Primary Water Supply System Report

1st Meeting of the Lake Huron Primary Water Supply System Board of Management  
January 31, 2019

Attendance: Meeting held on Thursday, January 31, 2019 at the London City Hall, commencing at 1:30 PM

PRESENT: C. Burghardt-Jesson (Chair), A. DeViet, D. Faubert, J. Fergusson, A. Hemming, S. Hillier, J. Keogh, S. Lehman, M. Van Holst, P. Walden, J. Wilcox and B. Willard and J. Bunn (Committee Secretary)

ALSO PRESENT: K. Butts (RWS), D. Gibson, B. Haklander (RWS), G. Henderson (OCWA), A. Henry, R. Lieber (OCWA), E. McLeod (RWS), L. McVittie (RWS), J. Millson, C. Murchland (OCWA), D. Rodrigues (OCWA), K. Scherr, B. Tully (OCWA) and J. Walker (RWS)

## 1. Call to Order

1.1 Election of Chair and Vice-Chair for term ending November 30, 2020

DEVIET AND VAN HOLST

That C. Burghardt-Jesson **BE ELECTED** Chair, for the term ending November 30, 2020. **CARRIED**

**Motion Passed**

HILLER AND LEHMAN

That M. van Holst **BE ELECTED** Vice Chair, for the term ending November 30, 2020. **CARRIED**

**Motion Passed**

**2. Adoption of Minutes**

2.1 Minutes of the 4th Meeting held on Thursday, October 4, 2018

VAN HOLST AND HEMMING

That the minutes of the 4th meeting of the Lake Huron Primary Water Supply System Joint Board of Management, from the meeting held on October 4, 2018, **BE NOTED AND FILED. CARRIED**

**Motion Passed**

**3. Consent Items**

3.1 Important Information Concerning Chlorinated Effluent Discharges from Drinking Water Treatment Facilities and the Fisheries Act

VAN HOLST AND HILLER

That the communication dated November 19, 2018, from D. DeOcampo, Environment and Climate Change Canada, with respect to important information concerning chlorinated effluent discharges from drinking water treatment facilities and the Fisheries Act, **BE RECEIVED. CARRIED**

**Motion Passed**

3.2 Quarterly Compliance Report (3rd Quarter 2018: July-September)

VAN HOLST AND HILLIER

That, on the recommendation of the Chief Administrative Officer, the report dated January 31, 2019, with respect to the general, regulatory and contractual obligations of the Lake Huron Primary Water Supply System, for July to September 2018, **BE RECEIVED. CARRIED**

**Motion Passed**

3.3 Environmental Management System and Quality Management System

VAN HOLST AND HILLIER

That, on the recommendation of the Chief Administrative Officer, the report dated January 31, 2019, with respect to the Environmental Management System and Quality Management System for the Lake Huron Primary Water Supply System, **BE RECEIVED. CARRIED**

**Motion Passed**

**4. Items for Discussion**

4.1 LH2019 Master Water Plan Update - Award

FERGUSSON AND WILLARD

That, on the recommendation of the Chief Administrative Officer, the following actions be taken with respect to the Lake Huron Primary Water Supply System Master Water Plan Update:

- a) the proposal from Jacobs, in the amount of \$73,551.50, including contingency and excluding HST, **BE ACCEPTED**; it being noted that contingency will be to the upset limit of the approved project budget, having submitted a proposal which meets the Request for Proposal requirements and evaluated as having the best value;
- b) the Chair and the Chief Administrative Officer **BE AUTHORIZED** to execute a consulting services agreement with Jacobs for the completion of a Master Water Plan Update for the Lake Huron Primary Water Supply System; and,
- c) the report dated January 31, 2019, with respect to the above-noted matter, **BE RECEIVED. CARRIED**

**Motion Passed**

4.2 LH1230 High Lift Pump Replacement Project - IESO Master Program Agreement and Project Incentive Contract

DEVIET AND HILLIER

That, on the recommendation of the Chief Administrative Officer, the following actions be taken with respect to the Lake Huron Primary Water Supply System LH1230 High Lift Pump Replacements Project:

- a) the Chair and the Chief Administrative Officer **BE AUTHORIZED** to execute a Master Program Agreement, as appended to the report dated January 31, 2019, with the Independent Electricity System Operator to streamline the Industrial Accelerator Program process associated with the above-noted project;
- b) the Chair and the Chief Administrative Officer **BE AUTHORIZED** to execute a Project Incentive Contract with the Independent Electricity System Operator for financial incentives associated with the above-noted

project, substantially in the form appended to the above-noted report and subject to further review by the Board's solicitor; and,

c) the remainder of the above-noted report **BE RECEIVED.**  
**CARRIED**

**Motion Passed**

**5. Deferred Matters/Additional Business**

None.

**6. Next Meeting Date**

March 7, 2019

**7. Adjournment**

The meeting adjourned at 2:11 PM.

<p><b>To:</b> Chair and Members Lake Huron Primary Water Supply System Board of Management</p> <p><b>From:</b> Kelly Scherr, P.Eng., MBA, FEC Chief Administrative Officer</p> <p><b>Subject:</b> Quarterly Compliance Report (4<sup>th</sup> Quarter 2018: October - December)</p>
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**RECOMMENDATION**

That the Quarterly Compliance report with respect to the general, regulatory and contractual obligations of the Lake Huron Primary Water Supply System **BE RECEIVED** for the information of the Board of Management; it being noted that there were no Adverse Water Quality Incidents or adverse laboratory results in the 4<sup>th</sup> quarter of 2018.

**EXECUTIVE SUMMARY**

Since the previous report to the Board, there were no new or proposed regulatory changes that may have an impact on the Lake Huron Primary Water Supply System (LHPWSS).

The Water Quality Quarterly Report for the period of October 1 – December 31, 2018 was posted on the water system’s website at <https://huronelginwater.ca/wp-content/uploads/2019/01/2018-Q4-Huron-Final.pdf>

There were no Adverse Water Quality Incidents (AWQI) reported by the operating authority or adverse laboratory results reported by the third-party accredited laboratory during this quarter.

**BACKGROUND**

Pursuant to Board of Management resolution, this Compliance Report is prepared on a quarterly basis to report on general, regulatory and contractual compliance issues relating to the regional water system. For clarity, the content of this report is presented in two basic areas, namely regulatory and contractual, and does not intend to portray an order of importance or sensitivity nor a complete list of all applicable regulatory and contractual obligations.

**REGULATORY ISSUES**

**Recent Regulatory Changes:** At the time of drafting this report, there were no new regulatory changes for this reporting period which may have a significant impact on the LHPWSS.

**New Environmental Bill of Rights (EBR) Registry Postings:** At the time of drafting this report, there were no new postings on the EBR that may have a significant impact on the LHPWSS.

**Quarterly Water Quality Reports:** The Water Quality Quarterly Report for the period of October 1 – December 31, 2018 was completed by the operating authority, and is posted on the Water Systems’ website at <https://huronelginwater.ca/wp-content/uploads/2019/01/2018-Q4-Huron-Final.pdf>

**Note:** In order to better comply with the *Accessibility for Ontarians with Disabilities Act, 2005*, the detailed tables of water quality test results which were previously appended to this Report have been removed. The full list of test results of drinking water quality parameters is posted on the water system’s website and available in print at the Board’s Administration Office in London upon request. In addition, the detailed water quality information is also published within the water system’s Annual Report required by O.Reg. 170/03 under the *Safe Drinking Water Act*.

**Adverse Water Quality Incidents (AWQIs):** There were no AWQI reported by the operating authority or adverse laboratory results reported by the third-party accredited laboratory during this quarter.

**O.Reg. 170/03, Section 11 “Annual Reports”:** Under the Drinking Water Systems Regulation (O.Reg. 170/03), an Annual Report for the LHPWSS is required to be prepared by February 28<sup>th</sup> of each year. The report will summarize water quality and maintenance information for the 2018 calendar year. This report is completed by Ontario Clean Water Agency (OCWA), the contracted operating authority for the LHPWSS. Although the report is no longer required to be submitted to the Ministry of the Environment, Conservation and Parks (MECP), the LHPWSS is required to provide copies of the report to drinking water systems that obtain water from this system. Once it is available, the Annual Report will be forwarded to the member municipalities by the February 28, 2019 deadline as required. The Annual Report will also be posted on the Water Systems’ website at <https://huronelginwater.ca/consumer-resources/consumer-reports/> for public information.

**O.Reg. 170/03, Section 22 “Summary Reports for Municipalities”:** Under the Drinking Water Systems Regulation (O.Reg. 170/03) a summary report is required by March 31<sup>st</sup> of each year which:

- Lists the requirements of the Act, the regulations, the system’s approval and any order that the system failed to meet at any time during the period covered by the report, and the duration of the failure. For each failure referred to, a description of the measures that were taken to correct the failure is required.
- In order to allow the system’s owner to “assess the capability of the system to meet existing and planned uses of the system”, provide a summary of the quantities and flow rates of the water supplied, including monthly average and maximum daily flows and daily instantaneous peak flow rates, with a comparison to the systems rated capacity.

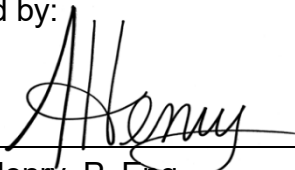
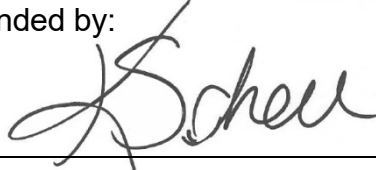
This report will also be completed by OCWA. The Summary Report will be forwarded to the member municipalities of the LHPWSS as required by the March 31, 2019 deadline. The report will be posted on the Water Systems’ website at <https://huronelginwater.ca/consumer-resources/consumer-reports/> for public information. All Summary Reports are available for viewing at the Lake Huron Water Treatment Plant and at the Board’s Administration Office in London. Copies of all reports are available to the public upon request and free of charge as required by O.Reg. 170/03.

**Compliance Inspections:** The Ministry of the Environment, Conservation and Parks (MECP) conducted an unannounced physical inspection of the LHPWSS on December 5-6, 2018. The final inspection report has not yet been issued. When the final inspection report is received from the MECP it will be the subject of a future report to the Board.

**CONTRACTUAL ISSUES**

**ARTICLE 3, “Operation and Maintenance of the Facilities – General”:**  
Board staff informally meets with OCWA on a monthly basis to discuss operations and maintenance related issues, and formally on a quarterly basis to review contractual performance. The 2018 fourth quarter Contract Report was received from OCWA on January 30, 2019 and was discussed at the quarterly administration meeting between Board staff and OCWA on February 14, 2019. Copies of the monthly Operations and Maintenance Reports, or quarterly Contract Reports are available at the Board’s Administration Office in London upon request.

This report was written by Erin McLeod, Quality Assurance and Compliance Manager.

<p>Submitted by:</p>  <hr/> <p>Andrew Henry, P. Eng. Director, Regional Water Supply</p>	<p>Recommended by:</p>  <hr/> <p>Kelly Scherr, P.Eng., MBA, FEC Chief Administrative Officer</p>
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<p><b>To:</b> Chair and Members Lake Huron Primary Water Supply System Board of Management</p> <p><b>From:</b> Kelly Scherr, P.Eng., MBA, FEC Chief Administrative Officer</p> <p><b>Subject:</b> Environmental Management System and Quality Management System</p>
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**RECOMMENDATION**

That the following report with respect to the Environmental Management System and Quality Management System for the Lake Huron Primary Water Supply System **BE RECEIVED** for information.

**BACKGROUND**

**Environmental Management System (EMS)**

The Lake Huron Primary Water Supply System (LHPWSS) has an Environmental Management System (EMS) which has been registered to the ISO 14001 standard since 2003. The LHPWSS underwent a three-year registration audit in November 2017 and was recommended for registration to the ISO14001:2015 standard for a three-year period (ending in 2020).

The continued utilization and registration of the EMS to the ISO 14001 standard is a requirement of the Service Agreement with Ontario Clean Water Agency (OCWA), the contracted Operating Authority for the LHPWSS.

**Quality Management System (QMS)**

In 2006, the Drinking Water Quality Management Standard (DWQMS) was integrated with the existing EMS and the combined EMS/QMS is maintained by the contracted Operating Authority. The *Safe Drinking Water Act* (SDWA) and the water system's Municipal Drinking Water Licence (MDWL) require that an accredited Operating Authority be in operational charge of the drinking water system. In order to become accredited, the Operating Authority must utilize and maintain an Operational Plan that meets the requirements of the DWQMS and must undergo an external accreditation audit every three years.

OCWA received full scope DWQMS re-accreditation in October 2016 and is currently accredited for the three-year period ending in 2019.

## DISCUSSION

### Management Review

The documented EMS/QMS and its performance requires Management Review by Top Management a minimum of once every calendar year to ensure that the management team of the Board and the Operating Authority stay informed of environmental and quality related issues. Items discussed at the Management Review meetings include, but are not limited to, water quality test results, environmental and quality performance, legislative changes, identified non-conformances, corrective and preventive actions, staff suggestions, changing circumstances and business strategies, and resource requirements. Corrective and preventive actions include not only those to address non-conformance issues and opportunities for improvement identified as part of internal and external audits, but also non-compliance issues identified by the Ministry of the Environment, Conservation and Parks (MECP), suggestions from staff, and opportunities for improvement identified during the Management Review process.

In order to carry out more effective Management Review meetings, the Board's administration has opted to conduct shorter meetings at more frequent intervals. Although each required Management Review input may not be covered at every meeting, over the course of the year all required inputs are reviewed at least once. Management Review meetings are held in a combined format for both the LHPWSS and the Elgin Area Primary Water Supply System (EAPWSS).

There were no Management Review meetings conducted during this reporting period.

### Internal Audits

Pursuant to the international ISO 14001 EMS standard and the provincial DWQMS standard, periodic "internal" audits are performed by the Board's administration to ensure continued compliance with legislated, contractual, and other requirements, as well as conformance with the ISO 14001 EMS standard and DWQMS standard. Internal audits also ensure that the ongoing operation of the LHPWSS conforms to the EMS and QMS as implemented. As required by the standards, internal audits are performed a minimum of once every calendar year.

An Environmental Compliance Internal Audit was conducted on January 29, 2019 and a summary of the audit findings is included in Appendix A of this report. Zero (0) non-compliances, two (2) opportunities for improvement and two (2) recommendations were identified during the audit. The audit findings will be discussed at the next Management Review meeting tentatively scheduled for April 2019.

The audit findings were considered minor in nature and should easily be addressed through assigned action items.

### **External Audits**

Annual surveillance audits (third-party external audits) are conducted for both the EMS and QMS, with a recertification audit taking place every third year. The external registrar for both the EMS and QMS is currently SAI Global. External audits review all aspects of the EMS or QMS, including the internal audits, subsequent management reviews, and corrective action processes.

There were no external audits conducted during this reporting period.

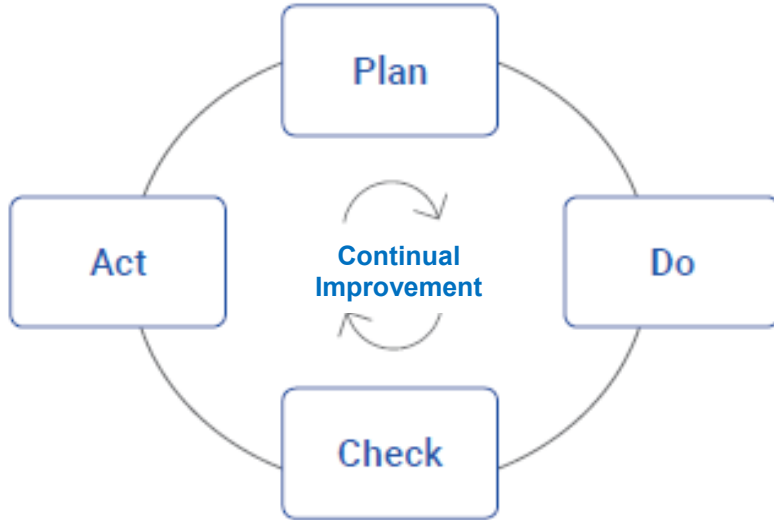
### **Corrective and Preventive Actions**

For an EMS and QMS to be effective on an on-going basis, an organization must have a systematic method for identifying actual and potential non-conformities, making corrections and taking corrective and preventive actions, preferably preventing problems before they occur. The Internal Audit process and Management Review are the two main drivers for identifying potential problems and opportunities for improvement for the LHPWSS and implementing corrective actions. Preventive actions may originate from identified opportunities for improvement as part of an audit, but also staff suggestions and discussions with management.

It is important to note that action items should not be construed as **compliance failures**, but rather an action to be undertaken which will improve the LHPWSS's overall performance.

Action items are the result of the "PLAN-DO-CHECK-ACT" continual improvement process. The identification of action items is a critical component of continual improvement and an essential element of management systems. The identification of action items should be seen as a positive element, as this drives continual improvement.

A key concept of PLAN-DO-CHECK-ACT is that it does not require nor expect 100% conformance but promotes an environment of continual improvement by identifying shortfalls, implementing corrective and preventive measures, and setting objectives and targets for improvement. Figure 1 outlines the general process.



*Figure 1: Plan-Do-Check-Act improvement process*

Since the last report to the Board, no new action items have been added to the EMS/QMS action item tracking system.

As of February 15, 2019, there are currently 22 open action items in the system. Action items are prioritized and addressed using a risk-based approach, and deadlines established given reasonable timeframes and resources that are available. Board staff are pleased with the performance of the corrective and preventive action process and have no concerns with the number of open action items.

All outstanding action items in the system are driven by continual improvement. All open action items are currently either proactive or relate to opportunities for improvement. None of the open action items relate to regulatory issues (i.e. non-compliances), management system non-conformances, or water quality issues.



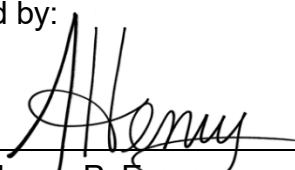
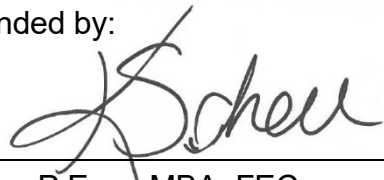
Lake Huron  
Primary Water Supply System

**Report No.:** LH-2019-02-02  
**Report Page:** 5 of 9  
**Meeting Date:** March 7, 2019  
**File No.:**

**CONCLUSION**

The Internal Audits and frequent Management Review meetings continue to effectively identify system deficiencies. The EMS and QMS for the LHPWSS continue to be suitable, adequate and effective. Activities by OCWA continue to address the need for change, and the management systems are being revised and refined as required.

This report was prepared by Erin McLeod, Quality Assurance & Compliance Manager with the assistance of Arlene Tanashi, Compliance Coordinator.

Submitted by:  Andrew Henry, P. Eng. Director, Regional Water Supply	Recommended by:  Kelly Scherr, P.Eng., MBA, FEC Chief Administrative Officer
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**Attachments:**

**Appendix A** – Environmental Compliance Internal Audit Report Summary (January 29, 2019)

**APPENDIX A: ENVIRONMENTAL COMPLIANCE INTERNAL AUDIT REPORT SUMMARY  
(JANUARY 29, 2019)**



## **ENVIRONMENTAL COMPLIANCE AUDIT**

**Audit Date:** January 29, 2019

**Internal Auditor(s):**  
Arlene Tanashi, Compliance Coordinator (Regional Water Supply)

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### **Audit Purpose:**

The purpose of the audit was to verify compliance with select environmental legislation and other compliance obligations at the Lake Huron Primary Water Supply System (LHPWSS). Internal audits ensure the progress and activity of the Environmental Management System (EMS) is tracked.

### **Auditor Qualifications:**

Arlene Tanashi has completed a three day training course in ISO 14001:2015 EMS Internal Auditing (see Certificate in Appendix A). The auditor holds an Air Water Resources Field Technology (now Environmental Technology) diploma from Fanshawe College of Applied Arts and Technology.

### **Methodology:**

The internal audit was conducted as outlined in Procedure LF-ADMIN-1600 (Compliance) as detailed in the EMS Manual. The audit checklists were generated using Nimonik Environmental Criteria Software and are attached as Appendix B of this report. An in-house Environmental Compliance Internal Audit checklist was also used and is attached as Appendix C of this report.

The audit was comprised of facility tours and an environmental compliance review of the LHPWSS. The audit was limited to the operation of the water supply system by the contracted Operating Authority, Ontario Clean Water Agency (OCWA), for the period of their operating tenure, starting July 1, 2012.

Operational documents and records maintained by the Operating Authority for the period September 15, 2016 through January 29, 2019 were reviewed in conjunction with this compliance evaluation.

**Note:**

The audit was conducted through a review of a sampling of documents, limited interviews and observations by the auditor to demonstrate compliance obligations are being met as outlined in the EMS. The review and audit should not be construed as a complete and comprehensive review of all aspects and all documents.

**Checklist criteria:**

<b>Environmental Compliance</b>	
Federal:	<p>The following Areas of Concern on the Nimonik Canada General Industry Environmental OHS Audit Template:</p> <ul style="list-style-type: none"> <li>• Environmental Emergency (SOR/2003-307)</li> <li>• Discharges to Navigable Waters (Fisheries Act)</li> <li>• Ozone Depleting Substances and Halocarbon (SOR/2016-137)</li> </ul>
Provincial:	<p>The following Areas of Concern on the Nimonik Ontario General Industry Health and Safety Audit Template:</p> <ul style="list-style-type: none"> <li>• Fire Protection and Prevention Act</li> <li>• OHS: Employers Duties (TSSA questions only)</li> <li>• OHS: Boilers and Pressure Vessels (O. Reg. 220/01)</li> </ul> <p>The following Areas of Concern on the Nimonik Ontario General Industry Environmental Audit Template:</p> <ul style="list-style-type: none"> <li>• Ozone Depleting Substances (O. Reg. 463/10)</li> <li>• Propane Storage &amp; Handling (O. Reg. 211/01 as it applies to forklifts)</li> </ul> <p>The following items had criteria from the in-house checklist:</p> <ul style="list-style-type: none"> <li>• Energy Reporting and Energy Conservation and Demand Management Plans (O. Reg. 507/18)</li> <li>• Building Code (O. Reg. 332/12) - Part 8, Septic systems</li> <li>• Watermain Disinfection Procedure</li> <li>• Waste Residuals - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act</li> </ul>
Municipal:	<p>The following items had criteria from the in-house checklist:</p> <ul style="list-style-type: none"> <li>• By-Law No. 30-2006 South Huron - Noise</li> <li>• By-Law No. 2016-066 Middlesex Centre – Noise</li> </ul>

<b>Environmental Compliance</b>	
Other:	<p>The following items had criteria from the in-house checklist:</p> <ul style="list-style-type: none"> <li>• Occupancy/License Agreements</li> <li>• Water Supply Agreements</li> <li>• Pipeline Operations and Maintenance Agreements (POMA)</li> <li>• Operating Contract/Service Agreement</li> </ul>

**Interviews Conducted:**

- Denny Rodrigues, Safety, Process & Compliance Manager, OCWA
- Greg Henderson, Sr. Operations Manager
- Randy Lieber, Sr. Operations Manager
- John Walker, Operations Manager, RWS
- Erin McLeod, Quality Assurance & Compliance Manager, RWS

**Areas Visited:**

- Lake Huron Water Treatment Plant (WTP), 711155 Bluewater Hwy, Municipality of South Huron
- McGillivray Booster Pumping Station, 4064 McGillivray Drive, Municipality of North Middlesex

**FINDINGS**

The following is a summary of the findings including non-compliance issues, opportunities for improvement and recommendations for the LHPWSS.

**Definitions:**

- A non-compliance (NC) is a non-fulfilment of a regulatory requirement.
- An opportunity for improvement (OFI) describes a regulatory requirement that can be more effectively addressed.
- A recommendation is a suggestion provided to improve the EMS, that is outside the scope of this audit.

**Positive Findings:**

- Random check of fire extinguishers, safety stations and spill kits indicated that checks had been completed monthly.
- During audit tour it was evident that improved housekeeping continues to be a priority. The old parts cleaning room in the maintenance shop has been refreshed and is now



general storage. There is evidence of improved organization in upstairs storage room over the maintenance shop.

**Regulatory Non-Compliance (NC):**

There were zero (0) non-compliances.

**Regulatory Opportunities for Improvement (OFIs):**

**OFI #1: (Building Code O. Reg. 332/12, Part 8):** Consider there was only one annual compliance inspection record able to be provided for the Arva/Komoka-Mt. Brydges Booster Pumping Station advanced septic system, which was installed in 2010. There was no information available in the Computerized Maintenance Management System (CMMS) for this asset.

**OFI #2: (OHS: Boilers and Pressure Vessels Inspection O. Reg. 220/01, S.10(7)):** Consider that the requirement for six years of record retention is not being maintained. During the audit, the owner and operator could not readily provide evidence that expired inspection/certificates are retained for six years.

**Recommendations:**

**Recommendation #1 (Building Code O. Reg. 332/12, Part 8):** Consider that no information could be provided regarding the conventional septic system at McGillivray Pumping Station (relating to when last inspected, when last pumped out, by who and where waste was disposed of). No records could be found in the CMMS for this asset.

**Recommendation #2 (Ozone Depleting Substances Refrigerants O. Reg. 463/10, S.23(7)):** Fill/repair tags are kept at each piece of equipment. Consider keeping a copy on file on the shared drive, to ensure the records are legible and protected.

**To:** Chair and Members  
Lake Huron Primary Water Supply System Board of Management

**From:** Kelly Scherr, P.Eng., MBA, FEC  
Chief Administrative Officer

**Subject:** Capital Status Report

## RECOMMENDATION

That the following actions be taken with regard to Lake Huron Primary Water Supply System capital projects:

- a) That this report regarding the status of capital projects **BE RECEIVED** for information; and,
- b) That projects LH1222 Low Lift Pump Refurbishment, LH1235 PAC System Assessment, LH1238 Roof Replacement, LH1241 Review of Inactivation Control Strategy, LH1375 Low Lift Screen Repairs, LH1379 Low Lift Surge Valves, and LH1383 Server Room Fire Suppression, LH1389 Flow Control Strategy and Storage Study **BE CLOSED**, with the surplus funds in the approximate amount of \$334,298 released to the Board's Reserve Funds; and,
- c) That project LH1902 Residue Management Facility **BE CLOSED**, it being noted that the corresponding projected debenture issuance related to this project will be reduced accordingly and surplus funds (if any) released to the Board's Reserve Funds.

## DISCUSSION

The Capital Project Status Report, attached to this report as Appendix A for the Board's information, provides a brief overview of the status of current capital projects for the Lake Huron Primary Water Supply System. This report is provided for the general information of the Board.

The status report is divided into four categories of projects, namely:

1. **Ongoing Projects:** This section provides a summary list of all projects which are funded by the Board through the Capital Budget and which are currently in-progress. Board funded projects are typically for the replacement or upgrade of existing assets, the construction of new assets, or engineering studies and assessments, as approved by the Board.



Under the terms of the Service Agreement with the contracted operating authority, the Board is also required to pay for some maintenance/repair projects. The benchmark used in the operating contract is that if the value of the material and any contracted labour is over \$30,000, the project is considered Capital Maintenance and the contracted operating authority would fund the first \$30,000, with the balance funded by the Board. Accordingly, the Board maintains an annual “fund” within the Board’s capital budget to pay for these projects as they arise.

- 2. **Completed Projects - Release Surplus to Reserve Funds:** This section provides a summary list of all projects which are presently completed, but do not require additional funds from that budgeted. Should the Board approve the closure of the listed projects, it is the recommendation of staff to release the surplus funds, if any, to the Reserve Fund.

**Completed Projects – Reduce Authorized Debt:** In the case where the project is funded through the issuance of a debenture, should the Board approve the closure of the listed project it is the recommendation of staff to reduce the previously authorized but unissued debt for the project(s).

- 3. **Completed Projects - Additional Funding Required:** This section provides a summary list of all projects which are presently completed, but require additional funds from that originally approved. Should the Board approve the closure of the listed projects, it is the recommendation of staff to provide the required additional funding from the Board’s Reserve Fund.

Submitted by:	Recommended by:
Andrew Henry, P. Eng. Director, Regional Water Supply	Kelly Scherr, P.Eng., MBA, FEC Chief Administrative Officer

**Attachments:** Capital Project Status Summary

**APPENDIX A: CAPITAL PROJECT STATUS SUMMARY**

**A.1 Ongoing Capital Projects**

PROJECT NO.	PROJECT	APPROVED BUDGET	EXPENDED TO DATE *	STATUS
LH1202	Meter Replacement & Upgrades	\$175,000	\$164,184	Ongoing multi-year project
LH1203	WTP HVAC Replacement	\$7,500,000	\$7,307,730	Project complete. Minor deficiencies to be addressed.
LH1207	Concrete Crack Injection	\$90,000	\$36,042	Ongoing multi-year project
LH1208	Drain Pipe Replacement	\$40,000	\$37,106	Multi-year project. Project ongoing
LH1209	HLP#5 Valve Replacement	\$365,000	\$74,801	Project ongoing
LH1216	Closed Loop Chlorine Control	\$100,000	\$10,914	Project ongoing
LH1218	Master Key System	\$100,000	\$87,386	Project ongoing
LH1219	Filter Backwash Turbidity Meters	\$250,000	\$23,889	Project ongoing
LH1227	Pipe Conveyance System	\$30,000	\$0	Project to be initiated
LH1229	Security Upgrades	\$250,000	\$15,681	Project ongoing
LH1230	High Lift Pump Replacement	\$13,557,000	\$98,685	Project ongoing
LH1232	Arva Victaulic Repair	\$50,000	\$19,177	Project ongoing
LH1233	Control Panel/Wire Cleanup	\$25,000	\$16,886	Project complete. Awaiting final invoice
LH1234	HVAC Smoke Alarm	\$100,000	\$0	Project to be initiated
LH1236	Raw Water Flow Meter Replacement	\$125,000	\$13,373	Project ongoing
LH1237	RMF Settling Plate Study	\$50,000	\$0	Project initiated
LH1239	Sluice Gate Repairs	\$150,000	\$52,460	Project ongoing
LH1240	Travelling Screen #1 Replacement	\$500,000	\$417,033	Project complete. Awaiting final invoice
LH1242	Hydraulic/Transient Model Update and Monitoring	\$110,000	\$0	Project initiated
LH1244	Building Exterior Condition Assessment	\$85,000	\$0	Project to be initiated



PROJECT NO.	PROJECT	APPROVED BUDGET	EXPENDED TO DATE *	STATUS
LH1255	Crop Yield Monitoring – 2012 Rupture	\$110,000	\$444	Project ongoing
LH1257	Chamber 63 Access Culvert	\$150,000	\$0	Project initiated
LH1260	Flash Mixer Upgrade	\$265,000	\$0	Project initiated
LH1261	PLC Replacements	\$40,000	\$0	Project to be initiated
LH1303	Easement Maintenance	\$185,000	\$27,971	Project ongoing
LH1316 -18	Annual Maintenance (2018)	\$125,000	\$2,403	Annual program
LH1316 -19	Annual Maintenance (2019)	\$125,000	\$0	Annual program
LH1317	Distressed Pipe Replacement	\$350,000	\$45,792	Project ongoing
LH1327	Strathroy Transmission Main	\$22,000,000	\$14,838,658	Project complete. Final Invoice to be issued.
LH1332	Electrical Systems Upgrade	\$7,495,000	\$6,526,716	Project complete. Awaiting final invoice
LH1338	Huron WTP Instrumentation	\$685,000	\$629,476	Annual program
LH1341	Sodium Hydroxide Metering Pump	\$75,000	\$0	Project initiated
LH1347	Pipeline Chamber Upgrades	\$500,000	\$382,075	Project ongoing
LH1353	WTP Modifications	\$350,000	\$92,700	Multi-year project
LH1369	Filter Media Rebuild	\$2,105,000	\$1,655,364	Ongoing multi-year project
LH1373	IT Security Upgrades	\$600,000	\$457,148	Project ongoing
LH1380	Clarifier Upgrades	\$120,000	\$5,031	Project ongoing
LH1382	Annual IT Mtce. Allowance	\$200,000	\$177,408	Project ongoing
LH1384	Filter Rate Meters	\$200,000	\$0	Project initiated
LH1385	1996 Crop Yield Monitoring	\$450,000	\$284,225	Project ongoing
LH1386	Chemical Delivery Panel	\$75,000	\$16,422	Project ongoing
LH1387	B Line Road Monitoring Station	\$40,000	\$82,436	Project complete
LH1388	Coagulation Optimization Study	\$50,000	\$0	Project on hold
LH1428	Distressed Pipe 11-5 Repair	\$300,000	\$256,108	Project completed. Awaiting final invoice



PROJECT NO.	PROJECT	APPROVED BUDGET	EXPENDED TO DATE *	STATUS
LH1900	Record Drawings & Documents	\$406,000	\$392,313	Ongoing multi-year project
LH2019-19	Master Water Plan	\$135,000	\$0	Project initiated
<b>TOTAL</b>		<b>\$60,788,000</b>	<b>\$34,248,037</b>	

**A.2(a) Completed Projects – Release Surplus to Reserve Funds (\$334,298)**

PROJECT NO.	PROJECT	APPROVED BUDGET	EXPENDED TO DATE *	STATUS
LH1222	Low Lift Pump Refurbishment	\$270,000	\$164,820	Project completed
LH1235	PAC System Assessment	\$50,000	\$35,428	Project completed
LH1238	Roof Replacement	\$200,000	\$174,633	Project completed
LH1241	Review Inactivation Control Strategy	\$30,000	\$26,036	Project completed
LH1375	Low Lift Screen Repairs	\$540,000	\$403,959	Project completed
LH1379	Low Lift Surge Valves	\$140,000	\$99,253	Project completed
LH1383	Server Room Fire Suppression	\$30,000	\$22,931	Project completed
LH1389	Flow Control Strategy & Storage Study	\$25,000	\$23,642	Project completed
<b>TOTAL</b>		<b>\$1,285,000</b>	<b>\$950,702</b>	

**A.2(b) Completed Projects – Reduce Authorized Debt**

PROJECT NO.	PROJECT	APPROVED BUDGET	EXPENDED TO DATE *	STATUS
LH1902	Residue Management Facility	\$24,350,000	\$18,665,092	Project completed
<b>TOTAL</b>		<b>\$24,350,000</b>	<b>\$18,665,092</b>	

**A.3 Completed Projects – Additional Funding Required (\$0)**

PROJECT NO.	PROJECT	APPROVED BUDGET	EXPENDED TO DATE *	STATUS
<b>TOTAL</b>		<b>\$ 0</b>	<b>\$ 0</b>	

Notes:

\* Expended as of 15 February 2019

**To:** Chair and Members  
Lake Huron Primary Water Supply System Board of Management

**From:** Kelly Scherr, P.Eng., MBA, FEC  
Chief Administrative Officer

**Subject:** London Hydro Occupancy Agreement Renewal

## RECOMMENDATION

That the Board of Management for the Lake Huron Water Supply System approve the occupancy Agreement renewal with London Hydro for the term of April 1, 2019 to March 31, 2024, and authorize the Board Chair and Chief Administrative Officer to execute the renewal agreement substantially in the form attached to this report.

## PREVIOUS AND RELATED REPORTS

December 5, 2013 London Hydro Occupancy Agreement  
March 12, 2009 London Hydro Occupancy Agreement

## BACKGROUND

Starting in 2009, London Hydro was undertaking the implementation of a hydro metering system upgrade which incorporated a radio-based automatic reading system using stationary radio-read equipment. Several radio transmitter/receiver stations are distributed throughout the City of London which are used to automatically read the various meters of London Hydro customers.

London Hydro entered in to an Occupancy Agreement with the Lake Huron Water Supply System for a ten (10) year term for London Hydro's occupancy of the water system's communication tower located at the Terminal Reservoir site near the community of Arva. The term of the occupancy agreement ends March 31, 2019.

The original agreement includes a renewal clause whereby, at London Hydro's request, the Occupancy Agreement may be renewed for a further five (5) year term at the discretion of the Board. The renewal would be under the same terms and conditions as the original Occupancy Agreement.

## DISCUSSION

In accordance with the 2009 Occupancy Agreement, London Hydro requested the Board's consideration for a renewal of the agreement for an additional five (5) year term. The proposed renewal term would become effective April 1, 2019 and terminate March 31, 2024.




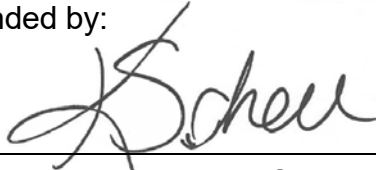
*Lake Huron*  
Primary Water Supply System

<b>Report No.:</b> LH-2019-02-04a
<b>Report Page:</b> 2 of 5
<b>Meeting Date:</b> March 7, 2019
<b>File No.:</b> H76/2019

The annual License Fee set in the Occupancy Agreement is one thousand five hundred dollars (\$1,500) per year, plus applicable taxes.

**CONCLUSION**

It is the recommendation of Board staff that the Board approve the Occupancy Agreement renewal with London Hydro for the term of April 1, 2019 to March 31, 2024, and authorize the Board Chair and Chief Administrative Officer to execute the renewal agreement substantially in the form attached to this report.

Submitted by:  _____ Andrew Henry, P. Eng. Director, Regional Water Supply	Recommended by:  _____ Kelly Scherr, P.Eng., MBA, FEC Chief Administrative Officer
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Attachments: Appendix A – Draft London Hydro Occupancy Renewal Agreement



**APPENDIX A: DRAFT LONDON HYDRO OCCUPANCY RENEWAL AGREEMENT**

**RENEWAL LICENSE AGREEMENT**

THIS RENEWAL AGREEMENT is made in triplicate on the \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

BETWEEN:

**THE JOINT BOARD OF MANAGEMENT  
OF THE LAKE HURON PRIMARY WATER SUPPLY SYSTEM**

Hereinafter called the "Licensor"

AND:

**LONDON HYDRO INC.**

Hereinafter called the "Licensee"

WHEREAS the Licensor and Licensee entered into a License Agreement dated the \_\_\_\_ day of 9 July, 2015 for Licensed Premises more particularly described therein located at the Arva Terminal Reservoir and Pump Station #4, municipally located at 13964 Medway Road in the Municipality of Middlesex Centre, Ontario (the "License Agreement");

AND WHEREAS the Licensor and Licensee wish to renew the License Agreement on the following terms.

Now therefore, it is agreed between the parties as follows:

1. The Licensor offers to renew the License Agreement for a further term of FIVE (5) years, commencing on April 1, 2019 and terminating on March 31, 2024 (the "Renewal Term").

The Term may be renewed for a further (5-year) period on the same terms, except the License fee. The Licensor shall provide a Renewal Agreement at least Six (6) months prior to the end of the current Term in the form set out as Schedule "B" including the License Fee applicable for the following 5 year period. The Licensor may provide acceptance by signing and returning the Renewal Agreement at least 30 days prior to the end of the present Term, failing which the License herein shall terminate at the end of the Term.



*Lake Huron*  
Primary Water Supply System

<b>Report No.:</b> LH-2019-02-04a
<b>Report Page:</b> 4 of 5
<b>Meeting Date:</b> March 7, 2019
<b>File No.:</b> H76/2019

2. The Licensee shall pay to the Licensor an annual license fee of One Thousand Five Hundred Dollars (\$1,500.00) together with applicable HST. The license fee shall be payable in advance and is due annually on the 1<sup>st</sup> day of April in each year of the renewal term or part thereof commencing April 1, 2019.
3. All notices and demands provided for in this Renewal Agreement and the Licence Agreement shall be in writing and delivered personally or by facsimile or mailed by either registered or signature mail and postage prepaid to either party as follows:

To the Licensor: Lake Huron Primary Water Supply System  
235 North Centre Road, Suite 200  
London, ON N5X 4E7  
Fax: (519) 474-0451  
Attention: Andrew J. Henry, P. Eng.  
Director, Regional Water Supply

To the Licensee: London Hydro Inc.  
111 Horton Street  
P.O. Box 2700  
London, Ontario  
N6A 4H6  
Fax: (519) 661-5838  
Attention: Jelena Kosarac.  
Director IT Infrastructure

The time of giving of notice by either registered or signature mail shall be conclusively deemed to be the third business day after the day of such mailing. Such notice, if personally delivered or if delivered by facsimile, shall be conclusively deemed to have been given and received at the time of such delivery

4. All other terms and conditions of the License Agreement shall apply to the Renewal Term.



*Lake Huron*  
Primary Water Supply System

<b>Report No.:</b> LH-2019-02-04a
<b>Report Page:</b> 5 of 5
<b>Meeting Date:</b> March 7, 2019
<b>File No.:</b> H76/2019

5. This offer may be accepted by the Licensee by delivering a signed copy of this Renewal Agreement to the Licensor on or before March 31, 2019, and upon acceptance form this Renewal Agreement.

DATED the \_\_\_\_\_ day \_\_\_\_\_, 20\_\_\_\_.

**THE JOINT BOARD OF MANAGEMENT LAKE HURON WATER SUPPLY SYSTEM**

\_\_\_\_\_  
Cathy Burghardt-Jesson  
Chair, Board of Management

\_\_\_\_\_  
Kelly Scherr, P.Eng., MBA, FEC  
Chief Administrative Officer

I/we have the authority to bind the Lake Huron Primary Water Supply System

DATED the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

**LONDON HYDRO Inc.**

\_\_\_\_\_  
Vinay Sharma, CEO

I/we have the authority to bind London Hydro Inc.

DRAFT

<p><b>To:</b> Chair and Members Lake Huron Primary Water Supply System Board of Management</p> <p><b>From:</b> Kelly Scherr, P.Eng., MBA, FEC Chief Administrative Officer</p> <p><b>Subject:</b> LH1260 Flash Mixer Upgrade – Award</p>
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**RECOMMENDATION**

That the following actions be taken with respect to the Lake Huron Primary Water Supply System Master Water Plan Update:

- a) That the Board of Management for the Lake Huron Primary Water Supply System **ACCEPT** the proposal from Jacobs in the amount of \$104,599.00, including contingency and excluding HST, having submitted a proposal which meets the Request for Proposal requirements and evaluated as having the best value;
- b) The Lake Huron Primary Water Supply System Board of Management **AUTHORIZE** the Chair and Chief Administrative Officer to execute a consulting services agreement with Jacobs for the completion of project LH1260 Flash Mixer Upgrade and related engineering work for the Lake Huron Primary Water Supply System coagulation system; and,
- c) The Board of Management **RECEIVE** this report regarding the status of the LH1260 Flash Mixer Upgrade project for information.

**PREVIOUS AND RELATED REPORTS**

- March 5, 2015      Water Quality Facility Plan
- October 4, 2018      2019 Current Operating & Capital Budgets

**BACKGROUND**

The proposed project, LH1260 Flash Mixer Upgrade, includes the replacement of the coagulant dosing system equipment and flash mixers to improve the treated water quality and overall plant performance at higher plant flows. It is anticipated that the completion of this project could decrease chemical cost by as much as than \$100,000 per year.

Multiple studies, including the Pre-Treatment System Optimization Study at the Lake Huron WTP (CH2M, 2017), have identified the inefficient dispersion and mixing of the coagulant

chemicals at the Lake Huron Water Treatment Plant (LHWTP) as an issue, resulting in over-utilization of chemicals to achieve the necessary treated water quality.

The water system's Water Quality Facility Plan further showed that the Lake Huron plant is capable of effectively treating 260 to 290 MLD with source water turbidity up to 10 NTU before degraded treated water quality is apparent. This is well below the plant's rated pumping capacity of 340MLD.

The plant's source water, Lake Huron, frequently experiences turbidities above 100NTU during significant storms. This would mean that as the plant flow approaches 260MLD, the treatment systems would struggle to achieve the desired drinking water quality supplied to our benefiting municipalities.

The Pre-Treatment Study completed in May 2017 made several recommendations for consideration which would contribute to improved coagulation system performance, including:

- Relocation of the injection point for the coagulant chemicals, likely requiring a new coagulant dosing system;
- Installation of a deflector plate flash mixer inlet, deflecting the raw water flow and improving chemical mixing; and,
- Replacement of the flash mixers for more efficient and effective chemical mixing

The purpose of the engineering assignment is to provide all necessary detailed design and tender document preparation services may. The initial engineering assignment will focus on the replacement of the flash mixers and coagulant dosing system to improve mixing and coagulation chemistry.

## DISCUSSION

In December 2018, Board staff released Request for Proposal (RFP) #18-59 that invited consulting engineering firms to submit a proposal for the above noted assignment. Three (3) proposals were received by the closing date of January 24, 2019. The proposals were reviewed by Board staff and evaluated against the requirements of the Request for Proposals document.

Based on this evaluation, the proposal from Jacobs was deemed to have a best value and was selected by Board staff as the recommended proposal. The Request for Proposal process was undertaken with assistance provided by the Purchasing Division of the City of London, and conforms with the procurement policy of the Board as well as the City of London (*used as a guide*).

The overall project budget for this project was approved by the Board at \$265,000 in the 2019 Capital Budget. Jacob's estimate for the fees associated with this assignment is \$104,599.00, including contingency and excluding HST, based on their current work plan. It is therefore anticipated that the total cost for this project will remain below budget.



Lake Huron  
Primary Water Supply System

<b>Report No.:</b> LH-2019-02-05
<b>Report Page:</b> 3 of 3
<b>Meeting Date:</b> March 7, 2019
<b>File No.:</b> LH1260

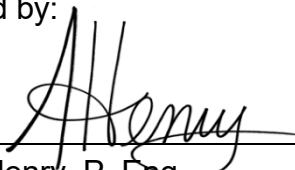
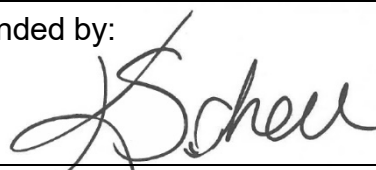
**CONCLUSION**

This Flash Mixer (Coagulant System) Upgrade will improve pre-treatment efficiency and effectiveness at the Lake Huron WTP, as previously identified by the 2017 Pre-Treatment System Optimization Study and the 2015 Water Quality Facility Plan. The goal of this project is to improve treatment performance and ensure that treated water quality is not degraded at the higher plant flows.

It is anticipated that this project could decrease chemical cost by as much as \$100,000 per year as a result of efficiency improvements.

In accordance with the Request for Proposal process, Jacobs was deemed to have a best value and staff recommends that the Board accept the proposal to undertake the LH1260 Flash Mixer Upgrade.

Information for this report was provided by Carolyn de Groot, Process Engineer.

Submitted by:  _____ Andrew Henry, P. Eng. Director, Regional Water Supply	Recommended by:  _____ Kelly Scherr, P.Eng., MBA, FEC Chief Administrative Officer
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