

Agenda

Lake Huron Primary Water Supply System Joint Board of Management

3rd Meeting of the Lake Huron Primary Water Supply System Joint Board of Management

June 3, 2021, 2:00 PM

2021 Virtual Meeting - during the COVID-19 Emergency

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1. Call to Order	
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5. Deferred Matters / Additional Business

6. Confidential

6.1. Position, Plan, Procedure, Criteria or Instruction for Negotiation Purposes

A matter pertaining to 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 municipality or local board related to the Service Agreement between the Ontario Clean Water Agency and the Lake Huron Primary Water Supply System.

7. Upcoming Meeting Dates

October 7, 2021

December 2, 2021

8. Adjournment

Lake Huron Primary Water Supply System

Minutes

2nd Meeting of the Lake Huron Primary Water Supply System Joint Board of Management
March 4, 2021

Attendance: Meeting held remotely on Thursday, March 4, 2021, commencing at 2:00 PM.

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

ALSO PRESENT: R. Aycock, A. Henry and K. Scherr

1. Call to Order

1.1. Disclosures of Pecuniary Interest

That it **BE NOTED** that no pecuniary interests were disclosed.

2. Adoption of Minutes

2.1. Minutes of the 1st Meeting held on Thursday, December 3, 2020

VANMEERBERGEN AND VANDERHEYDEN

That the minutes of the 1st meeting of the Lake Huron Primary Water Supply System Board of Management, held on December 3, 2020, **BE NOTED AND FILED. CARRIED**

Motion Passed

3. Consent Items

3.1. Quarterly Compliance Report (4th Quarter 2020: October - December)

HEMMING AND FERGUSSON

That, on the recommendation of the Chief Administrative Officer, the report dated March 4, 2021, with respect to the general, regulatory and contractual obligations of the Lake Huron Primary Water Supply System, for October to December 2020, **BE RECEIVED. CARRIED**

Motion Passed

3.2. Environmental Management System and Quality Management System

HEMMING AND FERGUSON

That, on the recommendation of the Chief Administrative Officer, the report dated March 4, 2021, 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. Quarterly Operating Financial Status - 4th Quarter 2020

HEMMING AND FERGUSON

That, on the recommendation of the Chief Administrative Officer, the report dated March 4, 2021, with respect to the Quarterly Operating Financial Status of the Lake Huron Water Supply System, **BE RECEIVED. CARRIED**

Motion Passed

3.4. Capital Status Report

HEMMING AND FERGUSON

That, on the recommendation of the Chief Administrative Officer, the following actions be taken with respect to report dated March 4, 2021, related to the Lake Huron Primary Water Supply System Capital Projects:

a) the above-noted report **BE RECEIVED**;

b) projects LH1209 HLP#5 Valve Replacement, LH1227 Pipe Conveyance System, LH1233 Control Panel/Wire Cleanup, LH1244 Building Exterior Condition Assessment, and LH1262 WTP UPS Replacement **BE CLOSED**, with the surplus funds in the approximate amount of \$232,351 being released to the Board's Reserve Funds; and,

c) project LH1386 Chemical Delivery Panel **BE CLOSED**, with additional funds in the approximate amount of \$18,367 being drawn from the Capital Reserve Fund. **CARRIED**

Motion Passed

3.5. Asset Management - Roadmap and Plan Update

HEMMING AND FERGUSSON

That, on the recommendation of the Chief Administrative Officer, the following actions be taken with respect to the report dated March 4, 2021, related to the Asset Management Roadmap and Plan Update for the Lake Huron Primary Water Supply System:

- a) the Chief Administrative Officer **BE DELEGATED** the authority to administratively award a consulting services assignment, following a public procurement process which complies with the Procurement By-law, for the completion of the Asset Management Plan Update, provided the proposal from the successful proponent meets the Request for Proposal terms and conditions and is within the budget previously approved by the Board;
- b) the Chair and Chief Administrative Officer **BE AUTHORIZED** to execute a consulting services agreement with the successful consulting firm for the completion of the Asset Management Plan Update, subject to the above-noted delegation of authority; and,
- c) the above-noted report **BE RECEIVED. CARRIED**

Motion Passed

3.6. Ministry of the Environment, Conservation and Parks Inspection Report

HEMMING AND FERGUSSON

That, on the recommendation of the Chief Administrative Officer, the report dated March 4, 2021, with respect to the Ministry of the Environment, Conservation and Parks Inspection Report, **BE RECEIVED. CARRIED**

Motion Passed

3.7. LH1425 Shoreline Erosion Project - Update

HEMMING AND FERGUSSON

That, on the recommendation of the Chief Administrative Officer, the following actions be taken with respect to the report dated March 4, 2021, related to an update on the LH1425 Shoreline Erosion Protection Project:

- a) an increase to the project budget of \$250,000, for a total budget of \$1,250,000, **BE APPROVED**; it being noted that the funds will be provided from the Emergency Reserve Fund; and,
- b) the above-noted report **BE RECEIVED. CARRIED**

Motion Passed

4. Items for Discussion

4.1. Operations and Maintenance Services Agreement - Negotiation of Term Extension

VANMEERBERGEN AND VANDERHEYDEN

That, on the recommendation of the Chief Administrative Officer, the Director of Regional Water **BE AUTHORIZED** to negotiate the terms and conditions for a draft term extension agreement with the Ontario Clean Water Agency for a five-year period, allowable under the current Operations and Maintenance Services Agreement. **CARRIED**

Motion Passed

4.2. LH1230 Huron High Lift Pump Replacements - Tender Award

LEHMAN AND DEVIET

That, on the recommendation of the Chief Administrative Officer, the following actions be taken with respect to the report dated March 4, 2021, related to the Lake Huron Primary Water Supply System High Lift Pump Replacements (LH1230) project:

a) the Chief Administrative Officer **BE AUTHORIZED** to execute an agreement with Kenaidan Contracting Ltd. (Kenaidan) for the construction of the High Lift Pump Replacements in the amount of \$8,300,351.48 (excluding HST);

b) the existing engineering assignment with AECOM, for contract administration and construction supervision services, at an estimated cost of \$852,310 (excluding HST) **BE EXTENDED**; and,

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

Motion Passed

5. Deferred Matters/Additional Business

None.

6. Next Meeting Date

June 3, 2021

7. Adjournment

The meeting adjourned at 2:40 PM.

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

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

Subject: Quarterly Compliance Report (1st Quarter 2021: January - March)

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 reported in the 1st quarter of 2021.

EXECUTIVE SUMMARY

Since the previous report to the Board, there are no new regulatory changes that may significantly impact the Lake Huron Primary Water Supply System (LHPWSS).

The [Water Quality Quarterly Report](#) for the period of January 1 – March 31, 2021 has been posted on the water system's website for public information.

There were no Adverse Water Quality Incidents (AWQI) reported by the operating authority or 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.

DISCUSSION

Regulatory Issues

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

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

Quarterly Water Quality Reports: The [Water Quality Quarterly Report](#) for the period of January 1 – March 31, 2021 was completed by the operating authority, and is posted on the Water Systems' website for public information.

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 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 28th of each year. The 2020 Annual Report summarized water quality and maintenance information for the calendar year. This report was 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. The 2020 Annual Report was forwarded to the member municipalities on February 12, 2021. The [2020 Annual Report](#) has also been posted on the Water Systems' website 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 31st 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 was also completed by OCWA. The 2020 Compliance Report (Summary Report for Municipalities) was forwarded to the Board members and member municipalities of the LHPWSS as required on March 19, 2021. The [2020 Compliance Report](#) has been posted on the Water Systems' website for public information. All Compliance 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: There were no compliance inspections conducted during this quarter.

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 2021 first quarter Contract Report was received from OCWA on April 30, 2021 and was scheduled to be discussed at the quarterly administration meeting between Board staff and OCWA on May 13, 2021. Copies of the monthly Operations and Maintenance Reports, or quarterly Contract Reports are available at the Board’s Administration Office in London upon request.

Prepared by: Erin McLeod, Quality Assurance & Compliance Manager

Submitted by: Andrew Henry, P. Eng.,
Director, Regional Water

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



Lake Huron
Primary Water Supply System

Report No.: LH-2021-02-02

Report Page: 1 of 18

Meeting Date: June 3, 2021

File No.:

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

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 October 2020 and was recommended for registration to the ISO14001:2015 standard for a three-year period (ending in 2023).

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 License (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 November 2019 and is currently accredited for the three-year period ending in 2022.

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 March 22, 2021. 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.

One (1) EMS Audit and one (1) Environmental Compliance Audit were conducted during this reporting period. The EMS internal audit was conducted April 20-22, 2021 and a summary of this audit's findings is included in [Appendix B](#) of this report (full report is available on request). Two (2) non-conformances and five (5) opportunities for improvement were identified during the audit. The Environmental Compliance audit was conducted April 1-6, 2021 and a summary of this audit's findings is included in [Appendix C](#) of this report (full report is available on request). No non-compliances or opportunities for improvement were identified during the audit. The audit findings will be discussed at the next Management Review meeting.

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 the EMS/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 proactively 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.

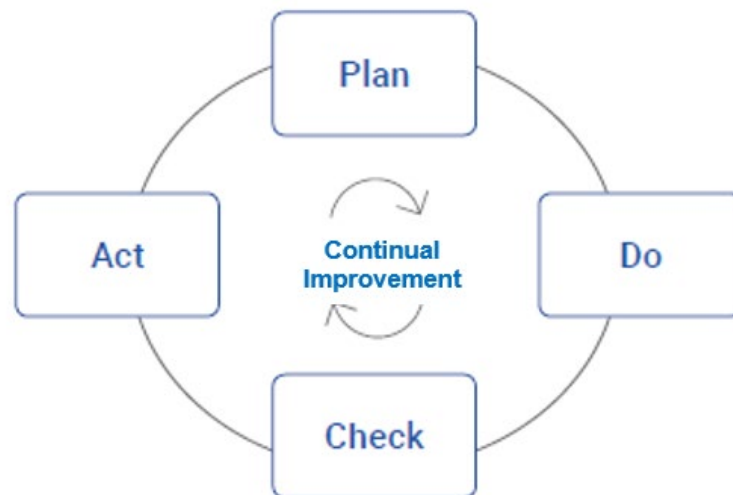


Figure 1: Plan-Do-Check-Act improvement process

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:

- Six (6) new action items were added as a result of the Environmental Compliance Audits performed in November & December 2020.
- Seven (7) new action items were added as a result of the corrective action process for a spill event that occurred in February 2021.
- One (1) new action item was added as a result of the Management Review Meeting on March 22, 2021.
- Two (2) new action items were added as a result of Emergency Contingency Plan reviews in December 2020.

As of April 28, 2021, there are currently twenty-four (24) 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.

CONCLUSION

The Internal Audits and frequent Management Review meetings continue to effectively identify system deficiencies. The EMS/QMS for the LHPWSS continues 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.

Prepared by: Erin McLeod, Quality Assurance & Compliance Manager, with the assistance of Christine Jansen, Compliance Coordinator

Submitted by: Andrew Henry, P. Eng.,
Director, Regional Water

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

Attachments: [Appendix A](#) – Management Review Meeting Minutes (March 22, 2021)
[Appendix B](#) – Environmental Management System Audit Summary Report (April 20-22, 2021)
[Appendix C](#) – Environmental Compliance Audit Summary Report (April 1-6, 2021)

APPENDIX A: MANAGEMENT REVIEW MEETING MINUTES (MARCH 22, 2021)

Lake Huron & Elgin Area Primary Water Supply Systems EMS/QMS Management Review

Date: March 22, 2021
Time: 1:00pm
Location: Virtual – Microsoft Teams
Attendees: Andrew Henry (RWS), Erin McLeod (RWS), Christine Jansen (RWS), Blair Tully (OCWA), Denny Rodrigues(OCWA), Simon Flanagan (OCWA), Greg Henderson(OCWA)
Regrets: Randy Lieber (OCWA)

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 minutes (December 1, 2020)

Minutes from the previous meeting are posted to SharePoint. Minutes were reviewed and approved.

2. Results of Board Meetings (LHPWSS & EAPWSS)

There were two meetings each for the Elgin Joint Board of Management (EJBOM) and the Huron Joint Board of Management (HJBOM) since the last Management Review Meeting. Board meetings took place on December 3, 2020 and on March 4, 2021.

At the December 3, 2020 meetings, there were no specific questions or comments from either Board regarding the EMS/QMS or Quarterly Compliance reports presented. The reports were received for information.

At the March 4, 2021 meetings the EMS/QMS, Quarterly Compliance, and MECPI Inspection Reports were all received for information.

There was one comment from HJBOM and one question from the EJBOM regarding the EMS/QMS Reports.

The HJBOM comment was concerning the wording of the audit scope in the report. This was discussed at Management Review, and as it is standard wording for all types of audits, the wording will remain unchanged.

The EJBOM question was specific to a regulatory change included as part of the EMS/QMS Board Report. At Management Review, the benefits and drawbacks of including this type of detailed information in future Board reports was discussed. It was determined that this information will be kept in future reports to the Boards as it may be beneficial for the member

municipalities.

3. 2020-2021 MECP Inspection Reports (LHPWSS & EAPWSS)

Both LHPWSS and EAPWSS received their 2020-2021 MECP Inspection Reports.

Final inspection ratings for each system were 100%.

OCWA provided an update that all three secondary systems that are part of the EMPS also received 100% inspection ratings.

4. Compliance Audits

a) EAPWSS – Nov. 23 & Dec. 2, 2020

There were three Opportunities for Improvement (OFI) identified during this internal audit.

The OFIs were related to ozone depleting substances regulations.

The OFIs were discussed, and action items were finalized to address them.

b) EAPWSS – Dec. 9-14, 2020

There were two non-compliances (NC) identified during this internal audit. One of the NCs was related to WHMIS regulations and one of the NCs was related to boiler & pressure vessel regulations.

The NCs were discussed, and action items were finalized to address them.

c) LHPWSS – Nov. 23-24, 2020

There were three OFIs and one NC identified during this internal audit. The NC was related to the handling of one waste manifest for disposal of hazardous waste. The OFIs were related to ozone depleting substances. The NCs and OFIs were discussed, and action items were finalized to address them.

d) LHPWSS – Dec. 10-14, 2020

There were two NCs identified during this internal audit.

The NCs were related to boiler & pressure vessel regulations.

The NCs were discussed, and action items were finalized to address them.

5. Compliance Obligations Update

Proposed Guidance Technical Document for Waterborne Pathogens

Source: Health Canada

Date Posted/Notice Received: December 8, 2020 (email)

Comments Due: February 3, 2021

Summary:

The intent of this document is to provide stakeholders with guidance on waterborne pathogens of human health concern that are not addressed in the *Guidelines for Canadian Drinking Water Quality*, with the objective of minimizing public health risks in Canadian water systems.



Lake Huron
Primary Water Supply System

Report No.: LH-2021-02-02

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Meeting Date: June 3, 2021

File No.:

The document provides a description of the pathogens, their health effects, how they are transmitted and best practices to ensure safe drinking water. The document states that setting Maximum Acceptable Concentrations (MACs) for the pathogens described remains impractical and is unnecessary in order for drinking water utilities to adequately manage risks. Implementing a source-to-tap approach is a universally recommended strategy for reducing the concentration of waterborne pathogens in drinking water and controlling their potential risks. Important elements of this strategy include source water protection, treatment and disinfection requirements based on health-based treatment goals for enteric protozoa (*Giardia* and *Cryptosporidium*) and enteric viruses, and managing microorganism survival and growth in drinking water distribution systems.

Potential impacts: None - guidance only.

Proposed updates to the Director's Directions - Minimum Requirements for Operational Plans

Source: Ministry of the Environment, Conservation and Parks (MECP)

Date Posted/Notice Received: December 11, 2020

Comments Due: January 25, 2021

Summary: MECP is proposing administrative updates to the minimum requirements for operational plans. The administrative updates are intended to reflect current practice in municipal residential drinking water systems and improvements in technology that have occurred since the directions were published in 2007. The updates reflect electronic versions of operational plans, electronic submissions, and public website postings.

Potential Impacts: No major impacts to the LHPWSS & EAPWSS. A minor administrative update is required for the Operational Plans.

[Post-meeting note: The administrative update to the Operational Plans has been completed.]

Consultation on the Creation of a Canada Water Agency

Source: Environment and Climate Change Canada (ECCC)

Date Posted/Notice Received: December 17, 2020

Comments Due: March 1, 2021

Summary: The Government of Canada has announced the launch of public consultations to help establish the new Canada Water Agency (CWA) and improve freshwater management across Canada. Water challenges such as droughts, floods, and deteriorating water quality are intensifying, due in large part to climate change. The CWA is being established to find the best ways to keep water safe, clean, and well managed. The CWA will be established in close collaboration with provinces, territories, Indigenous Peoples, and other partners. ECCC has released a discussion paper: *Toward the Creation of a Canada Water Agency*. The Discussion Paper proposes the development of the CWA, seeks input to identify freshwater priorities for the federal government, sets out various objectives, and proposes opportunities to enhance freshwater management in Canada.

Potential Impacts: Staff are reviewing the discussion paper for potential impacts and implications to the LHPWSS & EAPWSS as well as anticipated jurisdictional impacts between Ontario and Canada.

Ontario's Long-term Energy Planning Framework

Source: Ministry of Energy, Northern Development and Mines

Date Posted/Notice Received: January 27, 2021

Comments Due: April 27, 2021

Summary: Ontario is designing and implementing a new long-term energy planning framework. O.Reg. 355/17 was revoked effective Jan. 1, 2021, removing the requirement for the government to release a long-term energy plan every three years. Ontario is reforming the long-term energy planning process, and building on their commitment to increase the effectiveness, transparency, and accountability of energy decision-making.

Potential Impacts: No immediate impacts to the LHPWSS & EAPWSS. As the initiative progresses as it may have long-term implications to the energy management strategy.

Technical Guidelines for the Environmental Emergency (E2) Regulations 2019 - version 2.0

Source: Environment and Climate Change Canada (ECCC)

Date Posted/Notice Received: December 30, 2020

Comments Due: N/A

Summary:

The new Environmental Emergency Regulations, 2019 came into force on August 24, 2019, replacing the previous version of the Environmental Emergency (E2) Regulations (2011). An updated version of the Technical Guidelines for these Regulations are now available on the ECCC website. The intent of the Technical Guidelines is to assist regulatees in better understanding the requirements of the Regulations so that they are able to be compliant with the legislation. The recent amendments provide more clarity and better align with the intentions of the Regulations. A revision history of the changes is available in the document.

Potential Impacts: None. Chlorine gas is currently the only regulated substance at the LHPWSS & EAPWSS. New content in Appendix 3 (Container Systems and Valves) and Appendix 4 (Determination of Quantity of a Substance Onsite) were reviewed for potential impacts. The on-site chlorine tonners have automatic shut-off valves for each cylinder, therefore there is no impact.

O. Reg. 17/21: Drinking Water Systems and Sewage Works

Source: MECP

Date Posted/Notice Received: January 29, 2021

Comments Due: N/A

Summary: The regulation revokes the previous O.Reg. 75/20 of the same name. O.Reg. 75/20 was filed in March 2020 due to the pandemic. It provided blanket regulatory relief for drinking water and wastewater system owners and operating authorities who may experience staffing challenges as a result of the outbreak.

Potential Impacts: None anticipated.

Guidelines for Canadian Drinking Water Quality: Guideline Technical Document – Aluminum



Source: Health Canada

Date Posted/Notice Received: March 5, 2021

Comments Due: N/A

Summary:

The updated guideline value is as follows:

- The maximum acceptable concentration (MAC) for total aluminum in drinking water is 2.9 mg/L (2 900 µg/L) based on a locational running annual average of a minimum of quarterly samples taken in the distribution system.
- The operational guidance (OG) value for total aluminum in drinking water is 0.100 mg/L (100 µg/L) to optimize water treatment and distribution system operations. This value is based on a locational running annual average. The sampling frequency required to calculate the locational running annual average will vary based on the type of treatment facility and the sampling location.

There are changes from the August 2019 consultation document, with the main change being the proposed operational goal (OG) was increased from 0.05 mg/L to 0.100 mg/L total aluminum.

Potential Impacts: None. This is consistent with the current operational targets at the WTPs.

Guidance Document: Overview of the Microbiological Aspects of Drinking Water Quality

Source: Health Canada

Date Posted/Notice Received: March 5, 2021

Comments Due: N/A

Summary:

The document integrates the relevant microbiological considerations found in the various documents developed as part of the “source-to-tap” approach used in the Guidelines for Canadian Drinking Water Quality (GCDWQ). The overview also summarizes 21 other guidelines that have an impact on microbiological water quality. For further information, the GCDWQ technical documents can be found on the Water Quality website.

Potential Impacts: None.

Guideline Technical Document for Public Consultation: 4-Chloro-2-methylphenoxyacetic Acid (MCPA) in Drinking Water

Source: Health Canada

Date Posted/Notice Received: March 15, 2021

Comments Due: May 12, 2021

Summary:

This guideline technical document outlines the evaluation of the available information on 4-chloro-2-methylphenoxyacetic acid (MCPA) with the intent of updating the guidelines for MCPA in drinking water. The existing guideline, developed in 2010, established a maximum acceptable concentration (MAC) of 0.1 mg/L (100 µg/L). The present document proposes a higher MAC of 0.4 mg/L (400 µg/L).

Potential Impacts: None. The current MAC in Ontario is 0.1 mg/L. All MCPA results for the past 5 years were non-detect for both EAPWSS and LHPWSS.

6. Staff Suggestions

a) EAPWSS

A previous staff suggestion to reduce the Aluminum sampling to 2x/day from 6x/day was revisited. When the suggestion was originally made, Health Canada was discussing a possible change to the operational guidelines for Aluminum. It was decided to wait for Health Canada's decision regarding this guideline before changing the sampling frequency. Health Canada has now released the guideline and the operational goal has remained unchanged at 0.100mg/L. The water quality trend was reviewed, and the aluminum trend is stable and at a very low level. OCWA would like to proceed with the change to sampling frequency for Aluminum. OCWA will provide a contract Change Management Form to document this change.

b) LHPWSS

A staff suggestion to change internal lab times is being trialed. OCWA sent out an email for feedback from staff on the changes. Once responses are received, there will be a discussion of the results to decide if the change will become permanent.

7. Raw Water Supply and Drinking Water Quality Trends

a) EAPWSS

- Raw water colour is trending down. This may be due to a correction to the filter paper pore size in 2019.
- There is now two full years of dissolved oxygen data, which will allow trending to be established.
- Turbidity is very variable due to the raw water source (Lake Erie)
- Aluminum residual is very stable and normally below 0.02mg/L (contractual obligation 0.1mg/L).
- pH in treated water is very stable.
- Free chlorine residual target is higher in the summer months than winter months.
- Treated water turbidity is trending down.
- Haloacetic Acids (HAA) and Trihalomethanes (THM) are trending upward slightly, but the levels seen are still far below the Maximum Allowable Concentration (MAC) so this is not a concern.

b) LHPWSS

- Raw water colour is trending down. This may be due to a correction to the filter paper pore size in 2019.
- Raw water pH is trending down. Unsure what would be causing this decrease – this will need to be explored further. Compare raw water pH to other parameters going further back to see if any correlations are found. Look at seasonal runoff and summer/winter variations, and consider pH correlations with other trends such as aluminum residual, organics, hardness, etc.
- Raw water turbidity is normally very stable for source water (Lake Huron), but there were some spikes in late 2020 due to an intense storm season on the lake.



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- Aluminum residual is trending upwards – will monitor this once the coagulation upgrade at Huron WTP is completed, as improvements are expected as a result of this project.
- Chlorine residual is stable. Free chlorine residual target is higher in the summer months than winter months.
- Treated water pH is trending down at the WTP and at the Arva reservoir. Note on the trend graphs when the caustic system was offline for maintenance events (eg. pump replacements and tank cleaning).
- HAAs and THMs are trending upwards slightly, but the levels seen are still far below the MAC so this is not a concern.

8. QMS – Deviations to Critical Control Point Limits and Response Actions

a) EAPWSS

There was a total of 74 WaterTrax alerts for 2020, down from 81 in 2019. Most of these alerts were for free chlorine in settled water. This is mostly due to settling tank maintenance and filter maintenance causing inadequate mixing.

b) LHPWSS

There was a total of 6 WaterTrax alerts for 2020.

9. Adequacy of Resources

There is one open position in RWS (Asset Management Coordinator) that is being filled by an internal applicant.

In general, staff vacancies for both RWS and OCWA are typically filled quickly. Through the pandemic we are adapting and adopting new ways of working.

In the past year, the 100% MECF inspection ratings and successful internal and external audits show our management systems are working well and being supported.

SharePoint and Maximo have the capability to support system operations. OCWA feels well supported by RWS. Staffing resources are added as necessary with business cases being brought forward where required.

Training was a concern during the last year with the pandemic, but overall the training requirements are being met.

Water volumes are not increasing as much as anticipated which impacts revenue and capital project budgets. OCWA should be identifying high priority items as budgets may be limited.

There are recent commodity price increases and availability concerns during the pandemic as well. OCWA is looking at staff resources but also commodities.

10. Corrective Action Forms (CAF)

a) Huron Alum Spill (Feb. 19, 2021)

Corrective action items associated with this event have been added to the tracking sheet. A review of working around live piping with subcontractors should be performed before



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work is started. This is something that OCWA does through their work plan process, but this may be something that RWS should also consider implementing. This would require a determination of how much consulting time is needed onsite before the start of a project, which is difficult due to the varying scopes of projects.

The issue of RWS project contractors seeking direction from OCWA while on site may need to be revisited to determine how these situations should be approached and what OCWA's role is.

b) Elgin Filter Overflow (March 20, 2020)

Corrective action items associated with this event have been added to the tracking sheet. All corrective actions for this event have been completed.

Next Meeting: June 23, 2021

APPENDIX B: ENVIRONMENTAL COMPLIANCE AUDIT REPORT SUMMARY (NOVEMBER 23-24, 2020)

Audit Purpose:

The purpose of the audit was to verify conformance with the ISO 14001:2015 Environmental Management Systems standard for the Lake Huron Primary Water Supply System (LHPWSS). Internal audits ensure the EMS is being continually improved.

Non-conformances and opportunities for improvement are listed below.

Auditor Qualifications:

Christine Jansen has completed an ISO 14001:2015 training course in Internal Auditing. Denny Rodrigues has completed an ISO 14001:2004 training course as well as the ISO 14001:2015 Transition training. See certificates in Appendix C.

Methodology:

The Internal Audit was conducted as outlined in procedure LH-ADMIN-1200 Internal Audit. The internal audit was performed remotely, using information and communications technology, due to the current COVID-19 pandemic response measures in place in Ontario. The audit was comprised of a review of documents and records, 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 August 4-6, 2020.

Note: The audit was conducted through a review of a sampling of documents, limited interviews and observations by the auditors to demonstrate conformance with the ISO 14001:2015 Environmental Management Systems standard. The review and audit should not be construed as a complete and comprehensive review of all aspects/risks and all documents.

Findings:

The following is a summary of the audit findings, including non-conformances and opportunities for improvement.

Definitions:

- A non-conformance (NC) is a non-fulfillment of a requirement.
- An opportunity for improvement (OFI) describes a requirement that can be more effectively addressed.

Interviews Conducted:

- Mark Bilbrough – Operator
- Alex Russel – Operator
- Paladin Onsite Security Guard (contractor)

Summary of Findings

Non-Conformances (NC)

7.3 Awareness

NC #1: The organization has not ensured persons doing work under their control were aware of the significant environmental aspects and impacts associated with their work or their contribution to the effectiveness of the EMS. Contractors working for Paladin Security (onsite security) not sufficiently aware of the specific role they have in the success of the EMS.

8.2 Emergency preparedness

NC #2: Paladin Security contractors were not provided with adequate information related to emergency preparedness and response. Specifically, they were not informed on their role during certain emergency situations and, at the time of the audit, did not have access to the emergency procedures in the site security trailer. HMC-5, HSOP-1-07, HSOP-2-05, HSOP-2-06, HSOP-4-02 all have a clear role for security in the procedures.

Opportunities for Improvement (OFIs)

4 Context of the organization

OFI #1: There is an opportunity to link the Environmental Aspects and Impacts to the External and Internal Issues determined by the organization. Environmental aspects concern environmental conditions being affected by the organization, which is an internal issue. Consider referencing the Environmental Aspects and Impacts in the External and Internal Issues document.

OFI #2: Consider removing reference to O. Reg. 75/20: Drinking Water Systems and Sewage Works in the Interested Parties document. The first line item (Interested Party – ALL) references O. Reg. 75/20 in the Compliance Obligations column. This regulation was revoked on January 20, 2021.



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7.2 Competence

OFI #3: Consider documenting the EMS/QMS training requirements for Regional Water Supply staff in LH-ADMIN-1400 – Training.

7.4.3 External Communication

OFI #4: Consider documenting the procedure for handling complaints when they are directed to the Owner in LH-ADMIN-1000 Complaints.

7.5 Documented Information

OFI #5: The documented information for Clause 8.2 in the EMS Manual does not include the newly created HMC-8 Critical Shortage of Staff contingency plan.

APPENDIX C: ENVIRONMENTAL COMPLIANCE AUDIT REPORT SUMMARY (APRIL 1-6, 2021)

Summary

Audit Purpose:

The purpose of the audit was to verify compliance with select environmental legislation 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:

Christine Jansen has completed a three-day training course in ISO 14001:2015 EMS Internal Auditing (see Certificate in Appendix A). The auditor holds a Bachelor of Science in Environmental Science from Western University and an advanced diploma in Environmental Technology from Fanshawe College of Applied Arts and Technology.

Methodology:

The internal audit was conducted as outlined in Procedure LF-ADMIN-1600 (Compliance) of the EMS Manual. The audit checklists were generated using Nimonik Environmental Criteria Software and are attached as Appendix B of this report.

The audit was comprised of a facility tour and a 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 January 1, 2019 through April 1, 2021 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 generated by Nimonik Environmental Criteria Software:

Federal:

- Discharges to Navigable Waters
- Ozone Depleting Substances

Provincial:

- Ontario Fire Code (various)

Other Criteria:

- Soil, Groundwater and Sediment Standard (for use under Part XV.1 of the EPA)
- Watermain Disinfection Procedure
- By-Law No. 30-2006 – South Huron (concerning noise only)
- By-Law No. 2016-006 – Middlesex Centre (concerning noise only)
- Water Supply Agreements
- Occupancy Agreements
- Pipeline Operations and Maintenance Agreements (POMA)
- O. Reg. 332/12 Building Code (concerning septic tanks only)

Interviews Conducted:

- Denny Rodrigues, Safety Process & Compliance Manager
- Randy Lieber, Senior Operations Manager

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, opportunities for improvement, and observations 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.



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- An observation is a comment or remark provided to share the conditions found (i.e. on the day of the audit tour).

Regulatory Non-Compliance (NC):

- N/A

Regulatory Opportunities for Improvement (OFIs):

- N/A

Observations:

- Did not observe any signs indicating where designated smoking areas are located on site.
- Emergency exit light in Chlorine Building entrance was not illuminated.
- Contractor materials were observed being stored around the fire extinguisher in the Generator Building (fire extinguisher between two rolling doors).



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Meeting Date: June 3, 2021

File No.:

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

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

Subject: Quarterly Operating Financial Status – 1st Quarter 2021

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; it being noted that the financial information presented in this report is unaudited and subject to adjustments including the preparation of the financial statements and completion of the annual audit.

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 from 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 first quarter 2021 (January 1 to March 31) as well as a comparative accumulation of expensed for the year to date.

Note: The reported expenditures and revenues may be subject to adjustments, including but not limited to the preparation of financial statements and completion of the annual audit.

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:

- 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 other related contracted services. The total accumulated operating costs over the year (unaudited) is higher than the same period in 2020 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 and related energy management service charges for the water system. The water system is currently tracking approximately \$54,000 higher than the previous year, largely due to increased volumes supplied to the region.
- Salaries, wages and benefits expenditures include all direct labour costs for administrative staff including benefits. Variations over the same period in 2020 are attributed to annual salary adjustments, staff vacancies, and marginally lower total staffing costs as a result of the pandemic.
- Administration and Other Expenses relates to various overhead operating expenses, including subscriptions and memberships, office supplies and property taxes. While the reported expenditures will be adjusted as part of the year-end process, accounting for 2022 pre-payments and other cost accounting adjustments, the costs to date are lower than the same period in 2020.
- Vehicles and Equipment expenditures include costs associated with vehicles, computers and office equipment for administrative staff. Additional costs have been incurred related to replacement of computer equipment, travel and vehicles due to the pandemic.
- Purchased Services and Professional Fees largely relates to allowances for ad hoc professional consulting and legal services, security services, office lease, telephone charges, network and SCADA maintenance, printing services, and pipeline locate costs. The increased cost when compared to the same period in 2020 is largely attributed to increased insurance costs, the addition of security services in late 2020, and increased maintenance and repairs of computer systems.
- Debt Principle and Interest payments occur twice per year; in the first and third quarter.



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- Contributions to the Reserve Funds occur at the end of the fiscal year as part of the year-end audit preparation process, where the actual contributions are the total remaining revenue in excess of expenditures. Accordingly, the amount of the anticipated contribution is currently adjusted to reflect the additional revenue and expenses incurred, and may be subject to further adjustment as a result of the completion of the year-end financial statements and audit.

Prepared by: Archana Gagnier
Budget and Finance Analyst

Submitted by: Andrew Henry, P. Eng.,
Director, Regional Water Supply

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

Attachments: Operating Financial Status Summary – 1st Quarter 20201

Quarterly Financial Summary Report

Lake Huron Water Supply System
1st Quarter 2021 (January 1 to March 31)

(\$,000's)

	Approved 2021 Budget	Q1-2021	2021 Year to Date	% Year to Date	Variance Year To Date	2020 Year To Date
Total Revenue	23,300	3,426	3,426	14.7%	19,874	3,490
<u>Expenditures:</u>						
Contracted Operating Services	6,947	1,190	1,190	17.1%	5,757	1,136
Contracted Administrative Services	318	79	79	24.8%	239	78
Electricity	3,500	513	513	14.7%	2,987	459
Salaries, Wages, Benefits	741	173	173	23.3%	568	108
Administration and Other Expenditures	383	106	106	27.7%	277	113
Vehicles and Equipment	46	30	30	65.2%	16	12
Purchased Services & Professional Fees	1,210	341	341	28.2%	869	224
Debt Principle Payments	1,269	911	911	71.8%	358	898
Interest on Long-Term Debt	144	63	63	43.8%	81	78
Contributions to Reserve Funds	8,741	0	0	0.0%	8,741	0
Total Expenditures	23,299	3,406	3,404	14.6%	19,891	3,105



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

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

Subject: Water System Operation - Contract Status Update

RECOMMENDATION

That this report with respect to the status of the contract with the Ontario Clean Water Agency as the contracted operating authority BE RECEIVED for the information of the Lake Huron Primary Water Supply System Board of Management.

PREVIOUS AND RELATED REPORTS¹

March 4, 2021	Operations and Maintenance Services Agreement – Negotiation of Term Extension
June 4, 2020	Water System Operation - Contract Status Update
June 6, 2019	Water System Operation - Contract Status Update
June 7, 2018	Water System Operation – Contract Status Update
June 8, 2017	Operations and Maintenance Services Agreement – Negotiation of Term Extension

BACKGROUND

On January 19, 2012 the Board of Management for the Lake Huron Primary Water Supply System (LHPWSS), concurrently and jointly with the Board of Management for the Elgin Area Primary Water Supply System (EAPWSS), awarded the contract for the management, operation and maintenance of the drinking water systems to the Ontario Clean Water Agency (OCWA). OCWA began operating the LHPWSS on July 1, 2012. The original contract with OCWA was for a five-year term, with a five-year optional extension.

On June 8, 2017 the Board Chair and Chief Administrative Officer (CAO) were authorized by the Board to execute the Operations and Maintenance Service Amending Agreement with OCWA to extend the term of the agreement for the additional five-year period. The Amending Agreement for the second five-year term took effect on July 1, 2017 and the term ends on December 31, 2022. The Amending Agreement allows for an additional five-year extension at the option of the Board.

¹ **Previous and Related Reports** listed for the most recent five years. Similar reports are available dating back to January 12, 2012.

On March 4, 2021 the Board authorized staff to negotiate the terms and conditions for a draft term extension agreement with OCWA for the allowable five-year extension period. The term extension will be for the period January 1, 2023 to December 31, 2027, subject to the approval of the Board.

DISCUSSION

The service agreement with OCWA contains a significant number of deliverables. This report does not attempt to cover the status of all deliverables, rather it provides an overview of some of the more notable administrative items.

General Contract Deliverables

Under the service agreement, OCWA is required to provide several regular reports to Board staff, including:

- Monthly Operations and Maintenance Report
- Quarterly Contract Report
- Quarterly Water Quality Report
- Quarterly Financial Report
- Quarterly Health & Safety Activities Report

Board staff and OCWA currently meet monthly to review the day-to-day management, operations and maintenance activities for the water supply system. The Board's CAO, Director, and the senior management of OCWA also meet quarterly to discuss any financial, contractual compliance and administrative-level issues. All of the above noted reports and related meeting minutes are available from the Regional Water Supply office in London upon request.

Employee Retention Incentive

Under the service agreement, OCWA is entitled to receive an annual employee retention incentive payment if all critical staff positions were filled, and staff turnover for these positions was no more than two persons during the calendar year. This incentive was included in the service agreement in order to ensure adequate numbers of critical staff were available and incent minimal turnover, which was a significant issue with the previous contracted operating authority.

In 2020, OCWA did not achieve this for the LHPWSS and therefore did not receive the employee retention incentive payment. The incentive was impacted by turnover of three staff positions during the year: Team Lead (Maintenance & Distribution), and two Operators. These positions have all since been filled.

Performance Incentive Payment

At the end of each contract year, OCWA is entitled to receive a performance incentive payment of up to \$100,000, subject to any deductions outlined in the service agreement. Deductions could result from a number of specified issues, such as providing deficient or late reports, failure to meet emergency response requirements, failure to deal with complaints, failure to meet water quality performance criteria, etc. The performance incentive payment is intended to promote performance superior to minimum regulatory standards and best practices.

In 2020, there were no deductions to the incentive payment. The water quality performance criteria specified within the service agreement was continuously met during the period. In total, OCWA received the full \$100,000 incentive payment for the LHPWSS.

Service Fee Adjustment

The service agreement identifies projected annual treated water volumes throughout the contract term, upon which the annual service fee is based. At the end of each contract year, if the actual volume is greater than 105% or less than 95% of the projected volume, an adjustment is made to the service fee (either a credit or additional cost).

In 2020, the actual volume for the LHPWSS was 98.37% of the projected contract volume. This was within the accepted range therefore no adjustments to the service fee were required.

CONCLUSION

Board staff will continue to work closely with the operating authority to monitor performance and ensure deliverables under the service agreement. Any contractual issues are discussed at the quarterly operations meetings between OCWA and Board staff.

Prepared by: Erin McLeod, Quality Assurance & Compliance Manager

Submitted by: Andrew Henry, P. Eng.,
Director, Regional Water

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



Report No.: LH-2021-02-05

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Meeting Date: June 3, 2021

File No.:

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

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

Subject: 2020 Audited Financial Statement and Auditors Report

RECOMMENDATION

That the Board of Management for the Lake Huron Primary Water Supply System **RECEIVE AND ACCEPT** the 2020 Audited Financial Statement for the Lake Huron Primary Water Supply System.

DISCUSSION

On an annual basis, the finances and financial statements for the Lake Huron Primary Water Supply System are audited by a financial auditor acquired in partnership with the City of London in its capacity as Administering Municipality for the water system. The draft audited financial statements have been provided to the benefiting municipalities, as well as the reconciled volumes supplied to each municipality, to allow the municipalities to complete their respective financial audits and statements.

Submitted by: Andrew Henry, P. Eng.,
Director, Regional Water Supply

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

Attachments: 2020 Audited Financial Statements, Lake Huron Water Supply System

Financial Statements of

**LAKE HURON AREA PRIMARY WATER
SUPPLY SYSTEM**

And Independent Auditors' Report thereon

December 31, 2020

LAKE HURON AREA PRIMARY WATER SUPPLY SYSTEM
Statement of Financial Position
December 31, 2020, with comparative information for 2019

	2020	2019
Financial assets		
Due from the Corporation of the City of London (note 3)	\$ 44,588,744	\$ 37,632,030
Trade and other receivables	745,428	673,067
Total financial assets	45,334,172	38,305,097
Financial liabilities		
Accounts payable and accrued liabilities	977,399	1,511,085
Accrued interest on long-term debt	36,640	43,209
Long-term debt (note 4)	5,624,219	6,855,465
Total financial liabilities	6,638,258	8,409,759
Net financial assets	38,695,914	29,895,338
Non-financial assets		
Tangible capital assets (note 5)	144,293,049	148,540,345
Prepaid expenses	283,448	243,388
Total non-financial assets	144,576,497	148,783,733
Accumulated surplus (note 6)	\$ 183,272,411	\$ 178,679,071

Commitments (note 8)

Contingent liabilities (note 9)

The accompanying notes are an integral part of these financial statements.

LAKE HURON AREA PRIMARY WATER SUPPLY SYSTEM
Statement of Operations
Year ended December 31, 2020, with comparative information for 2019

	Budget (note 10)	2020	2019
Revenues			
User charges	\$ 22,772,970	\$ 23,698,905	\$ 22,838,742
Investment income	558,000	927,618	832,509
Other	5,000	7,426	1,536
Total revenues	23,335,970	24,633,949	23,672,787
Expenses			
Salaries, wages and fringe benefits	746,145	726,734	784,142
Materials and supplies	11,423,541	10,679,193	10,645,143
Contracted services	629,663	625,370	517,263
Rents and financial expenses	85,000	65,613	77,098
Interest on long-term debt (note 4)	141,565	141,565	162,889
Amortization of tangible capital assets (note 5)	7,496,404	7,496,404	7,543,440
Administrative charges to the Corporation of the City of London	312,938	305,730	213,459
Total expenses	20,835,256	20,040,609	19,943,434
Annual surplus	2,500,714	4,593,340	3,729,353
Accumulated surplus, beginning of year (note 6)	178,679,071	178,679,071	174,949,718
Accumulated surplus, end of year (note 6)	\$ 181,179,785	\$ 183,272,411	\$ 178,679,071

The accompanying notes are an integral part of these financial statements.

LAKE HURON AREA PRIMARY WATER SUPPLY SYSTEM
Statement of Changes in Net Financial Assets
Year ended December 31, 2020, with comparative information for 2019

	Budget	2020	2019
Annual surplus	\$ 2,500,714	\$ 4,593,340	\$ 3,729,353
Acquisition of tangible capital assets	(5,346,537)	(3,249,108)	(3,051,085)
Amortization of tangible capital assets	7,496,404	7,496,404	7,543,440
	4,650,581	8,840,636	8,221,708
Change in prepaid expenses	-	(40,060)	(40,878)
Change in net financial assets	4,650,581	8,800,576	8,180,830
Net financial assets, beginning of year	29,895,338	29,895,338	21,714,508
Net financial assets, end of year	\$ 34,545,919	\$ 38,695,914	\$ 29,895,338

The accompanying notes are an integral part of these financial statements.

LAKE HURON AREA PRIMARY WATER SUPPLY SYSTEM
Statement of Cash Flows
Year ended December 31, 2020, with comparative information for 2019

	2020	2019
Cash provided by (used in)		
Operating activities		
Annual surplus	\$ 4,593,340	\$ 3,729,353
Items not involving cash		
Amortization of tangible capital assets	7,496,404	7,543,440
Amortization of debenture discount	8,201	8,200
Change in non-cash assets and liabilities		
Due from the Corporation of the City of London	(6,956,714)	(7,798,649)
Prepaid expenses	(40,060)	(40,878)
Trade and other receivables	(72,361)	1,235,562
Accounts payable and accrued liabilities	(533,686)	(401,659)
Accrued interest on long-term debt	(6,569)	(6,044)
Net change in cash from operating activities	4,488,555	4,269,325
Capital activities		
Purchase of tangible capital assets	(3,249,108)	(3,051,085)
Net change in cash from capital activities	(3,249,108)	(3,051,085)
Financing activities		
Long-term debt repayments	(1,239,447)	(1,218,240)
Net change in cash flows and cash, end of year	\$ -	\$ -

The accompanying notes are an integral part of these financial statements.

LAKE HURON AREA PRIMARY WATER SUPPLY SYSTEM
Notes to Financial Statements
Year ended December 31, 2020

1. Nature of Reporting Entity

The final transfer order for Lake Huron Area Primary Water Supply System (the “Entity”) was effective September 15, 2000, transferring assets along with any other real property to The Corporation of the City of London (the “Corporation”) in trust to act as the Administering Municipality on behalf of the participating municipalities.

Under the transfer order, the works, properties and all assets, liabilities, rights and obligations of the system are conveyed, assigned and transferred to the Corporation as Trustee. Each of the benefitting municipalities, for so long as the municipality is serviced by the works has an undivided beneficial ownership interest in the works as tenant in common with all other municipalities jointly. The proportion that each municipality’s interest bears to the total of all municipalities’ interests shall be in the same ratio that the quantity of water supplied from the works to the municipalities at any time and from time to time bears to the total quantity of water supplied to all municipalities at such time. At present, the benefitting municipalities are The Corporation of the City of London, the Municipalities of Bluewater, South Huron, Lambton Shores, North Middlesex, Lucan-Biddulph, Middlesex Centre and Strathroy-Caradoc.

The transfer order established a joint board of management to govern the management of the water supply system. The joint board of management is comprised of eleven members appointed by the respective councils of participating municipalities. The Board composition is as follows:

Municipality	Members	Votes
The Corporation of the City of London	4	17
The Corporation of the Municipality of Bluewater	1	1
The Corporation of the Municipality of South Huron	1	1
The Township of Lucan-Biddulph	1	1
The Corporation of the Municipality of Lambton Shores	1	1
The Municipality of North Middlesex	1	3
The Municipality of Middlesex Centre	1	1
The Corporation of the Municipality of Strathroy-Caradoc	1	3

LAKE HURON AREA PRIMARY WATER SUPPLY SYSTEM
Notes to Financial Statements (continued)
Year ended December 31, 2020

2. Significant Accounting Policies

The financial statements of the Entity are prepared by management, in accordance with Canadian generally accepted accounting principles as defined in the CPA Canada Public Sector Handbook – Accounting. Significant accounting policies are as follows:

(a) Accrual Accounting

Sources of financing and expenses are reported on the accrual basis of accounting.

(b) Non-financial Assets

Non-financial assets are not available to discharge existing liabilities and are held for use in the provision of services. They have useful lives extending beyond the current year and are not intended for sale in the ordinary course of operations.

(i) Tangible Capital Assets

Tangible capital assets are recorded at cost which includes amounts that are directly attributable to acquisition, construction, development or betterment of the asset. The cost, less residual value, of the tangible capital assets, excluding land, are amortized on a straight line basis over their estimated useful lives as follows:

Asset	Useful Life - Years
Buildings and building improvements	15 – 40
Vehicles	5 – 15
Machinery and equipment	7 – 20
Water infrastructure	10 – 60
Computers	3

Annual amortization is charged in the year of acquisition and in the year of disposal using the half year rule. Assets under construction are not amortized until the asset is available for productive use.

(ii) Interest Capitalization

The interest costs associated with the acquisition or construction of a tangible capital asset are not capitalized.

(c) Revenue Recognition

The Entity recognizes revenue when water is drawn by each customer, collection of the relevant receivable is probable, persuasive evidence of an arrangement exists and the sales price is fixed or determinable.

LAKE HURON AREA PRIMARY WATER SUPPLY SYSTEM
Notes to Financial Statements (continued)
Year ended December 31, 2020

2. Significant Accounting Policies (continued)

(d) Government Transfers

Government transfer payments to the Entity are recognized in the financial statements in the year in which the payment is authorized and the events giving rise to the transfer occur, performance criteria are met, and a reasonable estimate of the amount can be made. Funding that is stipulated to be used for specific purposes is only recognized as revenue in the fiscal year that the related expenses are incurred or services performed. If funding is received for which the related expenses have not yet been incurred or services performed, these amounts are recorded as a liability at year end.

(e) Use of Estimates

The preparation of financial statements in conformity with Canadian generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the year. Significant items subject to such estimates and assumptions include the valuation allowances for receivables and useful lives assigned to tangible capital assets.

Actual results could differ from those estimates.

(f) Budget Figures

Budget figures have been provided for comparison purposes. Given differences between the budgeting model and generally accepted accounting principles established by the Public Sector Accounting Board ("PSAB"), certain budgeted amounts have been reclassified to reflect the presentation adopted under PSAB.

(g) Liability for Contaminated Sites

Under PS 3260, liability for contaminated sites are defined as the result of contamination being introduced in air, soil, water or sediment of a chemical, organic, or radioactive material or live organism that exceeds an environmental standard. This Standard relates to sites that are not in productive use and sites in productive use where an unexpected event resulted in contamination.

LAKE HURON AREA PRIMARY WATER SUPPLY SYSTEM
Notes to Financial Statements (continued)
Year ended December 31, 2020

2. Significant Accounting Policies (continued)

(h) Related Party Disclosures

Related parties exist when one party has the ability to control or has shared control over another party. Individuals that are key management personnel or close family members may also be related parties.

Disclosure is made when the transactions or events between related parties occur at a value different from what would have been recorded if they were not related and the transactions could have a material financial impact on the consolidated financial statements.

(i) Inter-entity Transactions

Transactions between related parties are recorded at carrying amounts with the exception of the following:

- Transactions in the normal course of business are recorded at exchange amount.
- Transactions with fair value consideration are recorded at exchange amount.
- Transfer of an asset or liability at nominal or no consideration is recorded by the provider at carrying amount and the recipient has the choice of either carrying amount or fair value.
- Cost allocations are reported using the exchange amount and revenues and expenses are reported on a gross basis.
- Unallocated costs for the provision of goods or services maybe recorded by the provider at cost, fair value or another amount dictated by policy, accountability structure or budget practice.

3. Due from the Corporation of the City of London

As the Administering Municipality, the Corporation manages the daily operations of the Entity. The Corporation maintains a separate general ledger on behalf of the Entity. All funds are paid and received through the Corporation's bank account and are held for use by the Entity.

LAKE HURON AREA PRIMARY WATER SUPPLY SYSTEM
Notes to Financial Statements (continued)
Year ended December 31, 2020

4. Long-term Debt

Long-term debt is stated as follows:

	2020	2019
Long-term debt assumed by the Corporation of the City of London, as Administering Municipality, on behalf of the Lake Huron Area Primary Water Supply System, with semi-annual interest payments:		
at rates ranging from 2.90% to 3.20% (2019 - 2.70% to 3.20%), maturing September 2022.	\$ 385,400	\$ 571,075
at rates ranging from 3.20% to 3.80% (2019 - 2.95% to 3.80%), maturing September 2023.	491,820	647,370
at rates ranging from 1.40% to 2.25% (2019 - 1.15% to 2.25%), maturing March 2025.	4,487,187	5,346,840
at rates ranging from 1.55% to 2.85% (2019 - 1.30% to 2.85%), maturing March 2027.	292,643	331,212
Total long-term debt	5,657,050	6,896,497
Less: Unamortized debenture discount	(32,831)	(41,032)
Net long-term debt	\$ 5,624,219	\$ 6,855,465

The long-term debt repayment schedule is as follows:

2021	\$ 1,261,262
2022	1,283,326
2023	1,106,232
2024	951,752
2025	965,815
2026 and beyond	88,663
Total	\$ 5,657,050

Total interest charges for the year for long-term debt, which are included in the statement of operations, are as follows:

	2020	2019
Interest on long-term debt	\$ 133,364	\$ 154,688
Amortization of debenture discount	8,201	8,201
	\$ 141,565	\$ 162,889

LAKE HURON AREA PRIMARY WATER SUPPLY SYSTEM
Notes to Financial Statements (continued)
Year ended December 31, 2020

5. Tangible Capital Assets

Cost	Balance at December 31, 2019	Additions	Disposals	Balance at December 31, 2020
Land	\$ 2,389,062	\$ 23,327	\$ -	\$ 2,412,389
Buildings and building improvements	55,801,279	242,294	68,354	55,975,219
Machinery and equipment	44,025,778	546,365	8,304,475	36,267,668
Vehicles	11,527	-	-	11,527
Water infrastructure	118,660,278	372,302	-	119,032,580
Computers	86,837	242,102	-	328,939
Assets under construction	725,286	1,822,718	-	2,548,004
Total	\$ 221,700,047	\$ 3,249,108	\$ 8,372,829	\$ 216,576,326

Accumulated Amortization	Balance at December 31, 2019	Amortization Expense	Amortization Disposals	Balance at December 31, 2020
Land	\$ -	\$ -	\$ -	\$ -
Buildings and building improvements	18,058,841	2,222,842	68,354	20,213,329
Machinery and equipment	23,531,515	2,927,085	8,304,475	18,154,125
Vehicles	4,117	1,651	-	5,768
Water infrastructure	31,522,176	2,252,297	-	33,774,473
Computers	43,053	92,529	-	135,582
Assets under construction	-	-	-	-
Total	\$ 73,159,702	\$ 7,496,404	\$ 8,372,829	\$ 72,283,277

	Net Book Value December 31, 2019	Net Book Value December 31, 2020
Land	\$ 2,389,062	\$ 2,412,389
Buildings and building improvements	37,742,438	35,761,890
Machinery and equipment	20,494,263	18,113,543
Vehicles	7,410	5,759
Water infrastructure	87,138,102	85,258,107
Computers	43,784	193,357
Assets under construction	725,286	2,548,004
Total	\$ 148,540,345	\$ 144,293,049

LAKE HURON AREA PRIMARY WATER SUPPLY SYSTEM
Notes to Financial Statements (continued)
Year ended December 31, 2020

5. Tangible Capital Assets (continued)

(a) Assets Under Construction

Assets under construction with cost of **\$2,548,004** (2019 - \$725,286) have not been amortized. Amortization of these assets will commence when the asset is available for productive use.

(b) Tangible Capital Assets Disclosed at Nominal Values

Where an estimate of fair value could not be made, the tangible capital asset was recognized at a nominal value. Land is the only category where nominal values were assigned.

(c) Write-down of Tangible Capital Assets

There were **\$nil** write-downs in tangible capital assets during the year (2019 - \$nil).

6. Accumulated Surplus

Accumulated surplus consists of individual fund surplus and reserve funds as follows:

	2020	2019
Surplus		
Invested in tangible capital assets	\$ 136,172,679	\$ 139,069,937
Reserve funds set aside for specific purpose by the Entity:		
Infrastructure renewal - water operations	47,099,732	39,609,134
	\$ 183,272,411	\$ 178,679,071

7. Financial Instruments

(a) The carrying values of Due from the Corporation of the City of London, Trade and other receivables and Accounts payable and accrued liabilities approximate their fair values due to the relatively short periods to maturity of the instruments.

The fair value of Long-term debt approximates its carrying value as interest rates are similar to current market rates of interest available to the Entity.

(b) Financial Risks

The Entity is not exposed to any significant interest, foreign currency or credit risks arising from its financial instruments.

LAKE HURON AREA PRIMARY WATER SUPPLY SYSTEM
Notes to Financial Statements (continued)
Year ended December 31, 2020

8. Commitments

Derivatives

The Entity has the following derivative:

- Contract with one block negotiated May 5, 2017, with a daily electricity purchase of 24 megawatt hours. Covering the period of November 1, 2018 to August 31, 2021, remaining contract cost at December 31, 2020 is **\$172,635** (2019 - \$431,587).

This derivative contract was purchased to ensure price certainty for 26% of the Entity's electricity needs over the term of the contract. The value of the contract is not reflected as an asset or liability in these financial statements.

9. Contingent Liabilities

There are certain claims pending against the Entity as at December 31, 2020. The final outcome of these claims cannot be determined at this time, however management believes that settlement of these matters will not materially exceed amounts recorded in these financial statements.

Draft

LAKE HURON AREA PRIMARY WATER SUPPLY SYSTEM
Notes to Financial Statements (continued)
Year ended December 31, 2020

10. Budget Data

Budget data presented in these financial statements are based upon the 2020 operating budget approved by the joint board of management. Adjustments to budgeted values were required to provide comparative budget values based on the full accrual basis of accounting. The chart below reconciles the approved budget with the budget figures as presented in these financial statements.

	Budget
Revenues	
User charges	\$ 22,772,970
Municipal revenues - other	25,000
Total revenues	22,797,970
Expenses	
Personnel costs	707,895
Administrative expenses	61,850
Financial expenses - other	335,000
Financial expenses - interest and discount on long-term debt	141,565
Financial expenses - debt principal repayments	1,239,448
Financial expenses - transfers to reserves and reserve funds	8,663,133
Purchased services	697,700
Materials and supplies	10,596,225
Furniture and equipment	42,216
Other expenses	312,938
Total expenses	22,797,970
Net surplus as per budget	-
PSAB reporting requirements	
Transfers to reserves and reserve funds	8,663,133
Debt principal repayments	1,239,448
Capital expenses not resulting in capital assets	(443,463)
Amortization	(7,496,404)
Reserve fund interest earned	538,000
Net PSAB budget surplus as per financial statements	\$ 2,500,714

LAKE HURON AREA PRIMARY WATER SUPPLY SYSTEM
Notes to Financial Statements (continued)
Year ended December 31, 2020

11. Impact of COVID-19 Pandemic

Effective March 11, 2020, the COVID-19 outbreak was declared a pandemic by the World Health Organization and has had a significant financial, market and social dislocating impact.

At the time of approval of these financial statements, the Entity has experienced the following indicators of financial implications and undertaken the following activities in relation to the COVID-19 pandemic:

- Due to the temporary closure of non-essential business and restrictions in activities, consumption within the municipalities served by the water system has moderately declined
- Lower water demand volumes within the municipalities may result in lower expenditures
- The Regional Water Supply office has remained open but reduced their staffing compliment on premises from March 18, 2020 to the date of the auditors' report based on public health recommendations
- Implemented voluntary working from home strategy in service delivery
- Modifications to shift coverage and work-isolations to minimize risks to operating staff at the water treatment plants

The ultimate duration and magnitude of the COVID-19 pandemic's impact on the Entity's operations and financial position is not known at this time, although to date the impact has not been significant. These impacts could include a decline in future cash flows and changes to the value of assets and liabilities. Though management continues to make best efforts to forecast possible financial scenarios, an estimate of the future financial effect of the pandemic on the Entity is not practicable at this time.



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

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

Subject: LH1242 Pressure Transient Monitoring Program – Status Update

RECOMMENDATION

That, on the recommendation of the Chief Administrative Officer, the Board of Management for the Lake Huron Primary Water Supply system **RECEIVE** this report regarding the Pressure Transient Monitoring Program (Project LH1242) for information.

PREVIOUS AND RELATED REPORTS

October 8, 2020 LH1242 Pressure Transient Monitoring Program

BACKGROUND

Assessment of hydraulic pressure transients within a water system is an important consideration for the long-term operation and integrity of the water supply system. Pressure transients can occur when the transmission system changes from one hydraulic state to another, resulting in a pressure wave travelling through the transmission system. This is often seen when the flow in a pumping station or pipeline reverts from full flow to complete stoppage due to pump shutoff or valve closure. The worst-case condition typically occurs when an electrical power failure causes all duty pumps in a pump station to suddenly stop. When pipe wall degradation is combined with the surge pressures that result from the sudden changes in flow conditions, the likelihood of pipe failure can significantly increase.

The evaluation of the pump station operation, such as pump start-up, range of flow, pressures (operating and surge) and surge protection can provide important information on the stresses inflicted on the pipeline. This vital information in conjunction with the acoustic fibre optic (AFO) monitoring program can help predict when a section of the pipeline is close to failure and needs replacement before a catastrophic failure occurs, as well as direct changes in the operating strategy to mitigate the long-term potential for such failures.

While normal pressure monitors typically read water pressure at intervals ranging from several seconds to a few minutes, transient pressure monitors will read water pressure in microseconds when a transient event is detected. This allows for a very detailed assessment of operating conditions during transient events.

In June 2019, the transient monitoring program was commissioned to further understand the operational and surge pressures within the primary transmission pipeline and to provide data for the hydraulic transient modeling undertaken as part of the design of the water treatment plant high lift pump replacements project. In October 2020, the transient monitoring program

was expanded by installing two additional transient pressure monitors at various points of interest along the transmission systems.

DISCUSSION

Currently, four (4) monitors are utilized on the 1200mm transmission pipeline and two (2) monitors are utilized on the smaller connecting transmission pipelines. One (1) additional pressure monitor is installed permanently on the primary system at the water treatment plant. The three (3) remaining monitors on the primary system were installed at the McGillivray pumping station upstream of reservoir fill valve, McGillivray pumping station discharge header and at connection to the Strathroy pipeline from June to September 2020. In October 2020, these three (3) monitors were relocated to B Line Road, Mount Carmel, and to the high point of the primary transmission main near Ilderton. In October 2020, two (2) additional monitors were installed on the Exeter Hensall pipeline and the Strathroy pipeline metering station.

Pressure transients that were generated during normal operations were measured in each selected section and transient data was recorded as follows:

- Normal operating background pressure readings taken every 2 to 4 minutes; and
- When rapid pressure change exceeds the threshold pressure change (impulse event), transient mode takes over and readings are taken at a frequency of 256 readings per second.

During the reporting period from June 2020 to December 2020 the Acoustic Fibre Optic Monitoring system detected 14 wire breaks on the 1200mm transmission pipeline at various locations. Pressure monitoring data that was collected at the nearest upstream and downstream pressure monitoring sites was reviewed for the time and date of each acoustic wire break event. It was determined that three of the acoustic wire break events directly correlated to transient events recorded at their nearest transient pressure monitoring sites:

- One (1) of the acoustic wire break events correlated in time to a transient event recorded at the McGillivray – Upstream of the reservoir fill valve transient pressure monitoring site.
- Two (2) of the acoustic wire break events occurred shortly within a 30-minute window of transient events recorded at the McGillivray Pump Station – Upstream of reservoir fill valve transient pressure monitoring site.

The remaining eleven (11) acoustic wire break events occurred with no detectable correlation to transient pressure events at the nearest pressure monitoring sites.

The figure below shows typical transient monitoring data for a pump trip due to a power failure at the water treatment plant.

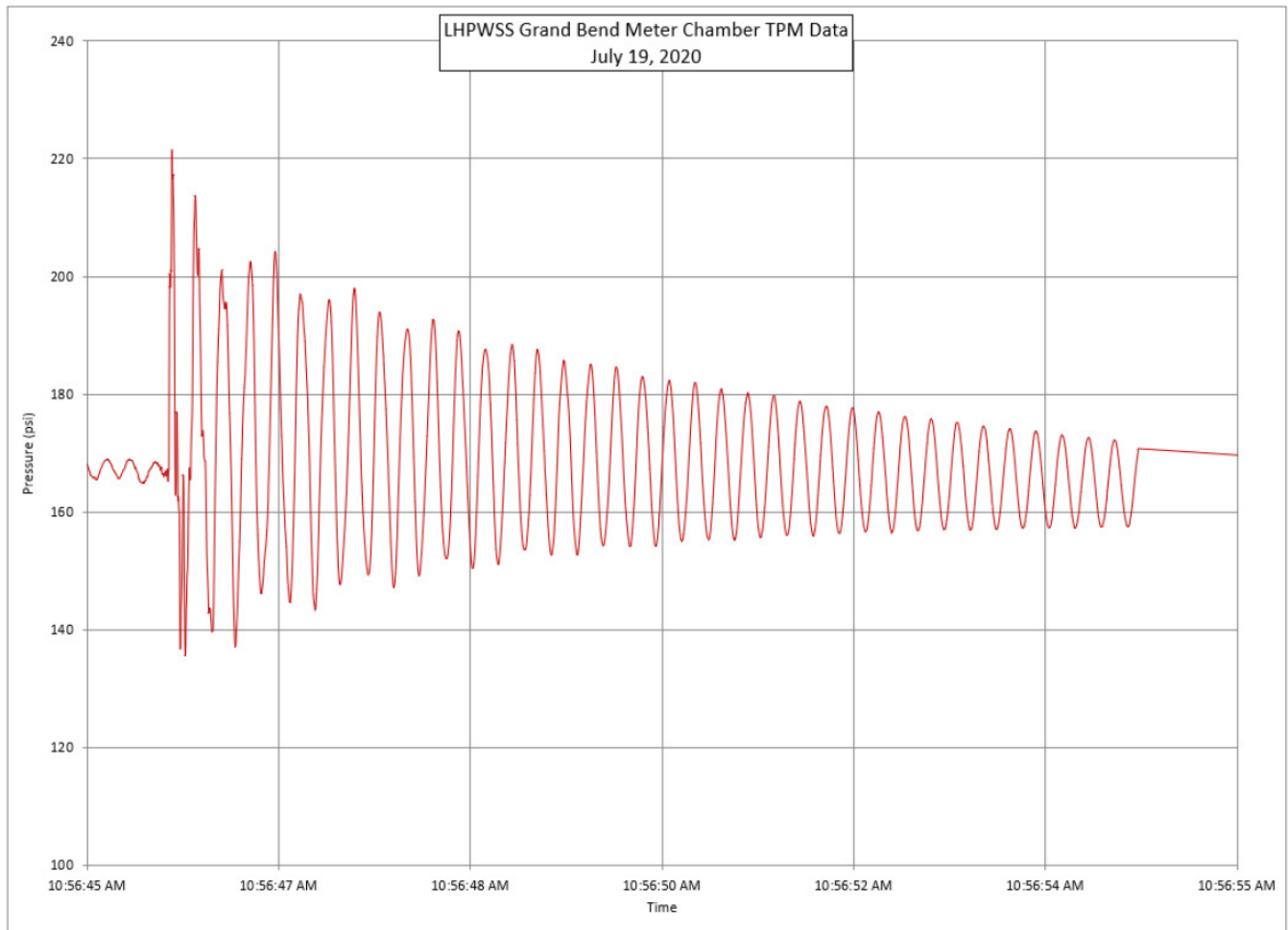


Figure 1: Water Treatment Plant Transient Monitoring – Power Failure Event July 19, 2020

Surge protection requirements based on the transient analysis (validated with the transient monitoring data) conducted as part of the design of the high lift pump replacements project recommended the following enhanced transient protection:

- Adjustment of surge tank Hydro-pneumatic Air Chamber (HAC) probe level settings (to be undertaken as part of the high lift pump replacements project);
- Installation of a surge relief valve (future capital);
- Installation of non-slam check valves for the station (to be undertaken as part of the high lift pump replacements project); and,
- Upgrades to air valves along the transmission main (future capital).



The transient monitoring program will continue until the new high lift pumps and the works noted above are in place and a comprehensive transient monitoring dataset across the primary and secondary pipelines is established. This information will be used to improve the regional water systems hydraulic and transient pressure models used to operate the transmission system.

In future, Board staff will engage the services of a pressure transient expert to review the monitoring data and perform additional transient modeling analysis to provide recommendations, if any, to further mitigate the risk of wire breaks on the primary transmission system.

PROJECT FINANCIAL STATUS

Summary of Projected Costs

The following summary of estimated costs is provided for review and will be confirmed throughout the project:

Monitoring	\$250,000
Construction	<u>\$120,000</u>
Total Projected Costs	\$330,000
Approved Budget	\$330,000

Summary of Expenditures Incurred to Date as of April 30, 2021

The following summary of expenditures incurred to date:

Monitoring	\$116,992
Construction	<u>\$ 35,028</u>
Total Expenditures	\$152,020
Budget Surplus/Deficit	\$177,980



Lake Huron
Primary Water Supply System

Report No.: LH-2021-02-09

Report Page: 5 of 5

Meeting Date: June 3, 2021

File No.: LH1242

CONCLUSION

Transient pressure monitoring on the primary transmission pipeline has determined that there is some correlation between wire breaks occurring in the 1200mm transmission pipeline and transient pressure surges. Board staff will engage the services of a pressure transient expert to further review the monitoring data and perform additional transient modelling analysis to provide recommendations, if any, to further mitigate the risk of wire breaks on the primary transmission system.

The monitoring program will continue until the enhanced transient protection is in place and a comprehensive transient monitoring dataset across the primary and secondary pipelines is established.

Prepared by: Billy Haklander, P.Eng., LL.M.
Environmental Services Engineer

Submitted by: Andrew Henry, P. Eng.,
Director, Regional Water Supply

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



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

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

Subject: LH1385 Crop Yield Monitoring Program – 1996 Pipeline Twinning Project

RECOMMENDATION

That, on the recommendation of the Chief Administrative Officer, the Board of Management for the Lake Huron Primary Water Supply System **RECEIVE** this report regarding the Crop Yield Monitoring Program (project LH1385) associated with the 1996 Pipeline Twinning Project for information.

PREVIOUS AND RELATED REPORTS

June 7, 2012	Lake Huron Pipeline Landowners Association – Pre-Transfer Issues
March 21, 2013	Lake Huron Pipeline Landowners Association – Status Update
March 6, 2014	Lake Huron Pipeline Landowners Association – Status Update
June 4, 2015	Crop Yield Monitoring Program – 1996 Pipeline Twinning Project
March 3, 2016	Crop Yield Monitoring Program – 1996 Pipeline Twinning Project
June 2, 2016	Crop Yield Monitoring Program – 1996 Pipeline Twinning Project
October 5, 2017	Crop Yield Monitoring Program – 1996 Pipeline Twinning Project

BACKGROUND

In October 2017, the Board approved a list of pre-qualified agronomists from which property owners may select to undertake a three-year crop yield monitoring program associated with the 1996 Pipeline Twinning Project. The Board also approved payment, in the amount of \$2,900 per acre, in lieu of a three-year crop yield monitoring program subject to the landowner providing a release in full and final satisfaction of all issues pertaining to crop loss arising from the 1996 pipeline twinning project.

DISCUSSION

Board staff contacted the forty-two (42) property owners affected by the 1996 pipeline twinning project to confirm either their participation in the crop yield monitoring program or select the payment in lieu of monitoring option. Thirty-eight (38) property owners chose the payment in lieu of monitoring option with four (4) property owners electing to participate in the crop yield monitoring program. All participants selected McCallum Agronomic Services as their pre-qualified crop yield monitoring specialist.



The crop yield monitoring program commenced in 2018 and assessed the 2018, 2019 and 2020 crop years. Two property owners had on-easement crop yields more than the 80% required, in comparison to the off-easement control samples, in three consecutive years. One of the owners had three farm properties assessed, two out of the three farms had on-easement crop yields more than the 80% required in three consecutive years. The third farm had an on-easement crop yield of 77% in comparison to the off-easement control sample in 2018 but greater than 80% in 2019 and 2020. Consequently, this third farm will be monitored again in 2021 to confirm on-easement crop yields of more than the 80% for the required three consecutive years. This property owner will also be compensated for the difference in yield for the 2018 crop year in accordance with the 1996 Pipeline Twinning Letter of Undertaking Agreement.

The remaining property owner that chose to participate in the crop yield monitoring program had on-easement yields significantly less than 80% in the 2018 and 2019 crop years. In the opinion of the crop yield monitoring specialist, it was unlikely that this portion of the easement could be reasonably remediated to the extent that it would consistently reach yields greater than 80% in three consecutive years. At the request of the property owner, Board staff adjusted the initial payment-in-lieu of monitoring offer considering the significant remediation efforts which would be necessary to achieve the required 80% in comparison to the off-easement control. The offer was accepted by the property owner and in May of 2020 provided a release in full and final satisfaction of all issues pertaining to crop loss arising from the 1996 pipeline twinning project.

PROJECT FINANCIAL STATUS

Expenditure	Projected	Incurred
Compensation in lieu of crop yield monitoring	\$ 285,886	\$ 284,655
Crop yield monitoring	\$ 51,939	\$ 45,486
Total	\$ 337,805	\$ 330,141
Approved Budget	\$ 450,000	
Projected Variance	\$ 112,195	



Lake Huron
Primary Water Supply System

Report No.: LH-2021-02-10

Report Page: 3 of 3

Meeting Date: June 3, 2021

File No.: LH1385

CONCLUSION

The crop yield monitoring program associated with the 1996 pipeline twinning project has been a long-standing issue since the Transfer Order issued by the Province of Ontario in 1998, as well as the subsequent monitoring undertaken in 2003 and 2004 and the 2012 Pipeline Twinning negotiations with the Lake Huron Pipeline Landowners Association.

Of the forty-two landowners impacted, only one agricultural property requires an additional year of crop yield monitoring, while the remaining properties have either met the 80% yield threshold stipulated in the landowner agreement or the property owner has accepted a payment in lieu of monitoring in exchange for the execution of a full and final release. Upon the completion of crop yield monitoring of the final field in 2021, the Lake Huron Primary Water Supply System will have met the obligation the Province of Ontario (via the Ontario Clean Water Agency) had with the Lake Huron Pipeline Landowners Association associated with the 1996 Pipeline Twinning project.

Prepared by: Billy Haklander, P.Eng., LL.M.
Environmental Services Engineer

Submitted by: Andrew Henry, P. Eng.,
Director, Regional Water Supply

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



Report No.: LH-2021-02-11
Report Page: 1 of 3
Meeting Date: June 3, 2021
File No.: LH1256

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

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

Subject: LH1256 Crop Yield Monitoring Program – 2014 Pipeline Twinning Project

RECOMMENDATION

That, on the recommendation of the Chief Administrative Officer, the Board of Management for the Lake Huron Primary Water Supply System **RECEIVE** this report regarding the Crop Yield Monitoring Program (project LH1256) associated with the 2014 Pipeline Twinning Project for information.

PREVIOUS AND RELATED REPORTS

October 8, 2020 2021 Operating and Capital Budgets

BACKGROUND

For the 2014 Pipeline Twinning Project, the Lake Huron Primary Water Supply System (LHPWSS) negotiated an agreement with affected property owners and the Lake Huron Pipeline Landowners Association which outlined specific conditions of construction and soil preservation methodologies, as well as coordination with property owners during and after construction. This agreement, in part, required a post-construction three-year crop yield monitoring program to be undertaken starting in the seventh year after construction. The monitoring program is required to be undertaken by a specialist agronomist mutually agreeable by both the LHPWSS and the property owner.

The primary objective of the crop yield monitoring program is to compare crop yields within the easement that were disturbed during the construction project, versus crop yields at reasonably comparable locations outside of the pipeline easement, for each affected agricultural property. Properties showing yield losses greater than 20% variance (i.e. 80% on-easement crop yields versus comparable off-easement yields) will be identified for possible further actions by the LHPWSS which may include compensation for losses exceeding the 20% allowable variance and potential soil remedial efforts to meet the required variance threshold.

DISCUSSION

A total of twenty (20) property owners were affected by the 2014 pipeline twinning project. Construction was originally completed on seventeen (17) of the properties in 2014, with crop yield monitoring to commence in 2021. Construction was completed on the three (3) properties, in 2015 with crop yield monitoring to commence in 2022.



Board staff contacted seventeen (17) property owners to confirm their participation in the crop yield monitoring program that was to start in 2021 and confirm their selection of the pre-qualified crop yield monitoring specialist. Three (3) of the property owners elected not to participate and provided a release in full and final satisfaction of all issues pertaining to crop loss arising from the 2014 pipeline twinning project.

The three (3) property owners where construction was completed in 2015 (monitoring to start in 2022) will be contacted in early 2022 to confirm their participation in the crop yield monitoring program and their selection of the pre-qualified crop yield monitoring specialist.

The following pre-qualified crop yield monitoring specialist firms which were selected by property owners were engaged by Board staff to undertake the three-year monitoring program:

1. Anderson Agronomy Services
2. McCallum Agronomic Services
3. Soil Resource Group
4. Stantec Consulting Ltd.

PROJECT FINANCIAL STATUS

Expenditure	Projected	Incurred
Crop Yield Loss	\$ 450,000	\$ -
Variance Compensation		
Remedial works	\$ 750,000	\$ -
Crop yield monitoring	\$ 150,000	\$ -
Total	\$ 1,350,000	\$ -
Approved Budget	\$	1,500,000
Projected Variance	\$	150,000



Lake Huron
Primary Water Supply System

Report No.: LH-2021-02-11

Report Page: 3 of 3

Meeting Date: June 3, 2021

File No.: LH1256

CONCLUSION

The agreement with landowners who's properties were affected by the twinning of the 1200mm high pressure transmission main in 2014 included crop-loss payments as a direct result of the construction activities based on an industry standard calculation of losses and crop recoveries. The agreement also required that in the seventh, eighth and ninth year after construction a crop-yield monitoring program is to be undertaken by an approved agronomist to ensure losses within the easement are less than 20% in comparison to comparable areas outside of the easement. Board staff have engaged pre-qualified crop yield monitoring specialist firms selected by property owners to undertake the three-year monitoring programs.

Prepared by: Billy Haklander, P.Eng., LL.M.
Environmental Services Engineer

Submitted by: Andrew Henry, P. Eng.,
Director, Regional Water Supply

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

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

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

Subject: Financial Plan Update Project – Consulting Award

RECOMMENDATION

That, on the recommendation of the Chief Administrative Officer, the following actions be taken with respect to the Financial Plan Update (EA4020) project:

- a) The Board of Management for the Lake Huron Primary Water Supply System **ACCEPT** the proposal from Watson & Associates Economists Ltd. for the Financial Plan Update in the amount of \$45,000.00, including contingency and excluding HST; and
- b) The Board of Management for the Lake Huron Primary Water Supply System **RECEIVE** this report regarding the status of the McGillivray Electrical Upgrades project for information.

PREVIOUS AND RELATED REPORTS

October 8, 2020 2021 Operating & Capital Budgets

BACKGROUND

The Lake Huron Primary Water Supply System (LHPWSS) completed a Strategic Financial Plan in 2007 that set out strategies and actions aimed at ensuring the long-term financial sustainability of the Board. It included an analysis of financial requirements and consideration of options for meeting the requirements with the presentation of a utility funding structure, rates plan, and structure for charging costs.

The 2016 Financial Plan Update reviewed the pressures and challenges facing the system at the time, and the previous solutions implemented through the 2007 Strategic Financial Plan. It updated all facets of the previous financial plan and considered tools to meet the challenges facing the Board based on the financial components in place and the findings and recommendations of various studies completed including the 2016 Asset Management Plan Update.

The 2021 Financial Plan Update will ensure that funds are available to meet current and required needs of the regional system in a timely and planned way well into the future. The Update reviews the policies, directions, and specific actions that are designed to be inclusive, fair, and equitable and provides recommendations to address current and anticipated pressures as well as opportunities facing the Board.



Lake Huron

Primary Water Supply System

Report No.: LH-2021-02-07

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Meeting Date: June 3, 2021

File No.: LH1020

The 2021 Financial Plan will also assist the Board in continuing to accomplish several key goals including the move toward a full lifecycle replacement funding structure and ensuring the ability to replace infrastructure at the end of its useful life. The 2021 Financial Plan will also consider the status of the reserve funds to ensure that they continue to remain strong in order to stabilize rates and minimize use of debt by accessing the Board reserves. It will be compliant with Provincial legislation and may be amended as necessary for future Municipal Drinking Water Licencing submissions.

DISCUSSION

In March 2021, Board staff invited Watson & Associates Economists Ltd. to submit a proposal for the above noted study for each of the Lake Huron and Elgin Area Primary Water Supply Systems. A proposal was received on April 29, 2021 and reviewed by Board staff to have met the requirements of the project, including a requirement for coordination with the ongoing update of the Asset Management Plan currently being undertaken by AECOM.

The budget for this project has been approved by the Board at \$50,000. Watson & Associates Economists Ltd.'s fee estimate associated with this assignment is \$45,000, excluding HST, based on their current work plan. It is therefore anticipated that the total cost for this project will remain below budget, it being noted that a contingency to the upset limit of the approved project budget will be managed by staff.

CONCLUSION

In accordance with the procurement policy of the Board, as well as the City of London's Procurement of Goods and Services Policy (*used as a guide*), Board staff recommends that the Board accept Watson & Associates Economists Ltd.'s proposal to undertake the Financial Plan Update.

Prepared by: Billy Haklander, P.Eng., LL.M.
Environmental Services Engineer

Submitted by: Andrew Henry, P. Eng.,
Director, Regional Water Supply

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



Lake Huron
Primary Water Supply System

Report No.: LH-2021-02-08

Report Page: 1 of 3

Meeting Date: June 3, 2021

File No.:

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

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

Subject: Locate Service Provider – Contract Award

RECOMMENDATION

That, on the recommendation of the Chief Administrative Officer, the following actions be taken with respect to retaining a Locate Service Provider:

- a) The Board of Management for the Lake Huron Primary Water Supply System **ACCEPT** the proposal from Utility Marx for the provision of Utility Locate Services;
- b) The Lake Huron Primary Water Supply System Board of Management **AUTHORIZE** the Board Chair and Chief Administrative Officer to execute an agreement with Utility Marx for the provision of Utility Locate Services; and,
- c) The Board of Management for the Lake Huron Primary Water Supply System **RECEIVE** this report regarding the status of the Locate Service Provider for information.

BACKGROUND

The Ontario Underground Infrastructure Notification System Act, 2012 requires that upon notice of excavation being given by Ontario One Call, owners and operators of buried infrastructure must either provide a proper locate of their buried infrastructure or provide a statement in writing that their infrastructure is clear of the excavation area.

The Lake Huron Water Supply System (LHWSS) has been contracting for locate services since 2013. Continuing with that practice, this report recommends the award of a contract for the provision of locate services for a three-year term from June 15, 2020 to June 14, 2023. The locate service provider will be responsible for interfacing with Ontario One Call and their systems, and for providing all labour, equipment materials, facilities, accommodations, transportation, traffic control, and supervision to perform underground municipal services location and marking services on behalf of the LHWSS.

DISCUSSION

In April 2021, Board staff with the assistance of the Purchasing Department of the City of London issued a formal Request For Proposal (RFP #21-12) for a Locate Service Provider on the Bids&Tenders website to procure a qualified and experienced proponent for locate services to the Lake Huron Water Supply System. Three submissions were received by the deadline stipulated in the Request for Proposals document, namely:

1. G-Tel Engineering
2. Utility Marx
3. Tierra Geomatic Services

A two-envelope RFP process was utilized; one envelope containing the technical proposal and the second containing the price proposal. The evaluation of all technical submissions was completed in full, and the financial proposals from those proponents which met the minimum scoring requirements were subsequently evaluated in accordance with the RFP documentation. The technical and financial evaluations were combined to determine best value for the proposals submitted.

Upon completion of the technical and financial evaluations, the proponent with the highest score and demonstrating their ability to fully meet with the requirements of the LHWSS in accordance with the RFP documentation was Utility Marx.

The estimated annual cost of the service provided for this contract is \$4,100 per year, excluding HST and based on 2017-2020 locate volumes, or \$12,300 for the three-year term. The actual cost of the service will be based on actual locate request volumes.

Regulatory Coordination

In connection with the locate contract and to maintain compliance with the Ontario Underground Infrastructure Notification System Act, 2012, the LHPWSS is required to continue to use the services of Ontario One Call which provides mandatory single-point-of-contact services to utility owners in Ontario. As required by the locate services agreement, Utility Marx will interface with Ontario One Call's communication system and will fully comply with all aspects of the Ontario Underground Infrastructure Notification System Act, 2012 and associated regulations.



Lake Huron
Primary Water Supply System

Report No.: LH-2021-02-08

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File No.:

CONCLUSION

The LHWSS is obligated to provide a utility locate service for the underground infrastructure it owns. Upon completion of a request for proposal procurement process with established service providers, Board staff recommends that the highest scoring proponent, Utility Marx, be awarded the service contract.

Prepared by: John Walker, CD, B.Sc.
Operations Manager, Regional Water

Submitted by: Andrew Henry, P. Eng.,
Director, Regional Water

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

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

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

Subject: LH1317 Distressed Pipe Replacement Program (Pipe 1-162)

RECOMMENDATION

That, on the recommendation of the Chief Administrative Officer, the following actions be taken with regards to the LH1317 Distressed Pipe Replacement Program (Pipe 1-162):

- a) The Board of Management for the Lake Huron Primary Water Supply System **APPROVE** the sole source procurement to Xylem (formerly Pure Technologies) to complete the removal and reinstallation of the proprietary Acoustic Fibre Optic Monitoring System related to the proactive replacement of pipe 1-162, as well as undertake the external electromagnetic verification at an estimated cost of \$59,575;
- b) The Board of Management for the Lake Huron Primary Water Supply System **APPROVE** the single source procurement to L82 Construction to complete the proactive replacement of pipe 1-162 at an estimated cost of \$142,645; and,
- c) The Board of Management for the Lake Huron Primary Water Supply System **RECEIVE** this report regarding the LH1317 Distressed Pipe Replacement Program for information.

PREVIOUS AND RELATED REPORTS

June 4, 2020 LH1317 Distressed Pipe Replacement Program (Pipe 4-80)

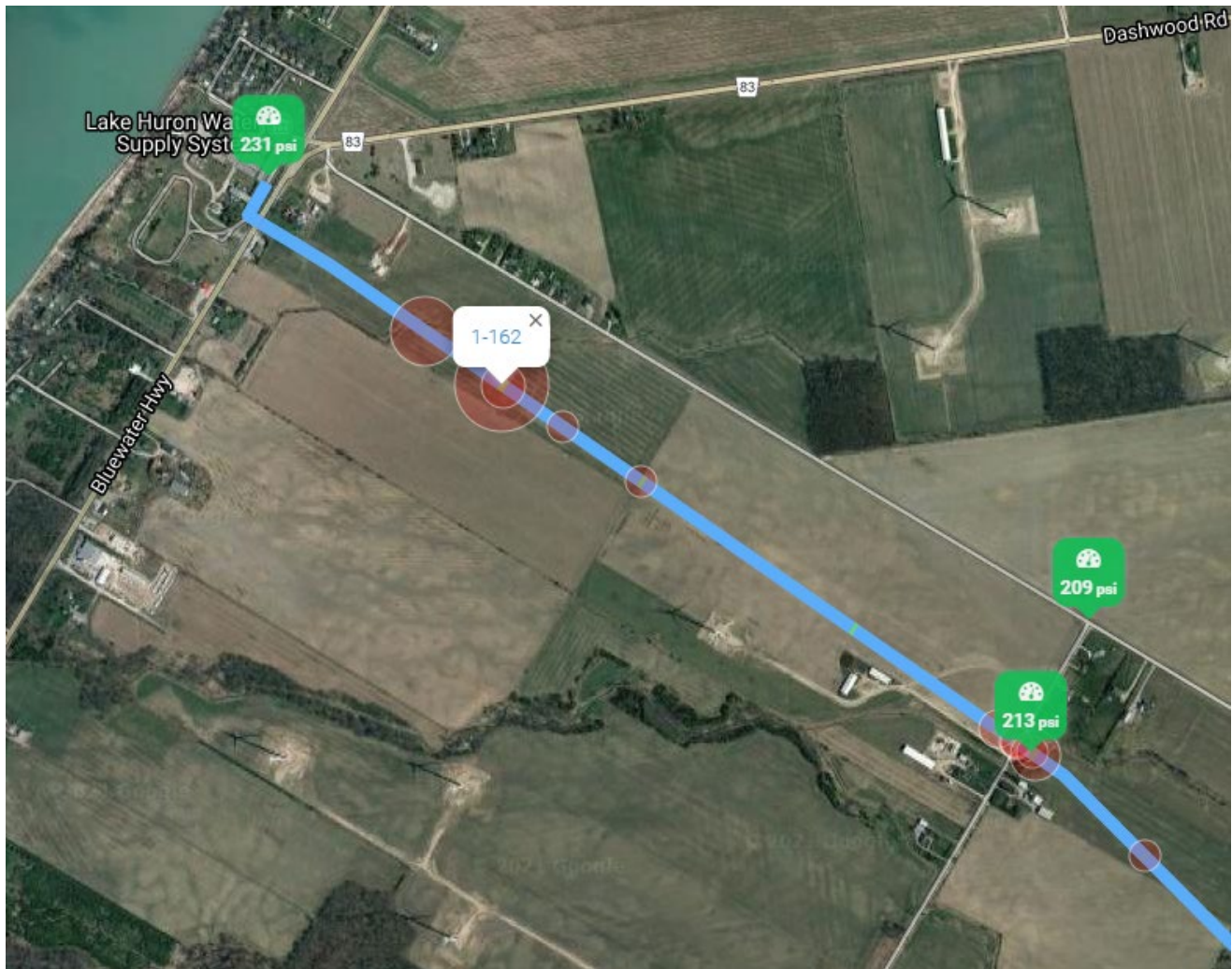
BACKGROUND

In October 2012, the PipeDiver™ electromagnetic inspection detected 5 broken reinforcing wires on Pipe 1-161 and detected no wire breaks on Pipes 1-162. Since the acoustic fibre optic (AFO) real-time monitoring system was commissioned in mid-2015, the system periodically detected wire breaks on Pipes 1-162 and 1-163 in subsequent years, typically occurring in the late-fall and winter months. From January 2021 to mid-April 2021, the wire break activity on Pipe 1-162 started to significantly increase. Figure 1 below shows the wire break trends for this pipe as of the time of writing this report, while figure 2 shows the structural performance of pipe 1-162 between 2015 and the time of writing this report.

The detection of wire breaks by the AFO monitoring system are accurate to within one metre (total length of one pipe is 4.88 metres or 16 feet). Given that all wire breaks were detected within a 1m distance of adjoining lengths of pipe, Xylem (formerly Pure Technologies) advised that it was possible that all wire breaks that the system showed as occurring across the three pipes may be located on one pipe, or within specific pipes. With wire breaks continuing, and

the possibility that all the damage may be located on one pipe alone and significant risk of subsequent failure, and Board staff decided to schedule a proactive repair of the pipe(s) for October 2021.

Pipes 1-161 through 1-163 are located southeast of Bluewater Highway, approximately 700 metres from the Huron Water Treatment Plant, and in a twinned section of the transmission main. It is also noted that there is a wind generator located approximately 500 metres south of these pipes.



Subject to further and accelerated deterioration of the pipe, as may be evidenced by an increase in number of wire breaks detected by the AFO monitoring system before the planned repair in October, the contracted operating authority may decide to proactively isolate the twinned pipeline but leaving the twinned transmission main pressurized by leaving the 8-inch bypass valves open in order to maintain water quality in this section of the transmission main. This would be undertaken as a precaution such that if the pipe(s) were to fail prior to the scheduled repair, the impact associated with the failure would be greatly reduced.



Wire Break Trend

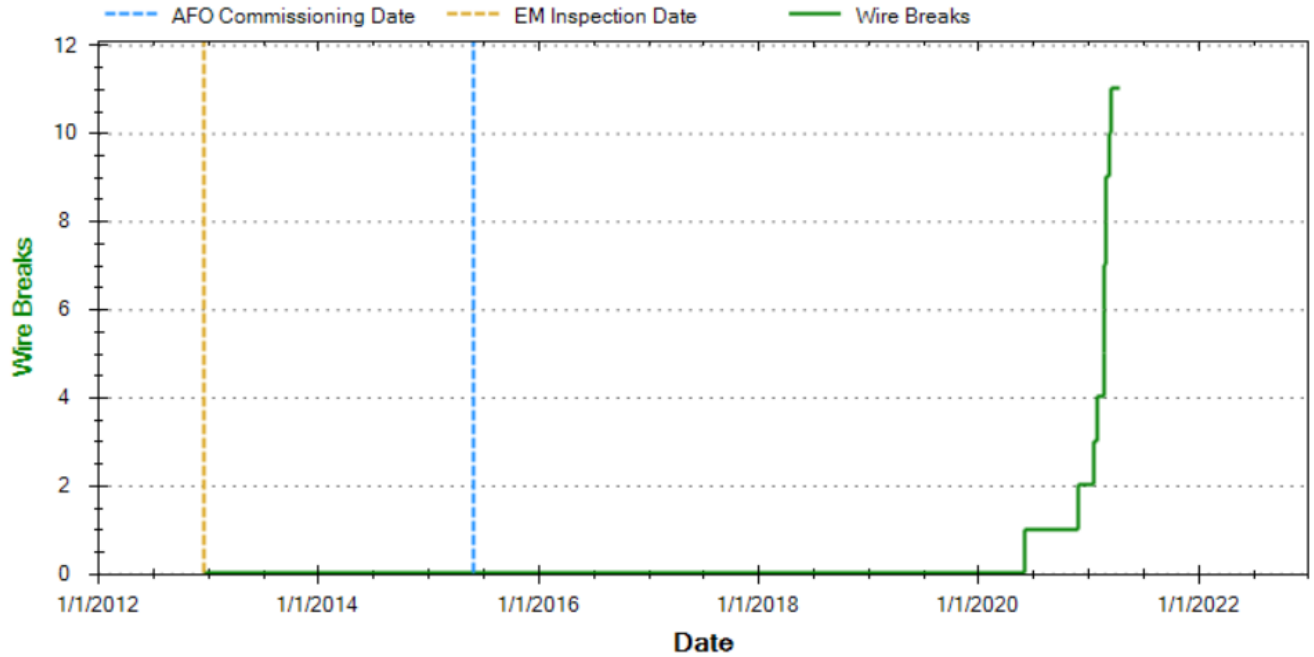


Figure 1: Wire break trend of Pipe 1-162

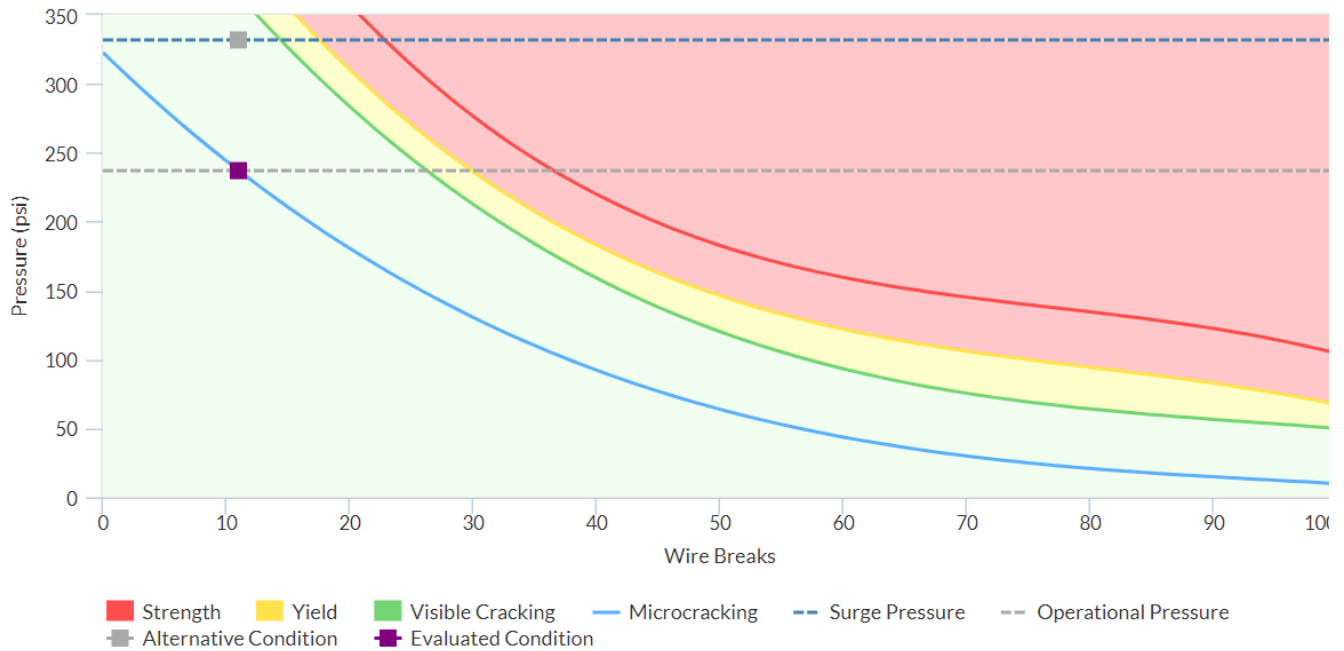


Figure 2: Structural Performance of Pipe 1-162

DISCUSSION

Procurement

The procurement and acquisition activities of the regional water system are undertaken under the authorities granted under the Transfer Order issued by the Province of Ontario, and subsequent bylaws and policies of the Board of Management. Notwithstanding, the LHPWSS is entitled to use the City of London's policies and procedures as a guide.

The procurement of the necessary services to complete the works are within administrative authority under the Transfer Order and the Board's bylaw; however, for transparency and aid in the utilization of City of London's resources (including the City of London's Purchasing Division), Board staff utilized the City of London's procurement policy as a guide in procuring the services necessary to complete the urgent repair.

Specifically, Board staff will utilize the single source procurement process to procure the general contractor for the project, L82 Construction Ltd. (L82) having the special knowledge, skills, expertise, and experience replacing pipe sections of this size, nature, and operating conditions and pressure, as they have undertaken previous repairs in other sections of the LHPWSS transmission main. This is in keeping with section 14.4(e) of the City of London's Procurement of Goods and Services Policy, which is used as a guide by the LHPWSS. L82 is the only local contractor that has completed this type of repair on behalf of the LHPWSS and has direct familiarity with the transmission system having completed the pipeline twinning construction project in 2014 as well as other repairs. Upon review of L82's quotation, it was found that the rates are comparable to the rates of the previous pipe replacements completed on the transmission main in 2013, 2014, 2017, 2019 and the recently completed replacement in March 2020.

Similarly, Board staff will utilize a sole source procurement for Xylem to undertake external electromagnetic (EM) scan of the pipes 1-161 and 1-162 once the pipes are excavated and exposed in order to verify the pipe section that is damaged as per the repair protocol. Xylem will also undertake the removal and reinstallation of the proprietary AFO cable within the damaged pipeline to facilitate the repairs. This is in keeping with section 14.3(c) of the City of London's Procurement of Goods and Services Policy, which is used as a guide by the LHPWSS, in that the electromagnetic scan service and the decommissioning and recommissioning of the AFO system as part of the repair, are proprietary and unique to Xylem.

The approved budget for the project is \$325,000 within the Distressed Pipe Replacement Program (LH1317). The projected costs for the repair scheduled for October 2021 are expected to be approximately \$284,985, including engineering, construction and operational support as further detailed in the Project Financial Status below. In comparison, the total expenditures associated with the transmission main failure that occurred in 2012 was approximately \$1.5 million (\$1.72M in 2021 dollars). Board staff are seeking endorsement from the Board in utilizing a single and sole source procurement to complete the proactive repair.



PROJECT FINANCIAL STATUS

<u>Approved Budget</u>	\$	325,000
<u>Projected Expenditures</u>		
Design & Construction Administration	\$	13,560
Construction	\$	142,645
Pipe Section External EM Verification	\$	17,250
AFO Decommission/Re-commission	\$	42,325
Operational Support (OCWA)	\$	50,000
Pipe Repair Kit	\$	<u>45,000</u>
Total Projected Expenditures	\$	310,780
Anticipated Budget Surplus/Deficit	\$	14,220

CONCLUSION

The LHPWSS determined that a pipe in a twinned section of the primary transmission main approximately 700 metres southeast of Bluewater Highway is in poor condition and consequently at risk of catastrophic failure. On this basis, and with the concurrence of the contracted operating authority, Board staff will procure the services of L82 Construction Ltd. and Xylem to complete the proactive replacement of this pipe section in October 2021.

Prepared by: Billy Haklander, P.Eng., LL.M.
Environmental Services Engineer

Submitted by: Andrew Henry, P. Eng.,
Director, Regional Water Supply

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

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

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

Subject: LH1243 McGillivray Electrical Upgrades – Consulting Award

RECOMMENDATION

That the following actions be taken with respect to the Lake Huron Primary Water Supply System McGillivray Electrical Upgrades (Project LH1243):

- a) That the Board of Management for the Lake Huron Primary Water Supply System **ACCEPT** the proposal from Stantec Consulting Ltd. for the McGillivray Electrical Upgrades in the amount of \$294,850.60, 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 Board of Management for the Lake Huron Primary Water Supply System **AUTHORIZE** the Chair and Chief Administrative Officer to execute a consulting services agreement with Stantec Consulting Ltd. for the completion of the McGillivray Electrical Upgrades project; and,
- c) The Board of Management for the Lake Huron Primary Water Supply System **RECEIVE** this report regarding the status of the McGillivray Electrical Upgrades project for information.

PREVIOUS AND RELATED REPORTS

October 8, 2020 2021 Operating & Capital Budgets

BACKGROUND

The McGillivray Booster Pumping Station (BPS) was constructed in 1976 and with much of the original equipment still in place. The various electrical equipment at this facility are well past their expected operating life including the motor control centres (MCC), switchgear and generator. In general, equipment of this type is typically replaced after it has been in operation for 25 to 35 years, depending on their operating conditions and environment. This equipment is approximately 45 years and needs replacement as evidenced by equipment failures that have occurred as well as replacement components being no longer available.

The Energy Audit and Pump Optimization Study previously completed included several Building Services and Energy Management Strategies for the McGillivray Pumping Station to be considered as part of upgrading the electrical equipment such as:

- Replacing Electrical Baseboard Heaters with Multi-Split Ductless Heat Pumps (MSDHP);
- Installation of a Variable Frequency Drive (VFD) on the motors for the Air Handling Units;
- Installation of a 70 kW Solar Rooftop PV Panel; and,
- Installation of a Domestic Hot Water (DHW) Control System.

DISCUSSION

In late February 2021, Board staff released a Request for Expression of Interest (RFEI #21-06) to seek interested and qualified engineering firms to provide consulting services for the replacement and upgrade existing and outdated switchgear, MCCs, and emergency generator located in the McGillivray Booster Pumping Station. The proposed scope for engineering services also includes a heating ventilation and air conditioning (HVAC) preliminary/conceptual design to ensure that the electrical equipment being installed is adequately sized when the HVAC equipment is upgraded in future. The current Capital Plan for the water system anticipates the design of the HVAC equipment to be undertaken in 2022, subject to the approval of the 2022 budget later this year.

The RFEI process is an open, publicly advertised, first stage of a two-stage process in accordance with the Board's Procurement Bylaw and the City of London's Procurement of Goods and Services Policy (used as a guide). The second stage of the procurement process involves issuing a Request for Proposal (RFP) to Proponents that successfully qualified during the RFEI process. Nine (9) submissions were reviewed and evaluated by Board staff and four (4) consultants were selected to participate in the RFP process.

In April 2021, Board staff released the Request for Proposal (RFP #21-25) for design and engineering services for the above noted Electrical Upgrades. Four (4) proposals were received by the closing date of April 26, 2021. The proposals were reviewed by Board staff and evaluated against the requirements identified in the RFP document. Based on this evaluation, the proposal from Stantec's was deemed to have the best value to the Board and is therefore recommended by Board staff.

Stantec's estimate for the fees associated with this assignment is \$294,850.60, including contingency but excluding HST, based on their current work plan. The approved budget for project LH1243 is currently \$685,000 which was intended to address the engineering required to complete the design for the McGillivray Electrical Upgrades, as well as the future fees associated with equipment prequalification, construction tender, supervision and administration. The approved budget currently does not include the cost of equipment purchases and construction, currently anticipated to be \$4.8 million, that will be included in the proposed 2022 Capital Budget later this year.



PROJECT FINANCIAL STATUS

Expenditure	Projected	Incurred
Detailed design and construction procurement	\$ 294,581	\$ -
Total	\$ 294,581	\$ -
Approved Budget	\$ 685,000	
Projected Variance	\$ 390,419	

CONCLUSION

In accordance with the Request for Proposal process issued in April 2021, Stantec Consulting Ltd. was deemed to have the best value to the Board and staff recommends that the Board accept their proposal to undertake the engineering consulting services for LH1243 McGillivray Electrical Upgrades.

Prepared by: David Scott, Capital Projects Coordinator &
Billy Haklander, Environmental Services Engineer

Submitted by: Andrew Henry, P. Eng.,
Director, Regional Water Supply

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