

Agenda

Lake Huron Primary Water Supply System Joint Board of Management

The 1st Meeting of the Lake Huron Primary Water Supply System Joint Board of Management
December 5, 2019, 2:00 PM
Committee Room #5

	Pages
1. Call to Order	
1.1 Disclosures of Pecuniary Interest	
2. Adoption of Minutes	
2.1 Minutes of the 4th Meeting held on Thursday, October 3, 2019	3
3. Consent Items	
3.1 Kelly Scherr, Chief Administrative Officer - Quarterly Compliance Report (3rd Quarter 2019: July - September)	8
3.2 Kelly Scherr, Chief Administrative Officer - Environmental Management System and Quality Management System	11
3.3 Kelly Scherr, Chief Administrative Officer - Quarterly Operating Financial Status Report - 3rd Quarter 2019	32
4. Items for Discussion	
4.1 Kelly Scherr, Chief Administrative Officer - Computerized Maintenance Management System Replacement	35
5. Deferred Matters/Additional Business	
6. Confidential	
6.1 Land Acquisition/Position, Plan, Procedure, Criteria or Instruction for Negotiation Purposes	
<p>A matter pertaining to a proposed acquisition of land, including communications necessary for that purpose, and a position, plan, procedure, criteria or instruction, to be applied to any negotiations carried on to be carried on by or on behalf of the Board.</p>	

6.2 Land Acquisition/Position, Plan, Procedure, Criteria or Instruction for Negotiation Purposes

A matter pertaining to a proposed acquisition of land, including communications necessary for that purpose, and a position, plan, procedure, criteria or instruction, to be applied to any negotiations carried on to be carried on by or on behalf of the Board.

7. Upcoming Meeting Dates

March 5, 2020

June 4, 2020

October 8, 2020

December 3, 2020

8. Adjournment

Lake Huron Primary Water Supply System Report

The 4th Meeting of the Lake Huron Primary Water Supply System Joint Board of Management
October 3, 2019

Attendance: Meeting held on Thursday, October 3, 2019 at the London City Hall, commencing at 2:00 PM.

PRESENT: C. Burghardt-Jesson (Chair), A. DeViet, D. Faubert, J. Fergusson, A. Hemming, S. Hillier, S. Lehman, J. Vanderheyden, P. van Meerbergen, J. Wilcox and B. Willard and J. Bunn (Committee Secretary)

ALSO PRESENT: R. Aycock (RWS), T. Bender (OCWA), D. Gibson, G. Henderson (OCWA), A. Henry, E. McLeod (RWS), L. McVittie (RWS), C. Murchland (OCWA), D. Rodrigues (OCWA), B. Tully (OCWA)

1. Call to Order

1.1 Disclosure of Pecuniary Interest

That it BE NOTED that no pecuniary interests were disclosed.

2. Adoption of Minutes

2.1 Minutes of the 3rd Meeting held on Thursday June 6, 2019

HILLIER AND HEMMING

That the minutes of the 3rd meeting of the Lake Huron Primary Water Supply System Board of Management, held on June 6, 2019, **BE NOTED AND FILED. CARRIED**

Motion Passed

3. Consent Items

3.1 Quarterly Compliance Report (2nd Quarter 2019: April - June)

HILLIER AND WILLARD

That, on the recommendation of the Chief Administrative Officer, the report dated October 3, 2019, with respect to the general, regulatory and

contractual obligations of the Lake Huron Primary Water Supply System, for April to June 2019, **BE RECEIVED. CARRIED**

Motion Passed

3.2 Environmental Management System and Quality Management System
HILLIER AND WILLARD

That, on the recommendation of the Chief Administrative Officer, the report dated October 3, 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

3.3 Capital Status Report

HILLIER AND WILLARD

That, on the recommendation of the Chief Administrative Officer, the following actions be taken with respect to the report dated October 3, 2019, with respect to Lake Huron Primary Water Supply System capital projects:

- a) projects LH1203 WTP HVAC Replacement, LH1208 Drain Pipe Replacement, LH1218 Master Key System, LH1237 RMF Settling Plate Study, LH1240 Travelling Screen #1 Replacement, and LH1316-18 Annual Maintenance (2018) **BE CLOSED**, with the surplus funds in the approximate amount of \$264,040 released to the Board's Reserve Funds;
- b) projects LH1202 Meter Replacement & Upgrades, and LH2034 Flocc Room Railing Replacement **BE CLOSED**, with additional funds in the approximate amount of \$21,351 be drawn from the Asset Replacement Reserve Fund; and,
- c) the above-noted report **BE RECEIVED. CARRIED**

Motion Passed

3.4 Quarterly Operating Financial Status Report - 2nd Quarter 2019

HILLIER AND WILLARD

That, on the recommendation of the Chief Administrative Officer, the report dated October 3, 2019, with respect to the Quarterly Operating Financial Status of the Lake Huron Primary Water Supply System, **BE RECEIVED. CARRIED**

Motion Passed

4. Items for Discussion

4.1 2020 Operating and Capital Budgets

VAN MEERBERGEN AND FERGUSON

That, on the recommendation of the Chief Administrative Officer, the following actions be taken by the Lake Huron Water Supply System with respect to the report dated October 3, 2019, related to the 2020 Operating and Capital Budgets:

- a) the 2020 Operating Budget, in the total amount of \$22,798,000, as included in the above-noted report, **BE APPROVED**;
- b) the 2020 Capital Budget, in the total amount of \$4,915,000, as included in the above-noted report, **BE APPROVED**;
- c) the 2021 to 2029 Capital Forecast **BE RECEIVED**;
- d) the 2020 rate for water of \$0.4992 per cubic meter **BE APPROVED**; and,
- e) the 2018 to 2024 Flow and Financial Analysis **BE RECEIVED. CARRIED**

Motion Passed

4.2 LH1230 High Lift Pump Replacements Project Pump Purchase

HILLIER AND LEHMAN

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 pump fabrication proposal from KSB Pumps Inc., **BE ACCEPTED**;
- b) a Purchase Order **BE ISSUED** to KSB Pumps Inc., in the amount of \$3,339,487.00, excluding HST, for pump fabrication associated with the above-noted project; it being noted that upon execution of the subsequent construction contract the Purchase Order for the supply of the pumps will be novated to the general contractor upon the issuance of an acceptable Purchase Order by the general contractor to KSB Pumps Inc.; and,
- c) the report dated October 3, 2019, with respect to this matter, **BE RECEIVED. CARRIED**

Motion Passed

4.3 McGillivray Radio Tower Occupancy Agreement - Licence Extension
VANDERHEYDEN AND HEMMING

That, on the recommendation of the Chief Administrative Officer, the Chair of the Joint Board of Management for the Lake Huron Primary Water Supply System and the Chief Administrative Officer **BE AUTHORIZED** to execute a License Extension and Amending Agreement, as appended to the report dated October 3, 2019, with Her Majesty the Queen in right of Ontario, as represented by the Minister of Government and Consumer Services, for the occupancy of their radio equipment and tower at the McGillivray Reservoir site. **CARRIED**

Motion Passed

5. Deferred Matters/Additional Business

5.1 (ADDED) 71111 Bluewater Highway - Termination of Licence Agreement
HILLIER AND HEMMING

That, on the recommendation of the Chief Administrative Officer, the Lake Huron Water Supply System administration **BE DIRECTED** to issue a Notice of Termination of the 2007 Licence Agreement with 1342936 Ontario Limited, effective December 31, 2020. **CARRIED**

Motion Passed

6. Confidential

FERGUSSON AND WILCOX

That the Lake Huron Primary Water Supply System Joint Board of Management convene, In Closed Session, for the purpose of considering the following:

6.1 Land Acquisition/Position, Plan, Procedure, Criteria or Instruction for Negotiation Purposes

A matter pertaining to a proposed acquisition of land, including communications necessary for that purpose, and a position, plan, procedure, criteria, or instruction, to be applied to any negotiations carried on or to be carried on by or on behalf of the Board.

Motion Passed

The Lake Huron Primary Water Supply System Joint Board of Management convened, In Closed Session, from 3:15 PM to 3:40 PM.

7. Next Meeting Date

December 5, 2019

8. Adjournment

The meeting adjourned at 3:43 PM.

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

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

Subject: Quarterly Compliance Report (3rd Quarter 2019: July - September)

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 was one Adverse Water Quality Incident reported in the 3rd quarter of 2019.

EXECUTIVE SUMMARY

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

The Water Quality Quarterly Report for the period of July 1 – September 30, 2019 was posted on the water system’s website at <https://huronelginwater.ca/wp-content/uploads/2019/10/2019-Q3-Huron-Final.pdf>.

There was one Adverse Water Quality Incident (AWQI) reported by the operating authority and 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 July 1 – September 30, 2019 was completed by the operating authority, and is posted on the Water Systems' website at <https://huronelginwater.ca/wp-content/uploads/2019/10/2019-Q3-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 Incident (AWQI): There was one AWQI reported by the operating authority and third-party accredited laboratory during this quarter. On August 7, 2019 the third-party accredited laboratory notified the operating authority that a treated water sample taken on August 6, 2019 had tested positive for both E. Coli and total coliforms. The operating authority notified the area Health Units and Ministry of the Environment, Conservation and Parks (MECP) as required by regulation. The corrective action was to resample and test. All resample results were clear, and the incident was considered to be resolved.

In this case it is unlikely that there was an actual water quality issue, as the sample had a free chlorine residual of 1.26 mg/L at the time of sampling, which is well above the minimum acceptable level. E. coli and coliform bacteria cannot survive in chlorinated water, therefore it is suspected that post-sampling contamination occurred. The resampling results support this conclusion. The microbiological testing procedure is sensitive, and accidental sample contamination can occur through operator or laboratory error, despite the specific procedures and precautions being adhered to while processing samples.

The operating authority completed a thorough investigation into the incident. During the investigation it was discovered that the contingency procedure for handling AWQIs was not followed by the operating authority. The operating authority has since implemented additional corrective actions to address the findings and mitigate the potential for this error to occur in future. The incident will be subject to further review by the MECP during their next inspection.

Compliance Inspections: There were no compliance inspections conducted during the reporting period. The MECP is scheduled to conduct a physical inspection of the LHPWSS on November 19-20, 2019. When the final inspection report is received from the MECP it will be the subject of a future report to the Board.



Lake Huron
Primary Water Supply System

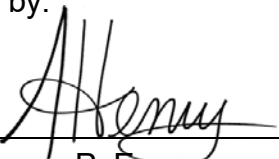
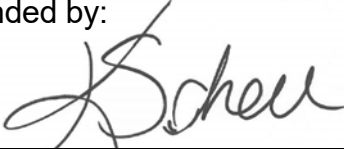
Report No.: LH-2019-05-01
Report Page: 3 of 3
Meeting Date: December 5, 2019
File No.:

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 2019 third quarter Contract Report was received from OCWA on October 28, 2019 and was scheduled to be discussed at the quarterly administration meeting between Board staff and OCWA on November 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.

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

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

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

Subject: Environmental Management System and Quality Management System

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).

A Management Review meeting was held on September 10, 2019. The meeting minutes are attached to this report as Appendix A for the information of the Board.

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.

A Compliance Internal Audit was conducted on August 14, 2019 and a summary of the audit findings is included in Appendix B of this report. There were two (2) non-compliances and zero (0) opportunities for improvement identified during the audit.

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.

A QMS Systems Audit (Stage 1) was conducted off-site on September 17, 2019. The Executive Overview of the audit findings is included as Appendix C of this report. There were zero (0) non-conformances and two (2) opportunities for improvement identified. These will be discussed at the next Management Review meeting scheduled for December 3, 2019 and action items will be assigned. A copy of the complete external audit report is available from the Board's administration office in London upon request.

The annual on-site external audits for the EMS/QMS have been scheduled for November 20-22, 2019 and the results will be included in a future report to the Board.

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.

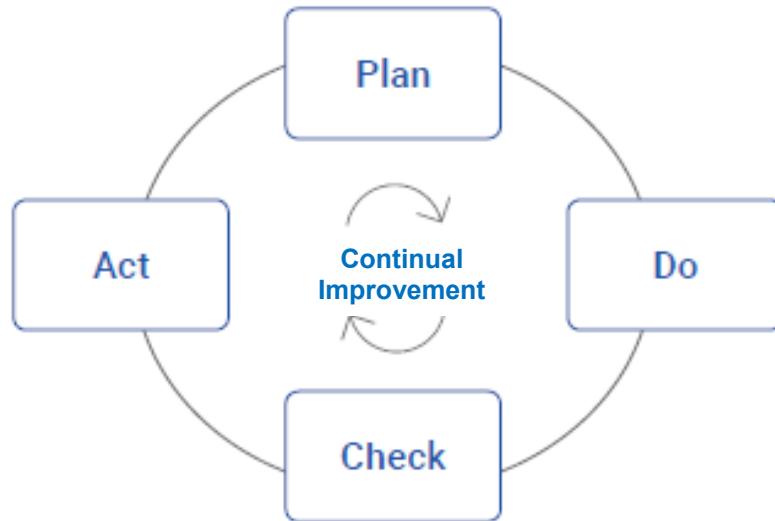


Figure 1: Plan-Do-Check-Act improvement process

Since the last report to the Board, the following summarizes new action items that have been added to the EMS/QMS action item tracking system:

- Three (3) new action items were added as a result of the EMS Internal Audit conducted on June 4-5, 2019.
- Two (2) new action items were added as a result of the Compliance Audit conducted on August 14, 2019.
- One (1) new proactive action item was added as a result of the September 10, 2019 Management Review meeting.
- Six (6) new action items were added as a result of the Management of Change process.

As of November 13, 2019, there are currently 10 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-2019-05-02
Report Page: 5 of 21
Meeting Date: December 5, 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

Attachments:

Appendix A – Management Review Meeting Minutes (September 10, 2019)

Appendix B – Compliance Audit Report Summary (August 14, 2019)

Appendix C – QMS Systems Audit (Stage 1) External Audit Report Executive Overview (September 17, 2019)

APPENDIX A: MANAGEMENT REVIEW MEETING MINUTES (SEPTEMBER 10, 2019)

Lake Huron & Elgin Area Primary Water Supply Systems EMS/QMS Management Review	
Date	September 10, 2019
Time	9:00 am –12:30 pm
Location	Regional Water Supply Boardroom
Attendees	Andrew Henry (RWS), Erin McLeod (RWS), Blair Tully (OCWA), Denny Rodrigues (OCWA), Simon Flanagan (OCWA), Greg Henderson (OCWA), Arlene Tanashi (RWS)
Regrets	
C.C.	

N.B.: Management Review meetings are held in a combined format for both the Lake Huron Primary Water Supply System (LHPWSS) and the Elgin Area Primary Water Supply System (EAPWSS).

-----Meeting Notes-----

1. Review and approval of previous meeting minutes – June 17, 2019

Revision 1 of the minutes are posted to SharePoint. The minutes were approved. No changes required.

OCWA provided an update on several action items from the past meeting. The full-scale test of the backfeed procedure from London to EAPWSS has been tentatively scheduled for October 15, 2019.

2. LHPWSS EMS Internal Audit (June 4-5, 2019)

The purpose of the audit was to verify conformance with the ISO 14001:2015 Environmental Management System standard for the Lake Huron Primary Water Supply System (LHPWSS). A summary of the audit findings was circulated. Zero (0) non-conformances (NC) and three (3) Opportunities for Improvement (OFIs) were noted. Discussion ensued and suggested additions and changes to action items and deadlines will be incorporated into the CAF tracking spreadsheet.

3. EAPWSS EMS Internal Audit (June 11-12, 2019)

The purpose of the audit was to verify conformance with the ISO 14001:2015 Environmental Management System standard for the Elgin Area Primary Water Supply

System (EAPWSS). A summary of the audit findings was circulated. Three (3) non-conformances (NCs) and four (4) Opportunities for Improvement (OFIs) were noted. Discussion ensued and suggested additions and changes to action items and deadlines will be incorporated into the CAF tracking spreadsheet.

4. LHPWSS Fire Safety Inspection (July 31, 2019)

The South Huron Fire Department inspector was on site at the Lake Huron Water Treatment Plant and Exeter-Hensall Pumping Station. OCWA and RWS personnel accompanied the inspector on the extensive tour of the facilities. There were zero (0) violations found. A copy of the Fire Safety Inspection Report has been uploaded to the Compliance Library in SharePoint.

5. EAPWSS Environmental Compliance Internal Audit (August 12, 2019)

The purpose of the audit was to verify compliance with relevant environmental legislation and other compliance obligations at the EAPWSS. A summary of the audit findings was circulated. Zero (0) non-compliances (NC) and zero (0) Opportunities for Improvement (OFI) were noted.

6. Incidents of Adverse Drinking Water Tests – LHPWSS (August 6, 2019)

The Adverse Water Quality Incident (AWQI) was reviewed and discussed. The AWQI involved adverse laboratory results reported by the third-party accredited laboratory; namely bacteriological analysis of the August 6, 2019 treated water sample which was positive for E-coli (1) and Total Coliform (1). All resample results were non-detect. OCWA conducted a thorough investigation into the AWQI but has not yet formally documented their review on a Corrective Action Form (CAF). In addition, OCWA undertook a full review of all water quality parameters from Supervisory Control and Data Acquisition (SCADA) around the sample time period of the reported adverse sample. All requirements were being met. It is suspected the AWQI is non-representative of actual results and was likely caused by post-sampling contamination. The full review will be documented on the CAF.

Two non-compliances occurred during the subsequent handling (i.e. incident response) for the AWQI. A Corrective Action Form and root cause analysis were completed for the handling of the AWQI, with appropriate corrective actions identified. The action items have been added to the tracking spreadsheet for follow up. The AWQI will be included in the next Quarterly Compliance Report to the Board (3rd Quarter 2019: July – September).

Action Item (LH): An additional Corrective Action Form is to be completed for the AWQI August 6, 2019 to identify the root cause of why there were positive

bacteriological results, and any associated corrective actions. Greg Henderson.
Deadline: September 30, 2019.

7. LHPWSS Environmental Compliance Internal Audit (August 14, 2019)

The purpose of the audit was to verify compliance with relevant environmental legislation and other compliance obligations at the LHPWSS. A summary of the audit findings was circulated. Two (2) non-compliances (NCs) and zero (0) Opportunities for Improvement (OFI) were noted. Discussion ensued and suggested additions and changes to action items and deadlines will be incorporated into the tracking spreadsheet.

8. Changes in External and Internal Issues relevant to the EMS (LH & EA)

A revised table was circulated identifying updated information for review. Discussion ensued and Top Management approved suggested changes and additions to be incorporated.

Issues discussed:

- Employee engagement of staff has increased evidenced by the 100% completion of the OCWA survey and participation in the follow up meeting. There is ownership and pride.
- Staff turnover and employee retention – EAPWSS has filled the Mechanic position. Stability has increased.
- For the first time OCWA has an operator that is competent to operate in both systems.
- Water demand is increasing at a rate greater than projected (2% vs 4%).
- Current political climate has reduced/cut funding to certain provincial programs (e.g. Drinking Water Surveillance Program, Conservation Authorities).
- Increased costs noted in chemicals and trucking and increased tariffs at the border between U.S. and Canada.
- Cutbacks of incentives and funding from federal and provincial government.

9. Changes in Needs and Expectations of Interested Parties (LH & EA)

A revised table was circulated identifying updated information for review. Discussion ensued and Top Management approved suggested changes and additions to be incorporated.

Future considerations discussed:

- First Nations may become an interested party in future; at this point no formal discussions regarding the water systems have taken place.
- Board restructuring under the Municipal Act.
- Existing Boards could enter into Service Level Agreements (SLA) with City of London to redefine the Administering Municipality.

10. Changes in Significant Environmental Impacts (LH & EA)

Significant changes to environmental impacts are captured during:

- The annual review of the EMS Aspects and Impacts Assessment document.
- The on-going Management of Change process.
- The annual review of energy consumption and chemical consumption trends. Distinct changes in the trends are noted at that time, and any activities/projects that may have contributed to this.
- The project management process. This includes the change management process, design considerations for environmental/resource efficiencies, life cycle perspective, and risk assessment.

Notable changes for 2019 include:

- Elgin electricity consumption trend is improving in 2019, mainly attributed to pipeline A decommissioning in April 2019.
- As noted in the Energy Conservation and Demand Management Plan, Huron electricity consumption is decreasing while natural gas consumption has significantly increased.
- LHPWSS Migratory Bird Damage or Danger Permit – new impact to migratory birds (seagulls).
- The EMS Aspects & Impacts Assessments have been clarified and expanded with respect to air emissions.
- Increasing lake levels have potential to impact water quality, increase erosion of shoreline, decrease beach area.

11. Changes in Risks and Opportunities (LH & EA)

The previous discussions regarding the management of change process, environmental impacts, external and internal issues and interested parties all considered changes in risks and opportunities.

Additional opportunities exist through the project management process, business case and risk mitigation strategy.

Security enhancements and implemented measures are providing greater protection for water quality and staff. There is increased knowledge/awareness for contractors and visitors. Improved signage at the beach front (both water treatment plant and Port Blake park) is further protecting the dune environment in regard to movement of the public.

There is an opportunity to install a dissolved oxygen (DO) probe for monitoring purposes which might be beneficial for LHPWSS in regard to monitoring water quality changes. There were five (5) lake turnovers in August 2019. Additionally, an increased alkalinity sampling program may improve alum dosing.

There is an opportunity for the LHPWSS to investigate purchasing the adjacent restaurant property. This would eliminate/mitigate the encroachment of septic system potential environmental impact. Subsequently, the gatehouse of Port Blake park would be relocated and at this time there is an opportunity to establish an education centre.

There is a risk associated with the construction of a roundabout at the intersection of Highway #21 and Waterworks Road. This may impact the Bluewater chamber and meter. The roundabout construction might require the province take mitigative measures to protect the water treatment plant and its surrounding environment.

Storm sampling at both water systems is providing valuable information and knowledge to assist with priority identification of future opportunities for treatment decisions.

The Union Water system has been piloting the use of a continuous monitoring Microcystin analyzer. There is an opportunity to look into this further for both water systems.

The Lambton Area Water System (LAWS) is looking at modelling the interconnection to LHPWSS in order to supply water to Ipperwash for emergency purposes and provide long term supplemented supply (to avoid a costly expansion of their system). This would potentially increase revenues to LHPWSS and increase emergency response capacity.

North Middlesex is considering construction of an elevated storage tower. This increased storage capacity would positively impact LHPWSS in a number of ways. The shutdown notification procedure would be simplified. Subsequently there should be a reduction in nuisance low water pressure complaints.

12. Environmental and Quality Policy (LH & EA)

Top Management reviewed the current combined Environmental and Quality Policy approved by the Boards on October 4, 2018. No further additions or changes were

noted at this time. If the Board's legal structure changes in future, then we will need to revisit the combined policy.

13. Management of Change Review Meeting (June 25, 2019) (LH & EA)

Management of Change Checklists were completed for the following three items:

- a) LHPWSS – New Municipal Drinking Water Licence (MDWL) was issued on May 28, 2019 with an expiry on May 26, 2024.
- b) LHPWSS – Damage or Danger Permit Issued under Migratory Birds Regulation was issued on May 10, 2019 with an expiry on December 31, 2019.
- c) EAPWSS - Elgin Middlesex Pumping Station (EMPS) Reservoir Emergency Repairs

As documented on the completed checklists, a summary of action items for each system was provided. The action items will be added to the tracking spreadsheet, with minor wording edits and clarifications.

14. Trends in Non-Conformities and Corrective Actions (EA)

Three recent incidents have occurred at the Elgin WTP, each resulting in a notification to the Spills Action Centre (SAC) or the local Ministry of the Environment, Conservation and Parks (MECP) office. Corrective action forms were completed for each incident to review the root cause, and appropriate corrective/preventive action items.

Corrective Action Forms were completed for:

- a) EAPWSS CO2 Leak (July 4, 2019); this incident was beyond the control of OCWA, as the equipment is solely the responsibility of Air Liquide; OCWA was being proactive in reporting, monitoring and working to achieve corrective actions.
- b) EAPWSS Alum Spill (July 26, 2019)
- c) EAPWSS Alum Incident (July 29, 2019)

The corrective action forms were reviewed, and the action items were updated and finalized for inclusion in the tracking spreadsheet.

15. EAPWSS Staff Suggestions – Aluminum Sampling Frequency

Staff suggested that the in-house Aluminum sampling and testing frequency be reduced from six (6) times per day to two (2) times per day. Discussion ensued and it was concluded that the current frequency be maintained based on the Operating Contract. It should be noted that a review is underway by Health Canada to reduce the Operational Guideline (OG) from 0.100 mg/L to 0.050 mg/L. This proposed lower OG may require more monitoring and optimization to ensure that aluminum removal is effective. This staff suggestion will be discussed again once the final Health Canada document is issued.

16. Communications & Consumer Feedback (LH & EA)

- a) LHPWSS Inquiry – A Bayfield resident contacted the water treatment plant on July 29, 2019, inquiring if the water system tested for Per- and Polyfluoroalkyl Substances (PFAS). Health Canada released a Guideline Technical Document in December 2018 for two PFAS, namely Perfluorooctane Sulfonate (PFOS) and perfluorooctanoic Acid (PFOA). Staff confirmed that the contracted laboratory is not accredited to test for these parameters in Ontario. There are no drinking water standards for PFOS or PFOA in Ontario. Apparently, the resident had supplied a water sample to a contact at the University of Michigan and the university had expressed some concerns. Currently, in the U.S. media PFAS are in the spotlight. The concern is that these compounds persist in the environment even though they are no longer in use. This inquiry has been noted for information. No further action being pursued at this time.
- b) LHPWSS – Proof not Promises Team Award was recently presented by Suez Water Technologies & Solutions to the OCWA Huron Team for their partnership work in achieving a significant environmental impact reduction. OCWA currently uses a hydrocarbon free polymer for the Residuals Management Facility (RMF). This offers environmental impact reductions including a reduced carbon footprint from less trucking, and polymer dosage optimization resulting in reduced costs and further environmental performance objective gains.
- c) EAPWSS – The town of Aylmer forwarded a copy of their Drinking Water Operations Quality Policy via email on September 2, 2019 to OCWA and Regional Water Supply (Regional Water Supply). The EAPWSS has been identified as a provider of essential services and as such, under the Drinking Water Quality Management Standard (DWQMS), this benefiting municipality supplied their policy.

17. Compliance Obligations Update (LH & EA)

Title	Guideline Technical Document – Copper
Source	Health Canada
Date Posted/ Notice Received	June 10, 2019
Comments Due	N/A
Summary	A MAC of 2 mg/L (2000 µg/L) is established for total copper in drinking water, based on a sample of water taken at the tap. The aesthetic objective (AO) for total copper in drinking water has been reaffirmed at 1 mg/L (1000 µg/L).
Notes	<p>There is currently no MAC in Ontario; an AO of 1.0 mg/L is set out in the Ministry’s Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines.</p> <p>The potential impact is low (based on Ontario’s impact statement in the previous consultation document). Drinking water systems are not currently required to sample for copper under O. Reg. 170.</p> <p><i>“However, because copper is generally found in drinking water as a result of leaching in the distribution and plumbing systems, strategies for reducing exposure to copper from drinking water should focus on corrosion control through approaches such as water quality adjustments and the use of corrosion inhibitors.”</i></p> <p>The new Health Canada MAC could have implications for corrosion control related to lead. The Ontario Ministry of the Environment, Conservation and Parks (MECP) is currently looking at lead requirements.</p>

Title	Consultation on – Escherichia coli (E. coli) in Drinking Water
Source	Health Canada
Date Posted/ Notice Received	June 17, 2019
Comments Due	August 16, 2019
Summary	The document proposed to reaffirm the maximum acceptable concentration (MAC) of none detectable per 100 mL for Escherichia coli in drinking water.
Notes	<p>The current MAC in Ontario is none detectable, which is consistent with Health Canada. All drinking water systems are currently required to sample for E. coli under O. Reg. 170.</p> <p>Health Canada recommends that surface water system provide a minimum 3-log removal/inactivation of protozoa (giardia and crypto)</p>



	and 4-log removal/inactivation of enteric viruses in order to achieve the E. coli MAC. This is consistent with Health Canada’s current guidelines on enteric viruses and enteric protozoa . Note previous discussion on these two guidelines at the June 17, 2019 EMS/QMS Management Review Meeting.
--	--

Title	Aluminum in drinking water: Guideline technical document for consultation
Source	Health Canada
Date Posted/ Notice Received	July 2, 2019
Comments Due	August 30, 2019
Summary	<p>The existing guideline technical document on aluminum was developed in 1998 and recommended operational guidelines (OG) only. A health-based guideline was not established at that time.</p> <p><i>“A maximum acceptable concentration (MAC) of 2.9 mg/L (2900 µg/L) is proposed for total aluminum in drinking water, based on a locational running annual average of a minimum of quarterly samples taken in the distribution system.</i></p> <p><i>An operational guideline (OG) value of 0.050 mg/L (50 µg/L) is proposed for total aluminum to optimize water treatment and distribution systems.”</i></p>
Notes	<p>There is currently no MAC in Ontario and no distribution sampling requirements for aluminum under O. Reg. 170. An OG of 0.10 mg/L is set out in the Ministry’s Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines.</p> <p>The previous Health Canada guideline recommended an OG of less than 0.10 mg/L for conventional treatment plants using aluminum-based coagulants. The proposed guideline lowers the OG. The proposed OG of 0.05 mg/L is related to minimizing the potential for the accumulation and release of aluminum and co-occurring contaminants in the distribution system as well as its interference with orthophosphate (where applicable). Based on Ontario's impact statement in the consultation document and the existing OG, the impact of the proposed MAC is expected to be minimal. However, the proposed lower OG of 0.05 mg/L may require more monitoring and optimization to ensure that aluminum removal is effective.</p> <p>The current service agreement with OCWA requires the following potable water performance criteria: <i>“A daily average concentration</i></p>



	<p><i>of total aluminum of not more than 0.1 mg/L on treated water, based on laboratory results.”</i></p> <p>From the WaterTrax database (2014 – 2019): EAPWSS: Average aluminum = 0.0139 mg/L Max. aluminum = 0.10 mg/L</p> <p>LHPWSS: Average aluminum = 0.0281 mg/L Max. aluminum = 0.116 mg/L</p>
--	---

Title	<u>Guidelines for Canadian Drinking Water Quality - Summary Table</u>
Source	Health Canada
Date Posted/ Notice Received	July 2, 2019
Comments Due	N/A
Summary	<i>“The Guidelines for Canadian Drinking Water Quality are established by Health Canada in collaboration with the Federal-Provincial-Territorial Committee on Drinking Water (CDW) and other federal government departments. They are published by Health Canada. This table is a summary of the values and key information from each of the guidelines. It is updated regularly and published on Health Canada’s water quality page.”</i>
Notes	The Table has been updated to incorporate recent changes.

Title	<u>Guidance on the use of quantitative microbial risk assessment in drinking water</u>
Source	Health Canada
Date Posted/ Notice Received	July 12, 2019
Comments Due	N/A
Summary	<p>Quantitative microbiological risk assessment (QMRA) is an approach that can be used by regulatory agencies and drinking water authorities to quantify the health risks from microorganisms for water sources.</p> <p>The intent of the guidance is to provide industry stakeholders, such as provincial and territorial regulatory authorities, decision-makers, water system owners, and consultants with guidance on the use of QMRA to assist in understanding microbiological risks in Canadian water systems.</p>

Notes	No impacts. The Ontario MECP is currently using a QMRA approach for Ontario to assist in determining provincial requirements for enteric viruses and protozoa (e.g., pending revisions to the Procedure for Disinfection of Drinking Water in Ontario). QMRA guidance could be used as a reference to enhance the DWQMS risk assessment if a better understanding of the microbiological risks in a drinking water system is desired/needed.
-------	---

Title	Proposed new Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health
Source	EBR Posting (Ministry of the Environment, Conservation and Parks)
Date Posted/ Notice Received	July 5, 2019
Comments Due	September 4, 2019
Summary	Since 1971, a series of Canada-Ontario Agreements have enabled the governments to address the most significant challenges facing the Great Lakes. The current Agreement expires in December 2019. The new draft Agreement is designed to advance action on tackling harmful algal blooms in Lake Erie and cleaning up the Great Lakes Areas of Concern. It also includes action for improving wastewater and stormwater management and reducing pollution, including a new focus on road salt and plastic pollution.
Notes	

18. Upcoming Audit Schedule (LH & EA)

The following audit dates were provided for information.

External Audit Schedule
 Sept. 16 – Elgin DWQMS Offsite Audit
 Sept. 17 – Huron DWQMS Offsite Audit
 Oct. 16-18 - Elgin EMS Surveillance Audit & DWQMS Accreditation Audit
 Nov. 20-22 – Huron EMS Surveillance Audit & DWQMS Accreditation Audit

Internal Audit Schedule (Tentative)
 Feb/March 2020 – Environmental Compliance Internal Audits
 April 2020 – QMS Internal Audits
 June 2020 – EMS Internal Audits

Next Meeting: December 3, 2019.

APPENDIX B: COMPLIANCE AUDIT REPORT SUMMARY (AUGUST 14, 2019)



ENVIRONMENTAL COMPLIANCE AUDIT

Audit Date: August 14, 2019

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

SUMMARY

Audit Purpose:

The purpose of the audit was to verify compliance with relevant 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 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. The Environmental Compliance Internal Audit checklist was also used and is attached as Appendix C of this report.

The audit was comprised of a facility tour 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), since the last Internal Audit conducted September 15, 2016.

Operational documents and records maintained by the Operating Authority for the period September 15, 2016 through August 14, 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:

Compliance Obligations	
Federal:	The following item had criteria in the Nimonik Canada General Industry Environmental OHS Audit Template: <ul style="list-style-type: none"> • Migratory Birds Convention Act, C.R.C., c. 1035 (Migratory Birds & Wildlife)
Provincial:	The following items had criteria in the Nimonik Ontario General Industry Environmental Audit Template: <ul style="list-style-type: none"> • Safe Drinking Water Act (SDWA) and Regulations (Drinking Water Systems – General) • Safe Drinking Water Act (SDWA) and Regulations (Drinking Water Systems – Municipal)
Board Policies and By-Laws:	The following items had criteria in the Compliance Audit Checklist: <ul style="list-style-type: none"> • Bulk Water Sales Policy • Public Access and Tour Policy • Procurement and Disposal By-Law

Interviews Conducted:

- Denny Rodrigues, Safety, Process & Compliance Manager, OCWA
- Greg Henderson, Senior Operations Manager, OCWA
- Allison McCann, Team Lead Operations & Compliance, OCWA
- Erin McLeod, Quality Assurance & Compliance Manager, RWS

Areas Visited:

- Lake Huron Water Treatment Plant (WTP), 711155 Bluewater Hwy, Municipality of South Huron

FINDINGS

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

Regulatory Non-Compliances (NCs):

The following NCs relate to the August 6, 2019 Adverse Water Quality Incident (AWQI):

NC #1 (O. Reg 169/03 Section 2 & O. Reg. 170/03 Schedule 17): Re-sample and test was not done immediately. Downstream sample was taken at McGillivray Booster Station on Wednesday, August 8, 2019.

NC #2 (SDWA Section 18 & O. Reg. 170/03 Schedule 16): Section 2A – Written Notice By Drinking Water (DWS) Owner was not provided via fax or email within 24 hours of the Immediate Report to the London Middlesex Health Unit, the Lambton County Health Unit and the Huron County Health Unit.

Regulatory Opportunities for Improvement (OFIs):

There were zero (0) opportunities for improvement.

APPENDIX C: QMS SYSTEMS AUDIT (STAGE 1) EXTERNAL AUDIT REPORT EXECUTIVE OVERVIEW (SEPTEMBER 17, 2019)

EXECUTIVE OVERVIEW

The objective of this System audit (Stage 1) was to review the management system and processes, confirm the scope for certification, and determine the organization's preparedness for the onsite verification audit (Stage 2). In addition, it allowed for the review of the adequacy of the SAI Global audit program and resources for the audit including confirming and preparing the draft audit plan.

The results of this System (Stage 1) audit indicate that the organization is now ready for an onsite accreditation (Stage 2) audit.

Recommendation

Based on the results of this audit it has been determined that the management system is effectively implemented and maintained and meets the requirements of the standard relative to the scope of certification identified in this report; therefore, a recommendation for (continued) certification will be submitted to SAI Global review team.

Opportunities for Improvement: The following opportunities for improvement have been identified.

- **Element 7 Risk Assessment** – There is an opportunity to ensure risk assessment criteria consistent terminology, i.e., LH-ADMIN-2400 (Hazard Analysis (Risk Assessment) & Critical Control Points Table 2 references “Consequence” but Table 4 and QMS Risk Assessment & Outcomes’ Table 1 references “Severity”.

- **Element 12 Communications** – There is an opportunity to clarify the connection between LH-ADMIN-1800 (Visitor Sign-In) and LH-ADMIN-500 (Communications); QMS Operational Plan (OP) Element 12 makes reference to LH-ADMIN-1800, however, it is not discussed nor listed as an associated document in LH-ADMIN-500.

It is suggested that the opportunities for improvement be considered by management to further enhance the Operating Authority's Quality Management System and performance.

Management System Documentation

The management systems operational plan(s) was reviewed and found to be in conformance with the requirements of the standard.

Management Review

Records of the most recent management review meetings were verified and found to meet the requirements of the standard. All inputs were reflected in the records and appear suitably managed as reflected by resulting actions and decisions.

Internal Audits

Internal audits are being conducted at planned intervals to ensure conformance to planned arrangements, the requirements of the standard and the established management system.

Corrective, Preventive Action & Continual Improvement Processes

The Operating Authority is implementing an effective process for the continual improvement of the management system through the use of the quality policy, quality objectives, audit results, data analysis, the appropriate management of corrective and preventive actions and management review.

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

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

Subject: Quarterly Operating Financial Status Report – 3rd Quarter 2019

RECOMMENDATION

That this report regarding the Quarterly Operating Financial Status of the Lake Huron Water Supply System **BE RECEIVED** by the Board of Management for information.

BACKGROUND

At the request of the Board of Management, a Financial Status Report is provided on a quarterly basis for information. The financial status provides a high-level overview of incurred expenditures and revenues on a cash-flow basis and is compared to the approved operating budget of the water supply system. All expenditures and revenues provided in this Financial Status Report are unaudited and may include accrued and/or unaccrued expenses of a previous or future fiscal year.

A high-level summary of incurred expenses and revenues for the water supply system is attached to this report as Appendix A for the third quarter 2019 (July 1 to September 30) as well as a comparative accumulation from January 1 to September 30 (Year to date).

The reported expenditures and revenues may be subject to adjustments prior to year-end and the creation of the audited financial statements.

DISCUSSION

For the information and reference of the Board, the following highlights of the attached summary provides a brief explanation of notable deviations from the approved budget and/or clarifications of the financial summary:

- Accumulated revenue is non-linear and directly proportional to water demands within the distribution systems of the member municipalities. The lowest monthly volumes (and corresponding revenue) typically occur in February, while the highest monthly volumes typically occur in July and August. The accumulated revenue between January 1 to September 30 is roughly consistent with the same period as 2018 when factoring the approved increase for the 2019 unit rate for water.



- Contracted Operating Services in the summary report reflects the total direct operating costs of the contracted operation of the water treatment and transmission system, as well as related contracted services (example: AFO monitoring). The total accumulated operating costs between January 1 and September 30 is higher than the same period in 2018 and is reflective of contractual increases in service agreements with the operating authority and other contracted services.
- Contracted Administrative Services in the summary report reflects the fees paid to the City of London.
- Electricity expenditures include the purchase of energy as well as energy management services for the water system.
- Salaries, wages and benefits expenditures include all direct labour costs for administrative staff including benefits. Variations over the same period in 2018 are attributed to annual salary adjustments and filling of a vacancy in late 2018.
- Administration and Other Expenses relates to various overhead operating expenses, including subscriptions and memberships, office supplies and property taxes.
- Vehicles and Equipment expenditures include costs associated with vehicles, computers and office equipment for administrative staff.
- Purchased Services and Professional Fees largely relates to allowances for ad hoc professional consulting and legal services, office lease, telephone charges, network and SCADA maintenance, printing services, and pipeline locate costs.
- Debt Principle and Interest payments occur twice per year; in the first and third quarter.
- Contributions to the Reserve Funds occur at the end of the fiscal year, where the actual contributions are the total remaining revenue in excess of expenditures.

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

Attachments: Operating Financial Status Summary – 3rd Quarter 2019

Quarterly Financial Summary Report

Lake Huron Water Supply system
3rd Quarter 2019 (July 1 to September 30)
(\$,000's)

	Approved 2019 Budget	Q3-2019	2019 Year to Date	Year To Date Variance	2018 Year To Date
Total Revenue	22,106	6,518	15,366	6,740	15,418
<u>Expenditures:</u>					
Contracted Operating Services	6,320	1,642	4,797	1,523	4,029
Contracted Administrative Services	213	53	160	53	156
Electricity	4,000	957	2,394	1,606	2,529
Salaries, Wages, Benefits	681	146	467	214	432
Administration and Other Expenditures	365	92	354	11	329
Vehicles and Equipment	35	3	24	11	31
Purchased Services & Professional Fees	609	236	490	119	451
Debt Principle Payments	1,226	333	1,218	8	1,197
Interest on Long-Term Debt	190	88	191	(1)	201
Contributions to Reserve Funds	8,467	0	0	8,467	0
Total Expenditures	22,106	3,550	10,095	12,011	9,355

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

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

Subject: Computerized Maintenance Management System Replacement

RECOMMENDATION

That the following actions be taken with regard to Lake Huron Primary Water Supply System Computerized Maintenance Management System (CMMS) Replacement Project:

- a) That the Board of Management **ACCEPT** the unsolicited proposal from the Ontario Clean Water Agency, contingent on the concurrent acceptance by the Elgin Area Water Supply System Board of Management, to replace the existing obsolete Computerized Maintenance Management System; it being noted that this award is a Single Source Authorization using the City of London's purchasing policy as a guide;
- b) That the Board of Management **AUTHORIZE** the creation of a capital project to replace the existing Computerized Maintenance Management System with an approved budget of \$180,000, it being noted that the Asset Replacement Reserve fund will be utilized for the source of funding; and,
- c) That the Board of Management **RECEIVE** this report for information.

BACKGROUND

The Computerized Maintenance Management System (CMMS) at the water treatment plant is a database program that is used to document all equipment assets within the system, plan the maintenance and repair of the assets, keep track of failures and asset conditions, and issue work orders for planned and unplanned maintenance and repair activities. The different components of a CMMS typically include but are not limited to:

1. Equipment data management
2. Preventive Maintenance Activities
3. Labour
4. Work Order Management
5. Scheduling/Planning
6. Vendor Management
7. Inventory Control
8. Purchasing Control
9. Activity Budget Tracking

10. Asset Tracking

The existing CMMS (Hansen Information Management System) is shared between both the Lake Huron and Elgin Area water systems and was installed in the early 1990s. The system is well past its useful functionality, operates on outdated operating systems, and modernization is necessary.

DISCUSSION

The Computerized Maintenance Management System (Maximo, a product of IBM) proposed by OCWA meets the functional requirements identified under the recent Asset Management Plan approved by the Board. The Maximo CMMS has been implemented corporately by OCWA on a central system and is utilized at nearly all of the water and wastewater locations operated by OCWA.

OCWA's proposal is a turnkey approach that will completely replace the current system. The plan proposed by the Ontario Clean Water Agency (OCWA) is as follows.

1. High level information gathering
2. Preparation of the software network
3. Procure software and licencing for LHPWSS
4. Prepare software server environment
5. Install Maximo software
6. Configure software
7. Load asset registry (LHPWSS – 4000 asset records, EAPWSS – 2400 asset records)
8. Training
9. Cutover to new system and archive existing Hansen IMS data

As part of this plan, OCWA has proposed an additional staff member to administer the system. The role will allow for the ongoing population of additional key asset attributes, ensure data reliability, and the betterment of the existing asset data by gathering additional information on the existing equipment. This staff member will be an addition to the existing compliment under the contracted operations at an additional cost of approximately \$55,000 per year.

The proposal was submitted for the installation for both the Lake Huron and Elgin Area water systems, with capital costs divided according to the number of assets and complexity. All values discussed in this report to the Board are costs associated with the Lake Huron water supply system only.

The proposal from OCWA includes provisions for ensuring that the regional water system retains all relevant and usable data belonging to the water system upon the termination of the Service Agreement with OCWA.

PROJECT FINANCIAL STATUS:

Requested Budget **\$ 180,000**

Projected Capital Costs

Licencing and Software	\$54,000
Configuration and Migration	72,000
Implementation and Deployment	36,000
Contingency	18,000
Total Projected Capital Costs	\$ 180,000

Projected Annual Operational Costs

Licencing, Software and Hosting	\$20,000
CMMS Asset Specialist	55,000
Total Projected Annual Operational Costs	\$ 75,000

There is currently no approved budget for this initiative, requiring the Board to explicitly approve the project and funding from the Asset Replacement Reserve Fund for the initial installation, in addition to the unsolicited proposal from the Ontario Clean Water Agency. The additional annual operating costs will be funded under the existing 2019 and 2020 Operating Budgets as approved, and included in future operating budgets when presented for the Board's consideration.



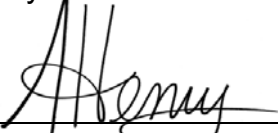
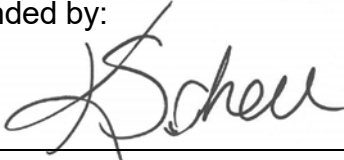
Lake Huron
Primary Water Supply System

Report No.: LH-2019-05-04
Report Page: 4 of 4
Meeting Date: December 5, 2019
File No.:

CONCLUSION

Installing a new CMMS for the plant will allow the water supply system to better leverage and utilize work management and maintenance data, track asset condition, and refine capital reinvestments in support of the Asset Management Plan and its objectives. The replacement of the Maintenance Management System removes significantly dated software and technology for a system that is better equipped to support the water system’s long-term goals.

This report was written by John Walker, Operations Manager.

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