

# Agenda

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

The 1st Meeting of the Lake Huron Primary Water Supply System Joint Board of Management  
December 2, 2021, 2:00 PM  
2021 Virtual Meeting - during the COVID-19 Emergency

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<b>1. Call to Order</b>	
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4.2. Kelly Scherr, Chief Administrative Officer - LH1257 Chamber 63 Access Culvert - Contract Award	

(Note: this report will be provided on the Added Agenda.)

**5. Deferred Matters/Additional Business**

**6. Upcoming Meeting Dates**

March 3, 2022

June 2, 2022

October 6, 2022

**7. Adjournment**

# Lake Huron Primary Water Supply System Report

4th Meeting of the Lake Huron Primary Water Supply System Joint Board of Management  
October 7, 2021

Attendance: Meeting held remotely on Thursday, October 7, 2021, commencing at 2:00 PM.

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

ALSO PRESENT: 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 3rd Meeting held on Thursday, June 3, 2021

VANDERHEYDEN AND FERGUSSON

That the minutes of the 3rd meeting of the Lake Huron Primary Water Supply System Board of Management, held on June 3, 2021, **BE NOTED AND FILED. CARRIED**

**Motion Passed**

## 3. Consent Items

### 3.1 Quarterly Compliance Report (2nd Quarter 2021: April - June)

HILLIER AND VAN MEERBERGEN

That, on the recommendation of the Chief Administrative Officer, the report dated October 7, 2021, with respect to the general, regulatory and contractual obligations of the Lake Huron Primary Water Supply System, for April to June 2021, **BE RECEIVED. CARRIED**

**Motion Passed**

3.2 Environmental Management System and Quality Management System

HILLIER AND VAN MEERBERGEN

That, on the recommendation of the Chief Administrative Officer, the report dated October 7, 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 - 2nd Quarter 2021

HILLIER AND VAN MEERBERGEN

That, on the recommendation of the Chief Administrative Officer, the report dated October 7, 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

HILLIER AND VAN MEERBERGEN

That, on the recommendation of the Chief Administrative Officer, the following actions be taken with respect to the report dated October 7, 2021, related to Lake Huron Primary Water Supply System Capital Projects:

- a) the above-noted report **BE RECEIVED**;
- b) project LH1275 Sewage Ejector Replacement **BE CLOSED**, with surplus funding in the approximate amount of \$1,345 being released to the Reserve Fund; and,
- c) project LH1316-20 Annual Maintenance (2020) and LH1369 Filter Media Rebuild **BE CLOSED**, with additional funding in the approximate amount of \$17,660 being drawn from the Reserve Fund. **CARRIED**

**Motion Passed**

3.5 Electric Vehicle Charging Stations

HILLIER AND VAN MEERBERGEN

That, on the recommendation of the Chief Administrative Officer, the report dated October 7, 2021, with respect to Electric Vehicle Charging Stations, **BE RECEIVED. CARRIED**

**Motion Passed**

**4. Items for Discussion**

4.1 2022 Operating and Capital Budgets

BURGHARDT-JESSON AND HILLIER

That the following actions be taken by the Board of Management for the Lake Huron Water Supply System, with respect to the report dated October 7, 2021, related to the 2022 Operating and Capital Budgets:

- a) the 2022 Operating Budget, in the total amount of \$24,254,000, **BE APPROVED** as appended to the above-noted report;
- b) the 2022 Capital Budget, in the total amount of \$11,417,000, **BE APPROVED** as appended to the above-noted report;
- c) the 2023 to 2031 Capital Forecast, as appended to the above-noted report, **BE RECEIVED**;
- d) the 2022 rate for water of \$0.5118 per cubic meter **BE APPROVED**; and,
- e) the 2020 to 2026 Flow and Financial Analysis **BE RECEIVED. CARRIED**

**Motion Passed**

4.2 Operations and Maintenance Services Agreement - Negotiation of Term Extension

HILLIER AND DEVIET

That, on the recommendation of the Chief Administrative Officer, the following actions be taken with respect to the report dated October 7, 2021, related to the Negotiation of Term Extension for the Operations and Maintenance Services Agreement:

- a) the Amended and Restated Operations Maintenance Services Agreement, as appended to the above-noted report, **BE APPROVED**; and,
- b) the Board Chair and the Chief Administrative Officer **BE AUTHORIZED** to execute the above-noted Agreement with the Ontario Clean Water Agency. **CARRIED**

**Motion Passed**

4.3 Asset Management Policy and Asset Management Plan Update

HILLIER AND FERGUSSON

That the following actions be taken with respect to the report dated October 7, 2021, related to the Asset Management Policy and Asset Management Plan Update for the Lake Huron Primary Water Supply System:

- a) the Asset Management Policy, as appended to the above-noted report, **BE APPROVED**; and,
- b) the above-noted report **BE RECEIVED. CARRIED**

**Motion Passed**

4.4 Ministry of the Environment, Conservation and Parks Air Quality Monitoring Station - Licence Extension and Amending Agreement

FERGUSSON AND VAN MEERBERGEN

That the Board Chair and the Chief Administrative Officer **BE AUTHORIZED** to execute the Agreement with Province of Ontario, as appended to the report dated October 7, 2021, for the amendment and extension of the existing licence agreement for the Ministry of the Environment, Conservation and Parks air quality monitoring station located at the water treatment plant property at 71155 Bluewater Highway, South Huron. **CARRIED**

**Motion Passed**

**5. Deferred Matters/Additional Business**

None.

**6. Confidential**

VANDERHEYDEN AND WILCOX

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

**6.1. Litigation/Potential Litigation/Matters Before Administrative Tribunals**

A matter pertaining to litigation or potential litigation, including matters before administrative tribunals, affecting the municipality or local board with respect to an event which may result in litigation against the Lake Huron Water Supply System.

**Motion Passed**

The Lake Huron Primary Water Supply System Board of Management convened, In Closed Session, from 2:33 PM to 2:53 PM.

**7. Next Meeting Date**

December 2, 2021

**8. Adjournment**

The meeting adjourned at 2:55 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 (3<sup>rd</sup> Quarter 2021: July - September)

## RECOMMENDATION

That the Quarterly Compliance report with respect to the general, regulatory and contractual obligations of the Lake Huron Primary Water Supply System **BE RECEIVED** for the information of the Board of Management; it being noted that there was one Adverse Water Quality Incident reported in the 3<sup>rd</sup> quarter of 2021.

## 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 July 1 – September 30, 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 was one AWQI reported by the operating authority during this quarter. On July 12<sup>th</sup> the operating authority took one filter out of service to complete a maintenance activity. On July 13<sup>th</sup>, upon completion of the maintenance activity, the filter was backwashed before being placed back into service. During the backwash the filter effluent valve was not fully closed, resulting in a turbidity spike in the filtered water. The SCADA data indicated that the filter turbidity was >1.0 NTU in two samples taken 15 minutes apart which is a reportable AWQI as per O.Reg. 170/03 under the *Safe Drinking Water Act*.

The operating authority made the required notifications to the Ministry of the Environment, Conservation and Parks (MECP), the area Health Units, and the owner. Corrective actions included increasing the chlorine dosages, enhanced monitoring, and additional microbiological sampling. All sample results were good, and the issue was resolved. As part of the Environmental Management System (EMS) and Quality Management System (QMS) the incident was further reviewed internally. The corrective action process was completed. This included root cause analysis and subsequent action items to prevent similar types of incidents from happening in the future.

There were no AWQI reported by the external laboratory during this quarter.

**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 third quarter Contract Report was received from OCWA on October 28, 2021 and was scheduled to be discussed at the quarterly administration meeting between Board staff and OCWA on November 10, 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



**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 September 22, 2021. The meeting minutes are included as [Appendix A](#) for the information of the Board.

### **Internal Audits**

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

A QMS internal audit was conducted on October 13-14, 2021. An internal audit summary report is included as [Appendix B](#) for the information of the Board.

### **External Audits**

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

A QMS external audit was conducted on November 1, 2021. The external audit results will be included in a future report to the Board.

An EMS external audit was conducted on November 25-26, 2021. The external audit results will be included in a future report to the Board.

### **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.

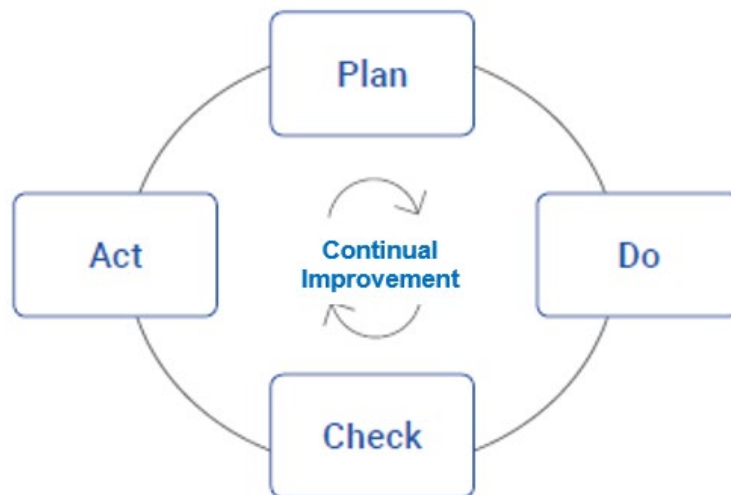


Figure 1: Plan-Do-Check-Act improvement process



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:

- One (1) new action item was added as the result of an emergency contingency plan test.
- Two (2) new action items were added as a result of the corrective action process related to an Adverse Water Quality Incident (AWQI) that occurred in July 2021.
- Two (2) new action items were added as a result of the Management of Change process for the Beach Chamber Erosion Control Project.
- One (1) new action item was added as a result of the corrective action process related to a loss of coagulation incident that occurred in August 2021.

As of October 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

**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 (September 22, 2021)  
[Appendix B](#) – QMS Internal Audit Report (October 13-14, 2021)

## **APPENDIX A: MANAGEMENT REVIEW MEETING MINUTES (SEPTEMBER 22, 2021)**

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

**Date:** September 22, 2021

**Time:** 1:00pm

**Location:** Virtual – Microsoft Teams

**Attendees:** Andrew Henry (RWS), Erin McLeod (RWS), Blair Tully (OCWA), Denny Rodrigues (OCWA), Simon Flanagan (OCWA), Greg Henderson (OCWA), 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 (LHPWSS & EAPWSS)**

The minutes from the previous meeting (June 23, 2021) are posted to SharePoint. The minutes were approved.

#### **2. Changes in External and Internal Issues (LHPWSS & EAPWSS)**

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

- OCWA's 5 year term extension (2023-2027) has been added
- Updates on the 2019 and 2020 employee retention incentive payments were provided
- Updates on the 2020 year end volumes were provided, with predictions that the 2021 volumes will be within the projected range
- Upcoming Asset Management Plan customer level of service workshops were noted
- All public tours have been suspended indefinitely due to the pandemic
- EAPWSS: A Climate Change Vulnerability Assessment was completed, in partnership with the Lake Erie Source Protection Region
- LHPWSS: Project #LH1425 (Beach Chamber Erosion Control) was completed, to address changing environmental conditions, high water levels and shoreline erosion
- EAPWSS: for the water demand line item, it was noted that there is leakage through a valve at the EMPS which impacts the St. Thomas Secondary System, however year end volume targets are based on treated water leaving the WTP
- Under political issues, there was a change in U.S. government this year. From an environmental perspective there is increasing awareness and willingness to act. The recent Canadian federal election is not anticipated to have any impacts on the systems.
- EAPWSS: Under changing environmental conditions, the shoreline survey has been added



*Lake Huron*

Primary Water Supply System

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**Meeting Date:** December 2, 2021

**File No.:**

- EAPWSS: Under changing environmental conditions, thermal inversions and low dissolved oxygen events could start happening more frequently, with the events of Sept. 2021 being the most severe experienced to date. This may impact chemical consumption.
- LHPWSS: Also experiencing more storm events this year, including tornado warnings.
- LHPWSS: Under aging infrastructure the High Lift Pump Project and Coagulation Upgrade Project were noted as projects anticipated to improve the electricity and chemical consumption

### **3. Changes in the Needs and Expectations of Interested Parties (LHPWSS & EAPWSS)**

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

- The contract negotiations with OCWA for a 5-year term extension (2023-2027) were noted
- Reference to O.Reg. 75/20 were removed as this regulation was revoked by the Ministry
- LHPWSS: Site Security contractor (Paladin) was added as a separate interested party
- LHPWSS: there have been an increased number of requests for access across the beach property by contractors working for neighbours, related to private property erosion control projects

### **4. Changes in Significant Environmental Impacts (LHPWSS & EAPWSS)**

- The overall 5-year trends indicate that electricity demand is continuing to decrease at both WTPs.
- Natural gas consumption has stabilized at Elgin WTP but continues to increase at the Huron WTP. Natural gas optimization may be considered in future environmental objectives and targets.
- Process water used and non-revenue water continue to be two (2) key performance indicators that are tracked.
- There are some anomalies with the non-revenue water that are currently being investigated (e.g. LHPWSS: London meters at Arva PS; EAPWSS: St. Thomas Secondary meter at EMPS).
- LHPWSS: OCWA is investigating and optimizing process water use where possible. Examples were noted where water runs continuously: filtered water sample taps; pre-chlorine line that feeds the low lift; sample taps at Exeter-Hensall and McGillivray Pumping Stations. OCWA is shutting lines off where possible to save process water used. OCWA may be able to quantify these savings through metering or other methods.
- EAPWSS: OCWA shut down the WTP during some peak electricity periods this summer, which limits energy impact.
- LHPWSS: Notification was received from South Huron that the current RMF residuals disposal location will no longer be available as of Jan. 1, 2022; this will create increased trucking mileage to a new disposal location.

## 5. Changes in Risks and Opportunities (LHPWSS & EAPWSS)

- EAPWSS Opportunity – Security Upgrades: Security enhancements are in progress (cameras, site security)
- LHPWSS Risk - Beach Chamber Erosion Control Project: There has been an increase in requests for access across the LHPWSS beach property by contractors (working for neighbours on various private erosion protection projects), and municipalities. This needs to be coordinated with any planned maintenance work related to the intake, beach chamber or erosion control structure, which would be impeded by the contractors/municipalities use of the access. RWS should develop a formal process for permitting these crossings.
- LHPWSS Opportunity – Bluewater Highway Property Demolition: Now that the building is gone, there is an opportunity to relocate the access to the park area from the shared location near the WTP to the existing driveway entrance off the provincial highway at 71111 Bluewater Highway (former building location). This will provide better separation between park and WTP activities, improves security, and accommodates space needs for future capital upgrades.
- LHPWSS Opportunity – Security Camera Upgrade Project: Previously there were 6 cameras on site and now there will be 20+ cameras. The coverage over more locations increases security, also provides operational and emergency response benefits such as better detection of equipment failure (e.g. smoke), fire, etc.
- EAPWSS & LHPWSS Opportunity – OCWA is investigating the implementation and use of electric vehicle charging stations. RWS has prepared two Oct. 7, 2021 Board Reports on this subject.
- LHPWSS Risk/Opportunity – A liquid polymer is currently used in the RMF. There is a supply chain risk with this chemical, but also an opportunity to investigate the use of different polymers once the residuals disposal site changes.
- LHPWSS Opportunity – The Class EA for the disinfection and storage upgrades is currently in progress. The process includes a review of environmental impacts.
- EAPWSS & LHPWSS Risk – Changing environmental conditions. Recent shoreline erosion events are impacting infrastructure. At the EAPWSS lake turnover events and low dissolved oxygen events are impacting source water quality and the ability to treat the water. Chemical consumption dramatically increases during these events.
- EAPWSS & LHPWSS Opportunity – OCWA and RWS are moving forward with a research study on per- and polyfluoroalkyl substances (PFAS) trends in drinking water.
- EAPWSS & LHPWSS Opportunity – At both the Huron and Elgin plants, OCWA is developing an internal energy and optimization working group supported by OCWA corporate services.
- EAPWSS & LHPWSS Opportunity – OCWA corporate is developing a rigorous review and debriefing program for any sites receiving MECF non-compliances, orders, or annual inspection ratings below 93%.
- EAPWSS & LHPWSS Opportunity – OCWA is transitioning to electronic logbooks in 2021.
- EAPWSS & LHPWSS Opportunity – OCWA is looking at potential high school co-op placements. This raises awareness of environmental career choices.



## **6. Climate Change Vulnerability Assessment Tool (EAPWSS)**

The Climate Change Vulnerability Assessment Tool was developed by Conservation Ontario in 2018 to assess well and surface water intake sensitivities and vulnerabilities due to climate change. The EAPWSS was approached by the Lake Erie Source Protection Region to undertake the assessment.

The results of the Climate Change Vulnerability Assessment Tool concluded that the Elgin Area Water Supply System intake and area are susceptible to climate change impacts. The high rating suggests that water quality of the drinking water source will be impacted by climate change.

The tool also demonstrated the water system has a low vulnerability, due to the high adaptive capacity and resilience to climate change impacts. The high adaptive capacity can be attributed to the ability to rely on the LHPWSS in the event of an emergency, as well as existing policies and management procedures, such as the EMS/QMS.

Staff recommendations are identified as result of the tool and include actions by EAPWSS, actions by the municipality, actions by the Source Protection Region.

A full report on this topic will be presented at the upcoming October 7, 2021 EAPWSS Board Meeting.

Regional Water intends to use the tool to also evaluate the LHPWSS. The QMS Risk Assessment will be reviewed to see if there are linkages to the assessment tool.

## **7. Corrective Action Forms (LHPWSS & EAPWSS)**

The following incidents have been documented and reviewed using Corrective Action Forms (CAFs):

- LHPWSS – Incident of Adverse Drinking Water Test; Filter #6 Turbidity Event (July 13, 2021)
- LHPWSS – Gore Road PRV Failure (June 23, 2021)
- EAPWSS - RMF Backwash Tank Overflow (Aug. 16, 2021))

Corrective action items associated with each of these events were approved and have been added to the tracking sheet.

The following incidents are currently under review and will be documented on CAFs. Any action items identified will be added to the tracking sheet.

- EAPWSS – Small Alum Spill (Sept. 10, 2021)
- LHPWSS – Coagulation incident (Aug. 26, 2021)

## **8. Communications, Complaints, Consumer Feedback (LHPWSS & EAPWSS)**

April 29, 2021 - U.S. Senate Passes Water Infrastructure Package

The U.S. Senate passed a bipartisan package of wastewater, stormwater, drinking water, and water reuse infrastructure funding. The bill, known as the [Drinking Water and Wastewater Infrastructure Act of 2021, S. 914](#), seeks to reauthorize many core federal water infrastructure funding programs. The bill also includes several new programs that will help communities address pressing water infrastructure challenges. This is noted because actions on the US side of the Great Lakes can have overall impacts (positive or negative) on EAPWSS & LHPWSS source water.

March 31, 2021 - Best Management Practices Summit for Water & Wastewater Utilities; Emerging Contaminants – What municipalities need to know about PFAS

The webinar included a discussion on the different types of emerging contaminants and to be aware of them, including Per- and polyfluoroalkyl substances (PFAS) in source water. The different kinds of PFAS were discussed. The two of concern are PFOA and PFOS, which can cause health effects in very low concentrations.

The Government of Canada is considering activities that would address PFAS as a class and a [Notice of Intent to address the broad class of PFAS](#) was published in the Canada Gazette, Part I: Vol. 155 No. 17 – April 24, 2021.

Notes:

- SGS has been contacted to obtain information and pricing on PFAS sampling.
- OCWA has approached the LHPWSS & EAPWSS for participation in a research study with NSERC.

Sept. 2021 - SAI Global has been bought out by another company, Intertek. MECP provided notification earlier this year and they are anticipating a seamless transition in the DWQMS Accreditation Program.

## **Communications, Complaints, Consumer Feedback (EAPWSS)**

January 11, 2021 (Consumer Complaint) – Resident of Aylmer complained about pH fluctuations. Operations staff reviewed internal lab results and SCADA data. Samples from the Aylmer and St. Thomas systems were collected and analyzed, as well as samples from the residence. The Town of Aylmer was also contacted, they reviewed their records and reported no elevated pH readings.

March 16, 2021 (Consumer Complaint) - Complaint received regarding a chlorinous odor from cold water taps by a resident in the St. Thomas Secondary System. Provided the resident with contact information for the City of St. Thomas water department. Also provided the resident with average treated water free chlorine residuals leaving the Elgin Water Treatment Plant and the EMPS (St. Thomas Secondary System).

April 29, 2021 (Spill in Source Water - Communication) – External communications received

from a Port Stanley resident as well as the Kettle Creek Conservation Authority regarding a small hydrocarbon spill in Port Stanley harbor. The spill had been reported to SAC. OCWA investigated and continued to monitor source water for potential impacts. None observed. A Complaint Form (EF-ADMIN-1000) was completed to document the communications.

May 31, 2021 (Spill in Source Water - Communication) - External communications received from the Kettle Creek Conservation Authority regarding a small spill of an oily substance in Port Stanley harbors. The spill had been reported to SAC. OCWA investigated and continued to monitor source water for potential impacts. None observed. A Complaint Form (EF-ADMIN-1000) was initiated to document the communications.

July 2021 (Spill in Source Water – Communication) – External communications received from Elgin County re: an environmental discharge to a creek which eventually discharges to Kettle Creek. KCCA was notified and requested the notification to the EAPWSS.

[It was generally noted that in 2021 there have been an increased number of reports of spills in source water. This is attributed to increased population in Port Stanley, increased public access, and increased awareness of environmental aspects and potential impacts to drinking water.]

Sep. 2021 (Customer Complaints) – Colour and/or odour complaints received from several municipalities (City of St. Thomas, City of London, and Municipality of Central Elgin) during the raw water manganese event. Complaint Forms (EF-ADMIN-1000) were initiated to document the communications. During this water quality event there were inquiries from several member municipalities re: communications messaging to the public, to ensure consistent messaging. OCWA was providing daily email status updates to customers.

### **Communications, Complaints, Consumer Feedback (LHPWSS)**

Dec. 12, 2020 (Consumer Complaint) – Complaint from a citizen over the drainage, standing water etc. around a chamber which was a water quality concern. OCWA responded and documented the details on a Complaint Form (LF-ADMIN-1000).

March 26, 2021 (Noise complaint) – Noise complaint received from a neighbour regarding excessive loud beeping of the main security gate. Operations modified the setpoints to eliminate the noise.

September 2021: OCWA received communications from South Huron notifying them as of Jan. 1, 2022 the RMF residuals will no longer be accepted at the current disposal location. OCWA is investigating alternatives.

## **9. Action Items Identified between Reviews - Management of Change (LHPWSS & EAPWSS)**

LHPWSS: The following changes were reviewed and documented on Management of Change checklists. All action items have been added to the tracking sheet.

- South Clearwell Repair Project – 0 action items
- Security Camera Upgrade Project – 0 action items
- Beach Chamber Erosion Control – 2 action items
- Bluewater Highway Property Demolition – 0 action items

EAPWSS: No Management of Change checklists have been completed since the last meeting.

## **10. Best Management Practices (LHPWSS & EAPWSS)**

The continual improvement requirement of the DWQMS is that there be a review and consideration of the applicable best management practices, including any published by the MECP on [www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater). There are currently no best management practices published on the MECP website. The LHPWSS & EAPWSS continue to identify best management practices through the other means documented in the Corrective & Preventive Action Procedures.

## **11. Compliance Obligations Update (LHPWSS & EAPWSS)**

### **[Guideline technical document for public consultation - Dimethoate and omethoate in drinking water](#)**

**Source:** Health Canada

**Date Posted/Notice Received:** June 21, 2021

**Comments Due:** August 18, 2021

#### **Summary:**

Dimethoate is a broad-spectrum pesticide. Canadians can be exposed through diet, occupational exposure, and to a lesser extent from drinking water. The existing guideline on dimethoate, developed in 1986, established a maximum acceptable concentration (MAC) of 0.02 mg/L (20 µg/L). The document proposes to retain a MAC of 0.02 mg/L (20 µg/L) for dimethoate in drinking water.

Omethoate can be formed during treatment of water containing dimethoate. The sum of the detected concentrations of dimethoate and omethoate must not exceed the MAC for dimethoate.

**Potential Impacts:** None anticipated. The current Ontario MAC is also 0.02 mg/L. All test results for dimethoate in treated water were non-detect for both the EAPWSS & LHPWSS from 2015-present.

### **[Director's Directions: Minimum Requirements for Operational Plans \(Decision Notice\)](#)**

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

**Date Posted/Notice Received:** May 11, 2021



**Comments Due:** N/A

**Summary:** MECP has updated the Director's Directions in order to reflect current practice in municipal residential drinking water systems and improvements in technology that have occurred since the directions were published in 2007.

Drinking water systems have until April 1, 2022 to make any updates (if necessary) to QMS Operational Plans.

**Potential Impacts:** None anticipated. Minor administrative amendments were made to the QMS Operational Plans as a result of the update. The website has been updated to reflect that copies of the QMS Operational Plan are available upon request.

**[Technical Bulletin: Requirements when Making Changes to Supervisory Control and Data Acquisition Systems \(SCADA\)](#)**

**Source:** MECP

**Date Posted/Notice Received:** June 1, 2021

**Comments Due:** N/A

**Summary:** MECP has release a new technical bulletin that provides high-level information about what is and is not required by MECP when making changes to a SCADA system in a municipal residential drinking water system. The examples included in the bulletin are intended to help owners and operators identify the types of changes that may be considered repair and maintenance that are not subject to approval requirements under the Act, or an alteration to the system that is pre-authorized by conditions in Schedule B of the Drinking Water Works Permit (DWWP).

**Potential Impacts:** None anticipated. The EAPWSS & LHPWSS will continue to follow the requirements of the DWWP and document minor modifications on Form 2 records where required.

**[Decision Notice: Modifications to Environmental Activity and Sector Registry \(EASR\) requirements and exemptions for low risk short-term water taking activities](#)**

**Source:** MECP

**Date Posted/Notice Received:** April 19, 2021

**Comments Due:** N/A

**Summary:** The ministry is moving forward with amending regulations made under the Environmental Protection Act and the Ontario Water Resources Act to streamline permissions for certain low risk short-term water taking activities. These amendments align approval requirements with the activity's level of risk, while maintaining environmental oversight. Effective July 1, 2021, eligibility requirements for the EASR for water takings will be expanded for construction site dewatering, road construction, and certain pumping tests. For more details see [O. Reg. 63/16](#) and [O. Reg. 387/04](#).

**Potential Impacts:** None anticipated.

**[Measurement Canada water meter consultations](#)**

**Source:** Gov. of Canada - Measurement Canada

**Date Posted/Notice Received:** September 12, 2021 (CERCN Newsletter)

**Comments Due:** September 30, 2021

**Summary:** The government is consulting with water meter manufacturers, water distribution



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utilities and water meter end users to obtain data on current water measurement approaches to support and promote water conservation through increased accurate measurement of water use.

**Potential Impacts:** None anticipated.

## **12. Status of Action Items (LHPWSS & EAPWSS)**

A summary of all open action items as documented on the action item tracking spreadsheet was circulated for review.

- The LHPWSS currently has 21 open action items.
- The EAPWSS currently has 12 open action items.

**Next Meeting: TBD (December 2021)**

## APPENDIX B: QMS INTERNAL AUDIT REPORT (OCTOBER 13-14, 2021)



### Quality Management System (QMS) Internal Audit

Audit Dates: October 13-14, 2021

Auditor: Erin McLeod, Quality Assurance & Compliance  
Manager, Regional Water

#### Audit Purpose:

The purpose of the audit was to verify conformance with the Ontario Drinking Water Quality Management Standard (DWQMS) Version 2.0 for the Lake Huron Primary Water Supply System (LHPWSS). Internal audits ensure the QMS is being continually improved.

Non-conformances and opportunities for improvement are listed below.

#### Auditor Qualifications:

Erin McLeod has completed a training course in DWQMS Internal Auditing. The training certificate is attached in Appendix B.

#### Methodology:

The Internal Audit was conducted as outlined in QMS Procedure LH-ADMIN-1200 (Internal Audit) and was comprised of a conformance review of the facilities and 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 4-7, 2020.

*Note:* The audit was conducted through a review of a sampling of documents, limited interviews and observations by the auditor to demonstrate conformance with the DWQMS. 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. The detailed audit checklist is attached for further information.

- Appendix A: LF-ADMIN-1201 QMS Audit Checklist (Erin McLeod)

#### Definitions:

- A non-conformance (NC) is a non-fulfilment of a requirement.



- An opportunity for improvement (OFI) describes a requirement that can be more effectively addressed.
- An observation is a comment or remark provided to share the conditions found on the day of the audit, typically related to an “out of scope” finding.

#### **Areas Visited:**

- Lake Huron Water Treatment Plant (WTP), 71155 Bluewater Highway, South Huron
- Exeter Hensall Pumping Station (EHPS), 39590 Huron Street, South Huron
- McGillivray Pumping Station, 4064 McGillivray Drive, North Middlesex
- Arva Terminal Reservoir, 13964 Medway Road, Middlesex Centre
- Komoka-Mt. Brydges Pumping Station (KMBPS), 13964 Medway Road, Middlesex Centre

#### **Interviews Conducted:**

- Denny Rodrigues – Safety, Process and Compliance Manager, OCWA
- Greg Henderson – Senior Operations manager, OCWA
- Randy Lieber – Senior Operations Manager, OCWA
- Allison McCann – Team Lead, Operations & Compliance, OCWA
- Paladin Security Guard
- Blair Tully – General Manager, OCWA

#### **Summary of Findings**

##### **Positive Findings**

- New safety seals being used for the spill kits and first aid kits appear to be useful and makes inspections more efficient.
- The “Huron Handbook” created for new staff provides good background and reference information for an easier transition for new operators.
- The new dissolved oxygen analyzer at the Low Lift provides useful raw water quality information (e.g. early warning during lake turnover events and algal bloom events).
- 

##### **Non-Conformances (NCs)**

###### Element 5 (Document and Records Control)

- NC #1: Various different versions of LF-ADMIN-2200 (Calibration Certificate) were being used to record calibrations. The current version is v.4.0 (dated July 16, 2018) but in most instances v.3.0 was being used. The printed versions also don't match the corresponding template in SharePoint (i.e. multiple different versions of v.3.0 being used).



## Opportunities for Improvement (OFIs)

### Element 2 (QMS Policy)

- OFI #1: Consider the access and availability of the Policy.
  - i. The Policy is no longer available on the [huronelginwater.ca](http://huronelginwater.ca) website, it is only available upon request.
  - ii. Due to restricted access to the control room, the Policy is no longer readily available for contractors and other visitors at the WTP.

### Element 5 (Document and Records Control)

- OFI #2: Consider identifying the location and record retention period for the Monthly Operations, Maintenance and Quality Reports and associated meeting minutes, in Appendix A of LH-ADMIN-200 (Document & Records Control Procedure). These reports and meeting minutes are QMS records as referenced in LH-ADMIN-2000.
- 
- OFI #3: Two documents in the Security Guard trailer were not the most current versions:
  - HSOP-2-06 v.7.0 (no longer available in SharePoint);
  - HSOP-2-05 v.3.0 (not current, there is a version 4.0 available in SharePoint).

### Element 7 (Risk Assessment)

- OFI #4: Two items that are listed in the QMS Operational Plan as threats or operational challenges have not been considered in the QMS Risk Assessment:
  - SCADA communications failures (e.g. loss of communications between the WTP and remote sites);
  - Low raw water turbidity.

### Element 8 (Risk Assessment Outcomes)

- OFI #5: The QMS Risk Assessment & Outcomes table references a number of Standard Operating Procedures (SOPs). Not all SOPs referenced are available in the EMS/QMS SharePoint library. Examples: Harmful Algal Bloom (HAB) monitoring; frazil ice; SCADA control.
- OFI #6: Section 5.1 of Procedure LH-CCP-2000 (Chlorination Control) contains outdated references to an older 2009 versions of the CT Tables and Excel-based CT Calculator. There is no reference to the online SCADA CT calculator as a tool for operators. Consider that the online SCADA CT calculator, Excel CT Calculator, and corresponding Technical Memo were all updated in 2021.

#### Element 11 (Personnel Coverage)

- OFI #7: Procedure LH-ADMIN-2600 indicates the “master copy” of the shift schedule is in the control room but it has been moved to the spare operator’s office.

#### Element 13 (Essential Supplies & Services)

- OFI #8: Consider listing a back-up suppliers for powder activated carbon (PAC) and sodium hypochlorite. These are the only chemicals currently listed without a back-up.
- OFI #9: Consider that there are new contacts and a new procedure for SCADA control system repair/troubleshooting. There is a new SCADA on-call procedure in which RWS staff (Control Systems Coordinator, or Information Security Supervisor) are contacted first. The Rockwell 24/7 monitoring service has been cancelled. There is now a Parts Management Agreement (PMA) with Rockwell.
- OFI #10: Consider that there is a name change for the back-up lab service provider. Maxxam is now Bureau Veritas.

#### Element 15 (Infrastructure Maintenance, Rehabilitation and Renewal)

- OFI #11: Consider completing a Management of Change checklist for the new Computerized Maintenance Management System (ie. Maximo) to ensure training requirements, procedural updates etc. are captured.
- OFI #12: The “Out of Service Equipment Logbook” at Exeter-Hensall PS indicates pumps #1 and #3 are currently out of service, but they have both been placed back into service.

#### Element 16 (Sampling, Testing and Monitoring)

- OFI #13: The Sampling & Lab Analysis Procedure (LH-ADMIN-2050) indicates that the operator records both the analyzer and hand-held chlorine test results on LF-ADMIN-2054. This is no longer the case, and only the hand-held test results are now required to be recorded on the Form.
- OFI #14: There has been an operational change at McGillivray PS and Exeter-Hensall PS in which the sample taps no longer run continuously. Consider updating the sampling procedure (LH-ADMIN-2050) with instructions on how long the sample taps must run before sampling.



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## Element 18 (Emergency Management)

- OFI #15: Consider whether the “loss of alum” incident in August 2021 should be reviewed and documented as a contingency plan test, as loss of alum relates to a QMS critical control point (as per procedure CCP-3000).

## Observations

- Health & Safety: There is a “silica gel” product at McGillivray PS that was not accompanied by a Safety Data Sheet (SDS).
- Health & Safety; Housekeeping: At Exeter Hensall PS there was a bucket containing an unknown liquid substance and used/dirty rags within the sodium hypochlorite spill containment area.



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**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 – 3<sup>rd</sup> 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 third quarter 2021 (July 1 to September 30) 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 slightly 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 \$9,000 lower than the previous year.
- 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 additional costs as a result of the pandemic. In addition, the 2020 YTD amount shown is understated as the onset of the pandemic delayed accounting entries related to salaries, wages and benefits.
- 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 higher than the same period in 2020 largely due to increased costs associated with property taxes.
- Vehicles and Equipment expenditures include costs associated with vehicles, computers and office equipment for administrative staff. Additional costs in 2021 were incurred related to replacement of computer equipment, as well as 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 the addition of security services introduced in late 2020, higher insurance premiums, and additional legal costs incurred by the water system related to the High-Pressure

event as well as discussions related to the Joint Municipal Services Board and Municipal Services Corporation under the Municipal Act.

- Debt Principle and Interest payments occur twice per year; in the first and third quarter.
- Contributions to the Reserve Funds occur at the end of the fiscal year 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 – 3<sup>rd</sup> Quarter 20201

## Quarterly Financial Summary Report

### Lake Huron Water Supply System

3rd Quarter 2021 (July 1 to September 30)

(\$,000's)

	Approved 2021 Budget	Q3-2021	2021 Year to Date	% Year to Date	Variance Year To Date	2020 Year To Date
<b>Total Revenue</b>	<b>23,300</b>	6,858	16,150	69.3%	7,150	16,081
<u>Expenditures:</u>						
Contracted Operating Services	6,947	1,686	5,045	72.6%	1,902	4,881
Contracted Administrative Services	318	79	238	74.8%	80	227
Electricity	3,500	794	1,974	56.4%	1,526	1,985
Salaries, Wages, Benefits	741	252	545	73.5%	196	478
Administration and Other Expenditures	383	157	346	90.3%	37	279
Vehicles and Equipment	46	4	39	84.8%	7	22
Purchased Services & Professional Fees	1,210	425	985	81.4%	225	699
Debt Principle Payments	1,269	350	1,261	99.4%	8	1,239
Interest on Long-Term Debt	144	55	126	87.5%	18	153
Contributions to Reserve Funds	8,741	0	0	0.0%	8,741	0
<b>Total Expenditures</b>	<b>23,300</b>	<b>3,802</b>	<b>10,557</b>	<b>45.3%</b>	<b>12,738</b>	<b>9,962</b>

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

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

**Subject:** 2021 and 2022 Meeting Schedule – Revised

### RECOMMENDATION

That the Board of Management for the Lake Huron Primary Water Supply System **APPROVE** the revised meeting schedule for the Board of Management for 2022.

### PREVIOUS AND RELATED REPORTS

June 4, 2020	2021 and 2022 Meeting Schedule
January 31, 2019	2019 and 2020 Meeting Schedule
December 1, 2016	2017 and 2018 Meeting Schedule - Revised
October 16, 2016	2017 and 2018 Meeting Schedule

### BACKGROUND

The Board of Management for the Lake Huron Primary Water Supply System regularly meets on the first Thursday of March, June, October and December. Rather than meeting in September (consistent with a meeting every three months) the budget report is issued in September, thirty days in advance of the October meeting, to allow for a comprehensive review period by the Board Members.

In the year of a municipal election, the meeting which would normally be held in December is deferred to at least mid-January in the following year to allow for each newly elected municipal council to recommend the proposed appointments of members and alternates to the Board.

### DISCUSSION

The following meeting dates for 2022 were previously approved by the Board at the June 4, 2020 meeting:

March 3, 2022  
June 2, 2022  
October 6, 2022  
December 1, 2022  
January 19, 2023





Given that the municipal election will be held in October 2022, and typically the inaugural meetings of the respective Councils will not take place until early December, Municipal Councils will not have the opportunity to affirm the appointment(s) to the Board of Management until at least mid-December. Past practice for the Board has been to defer the meeting which would typically be held in December to the following January to allow Councils to confirm appointments

Accordingly, the previously approved meeting of December 1, 2022 was included in error, and is recommended by staff to be cancelled.

The recommended revised meeting schedule for the Board is as follows:

March 3, 2022

June 2, 2022

October 6, 2022

January 19, 2023\*

\* *The municipal election being held in October 2022 requires the meeting that would normally be held in December 2022 to be scheduled in mid- to late-January 2023.*

**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:** LH1429 Clearwell and Conduit Emergency Repairs

### RECOMMENDATION

That, on the recommendation of the Chief Administrative Officer, the following actions be taken with respect to LH1429 Clearwell and Conduit Emergency Repairs project:

- a) The Board of Management for the Lake Huron Primary Water Supply system **APPROVE** an increase to the project budget by \$165,000 for a total budget of \$725,000, it being noted that the funds will be provided from the Emergency Reserve Fund; and,
- b) The Board of Management for the Lake Huron Primary Water Supply System **RECEIVE** this report for information.

### PREVIOUS AND RELATED REPORTS

October 8, 2020      LH1429 South Filter Conduit Emergency Repairs

### BACKGROUND

The Lake Huron water treatment plant utilizes twelve (12) dual-media filters as part of the conventional water treatment process, divided into two banks of six filters each (commonly referred to as the “south” and “north” filters). Water from the sedimentation tanks flow through the anthracite/sand filters and into a common filtered water conduit before chlorine is added for primary disinfection. The north and south filtered water conduits then flow into clearwells under the plant.

Each filter is periodically taken out of service for regular maintenance and inspection, as well as topping up of the anthracite media within the filter.

During a routine maintenance and inspection of filter #6 at the water treatment plant staff of the contracted operating authority, the Ontario Clean Water Agency (OCWA), found that water was draining from the filter even though all valves were confirmed to be closed. A subsequent inspection from within the south clearwell (clearwell #2) confirmed that water was leaking from the south filtered water conduit above into the clearwell. Further inspection also noted that water appeared to be leaking from filter number 8 and 10 as well.

Water within the filtered water conduits is unchlorinated as chlorine is added at the end of each conduit before entering into the clearwell. While the risk to human health from this leakage is considered insignificant due to the leakage rate(s) into the clearwell, compared to the volume of clearwell itself. In effect, a fractional percent of water is bypassing the chlorination stage; however, that water is chlorinated as it will achieve the Contact Time requirements prior to the first consumer.

Notwithstanding, the leakage of water from the filtered water conduit poses a significant risk to the water treatment system over time as the rate of leakage is likely to increase. Filter number 6 remains out of service, and the remaining five south filters are being assessed to determine if their removal from service is necessary as well. The removal of three filters from production effectively reduces the capacity of the plant by 25%.

Upon receipt of the inspection report and work plan for the repairs to the south filtered water conduit from OCWA, the Director of Regional Water, with the consent of the Chief Administrative Officer, authorized the repairs to be undertaken on an emergency basis.

The emergency authorization provisions of the Board's Procurement Bylaw was used as the leakage of unchlorinated water must be addressed before the circumstances escalate to a point where human health may be at risk. In addition, as the repair work involves taking clearwell #2 out of service (reducing plant capacity to 50%), the repairs must be undertaken prior to the installation of the new high lift pumps in 2021.

## DISCUSSION

Repairs to the south side conduit were completed in July 2021. As part of the warranty inspections required on the south side for the completed work, the north side was also inspected by an engineering firm, GM BluePlan (GMBP) hired by the Board's contracted operating authority (OCWA). A number of issues were discovered, some that are of a serious nature and are as follows:

- Leaks similar to the South Clear Well on Filter 1, 5, 7, and 9. The majority of these leaks seem to be located along the construction joint on the filter flumes and most are relatively minor.
- Filter 7 had significant leaks which would explain not being able to hold static during disinfection procedures.
- The expansion joint material appears to be deteriorated and likely should be replaced when the clear well is drained.
- No significant structural concerns were noted by GMBP staff at this time.

OCWA plans to use Tarpon Contracting, the contractor that was used on the South clearwell to continue the work on the North clearwell. Tarpon is familiar with the site, and the specifications and standards set out by the engineering firm. OCWA will be sourcing them for the work according to their Provincially approved purchasing policies.

As this project now spans both North and South clearwells and conduits, it should be noted that the project name is changing from ‘South Filter Conduit Emergency Repairs’ to ‘Clearwell and Conduit Emergency Repairs’.

### PROJECT FINANCIAL STATUS

This project was initiated and undertaken under the emergency provisions of the Board’s Procurement Bylaw. The following table provides a high-level summary of projected and incurred expenditures to date for the project:

Approved Budget	\$560,000
Incurred cost to date	<u>\$325,817</u>
Remaining Balance	\$234,183
Construction Estimate North Side	\$284,500
Engineering Support North Side	\$60,000
Contingency	<u>\$50,000</u>
Projected total cost	\$747,317
Variance	(\$160,317)

### CONCLUSION

During a recent warranty inspection of the clearwells at the water treatment plant, OCWA discovered that the north side conduit and filters were leaking into Clearwell #1.

The Director of Regional Water, with the consent of the Chief Administrative Officer, authorized the creation of project LH1429 for the repairs to the suction water conduit and clearwell to be undertaken on an emergency basis under the emergency provisions of the Board’s Procurement Bylaw.

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

**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:** LH1257 Chamber 63 Access Culvert – Tender Award

## RECOMMENDATION

That, on the recommendation of the Chief Administrative Officer, the following actions be taken with respect to the Lake Huron Primary Water Supply System Chamber 63 Access Culvert (LH1257) project:

- a) The Board of Management for the Lake Huron Primary Water Supply System **AUTHORIZE** the Chair and Chief Administrative Officer to execute an agreement with Premier North Ltd. the construction of the Chamber 63 Access Culvert in the amount of \$241,006, excluding HST;
- b) The Board of Management for the Lake Huron Primary Water Supply system extend the existing engineering assignment with RV Anderson for contract administration and construction supervision services at an estimated cost of \$37,000 (excluding HST); and,
- c) The Board of Management for the Lake Huron Primary Water Supply System **RECEIVE** this report for information.

## BACKGROUND

Periodic access to this critical chamber currently requires access over three properties: a total distance of about 850m through agricultural lands and along waterways. The proposed project will install a manufactured culvert bridge near Chamber 63 which will reduce the access requirements to only 300m across one property largely using an existing laneway and significantly reduce the annual impacts to landowners and agricultural lands.

While this project was initiated in 2019, substantial delays in this project are attributed to permits and approvals required by the Upper Thames River Conservation Authority (UTRCA) and subsequent alterations to the design and unanticipated restrictions to the construction methodology originally proposed.

## DISCUSSION

### ***Design***

As the proposed culvert will be constructed within an existing municipal drain, additional flood prevention was required to be incorporated into the design. RV Anderson (RVA) initially proposed a culvert that was able to be submerged as the crossing is not anticipated to be used if there was a significant storm event. The UTRCA did not accept the original proposal, and RVA then proposed a culvert that would be sufficient for a 100-year storm. The UTRCA subsequently required that the culvert was required to accommodate a 300-year storm.

While the alternative designs provided by RVA for the proposed culvert was be sufficient to accommodate the revised design requirements; however, the consultant was obliged to show modelling details and demonstrate compliance.

Approval permits were provided by the UTRCA in the summer of 2021.

### ***Tendering***

RVA finalized the detailed design in early October 2021 and the Tender for construction (RFT#21-102) was issued on November 09, 2021. All contractors submitted compliant bids on the closing time and date on November 29, 2021. The pre-tender construction cost estimate of the proposed works prior to tender close was \$200,000 (excluding HST).

The acceptable bids received are summarized as follows:

<b>Contractor</b>	<b>Tender Bid (excluding HST)</b>
Premier North Ltd.	\$241,006
598424 Ontario Ltd. a/o Russel Construction	\$262,911
Blue-Con Construction	\$320,464
Aar-Con Excavating	\$323,491
J-AAR Excavating Ltd.	\$344,171
L82 Construction Ltd.	\$381,785
PV-EX Construction Ltd.	\$434,236
VanDriel Excavating Ltd.	\$444,898
Enscon Ltd.	\$538,920
Neptune Security Services	\$693,104

On this basis, the bid submitted by Premier North Limited in the amount of \$241,006 (excluding HST) is recommended for acceptance, noting that the submitted bid met the



tendered requirements. The procurement process utilized met the requirements of the Board's Procurement Bylaw, as well as the City of London's procurement policy (used as a guide).

### PROJECT FINANCIAL STATUS

The following is a summary of projected and incurred expenditures to date for the project:

<b>Expenditure</b>	<b>Projected</b>		<b>Incurred</b>	
Engineering	\$	60,000	\$	48,640
Construction Supervision & Contract Administration	\$	37,000	\$	-
Construction	\$	241,006	\$	-
Contingency	\$	30,000		
Permits	\$	2,100	\$	2,050
<b>Total</b>	<b>\$</b>	<b>370,106</b>	<b>\$</b>	<b>50,690</b>

<b>Approved Budget</b>	<b>\$</b>	<b>405,000</b>
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Anticipated Variance	<b>\$</b>	<b>34,894</b>
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### ANTICIPATED SCHEDULE

In order to construct during the winter and have a minimal impact on the local landowner's agricultural operations and the municipal drain, construction is then set to begin in early January.

### CONCLUSION

Completing this project will enable the Board's contracted operating authority unrestricted access to critical infrastructure, with minimal impacts to crops and agricultural lands, and improve relationships with the local landowners.

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**Submitted by:** Andrew Henry, P. Eng.,  
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**Recommended by:** Kelly Scherr, P.Eng., MBA, FEC  
Chief Administrative Officer