Agenda
Lake Huron Primary Water Supply System
Joint Board of Management

4th Meeting of the Lake Huron Primary Water Board
October 4, 2018, 1:30 PM
Committee Room #5

Pages

Lake Huron Primary Water Supply System

Report

The 3rd Meeting of the Lake Huron Primary Water Supply System
June 7, 2018

Attendance: Meeting held on Thursday, June 7, 2018 at the London City Hall, commencing at 1:32 PM

PRESENT: V. Ridley (Chair), C. Burghardt-Jesson, M. Cassidy, M. Cole, J. Finlay, J. Gillespie, J. Helmer, J. Vanderheyden and M. van Holst and J. Bunn (Committee Secretary)

ALSO PRESENT: T. Bender (OCWA), K. Butts (RWS), S. Core (OCWA), D. Gibson, B. Haklander (RWS), E. McLeod (RWS), C. Murchland (OCWA), D. Rodrigues (OCWA) and B. Tully (OCWA)

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 2nd Meeting held on Thursday, March 1, 2018.

FINLAY AND VANDERHEYDEN

That the Minutes of the March 1, 2018 meeting of the Lake Huron Primary Water Supply System Joint Board of Management **BE NOTED AND FILED**. **CARRIED**

3. Consent Items

3.1 Quarterly Compliance Report (1st Quarter 2018: January - March)

CASSIDY AND VAN HOLST

That, on the recommendation of the Chief Administrative Officer, the report dated June 7, 2018, with respect to the general, regulatory and contractual obligations of the Lake Huron Primary Water Supply System, for January to March 2018, **BE RECEIVED**. **CARRIED**

3.2 Environmental Management System and Quality Management System

CASSIDY AND VAN HOLST

That, on the recommendation of the Chief Administrative Officer, the report dated June 7, 2018, with respect to the Environmental Management System and Quality Management System for the Lake Huron Primary Water Supply System, **BE RECEIVED**. **CARRIED**

3.3 Summary of Insurance Policies

CASSIDY AND VAN HOLST

That, on the recommendation of the Chief Administrative Officer, the report dated June 7, 2018, with respect to the Summary of Insurance

Policies for the Lake Huron Water Supply System, **BE RECEIVED**. **CARRIED**

3.4 Water System Operation - Contract Status Update

CASSIDY AND VAN HOLST

That, on the recommendation of the Chief Administrative Officer, the report dated June 7, 2018, with respect to the status of the contract with the Ontario Clean Water Agency as the contracted operating authority for the Lake Huron Primary Water Supply Board, **BE RECEIVED**. **CARRIED**

4. Items for Discussion

4.1 2017 Audited Financial Statement

HELMER AND COLE

That, on the recommendation of the Chief Administrative Officer, the revised attached 2017 Audited Financial Statement for the Lake Huron Primary Water Supply System, **BE RECEIVED** and **BE ACCEPTED**. **CARRIED**

4.2 Surplus Asset Disposal

GILLESPIE AND HELMER

That, on the recommendation of the Chief Administrative Officer, the following actions be taken with respect to the portable diesel generator located in the Powdered Activated Carbon Building at the Lake Huron Primary Water Treatment Plant:

a) the above-noted portable diesel generator **BE DECLARED** surplus; and,

b) the Civic Administration **BE AUTHORIZED** to dispose of the asset in a manner fitting its value. **CARRIED**

5. Deferred Matters/Additional Business

None.

7. Adjournment

The meeting adjourned at 2:02 PM.

Financial Statements of

LAKE HURON AREA PRIMARY WATER SUPPLY SYSTEM

December 31, 2017

INDEPENDENT AUDITORS' REPORT

To the Board of Directors of Lake Huron Area Primary Water Supply System

We have audited the accompanying financial statements of Lake Huron Area Primary Water Supply System, which comprise the statement of financial position as at December 31, 2017, the statements of operations, change in net financial assets and cash flows for the year then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of Lake Huron Area Primary Water Supply System as at December 31, 2017 and its results of operations and its cash flows for the year then ended in accordance with Canadian public sector accounting standards**.**

Chartered Professional Accountants, Licensed Public Accountants
DRAFT
London, Canada

LAKE HURON AREA PRIMARY WATER SUPPLY SYSTEM
Statement of Financial Position
December 31, 2017, with comparative information for 2016

	2017	2016
Financial assets		
Due from the Corporation of the City of London (note 3)	**$ 23,505,532**	$ 20,700,907
Trade and other receivables	**627,445**	1,053,164
Total financial assets	**24,132,978**	21,754,071
Financial liabilities		
Accounts payable and accrued liabilities	**2,260,810**	2,874,777
Deferred revenue (note 4)	**674,777**	711,077
Accrued interest on long-term debt	**54,196**	55,884
Long-term debt (note 5)	**9,254,783**	9,982,226
Total financial liabilities	**12,244,566**	13,623,964
Net financial assets	**11,888,411**	8,130,107
Non-financial assets		
Tangible capital assets (note 6)	**157,682,748**	158,395,013
Prepaid expenses	**206,664**	163,296
Total non-financial assets	**157,889,412**	158,558,309
Accumulated surplus (note 7)	**$ 169,777,823**	$ 166,688,416

Commitments (note 9)
Contingent liabilities (note 10)

See accompanying notes to financial statements

LAKE HURON AREA PRIMARY WATER SUPPLY SYSTEM
Statement of Operations
Year ended December 31, 2017, with comparative information for 2016

	Budget	2017	2016
Revenues			
User charges	$ 19,680,947	**$ 21,583,674**	$ 20,726,432
Investment income	15,000	**297,350**	346,936
Transfer payments	-	**-**	
Provincial	-	**36,300**	65,864
Federal	-	**35,845**	161,614
Other	5,000	**5,313**	7,576
Total revenues	19,700,947	**21,958,483**	21,308,422
Expenses			
Salaries, wages and benefits	580,930	**520,347**	577,186
Materials and supplies	10,347,800	**10,396,226**	10,903,505
Contracted services	151,344	**441,603**	611,183
Rents and financial expenses	52,500	**47,174**	44,716
Interest on long-term debt (note 5)	228,994	**195,819**	202,864
Amortization of tangible capital assets (note 6)	-	**7,064,735**	6,973,943
Administrative charges	203,173	**203,173**	198,218
Total expenses	11,564,741	**18,869,076**	19,511,616
Annual surplus	8,136,206	**3,089,407**	1,796,806
Accumulated surplus, beginning of year (note 7)	166,688,416	**166,688,416**	164,891,610
Accumulated surplus, end of year (note 7)	$174,824,622	**$ 169,777,823**	$166,688,416

See accompanying notes to financial statements

LAKE HURON AREA PRIMARY WATER SUPPLY SYSTEM
Statement of Change in Net Financial Assets
Year ended December 31, 2017, with comparative information for 2016

	Budget	2017	2016
Annual surplus	$ 8,136,206	**$ 3,089,407**	$ 1,796,806
Acquisition of tangible capital assets	(505,399)	**(6,352,470)**	(2,928,186)
Amortization of tangible capital assets	-	**7,064,735**	6,973,943
	7,630,807	**3,801,672**	5,842,563
Change in prepaid expenses	-	**(43,368)**	(1,801)
Change in net financial assets	7,630,807	**3,758,304**	5,840,762
Net financial assets (debt), beginning of year	8,130,107	**8,130,107**	2,289,345
Net financial assets, end of year	$ 15,760,914	**$ 11,888,411**	$ 8,130,107

See accompanying notes to financial statements

LAKE HURON AREA PRIMARY WATER SUPPLY SYSTEM
Statement of Cash Flows
Year ended December 31, 2017, with comparative information for 2016

	2017	2016
Cash provided by:		
Operating activities:		
Annual surplus	**$ 3,089,407**	$ 1,796,806
Items not involving cash:		
Amortization of tangible capital assets	**7,064,735**	6,973,943
Amortization of debenture discount	**8,066**	7,932
Changes in non-cash assets and liabilities:		
Due from the Corporation of the City of London	**(2,804,625)**	(5,636,939)
Prepaid expenses	**(43,368)**	(1,801)
Trade and other receivables	**425,718**	780,232
Accounts payable and accrued liabilities	**(613,967)**	197,367
Deferred revenue	**(36,300)**	(65,864)
Accrued interest on long-term debt	**(1,688)**	(3,406)
Net change in cash from operating activities	**7,087,979**	4,048,270
Capital activities:		
Purchase of tangible capital assets	**(6,352,470)**	(2,928,186)
Cash used in capital activities	**(6,352,470)**	**(2,928,186)**
Financing activities:		
Proceeds from issuance of long term debt	**404,232**	-
Long-term debt repayments	**(1,139,741)**	(1,120,084)
Cash used in financing activities	**(735,509)**	**(1,120,084)**
Net change in cash flows	$ -	$ -

See accompanying notes to financial statements

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 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 City of London	4	17
Bluewater	1	1
South Huron	1	1
Lucan-Biddulph	1	1
Lambton Shores	1	1
North Middlesex	1	3
Middlesex Centre	1	1
Strathroy-Caradoc	1	3

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.

2. Significant accounting policies (continued)

(b) Non-financial assets (continued)

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

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.

(d) Government transfers

Government transfer payments from the Corporation 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.

2. Significant accounting policies (continued)

(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.

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.

4. Deferred revenue

Deferred revenue is comprised of the following:

	2017	2016
Provincial HELP Funding	**$ 674,777**	$ 711,077

5. Long-term debt

(a) Long-term debt is stated as follows:

	2017	2016
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:		
(a) at rates ranging from 2.05% to 3.20%, maturing September 2022.	**$ 928,950**	$ 1,101,375
(b) at rates ranging from 1.95% to 3.80%, maturing September 2023.	**946,560**	1,090,380
(c) at rates ranging from 0.80% to 2.25%, maturing March 2025	**7,029,775**	7,853,271
(d) at rates ranging from 1.15% to 2.85%, maturing March 2027	**406,931**	-
Total long-term debt	**9,312,216**	10,045,026
Less: Unamortized debenture discount	**(57,433)**	(62,800)
Net long-term debt	**$ 9,254,783**	$ 9,982,226

5. Long-term debt (continued)

(b) The long-term debt repayment schedule is as follows:

2018	$ 1,197,478
2019	1,218,241
2020	1,239,448
2021	1,261,262
2022	1,283,326
2023 & Beyond	3,112,461

(c) Total charges for the year for long-term debt which are reported on the Statement of Operations are as follows:

	2017	2016
Interest	**$ 187,752**	$ 194,932
Amortization of debenture discount	**8,066**	7,932
	$ 195,819	$ 202,864

6. Tangible capital assets

Cost	Balance at December 31, 2016	Additions	Disposals	Balance at December 31, 2017
Land	$ 1,843,513	$ -	$ -	$ 1,843,513
Buildings and building improvements	48,838,423	6,373,733	131,349	55,080,808
Vehicles, machinery and equipment	39,815,696	2,680,224	801,183	41,694,738
Water infrastructure	117,350,378	318,842	677	117,668,542
Assets under construction	3,216,457	115,300	3,135,467	196,290
Total	$ 211,064,467	$ 9,488,099	$ 4,068,675	$ 216,483,891

Accumulated Amortization	Balance at December 31, 2016	Amortization expense	Disposals	Balance at December 31, 2017
Land	$ -	$ -	$ -	$ -
Buildings and building improvements	11,909,222	1,954,911	131,349	13,732,784
Vehicles, machinery and equipment	15,922,499	2,907,505	801,183	18,028,821
Water infrastructure	24,837,734	2,202,320	515	27,039,538
Assets under construction	-	-	-	-
Total	$ 52,669,454	$ 7,064,735	$ 933,047	$ 58,801,143

	Net book value December 31, 2016	Net book value December 31, 2017
Land	$ 1,843,513	$ 1,843,513
Buildings and building improvements	36,929,201	41,348,024
Vehicles, machinery and equipment	23,893,197	23,665,916
Water infrastructure	92,512,644	90,629,004
Assets under construction	3,216,458	196,290
Total	$ 158,395,013	$ 157,682,748

6. Tangible capital assets (continued)

(a) Assets under construction

Assets under construction with a net book value of $196,290 (2016 - $3,216,458) 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 no write-downs in tangible capital assets during the year (2016 – nil).

7. Accumulated surplus

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

	2017	2016
Surplus:		
Invested in tangible capital assets	**$143,711,822**	$144,102,760
Total surplus	**143,711,822**	144,102,760
Reserve funds set aside for specific purpose by the Board:		
Infrastructure renewal - water operations	**$ 26,066,000**	$ 22,585,656
Total reserve funds	**26,066,000**	22,585,656
	$169,777,823	$166,688,416

8. 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.

9. Commitments

Derivatives

The Entity has the following derivative:

- Contract with one block negotiated October 22, 2015, with a daily electricity purchase of 24 megawatt hours. Covering the period of November 1, 2015 until October 31, 2018, remaining contract cost of $219,938 (2016 - $484,008).

This derivative contract was purchased to price certainty for 15% 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.

10. Contingent liabilities

There are certain claims pending against the Entity as at December 31, 2017. 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.

11. Budget Data

Budget data presented in these consolidated financial statements are based upon 2017 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	$	19,680,947
Municipal Revenues - Other		20,000
Total revenues		19,700,947
Expenses		
Personnel Costs		519,430
Administrative Expenses		82,150
Financial Expenses - Other		272,500
Financial Expenses - Interest & Discount on LTD		228,994
Financial Expenses - Debt Principal Repayments		1,139,741
Financial Expenses - Transfers to Reserves and Reserve Funds		6,996,465
Purchased Services		684,344
Materials & Supplies		9,552,650
Furniture & Equipment		21,500
Other Expenses		203,173
Recovered Expenses		
Total expenses		19,700,947
Net surplus (deficit) as per Budget	**$**	**-**
PSAB Reporting Requirements:		
Transfers to Reserves and Reserve Funds	$	6,996,465
Debt principal repayments		1,139,741
Net PSAB Budget surplus as per Financial Statements	**$**	**8,136,206**

Lake Huron
Primary Water Supply System

Report No.:	LH-2018-03-02
Report Page:	1 **of** 2
Meeting Date:	October 4, 2018
File No.:	

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

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

Subject: Quarterly Compliance Report (2nd Quarter 2018: April - June)

RECOMMENDATION

That the Quarterly Compliance report with respect to the general, regulatory and contractual obligations of the Lake Huron Primary Water Supply System **BE RECEIVED** for the information of the Board of Management; it being noted that there were no Adverse Water Quality Incidents or adverse laboratory results in the 2nd quarter of 2018.

EXECUTIVE SUMMARY

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

The Water Quality Quarterly Report for the period of April 1 – June 30, 2018 was posted on the water system's website at https://huronelginwater.ca/consumer-resources/water-quality/.

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

BACKGROUND

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

REGULATORY ISSUES

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

New Environmental Bill of Rights (EBR) Registry Postings: At the time of drafting this report, there were no new postings on the EBR, or through other sources, that may have an impact on the LHPWSS.

Quarterly Water Quality Reports: The Water Quality Quarterly Report for the period of April 1 – June 30, 2018 was completed by the operating authority, and is posted on the Water Systems' website at https://huronelginwater.ca/consumer-resources/water-quality/.

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

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

CONTRACTUAL ISSUES

ARTICLE 3, "Operation and Maintenance of the Facilities – General":
Board staff informally meets with OCWA on a monthly basis to discuss operations and maintenance related issues, and formally on a quarterly basis to review contractual performance. The 2018 first quarter Contract Report was received from OCWA on July 27, 2018 and was discussed at the quarterly administration meeting between Board staff and OCWA on August 9, 2018. Copies of the monthly Operations and Maintenance Reports, or quarterly Contract Reports are available at the Board's Administration Office in London upon request.

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

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

Lake Huron
Primary Water Supply System

Report No.:	LH-2018-03-03
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Meeting Date:	October 4, 2018
File No.:	

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

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

Subject: Environmental Management System and Quality Management System

RECOMMENDATION

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

BACKGROUND

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

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

Quality Management System (QMS)
In 2006, the Drinking Water Quality Management Standard (DWQMS) was integrated with the existing EMS and the combined EMS/QMS is maintained by the contracted Operating Authority. The *Safe Drinking Water Act* (SDWA) and the water system's Municipal Drinking Water Licence (MDWL) require that an accredited Operating Authority be in operational charge of the drinking water system. In order to become accredited, the Operating Authority must utilize and maintain an Operational Plan that meets the requirements of the DWQMS, and must undergo an external accreditation audit every three years. OCWA received full scope DWQMS re-accreditation in October 2016 and is currently accredited for the three-year period ending in 2019.

DISCUSSION

Management Review

The documented EMS/QMS and its performance requires Management Review by Top Management a minimum of once annually 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 were held on June 28, 2018 and September 5, 2018. The June 28, 2018 meeting minutes are attached to this report as Appendix A for the information of the Board. The September 5, 2018 meeting minutes will be included in a future report to the Board once the minutes are finalized and accepted by all parties of the meeting.

Internal Audits

Pursuant to the international ISO 14001 EMS standard and the provincial DWQMS, 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. 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 annually.

A QMS Internal Audit was conducted on April 18 & 20, 2018, and a summary of the audit findings is included in Appendix B of this report. Zero (0) non-conformances and twenty four (24) opportunities for improvement were identified during the audit. The audit findings were discussed at the June 28, 2018 Management Review meeting and action items were subsequently assigned.

An EMS Internal Audit was conducted on June 6 & 8, 2018 and a summary of the audit findings is included in Appendix C of this report. Zero (0) non-conformances and five (5) opportunities for improvement were identified during the audit. The audit findings were discussed at the September 5, 2018 Management Review meeting and action items were subsequently assigned.

The audit findings were considered to be minor, largely related to possible improvements to documentation, and should easily be addressed through assigned action items.

External Audits

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

There were no external audits conducted during this reporting period.

Corrective and Preventive Actions

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

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

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

A key concept of PLAN-DO-CHECK-ACT is that it does not require or 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.

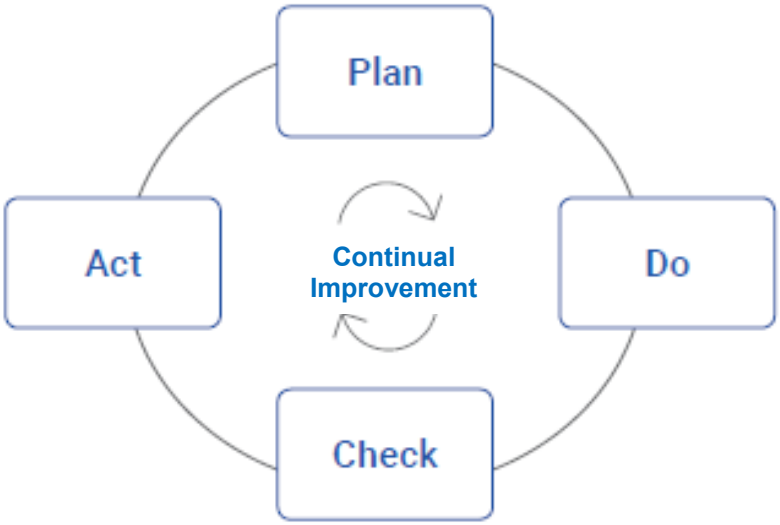


Figure 1: Plan-Do-Check-Act improvement process

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:

- Seven (7) new proactive action items were added as a result of the June 28, 2018 Management Review meeting.
- Four (4) new action items were added as a result of the Management of Change review process.
- Twenty four (24) new action items were added as a result of the April 18 & 20, 2018 QMS Internal Audit.
- Five (5) new action items were added as a result of the June 6 & 8, 2018 EMS Internal Audit.

As of September 6, 2018, there are currently 43 open action items in the system. This represents an overall completion rate of 92%.

All outstanding action items in the system are driven by continual improvement. The majority of open action items in the system are administrative in nature with an assigned priority of low, meaning that they are opportunities for improvement and proactive in nature. None of the open action items relate to regulatory issues (ie. non-compliances), management system non-conformances, or water quality issues.

CONCLUSION

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

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

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

Attachments:
Appendix A - Management Review Meeting Minutes (June 28, 2018)
Appendix B - Quality Management System (QMS) Internal Audit Report Summary (April 18 & 20, 2018)
Appendix C - Environmental Management System (EMS) Internal Audit Report Summary (June 6 & 8, 2018)

APPENDIX A: MANAGEMENT REVIEW MEETING MINUTES (JUNE 28, 2018)

Lake Huron & Elgin Area Primary Water Supply Systems EMS/QMS Management Review	
Date	June 28, 2018
Time	9:00 am – 12:00 pm
Location	Regional Water Supply Boardroom
Attendees	Andrew Henry (RWS), Erin McLeod (RWS), Blair Tully (OCWA), Denny Rodrigues (OCWA), Shawn Core (OCWA), Simon Flanagan (OCWA), Arlene Tanashi (RWS)
Regrets	
C.C.	

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

1. **Review and approval of previous meeting minutes - May 3, 2018**

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

2. **LHPWSS QMS Internal Audit - April 18 and 20, 2018**

   The purpose of the audit was to verify conformance with the Ontario Drinking Water Quality Management Standard v. 2.0 (DWQMS) for the Lake Huron Primary Water Supply System (LHPWSS). A summary of the audit findings was circulated. Zero (0) non-conformances (NC) and twenty four (24) Opportunities for Improvement (OFI) were noted. Discussion ensued and suggested additions and changes to action items and deadlines will be incorporated into the CAF tracking spreadsheet.

3. **EAPWSS QMS Internal Audit - April 26 and 27, 2018**

   The purpose of the audit was to verify conformance with the Ontario Drinking Water Quality Management Standard v. 2.0 (DWQMS) for the Elgin Area Primary Water Supply System (EAPWSS). A summary of the audit findings was circulated. Zero (0) non-conformances (NC) and sixteen (16) Opportunities for Improvement (OFI) were noted. Discussion ensued and suggested additions and changes to action items and deadlines will be incorporated into the CAF tracking spreadsheet.

4. Raw Water Supply and Drinking Water Quality Trends

Elgin

Handout of Elgin six year trends included: raw water pH, treated water pH, filtered water aluminum residual, raw water turbidity, treated water turbidity, raw water temperature, raw water colour, treated water fluoride residual, treated water free chlorine residual, THMs and HAAs.
All trends look fine.
There is now a raw water Dissolved Oxygen (DO) analyzer in place at the low lift. Top management suggested that raw water DO be added to the trend reporting.

Action Item: Add Dissolved Oxygen (DO) to the Summary of Water Quality, Chemical and Operating Data in the monthly operations reports. Deadline: August 31, 2018. Denny Rodrigues.

Action Item: Ensure that Dissolved Oxygen (DO) is in Vantage Point. Deadline: December 31, 2018. Walter Martin.

Action Item: Investigate correlation between lake levels and turbidity. Process Engineering Intern to compile data from Environment Canada Climate Change (ECCC). Deadline: July 31, 2018. Erin McLeod.

Huron

Handout of Huron six year trends included: raw water pH, treated water pH, raw water turbidity, treated water turbidity, treated water aluminum residual, treated water free chlorine residual, raw water temperature, raw water colour, THMs and HAAs.
General notes on the trends:

- Treated water average pH is more stable in the last year and a half
- A5 to A7 alum switch for a summer trial period is now in effect
- Free chlorine residual creeping up while pH is going down
- Raw Water temperature; switched data collection source from lab to analyzer
- THM reading for Exeter Hensall (MS3) had a reading of greater than 50 ug/L for the first time in October 2017 sample. Exeter-Hensall (MS3) historically has highest THM because of longest residence time in distribution system but this reading is still well below the maximum acceptable concentration of 100 ug/L.

Action Item: To confirm date of switching data collection source for raw water temperature from lab to analyzer. Deadline: July 31, 2018. Denny Rodrigues.

Action Item: To verify whether colour is being reported as apparent colour or true colour and when a switch in lab procedure occurred. Deadline: July 31, 2018. Denny Rodrigues.

Action Item: Top Management requested that electronic copies of the Raw Water Supply and Drinking Water Quality Trend reports for both Huron and Elgin be provided to OCWA for the purpose of sharing with personnel. Deadline: July 31, 2018. Erin McLeod.

5. Results from Board Meetings – June 7, 2018

Huron Board Meeting
Quarterly Compliance Report:
Received for information.
EMS/QMS Report:
Request for clarification on the 93% completion of action items, specifically what does this represent (i.e. all items since inception in 2012), and what types of action items are there which are not administrative and low priority.
General questions/comments re:

- Latest MOECC inspection, request for status update on completion of action items related to this;
- Construction Lien Act;
- DO analyzer at Elgin and linkages between this and detection of algal blooms;
- Copper guideline, clarification on the Maximum Acceptable Concentration (MAC) and Aesthetic Objective (AO).

Elgin Board Meeting
Quarterly Compliance Report:
The Board requested further information on the recent changes to the *Safe Drinking Water Act* and *Clean Water Act* with regards to source protection planning, to confirm that there will be no significant impacts to the EAPWSS.
EMS/QMS Report:
Received for information.

6. Relevant Communications from Interested Parties

a) Elgin: MOECC – Hydrilla - Invasive Species Warning
Corporate Compliance OCWA provided information regarding Hydrilla which is an invasive aquatic plant that has spread rapidly through much of the U.S. Although it has not been detected in Canada yet, it is anticipated that the nutrient-rich waters of Lake

Erie could be a Hydrilla habitat. Consequently, the provincial government has added it to their Invading Species Awareness Program. It is able to grow aggressively, outcompeting native plants and forming dense mats which degrades water quality by raising pH levels, decreasing oxygen and increasing water temperature.

b) Elgin: Kettle Creek Conservation Authority (KCCA) Watershed – Report Card
The London Free Press published an article discussing the Report Card. Highlights of the Report Card included a review of the surface water quality, underground water quality, forest conditions and cover, and wetland condition.

c) Elgin: Southwestern Public Health
Elgin St. Thomas Public Health and Oxford County Public Health have merged and are now known as Southwestern Public Health.

Action Item: Update ECP-2 (Emergency Contact & Essential Suppliers & Services List) and EMC-1 (Report of Adverse Water Quality Incident AWQI), to reflect Southwestern Public Health. Deadline: 30-Sep-18. Denny Rodrigues.

7. Compliance Obligations Update

Title	**Haloacetic Acids (HAAs) Sampling Concerns**
Source	Ministry of the Environment and Climate Change (MOECC)
Date Posted/ Notice Received	May 9, 2018 – Email notification
Comments Due	N/A
Summary	The purpose of the letter was to clarify ministry guidance for HAAs sampling. In light of the recently introduced HAAs standard of 80 ug/L which comes into force January 1, 2020, guidance has been provided for developing the monitoring program. The guidance indicates that more than one sampling location may be required to characterize HAAs levels throughout the system.
Notes	The LHPWSS and EAPWSS have been conducting quarterly HAAs sampling since 2012. The LHPWSS currently samples for HAAs at four (4) different locations (Arva Reservoir, SC-2, KM-2, EH-3). The EAPWSS currently samples for HAAs at one (1) location (EMPS valve house). Consideration will have to be given to sample at a point after the EMPS reservoir, as per the guidance document. Action Item: Follow up with City of London and MOECC regarding HAA sampling at the EMPS and sharing of results. Deadline: Sept. 30, 2018. Erin McLeod.

Post Meeting Notes:	Upon further review, the letter indicates that HAAs peak in the distribution system closer to a chlorine addition point, and decrease at the extremities of the system. Peak HAAs also change location in the distribution system throughout the year. For the LHPWSS, a suggestion would be to consider adding two (2) more sampling points; PS#3 after re-chlorination (i.e. station discharge) and PS#4 after re-chlorination (i.e. station discharge). Action Item: Review/investigate additional sampling points for HAAs sampling in the distribution system. Sept. 30, 2018. Denny Rodrigues and Shawn Core.

Title	**Strontium in Drinking Water - Guideline Technical Document for Public Consultation**
Source	Health Canada
Date Posted/ Notice Received	May 25, 2018
Comments Due	July 20, 2018
Summary	"A maximum acceptable concentration (MAC) of 7.0 mg/L is proposed for strontium in drinking water, based on bone effects in rats and using currently available scientific studies and approaches. This guideline technical document provides exposure information as well as analytical methods and treatment technologies that may be effective for strontium removal at the municipal and residential scales."
Notes	There is currently no data available in WaterTrax for strontium in treated water, for either EAPWSS or LHPWSS. MOECC Drinking Water Surveillance Program (DWSP) data from 2011 – 2016: Strontium in Elgin treated water: Max. 171 µg/L, average 160.6 µg/L (based on 10 results) Strontium in Huron treated water: Max. 115 µg/L, average 104.5 µg/L (based on 6 results)

Proposed Changes to Municipal Drinking Water Licence (MDWL) and Drinking Water Works Permit (DWWP)

Staff viewed the MOECC Webinar June 27, 2018 which presented a number of proposed changes to MDWL and DWWP:

- Issue date vs Effective date on MDWL
- New condition on the MDWL that states all the procedures in Operations & Maintenance manuals must be implemented. BT concerned that SCADA process control narratives and operations manuals are not fully reflective of current day, this is applicable to both facilities but more in regards to Huron for the operations manual.
- Residuals Management Facility (RMF) information included on the MDWL is being reviewed to ensure appropriate limits and monitoring requirements. This could impact the LHPWSS which currently has very lenient monitoring requirements compared to the EAPWSS
- Wording regarding CT calculations is being clarified
- New conditions for calibration of CT monitoring equipment (this should have no impact on the LHPWSS and EAPWSS as it's already being done)
- New Schedule is being issued for Source Protection, as it relates to storage of liquid fuel (e.g. diesel).

The LHPWSS will be the first system to have the MDWL renewed (2019), and will be subject to the new conditions prior to the EAPWSS MDWL renewal (2021).

Action Item: Circulate draft copies with proposed changes to the MDWL and DWWP documents from MOECC when received. Submit comments to MOECC. Deadline: July 12, 2018. Erin McLeod.

8. Effectiveness of the Risk Assessment Process

The risk assessment process continues to be suitable and effective. The DWQMS requires that the risk assessment identifies the method to verify, at least once every calendar year, the currency of the information and the validity of the assumptions used in the risk assessment. Both Elgin and Huron water systems are prompted to do the review by a generated work order.

The Annual Reviews for both systems will be conducted in July 2018 by OCWA (Denny Rodrigues). Indications were that cross referencing will take place to the Management of Change Forms to ensure all recent changes have been captured on the risk assessment.

9. Results of Emergency Response Testing

On February 01, 2018 the Annual Fire Drill took place at EAPWSS. On March 8, 2018 the Annual Fire Drill took place at LHPWSS.

The power failure at LHPWSS in April 2018 is being used as an actual event for the annual Contingency Review/Test for both water supply systems.

A tracking spreadsheet is used to ensure Emergency Mandatory Contingency Reviews/Tests take place as required.

10. Adequacy of Resources

The adequacy of resources for the EMS/QMS was discussed.

SharePoint is not being used to its full potential yet. Going forward it will be a valuable tool. There was a bit of a rush in fall of 2017 to get the documents into SharePoint so that the external auditor would have access. Administrative updates to documents are currently underway. In recent months, the Operations and Compliance Team Leads have been familiarizing themselves and becoming accustomed to using SharePoint. Operations staff still need to be introduced to SharePoint.

BT Observation – Staff resources have been strained over the past year, due to the need to support capital and operations projects. This has an impact on EMS/QMS. AH - Increased Capital Projects have increased strain on EMS/QMS. RWS will be revisiting project management resources to see how OCWA is being engaged in projects. Project management through Office 365 may ultimately be more efficient, and an opportunity to relieve strain on resources.

It should be noted that the regular reprioritization of the CAF tracking items is ensuring that the highest priority items are being dealt with in a timely manner.

11. Suitability, Adequacy and Effectiveness of the EMS/QMS

Discussion took place around this topic as the external auditor has always highlighted this during the audit process.

Wording in the quarterly EMS/QMS Board Report states “The Internal Audits and frequent Management Review meetings continue to effectively identify system deficiencies. The EMS/QMS 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.”

Top Management noted:

- From a regulatory standpoint there have been no major non compliances and non-conformances.

- Office 365/SharePoint has improved the system, and should overall improve effectiveness.
- Action items are being address in a timely fashion.
- EMS/QMS provides a valuable education piece for staff.
- Staff awareness is going really well, staff are engaged and asking questions.
- The management system culture is being ingrained, OCWA is now writing EMS/QMS requirements into Request for Proposal (RFP), example of life cycle perspective.
- OCWA internal quarterly meetings are being utilized to highlight safety, process, compliance and EMS/QMS issues.
- Feedback from the Joint Boards of Management including our customers (municipalities) is that they are satisfied with identification and management of risk, and confident in the operation and administration of the systems.

12. Status of action items

Action item summaries were provided for both water supply systems. As of June 25, 2018 EAPWSS action items are 93% complete and LHPWSS actions items are 91% complete.

When presenting this information to the Board in future, we will try presenting qualitative rather than quantitative data (e.g. confirmation that open action items do not relate to regulatory non-compliance, water quality issues, etc.).

Action Item: Improved wording to be included in the EMS/QMS Board Report to ensure clarification of status of action items to the Boards. Deadline: August 30, 2018. Erin McLeod.

13. Environmental Objectives - Update

LHPWSS Environmental Management Program (EMP) objectives were reviewed. Handouts of each EMP objective and the progress updates were provided for each Project/Study. Handouts were provided updating Lake Huron Water Treatment Plant Electricity Efficiency and Chemical Efficiency trends for the last five years. Also provided was the McGillivray Pumping Station Electricity Efficiency trend.

EAPWSS Environmental Management Program (EMP) objectives were reviewed. Handouts of each EMP objective and the progress updates were provided for each Project/Study. Handouts were provided updating Elgin Water Treatment Plant Electricity Efficiency and Chemical Efficiency trends for the last five years.

Action Item: Track RMF solids going to landfill and not being returned to the lake for EAPWSS. Deadline: December 31, 2018. Erin McLeod.

14. Environmental & Quality Policy

As part of an Opportunity For Improvement (OFI) noted from the external audits conducted last fall and staff discussion and review of the Scope and individual policies, a mock-up of a combined Environmental & Quality Policy has been prepared. This was done keeping the end user in mind.

Action Item: Circulate draft version of the combined Environmental & Quality Policy by email for comment. Deadline: August 15, 2018. Erin McLeod.

15. Life Cycle Perspective

Discussion of Life Cycle Perspective has been deferred until next meeting.

Next Meeting: To Be Determined

APPENDIX B: QUALITY MANAGEMENT SYSTEM (QMS) INTERNAL AUDIT REPORT SUMMARY (APRIL 18 & 20, 2018)

Lake Huron
Primary Water Supply System

QUALITY MANAGEMENT SYSTEM (QMS) INTERNAL AUDIT

Audit Dates: April 18 and April 20, 2018

Auditor(s): Arlene Tanashi, Compliance Coordinator, Regional Water Supply; Denny Rodrigues, Safety Process & Compliance Manager, OCWA

Audit Purpose:

The purpose of the audit was to verify conformance with the Ontario Drinking Water Quality Management Standard Version 2.0 (DWQMS) 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:

Arlene Tanashi has completed an Internal Auditing for the DWQMS course (see Certificate in Appendix C).

Methodology:

The Internal Audit was conducted as outlined in Procedure LH-ADMIN-1200 (Internal Audit) of the QMS 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, since the last Internal Audit conducted July 11 and 12, 2017.

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 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. The detailed audit checklists are attached for further information.

- Appendix A: LF-ADMIN-1201 DWQMS Internal Audit Checklist (Arlene Tanashi)
- Appendix B: LF-ADMIN-1201 DWQMS Internal Audit Checklist – Element 19 ONLY (Denny Rodrigues)
- Appendix C: Internal Auditor Certificate Arlene Tanashi

Definitions:

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

Areas Visited:

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

Interviews Conducted:

- Andrew Henry - Director (Regional Water Supply)
- Denny Rodrigues – Safety, Process and Compliance Manager & QMS Representative (OCWA)
- Shawn Core – Senior Operations Manager (OCWA)
- Erin McLeod – Quality Assurance & Compliance Manager (Regional Water Supply)
- Brandon Davis - Operator (OCWA)
- Scott Dinney – Senior Operator (OCWA)

SUMMARY OF FINDINGS

Non-Conformances (NC)

There were zero (0) non conformances noted during the audit.

Opportunities for Improvement (OFIs)

Element 5 Document and Records Control

OFI #1: Consider that there is no version number on each page of the Operational Plan as required per the Director's Directions Minimum Requirements for Operational Plans. [**Post Audit Note: Completed].**

OFI #2: Consider reviewing all headers of EMS/QMS procedures to ensure that the QMS Reference matches what is in the Operational Plan.
For example, five administrative procedures are noted under Element 3 Commitment and Endorsement, yet the headers of these procedures do not all contain the reference to that element. For example, Element 8 is referenced in the header of LH-ADMIN-2400 Hazard Analysis (Risk Assessment) & Critical Control Points v. 2.0 but is not referenced in the Operational Plan.

OFI #3: Consider updating all EMS/QMS documentation, including the Quality Policy, to reflect Andrew Henry's title change to "Director" from "Division Manager".

OFI #4: Consider adding wording referencing haloacetic acids (HAAs) in addition to trihalomethanes (THMs) in Table 2 of LH-ADMIN-200 Document & Records Control v. 2.0.

OFI #5: Consider that LH-CCP-2000 Chlorination Control and LH-CCP-3000 Turbidity Control in Compliance binder are not the most current version.

OFI #6: Consider that LF-ADMIN-2054 Distribution Sampling Record Form v. 2.0 was an unapproved document that was in use.

Element 6 Drinking Water System

OFI #7: Consider making a reference in the Operational Plan to LHPWSS Process Flow Diagrams, which reference Element 6 in the header (indicating they are part of the EMS/QMS documentation). This would be in addition to the Lake Huron WTP Process Flow Diagram dated June 2017. This would provide additional description of Distribution System components.

OFI #8: Consider addition of the B-line regulatory monitoring station to LHPWSS Process Flow Diagrams.

OFI #9: Consider adding how polymer chemical deliveries are made on p.10 and p.11 (to match other chemical systems) of the LHPWSS Process Flow Diagrams.

OFI #10: Consider applicability that on the header of LH-ADMIN-700 Changes in the Lake Huron System there is a QMS Reference to Element 6.

Element 7 Risk Assessment

OFI #11: Consider removing QMS reference to Element 8 in the header of LH-ADMIN-2400 Hazard Analysis (Risk Assessment) & Critical Control Points v. 2.0.

Element 8 Risk Assessment Outcomes

OFI #12: Consider adding QMS Reference Element 8 to the header of QMS Risk Assessment & Outcomes v. 2.0, for consistency with the Operational Plan.

OFI #13: Consider that under Intake and Hazard of Frazil Ice there is duplication of wording “monitor water levels in low lift surge wells”.

OFI #14: Consider removing the word “Seasonal” under Intake and the hazard Mussel since chlorination for mussel control now takes place all year round.

OFI #15: Consider that LH-CCP-3000 Turbidity Control requires updating based on more recent filter backwash data.

Element 9 Organizational Structure, Roles, Responsibilities and Authorities

OFI #16: Consider the Technical Project Coordinator position for inclusion in LH-ADMIN-100 Structure & Responsibilities table.

Element 12 Communications

OFI #17: Consider that the Visitor Sign-In Logs being used at different facilities are not all the same. Consider creating a controlled Visitor Sign-In Log and using the same one at each facility. **N.B. Repeat finding**. This was an OFI from the last QMS Internal Audit July 11 & 12, 2017. (CAF #386). **[Post Audit Note: Completed].**

Element 13 Essential Supplies and Services

OFI #18: Consider that Flowmetrix is not listed in HCP-3 Emergency Contact & Essential Suppliers & Services List for Calibration Services and Monitoring Equipment Supplies. [Noted Post Audit].

Element 16 Sampling, Testing and Monitoring

OFI #19: Consider that the Uncontrolled form "training sheet for acceptable sample results" is still in use in Control Room. Consider controlling the sheet and incorporating the form into LF-ADMIN-2052. **N.B. Repeat finding**. This was an OFI from the last QMS Internal Audit July 11 & 12, 2017. (CAF #394). **[Post Audit Note: Completed].**

Element 17 Measurement and Recording Equipment Calibration and Maintenance

OFI #20: Consider updating LH-ADMIN-2200 Calibration of EMS/QMS Equipment to reflect that three (3) types of calibration certificates exist but only one (1) is listed. All have been approved in SharePoint.

OFI #21: Consider that expired chemicals are present in the lab as follows:
- Buffer Solution 4 litre pH 10.1 +/- 0.02 @ 25 degrees C Lot A7081 Exp. March 2018.
- Hach Voluette Analytical Standard Chlorine Solution 50-75 mg/l Lot A6006 Exp. Sep-17.

Element 18 Emergency Management

OFI #22: Consider that Emergency Standard Operating Procedures (HSOP) were not available for auditing purposes. These documents are part of the EMS/QMS documentation. There were no old HSOPs in the Compliance Office copy (red binder) and in Control Room copy (red binder) there was no emergency procedure for Power Failure at WTP.

OFI #23: Consider adding Emergency Standard Operating Procedures (HSOP) to Associated Procedures list on page 5 and 6 of the Operational Plan as they are referenced in the Operational Plan.

Element 21 Continual Improvement

OFI #24: Consider the need for the prompt box titled "Working Effectively After 90 Days?" at end of LF-ADMIN-400 Corrective Action Form, as it is typically not being filled in.

APPENDIX C: ENVIRONMENTAL MANAGEMENT SYSTEM (EMS) INTERNAL AUDIT REPORT SUMMARY (JUNE 6 & 8, 2018)

Lake Huron
Primary Water Supply System

ENVIRONMENTAL MANAGEMENT SYSTEM (EMS) INTERNAL AUDIT

Audit Dates: June 06 and 08, 2018

Auditor(s): Arlene Tanashi, Compliance Coordinator, Regional Water Supply; Denny Rodrigues, Safety, Process & Compliance Manager, OCWA.

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:

Arlene Tanashi has completed an ISO 14001:2015 training course in Internal Auditing. Denny Rodrigues has completed an ISO 14001:2004 training course. In addition, both auditors have also completed 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) of the EMS 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, since the last Internal Audit conducted August 17 and 18, 2017.

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. The detailed audit checklists are attached for further information.

- Appendix A: LF-ADMIN-1200 EMS Audit Checklist (Arlene Tanashi)
- Appendix B: LF-ADMIN-1200 EMS Audit Checklist – Only Clauses 9.1.2 and 9.2 (Denny Rodrigues)

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.

Areas Visited:

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

Interviews Conducted:

- Blair Tully – General Manager (OCWA)
- Denny Rodrigues – Safety, Process and Compliance Manager & QMS Representative (OCWA)
- Shawn Core – Senior Operations Manager (OCWA)
- Greg Henderson – Team Lead, Operations & Compliance (OCWA)
- Paul Otis – Operator (OCWA)
- Owen Vincent – Team Lead Maintenance & Distribution (OCWA)
- Erin McLeod – Quality Assurance & Compliance Manager (RWS)

SUMMARY OF FINDINGS

Positives:

7.3 Awareness:

- Interviews with personnel provided evidence that performance of duties was taking place keeping in mind Environmental Management Program objectives related to electricity use and chemical consumption.

- Contractor on site aware of the Environmental Policy and the EMS. The subcontractor to the main contractor had also signed the Visitors Sign-In and EMS signoffs were in place for both companies.

10.3 Continual Improvement:

- Significantly improved housekeeping and storage related to chemicals both at WTP (maintenance shop and garage) and remote facilities.
- Improved WHMIS labelling.
- A new parts washer has been installed in the maintenance shop which uses an environmentally safe biomaterial and waste is removed by Safety Kleen.
- All random checks for monthly fire extinguisher, eye wash and safety shower stations were observed to be completed.
- Metal recycle bins located in garage and parking lot being utilized. Good separation of waste.

Non-Conformances (NC)

There were zero (0) non-conformances noted.

Opportunities for Improvement (OFIs)

4.2 Understanding the needs and expectations of interested parties

OFI #1: Consider including Community Emergency Management Coordinators (CEMCs) and Media Outlets in the ISO 14001:2015 Interested Parties document.

6.2.1 Environmental objectives

OFI #2: Consider that the two documented objectives were not posted in the WTP lunchroom as per LH-ADMIN-1500 Objectives, Targets & Programs v. 2.0, Section 8.1.

7.3 Awareness

OFI #3: Consider reviewing which personnel require the Refresher EMS/QMS training and schedule a training session.

7.5.2 Creating and updating (documented information)

OFI #4: Consider reviewing the EMS Manual for correct references to procedures and at the same time ensure that all document headers have the appropriate EMS reference(s).

OFI #5: Consider that the following procedures do not reflect current practice regarding electricity use; LH-ADMIN-2100 Electricity Use and LH-ADMIN-2000 Monitoring Maintenance, Operations, & Quality.

Lake Huron
Primary Water Supply System

Report No.:	LH-2018-03-04
Report Page:	1 **of** 5
Meeting Date:	October 4, 2018
File No.:	

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

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

Subject: Capital Status Report

RECOMMENDATION

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

a) That this report regarding the status of capital projects **BE RECEIVED** for information; and,

b) That projects LH1231 Alum Flow Switch and LH1906 Office Expansion **BE CLOSED**, with the surplus funds in the approximate amount of $30,644 released to the Board's Reserve Funds; and,

c) That projects LH1225 Distressed Pipe 32-48 Repair, LH1316-17 Annual Maintenance (2017), and LH1367 Electronic Document Management System **BE CLOSED**, with the additional funds in the approximate amount of $205,750 be provided from the Board's Reserve Funds.

DISCUSSION

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

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

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

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

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

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

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

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

Attachments: Capital Project Status Summary

APPENDIX A: CAPITAL PROJECT STATUS SUMMARY

A.1 Ongoing Capital Projects

PROJECT NO.	PROJECT	APPROVED BUDGET	EXPENDED TO DATE *	STATUS
LH1202	Meter Replacement & Upgrades	$175,000	$141,492	Multi-year program. Project ongoing
LH1203	WTP HVAC Replacement	$7,500,000	$7,277,404	Project complete. Minor deficiencies to be addressed.
LH1207	Concrete Crack Injection	$90,000	$36,042	Multi-year project. Project ongoing
LH1208	Drain Pipe Replacement	$40,000	$18,470	Multi-year project. Project ongoing
LH1209	HLP#5 Valve Replacement	$365,000	$53,351	Project ongoing
LH1216	Closed Loop Chlorine Control	$100,000	$10,914	Project ongoing
LH1218	Master Key System	$100,000	$87,264	Project ongoing
LH1219	Filter Backwash Turbidity Meters	$100,000	$0	Project initiated
LH1222	Low Lift Pump Refurbishment	$270,000	$164,820	Project ongoing
LH1227	Pipe Conveyance System	$30,000	$0	Project to be initiated
LH1229	Security Upgrades	$150,000	$0	Project to be initiated
LH1230	High Lift Pump Replacement	$125,000	$11,878	Project ongoing
LH1232	Arva Victaulic Repair	$50,000	$0	Project to be initiated
LH1233	Control Panel/Wire Cleanup	$25,000	$0	Project to be initiated
LH1234	HVAC Smoke Alarm	$100,000	$0	Project to be initiated
LH1235	PAC System Assessment	$100,000	$18,848	Project ongoing
LH1236	Raw Water Flow Meter Replacement	$125,000	$0	Project initiated
LH1237	RMF Settling Plate Study	$50,000	$0	Project to be initiated
LH1238	Roof Replacement	$200,000	$0	Project initiated
LH1239	Sluice Gate Repairs	$150,000	$21,432	Project ongoing
LH1240	Travelling Screen #1 Replacement	$500,000	$377,981	Project ongoing

PROJECT NO.	PROJECT	APPROVED BUDGET	EXPENDED TO DATE *	STATUS
LH1241	Review Inactivation Control Strategy	$30,000	$26,036	Project ongoing
LH1303	Easement Maintenance	$185,000	$27,971	Project ongoing
LH1316 -18	Annual Maintenance (2018)	$125,000	$2,403	Annual program
LH1317	Distressed Pipe Replacement	$350,000	$45,792	Project ongoing
LH1327	Strathroy Transmission Main	$22,000,000	$14,838,658	Project complete. Final Invoice to be issued.
LH1332	Electrical Systems Upgrade	$7,495,000	$6,504,533	Project complete. Deficiencies to be addressed
LH1338	Huron WTP Instrumentation	$610,000	$617,586	Annual program
LH1341	Sodium Hydroxide Metering Pump	$75,000	$0	Project initiated
LH1347	Pipeline Chamber Upgrades	$500,000	$382,075	Project ongoing
LH1353	WTP Modifications	$350,000	$92,700	Multi-year project
LH1369	Filter Media Rebuild	$1,680,000	$1,300,963	Ongoing multi-year project
LH1373	IT Security Upgrades	$600,000	$404,873	Project ongoing
LH1375	Low Lift Screen Repairs	$540,000	$403,959	Project ongoing
LH1379	Low Lift Surge Valves	$140,000	$94,875	Project ongoing
LH1380	Clarifier Upgrades	$120,000	$5,031	Project ongoing
LH1382	Annual IT Mtce. Allowance	$200,000	$155,627	Project ongoing
LH1383	Server Room Fire Suppression	$30,000	$2,374	Project initiated
LH1384	Filter Rate Meters	$200,000	$0	Project initiated
LH1385	1996 Crop Yield Monitoring	$450,000	$270,060	Project ongoing
LH1386	Chemical Delivery Panel	$75,000	$13,285	Project ongoing
LH1387	B Line Road Monitoring Station	$40,000	$8,350	Project ongoing
LH1388	Coagulation Optimization Study	$50,000	$0	Project to be initiated
LH1389	Flow Control Strategy & Storage Study	$25,000	$23,642	Project completed. Awaiting final invoice

PROJECT NO.	PROJECT	APPROVED BUDGET	EXPENDED TO DATE *	STATUS
LH1428	Distressed Pipe 11-5 Repair	$250,000	$242,120	Project completed. Awaiting final invoice
LH1900	Record Drawings & Documents	$406,000	$383,611	Ongoing multi-year project
LH1902	Residue Management Facility	$24,350,000	$18,665,092	Project complete. Awaiting final invoice
	TOTAL	**$71,221,000**	**$52,731,512**	

A.2(a) Completed Projects – Release Surplus to Reserve Funds ($30,644)

PROJECT NO.	PROJECT	APPROVED BUDGET	EXPENDED TO DATE *	STATUS
LH1231	Alum Flow Switch	$30,000	$16,138	Project completed
LH1906	Office Expansion	$130,000	$113,218	Project completed
	TOTAL	**$160,000**	**$129,356**	

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

PROJECT NO.	PROJECT	APPROVED BUDGET	EXPENDED TO DATE *	STATUS
	TOTAL	**$ 0**	**$ 0**	

A.3 Completed Projects – Additional Funding Required ($205,750)

PROJECT NO.	PROJECT	APPROVED BUDGET	EXPENDED TO DATE *	STATUS
LH1225	Distressed Pipe 32-48 Repair	$200,000	$381,895	Project completed
LH1316 -17	Annual Maintenance (2017)	$125,000	$137,173	Annual program completed
LH1367	Electronic Document Management System	$100,000	$111,682	Project completed
	TOTAL	**$425,000**	**$630,750**	

Notes:

* Expended as of 7 September 2018

Lake Huron
Primary Water Supply System

Report No.:	LH-2018-03-06
Report Page:	1 **of** 4
Meeting Date:	October 4, 2018
File No.:	

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

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

Subject: Environmental and Quality Policy

RECOMMENDATION

That the following actions be taken with respect to the Environmental Management System and Quality Management System for the Lake Huron Primary Water Supply System:

a) The Board of Management for the Lake Huron Primary Water Supply System RECEIVE the report for information; and,

b) The Board of Management for the Lake Huron Primary Water Supply System ENDORSE the Environmental and Quality Policy attached to this report.

PREVIOUS AND RELEVANT REPORTS

June 8, 2017	Environmental Management System and Quality Management System
January 22, 2015	Management System Policies and Operational Plan
December 5, 2013	Management System Policies

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 continued utilization and registration of the EMS is a requirement of the Service Agreement with the Ontario Clean Water Agency (OCWA), the contracted operating authority for the LHPWSS.

Quality Management System (QMS)
The LHPWSS has a Quality Management System (QMS) which has been in place since 2006. The QMS is now a regulatory requirement under the Province's Municipal Drinking Water Licencing program, which includes the Drinking Water Quality Management Standard.

DISCUSSION

Environmental and Quality Policy

The standards for the Environmental Management System (EMS) and Quality Management System (QMS) each respectively require the development and implementation of an environmental policy and quality policy. The Policies incorporate the guiding principles of the management systems and provide the foundation for the EMS and QMS. The Policies provide the necessary "drivers" and direction for implementing and improving the organization's EMS and QMS.

The LHPWSS currently has a separate Environmental Policy and Quality Policy. The Policies are reviewed a minimum of once annually by Top Management, and any recommended changes are brought forward to the Board for consideration and approval. The Environmental Policy and Quality Policy were last approved by the Board on June 8, 2017 and January 22, 2015, respectively. The current Policies are posted on the website at: https://huronelginwater.ca/about-us/management-systems/

During the most recent external audit by SAI Global, the auditor noted that the Policies were lengthy and contained duplication of information already included elsewhere within the management system documentation (e.g. scope). Rather, the Policies should focus on the direction of the organization, the commitments, the drivers for the management system, and what distinguishes the LHPWSS from other organizations.

Staff is recommending the following changes:

- Combine the two separate Policies into one document, to avoid duplication of information.
- Remove non-essential information such as Water Board description and facility descriptions as this can be detailed elsewhere in the management system documentation.
- Revise generic statements to include details specific to the LHPWSS.

A combined Environmental and Quality Policy will streamline the information, and subsequently will better highlight the Board's commitments. This will also make the Policy more convenient, concise, and memorable for end users.

The revised Environmental and Quality Policy is included as Appendix A of this report for the Board's reference and consideration. If approved by the Board, the revised Policy will become effective October 4, 2018.

As with the previous Policies, the proposed Environmental and Quality Policy will play an important role in the Board's continuing commitments to the management systems and the continual improvement of the water system.

Information for this report was provided by Erin McLeod, Quality Assurance & Compliance Manager.

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

Attachments: Environmental and Quality Policy

APPENDIX A: ENVIRONMENTAL AND QUALITY POLICY

Lake Huron
Primary Water Supply System

ENVIRONMENTAL AND QUALITY POLICY

The Lake Huron Primary Water Supply System (LHPWSS) and Ontario Clean Water Agency (OCWA) as the Operating Authority are committed to:

- Maintaining and continually improving the Environmental Management System (EMS) and Quality Management System (QMS) to enhance environmental and quality performance.
- Managing and operating the drinking water system in a responsible manner.
- Providing the customer with safe drinking water.
- Being environmental and quality leaders in the municipal drinking water industry.
- Promoting owner and consumer confidence in the safety of the drinking water supply.
- Developing and implementing policies and environmental objectives in partnership.
- Protecting the environment, including prevention of pollution, energy management, and chemical usage optimization.
- Promoting resource stewardship, including conservation.
- Meeting all relevant compliance obligations and encouraging suppliers and subcontractors to similarly meet these requirements.
- Accomplishing these commitments through the dedication, support and participation of all personnel.

The LHPWSS and OCWA will periodically undertake reviews, evaluations and performance measurements of the operations to promote conformance with the Environmental and Quality Policy.

OCWA also maintains a separate Quality Management System Policy which governs the activities of the Operating Authority as a Corporation.

Andrew Henry
Director, Regional Water Supply
Elgin Area Primary Water Supply System

Blair Tully
General Manager
Ontario Clean Water Agency

Lake Huron
Primary Water Supply System

Report No.:	LH-2018-03-05
Report Page:	1 **of** 2
Meeting Date:	October 4, 2018
File No.:	

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

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

Subject: 2019 and 2020 Meeting Schedule

RECOMMENDATION

That the Board of Management for the Lake Huron Primary Water Supply System **APPROVE** the proposed meeting schedule for the Board of Management for 2019 and 2020.

PREVIOUS AND RELATED REPORTS

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 their members and alternates to the Board.

DISCUSSION

The following dates in 2019 were previously approved by the Board at the December 1, 2016 meeting:

January 24, 2019*

The following meeting dates in 2019 are recommended for the consideration and approval by the Board:

March 7, 2019

June 6, 2019

October 3, 2019

December 5, 2019

The following meeting dates in 2020 are recommended for the consideration and approval by the Board:

March 5, 2020

June 4, 2020

October 8, 2020

December 3, 2020

* *The municipal election being held in October 2018 requires the meeting that would normally be held in December 2018 to be scheduled in mid- to late-January 20*19.

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

Lake Huron
Primary Water Supply System

Report No.:	LH-2018-03-07
Report Page:	1 **of** 13
Meeting Date:	October 4, 2018
File No.:	

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

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

Subject: Municipal Act – Board Structure

RECOMMENDATION

That the Board of Management for the Lake Huron Water Supply System **RECEIVE** this report for information.

PREVIOUS AND RELATED REPORTS

December 1, 2018 Board Structure – Municipal Act

December 10, 2016 (Concurrent Meeting) Corporate Options for the Primary Water Supply Systems

EXECUTIVE SUMMARY

Representatives from all of the benefiting municipalities were invited to attend one of two identical information sessions (workshop #1) held on June 22 and June 29, 2019. The workshop provided an overview of the establishment of the Board and regional water system, and options under the Municipal Act to clarify the legal status of the Board; as either a Municipal Services Board (local board) or Municipal Services Corporation.

Additional documentation and information is being prepared for the consideration of the benefiting municipalities, including the preparation of an outline of an agreement that could be used to establish either the Municipal Services Board or Municipal Services Corporation.

It is currently anticipated that an agreement likely wouldn't be finalized and approved by each municipal council any earlier than the fourth quarter of 2019.

BACKGROUND

The ownership of the Lake Huron Primary Water Supply System was transferred from the Province of Ontario and the Board of Management established in 2000 in accordance with the Transfer Order issued by the Minister of the Environment under the *Municipal Water and Sewage Systems Transfer Act*, 1997. Because of the ambiguity of the *Municipal Water and Sewage Systems Transfer Act* and the subsequent Order, the legal status of the Board requires further clarification with specific regard to the *Municipal Act* and in relation to the collective powers of the benefitting municipalities of the water system.

DISCUSSION

Information Workshop #1

Representatives from all of the benefiting municipalities were invited to attend one of two (duplicate) information workshops (Workshop #1) held on June 22 and June 29, 2018 at the Best Western Lamplighter Inn and Conference Centre. The workshop was intended to provide preliminary information on the legal status of the Board and regional water system, including:

- Background information related to the Municipal Water & Sewage Systems Transfer Act, the Transfer Orders creating the Board of Management, an overview of the current organization, administration and operation of the regional water systems, and the current ambiguity of the legal status of the Board.
- An overview of the options under the Municipal Act (local board/Municipal Services Board versus Municipal Services Corporation), the legal relationship between the Board and its benefiting municipalities, reporting relationships, and applicable law (including the Municipal Freedom of Information and Protection of Privacy Act, and the Safe Drinking Water Act)
- An overview of the current financial status and fiscal relationship with the benefiting municipalities, and potential financial implications with the Municipal Act options.

As part of the municipal workshops, there was an open forum discussion whereby attendees could ask questions, express concerns, and provide comments on the information presented. In addition, the overall process of consideration and approval by the respective Councils of each of the benefiting municipality was discussed.

An overview of the workshop and summary of the questions asked is attached to this report as Appendix A for the information of the Board.

Action Items and Next Steps

Following Workshop #1, documents are being prepared for the benefiting municipalities which will outline:

- A summary of the workshop discussions, frequently asked questions, and additional requested information;

- An overview of the options under the Municipal Act (do nothing, local board/Municipal Services Board, or Municipal Corporation) and anticipated benefits and risks associated with each;
- An outline of possible options for administering the system; and,
- An outline of a possible agreement that could be used to establish either a Municipal Services Board or a Shareholders Agreement (Municipal Services Corporation).

In addition, and at the request of the municipal representatives, the option of establishing one legal entity over both the Lake Huron and Elgin Area water systems is being explored including variations whereby the systems operate independently or jointly as one combined regional water system.

It is anticipated that these document will be circulated to each of the benefiting municipalities in late 2018, and then discussed at a second workshop during the winter of 2018/2019.

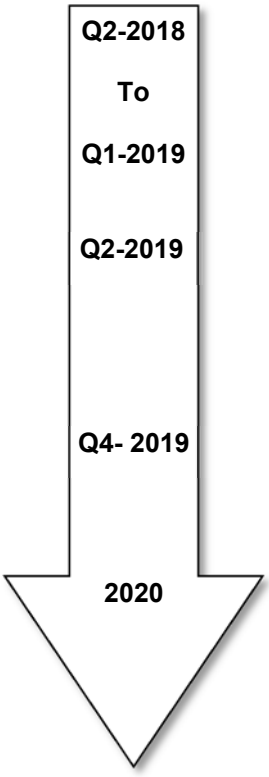
It is important to note that the decision whether to pursue and establish the Board under the Municipal Act, either as a Municipal Services Board or a Municipal Services Corporation, is entirely at the discretion of each Municipal Council. Should one Municipal Council chose to not approve the agreement that would establish the Board as a Municipal Services Board or Municipal Services Corporation, the issue cannot proceed further and the Board would continue to operate in legal ambiguity.

TIMELINE

There is no set schedule in the discussions or specific deadline to establish (or not) the Board as a Municipal Services Board or Municipal Services Corporation. It is the recommendation of staff that process be allowed progress at a steady pace and measured pace, but allow all parties of the discussion the opportunity to receive and deliberate on issues of concern.

Based solely on the level of engagement at the first workshop, the questions asked and information requested, it is currently anticipated that an agreement wouldn’t be achieved any earlier than the third quarter of 2019.

An agreement would have to be approved and authorized by the Council of each of the benefiting municipalities through by-law.



INFORMATION MEETINGS - Benefiting municipalities meet to understand and discuss the options available, obligatory and suggested process(es) for undertaking each option, potential benefits and detriments of each option to both the Boards and the benefiting municipalities, and the potential legal and financial implications. In order to proceed beyond this "information stage", each municipality must agree to enter into detailed discussions and negotiations with the objective of drafting an agreement for the preferred option.

MUNICIPAL DECISION – Each of the benefiting municipalities must decide to pursue (or not) further discussions and negotiations. *It is highly recommended that each benefiting municipality seek their own legal and financial advice, as necessary, prior to their commitment to enter into further discussions and negotiations*.

MUNICIPAL DISCUSSION AND NEGOTIATION – The benefiting municipalities collectively enter into detailed discussions and negotiations with respect to the preferred option with the objective of drafting an agreement which defines the "new entity" as preferred.

ESTABLISH NEW ENTITY – Once the agreement between the benefiting municipalities is finalized, each municipality must pass an enacting bylaw to complete the creation of the new municipal entity.

New entity begins operation (January 1, 2020 at the earliest)

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

Attachments: Appendix A – Stakeholder Information Session (June 22 and June 29, 2018)

APPENDIX A: STAKEHOLDER INFORMATION SESSION (JUNE 22 AND JUNE 29, 2018)

Municipal Services Boards, Municipal Services Corporations, and the Lake Huron/Elgin Area Water Supply Systems

PRESENTATIONS:

The Origins of the Regional Water Systems, and the Transition to the Boards of Management

Andrew Henry, Director of Regional Water, Lake Huron & Elgin Area Water Systems

Mr. Henry provided details on the origin of regional water systems and the transition to the current boards of management. He explained that originally the province constructed, owned and operated regional water and wastewater systems through the Ontario Water Resource Commission, and then subsequently through the Ministry of the Environment and the Ontario Clean Water Agency. The province transferred ownership of water and wastewater assets throughout the province to the municipalities under the *Water & Sewage Systems Transfer Act, 1997* (the "MWSTA"). The MWSTA established a system whereby water and wastewater systems that benefitted multiple municipalities were transferred and governed by boards of management (the "Water Boards").

MWSTA Transfer Orders

In 1998 a MWSTA Transfer Order (the "1998 Transfer Order") created separate provisional Water Boards for both the Huron water system and the Elgin water system. The debt associated with the water system was transferred from the province and refinanced, and the City of London was appointed as Trustee.

In 2000 the province issues a final transfer order for each of the Huron and Elgin Systems (the "2000 Transfer Orders"). The 2000 Transfer Orders completed the transfer of real property associated with the systems to the City of London as trustee. As a trustee, London holds registration of property in its name for the benefit of the municipalities that the regional water systems' services. London is also mandated to provide administrative services to the Huron and Elgin Water Boards.

The 2000 Transfer Orders established the management structure for the Water Boards including the roles, responsibilities and obligations of Board members with the overarching obligation to act in the best interests of regional water system. The Water Boards have the authority to act by by-law, issue policies, approve budgets, and enter into contracts, and maintain bank accounts.

Problem Statement

The authorities given to Water Boards through transfer orders under the MWSTA imply that they are "bodies-corporate", but their legal status is slightly ambiguous. A body-corporate is defined

as “an organization such as a company or government entity that is considered to have its own legal rights and responsibilities similar to a natural person”. Examples of “Body-Corporates” include: private corporations, public corporations, (M.A.) Local Board, Limited Liability Partnerships, etc.

Municipalities of the Huron-Elgin water systems need to deal with this issue of unclear legal identity because the implications are widespread. For example, legal status determines the Water Boards’ ability to hold debt, have bank accounts, have employees etc. The *Municipal Act, 2001* provides several legal structures for possible future governance structures of the water system.

Overview of Legal Options under the Municipal Act, 2001

Paula Lombardi, Partner and Solicitor, Siskinds LLP

Ms. Lombardi explained that the *Municipal Act, 2001* (the “Act”) provides municipalities with three options concerning the future governance structure of water systems: 1) Local Board / Municipal Services Board, 2) a Municipal Services Corporation, or 3) “do nothing”.

1) Local Boards

The definition of a Local Board in section 1 of the Act includes a municipal service board, transportation commission, public library board, board of health, police services board, and planning board. Generally a Local Board can refer to any board, commission, committee, body or local authority established or exercising any power under any provincial legislation with respect to the affairs of one or more municipality (excluding a school board and conservation authority).

Municipal Authority with respect to Local Boards are governed by s.216 of the Act, which grants Municipalities power to deal with various boards defined broadly. Municipal councils can make changes to Local Boards (s.216(5)), may pay remuneration of members, officers, and employees of Local Board (s. 283).

Local Boards are now subject to mandatory codes of conduct, and as of January 1, 2018 they can conduct electronic meetings and closed door meetings. Closed door meetings are limited to statutory exemptions to protect information received from a province or crown agency, competitive positions, contractual or other negotiations, trade secrets or information of monetary value, and information relied in in negotiations.

Local Boards still look after best interest of municipality, but their first priority is to the mandate of the Local Board.

There are additional regulatory requirements of Local Boards, including the fact that they are governed by the *Municipal Freedom of Information and Protection of Privacy Act* (“MFIPPA”),

and the *Planning Act* requires that comments decisions of Local Boards that affect a planning matter shall be consistent with and conform to provincial plans and policies (ss. 3(5) and (6)).

2) Municipal Service Corporations

Since 2007, with the passage of Bill 68, the Act has allowed the creation of Municipal Services Corporations ("MSCs"). An MSC is wholly owned by a municipality. It may be brought into existence only after the municipality has done a case study, but once established it cannot easily be dissolved by council.

In general an MSC is more nimble and more flexible than a Local Board, and while it is tied to the municipality its sits outside of the immediate authority of council. An MSC is tantamount to a delegation of authority by the municipality, but as soon as it is formed there is limited oversight by the council.

Power of MSCs

MSCs have powers to do things Local Boards cannot do, such as leverage real assets. This is in part because an MSC, unlike a Local Board, is a real corporation and the articles of incorporation dictate what it can do. MSC's may be structured under the *Ontario Business Corporations Act* ("OBCA"), however, all shares of MSC must be owned by municipalities. While private entities cannot own any shares in a MSC, the MSC can enter into public / private partnerships.

There are some differences between MSCs and regular corporations. For example, MSCs are subject to MFIPPA (like Local Boards) and are deemed under the Act to be the same as a Local Boards for the purposes of certain regulatory oversight regimes (i.e. conflict of interest and privacy).

Directors of MSCs

A Shareholder Declaration determines governance structure of an MSC, and Directors are appointed by municipal council. An MSC always has a representative of municipal council on the board, but the remainder of the board depends on the Shareholder Declaration. Often the Shareholder Declaration will require that Directors have expertise in the area of the intended purpose of the MSC. This is distinct from Local Boards where the decision about whether directors should have a particular expertise depends on the political cycle and the decision of council.

Directors' decisions must be in the best interests of the MSC (similar to the duty of a member of a Local Board to act in best interest of the Board). This includes any municipal representative. His or her first duty is to the MSC.

Liability

Because an MSC is a separate legal entity from the municipality, any liability associated with the operation of its service remains with the MSC and not the municipality. For example, the duty of

care to provide safe drinking water under the *Safe Drinking Water Act* would create liability for an MSC that owned and operated the municipal drinking water system, not the municipality. Whereas, if the drinking water system is operated by a Local Board, the liability stays with the municipality.

Water System Finances

Anna Lisa Barbon, Managing Director, Corporate Services and City Treasurer, Chief Financial Officer, City of London.

Accounting

Lake Huron and Elgin prepare their own financial statements on an annual basis. Generally, the works, properties and all assets, liabilities and rights of the water system are transferred jointly to the member municipalities.

Debt Issuance

As the administering municipality, London issues the debt on behalf of the Huron and Elgin Water Boards. London has had a AAA credit rating for 42 years. As a result London receives a very good interest rate that the Water Boards have been able to take advantage of.

"Pros" to Water Systems Holding Their Own Debt:

- financial flexibility (control over timing, structure, terms and conditions of debenture issuances)
- potential additional debt capacity for benefiting municipalities

"Cons" to Water Systems Holding Their Own Debt:

- potential for lower credit rating (additional borrowing costs)
- administrative effort and cost (obtaining a credit rating, fiscal agents, clearing and depository requirements)
- limited debt capacity for Huron and Elgin

OPEN DISCUSSION: COMMENTS, QUESTIONS AND CONCERNS OF STAKEHOLDERS

Comments

There was a general request for a summary of the pros and cons of three option discussed, and a recognition that municipalities will not able to make decision right away. The earliest possible time to make a decision is likely January 2019 with the remainder of 2018 being used to ensure that the municipalities have the information necessary to advise councils of their options.

Attendees were also reminded that the Water Boards as they exist today have no authority over this discussion, but it is a decision for municipal councils. Ultimately, all 15 municipalities will

have to come to an agreement based on what's best for entire region. That said, no provincial approval is required for the municipalities' decision.

Questions

Q: If Council appoints someone to the board, is there a mechanism for removing them?

- Yes, in an MSC a shareholder declaration can provide such a mechanism. The shareholder declaration could tie representation to an election cycle, establish criteria for alternative appointment, etc.
- Under the current Water Board system, they serve at the pleasure of the municipality

Q: If a person sits on board and a decision comes and they don't want to decide until they go back to council and get feedback, can we do that?

- No, you don't have an obligation to take it back to council, you're duty is to the water system, we're voting anyways and continuing to operate as a board.

Q: Can you have an alternate member or a substitute?

- Yes, under either system.

Q: If the agenda is public information, can I discuss the agenda with council prior to going to the board, or can I not discuss with council at all?

- Today, the Water Boards are run as local boards and the agendas are public with exception of confidential items. So board member can sit down with staff or fellow council members and discuss.
- Remember an MSC is a separate corporation with its own board and makes its own decision and regularly reports back to council, so shouldn't be seeking advice from council (outside of periodic update to council) – council has no say once MSC formed.

Q: If you go to MSC structure, who represents rate payers, tax payers, customers?

- It depends on the Stakeholder Declaration. It can be specific about what the Board has to take into consideration, and this could be tied to guidance documents that are reviewed annually, for example.

Q: With so many municipalities as members, how is the public interest determined in guidance document because the needs are different across municipalities?

- If you think about the overall interest in the day-to-day operations of a water system, decision of the MSC Board can be expected to be based on the benefit to public at large regardless of specific municipalities. However, if there are different needs by municipality, the Stakeholder Declaration can say that annually as part of annual business plan, you can create key identifiers for the goals and plans for each municipality and figure that out.

Q: With MSC and skills-based members, is that a paid position? Compensation from municipality?

- Currently, remuneration (if any) is provided by the municipality
- In the future, you can write it into Stakeholder Declaration. It could be could be nothing or could be *per diem* and expenses, whatever is written in.

Q: The voting system does not work the same in Huron vs Elgin, so how would it work going forward with an MSC?

- Votes are proportion to the approximate benefit to each municipality, with the exception that London held to only 60% of votes on the Huron system. This structure could remain the same in an MSC, or it could change. In an MSC, the Stakeholder Declaration is the governing/controlling document and it would spell out the voting mechanism.

Q: Under the current system, we consolidate the debt, I assume we can't count the proportion of the revenue?

- Yes, it's recognized, but it's a part of your broader financial situation and with debt it could free up the debt limit for individual municipalities. If we're a government business enterprise, you take debt component away. Either way it's relative.

Q: Under MSC, do we still have administration from municipality?

- It depends, but likely not. You could structure it as two separate corporations (Elgin and Huron), and hypothetically you could have one contracted to the other, or you could create joint administration. At this stage the thinking remains very preliminary and high level.

Q: Is one of the options a complete merger of the Elgin Water Board and Huron Water Board into a single corporation?

- At this point, we are not proposing that. This is entirely up the municipalities, but we are proceeding under assumption that they would stay separate. If you want us to look at merging into one single corporation we can. It is possible but we are not proposing it at this point.

Q: In order for structure of the Board to comply with requirements of the Municipal Act, is the re-structuring a necessity or is it just a recommendation?

- Under the changes, we are not actually sure if we are a body corporate at law. It's implied, but we are not sure. For example, the City of London as bare trustee is currently signing extra agreements so they are reassured that contracts will be followed and bills paid back.
- For example, the Boards buy electricity every year and we don't know if we can legally do that.
- We are choosing to act and behave as a local board, but we don't know for sure that we are.

- The Boards are at a stage in your operations that you have to do something to make the legal structure clear and to do all the things you're doing – now that the Boards are more sophisticated in our operation and management, it's time for us to evolve and we need to make the determination of whether we're a MSB or MSC.

Q: Have we spoken to the Ministry about this issue and asked them to clarify what we are?

- Yes, and their response was it's your problem now, figure it out.
- The changes in 2010 to the *Municipal Act* allow us to fix it ourselves and it's in the best interest of the municipalities to work together to fix it because then we can make sure we get what we want.

Q: For similar boards in Ontario, what are they doing?

- There are two others, besides ours:
  - The Lambton Area Board is years behind us
  - The Union (Chatham) Board is looking at same thing we are
- Since 2002, there have been several instances in Ontario where municipalities are creating MSBs, but more often it's a MSC (Innisfil, Chatham etc.) because these opportunities now exist.

Q: Do you have comparative costs of the 2 options?

- We could give potential costs. What municipalities see now is the unit rate at which we sell municipalities water, pays for admin costs, electricity, engineering, to reserve funds etc.
- If we go MSC route, the actual changes are that board's decision.
- If stays as MSB, they make the decisions of how it changes in the future.
- Boards would have to be accredited for their credit-worthiness, could be AAA, but likely go down to AA and that could increase costs over time.
- Operating costs would likely not change unless the administration changed dramatically under the new structure.
- If we went to a one corporation system, may still choose to run it as 2 separate water systems with different rates charged for Huron versus Elgin.
- We could also have a holding corporation with 2 subsidiaries under it, one for each system, and each system could have its own boards and shareholder declaration.

Q: Are we having this discussion so we can remove the debt from our individual municipalities and have more room before we hit the ceiling? Is that the main driver?

- We see the main issues as: Are these entities body corporates at law and what does that mean?
- The biggest issue with respect to debt is the whole financial sustainability of the water systems themselves. They could trigger even greater impact on the municipalities over

the long term if debts of the water systems go up and it begins to affect the ability to do future capital projects.
- But the risk depends on how much debt each municipality is carrying currently and is different for each. So that's why you need to go back and look at your own – could have a higher impact if you're already close to your debt capacity, or may not want to arbitrarily increase debt anyways because can impact on your interest rates in the long run.
- The financial plan of the water systems is good place to start. It shows you debt-equity ratios etc.

Q: Do we know if the debt we have currently is transferable over to a new MSC?
- We think that it is, but we would look at how that's done once we move forward, different ways to transfer it all over.
- An MSC could purchase all the debts and assets of the entities and re-finance etc. accordingly
- Once transferred to a MSC, depending on how the MSC is structured, it will be evaluated on its own.
- if you make it the same (MSB), you'd need to look at how it will impact your credit rating with future financial plans, taking on debt, capital projects etc.
- But consolidation could occur under either option.

Q: Are there any major substantive differences on the personnel side if going with one option over the other?
- This entirely depends on the structure that's adopted, operationally likely wouldn't change much, but how you administer it would depend on what the entity is.
- Currently we contract out a lot of administration services that may change depending on how we structure it.

Q: As new board members come onto the Water Boards, they will have to be brought up to speed, how will that work over the next year?
- Water Boards themselves have no authority over this process, entirely up the municipalities, only responsibility is to inform the board about progress.
- For the next 6 months, mostly administration working on this issue, informing councils and Andrew informing the Boards

Q: The goal in terms of how to better manage risk and liability under standards of care, members etc. wasn't included in your presentation, so can you include how the risks and liabilities etc. will be better managed under each option?
- Yes, you will get that before the next session.
- We talked about it a little bit, but we can provide an FAQ on how it's being managed now and how it could be changed under a different structure. For example, the application of

safe drinking water act, how it applies to boards and back to municipalities is something we looked at.

CLOSING REMARKS AND NEXT STEPS:

- Preliminary recommendation in session in late fall after balloting exercise happening in October.
- Then gather feedback.
- By spring, have a recommendation for municipalities to consider based on everyone's opinions, concerns etc. and maybe even a draft stakeholders' declaration.
- This is not a short process. It will likely take up to a year.

Lake Huron
Primary Water Supply System

Report No.:	LH-2018-03-09
Report Page:	1 **of** 8
Meeting Date:	October 4, 2018
File No.:	

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

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

Subject: Municipal Drinking Water Licence – Consolidated Financial Information

RECOMMENDATION

That the Lake Huron Primary Water Supply System Board of Management **APPROVE** the consolidated financial information for the purposes of the Municipal Drinking Water Licence application, it being noted that this document is based upon the approved Financial Plan of October 2016.

PREVIOUS AND RELEVANT REPORTS

October 6, 2016 Financial Plan Update

October 3, 2013 Financial Plan

BACKGROUND

Under the *Safe Drinking Water Act* (SDWA), municipal residential drinking water systems must be licensed under Municipal Drinking Water Licensing Program. A licence is issued by the Ministry of the Environment, Conservation, and Parks (MECP) and is valid for a five year period.

There are five elements that must be in place under the Municipal Drinking Water Licence (MDWL):

1. A Drinking Water Works Permit (DWWP);
2. An accepted operational plan;
3. An accredited operating authority;
4. A Permit To Take Water (PTTW);
5. A Financial Plan.

Requirements for Financial Plans are prescribed under O.Reg. 453/07 (Financial Plans). In addition, a guidance manual entitled "*Toward Financially Sustainable Drinking Water and Wastewater Systems (August 2007)*" was produced by the Ministry to assist owners in the preparation of their Financial Plans for the purposes of applying for a Municipal Drinking Water

Licence. The guidance manual sets out broad principles, but adherence to this guideline is not mandatory. The guidance manual emphasizes the importance of long-term capital planning and asset management. The Financial Plan must contain projections of financial information for each fiscal year for a minimum six year period.

The intent of the Financial Plan is to ensure that municipalities plan for the long-term financial sustainability of their drinking water systems to guarantee the safety of their drinking water into the future.

Municipal Drinking Water Licences are issued for a five year period and have an expiry date. Drinking water system owners are required to apply for renewal of a MDWL six months before the expiry date.

The current MDWL for the LHPWSS expires on May 30, 2019, with a specified renewal application date of November 30, 2018.

The existing Financial Plan is required to be updated and financial information consolidated in preparation for the MDWL renewal. As part of the MDWL renewal application, a Financial Plan must be in place that applies for a period of six years beginning in 2019, the year that the MDWL expires. When a Financial Plan is approved by the Board, it is posted on the water system's website at www.huronelginwater.ca for public information. The regulation requires that copies of the Financial Plan must be made available to the public served by the drinking water system, at no charge, and on a website if the system owner has a website. In addition, notice of availability is also required.

DISCUSSION

In 2015, the LHPWSS retained Watson & Associates Economists Ltd. (Watson) to undertake the completion of a Financial Plan for the regional water system. This study provided an analysis for current capital and operating forecasts, costing for asset management/lifecycle cost requirements, current volumes, and customer profiles. The results of this analysis provided updated water rates for customers of the LHPWSS. The resultant rate analysis provided fiscally responsible practices that are in-line with current and pending provincial legislation at a level of increases that are reasonable. The Financial Plan was endorsed by the Board on October 6, 2016.

For the purposes of the MDWL application, consolidated financial information has been prepared based on the Financial Plan approved on October 6, 2016. The consolidated financial information meets the minimum requirements of the Municipal Drinking Water Licence renewal, and is included in Appendix A for the consideration of the Board.

Lake Huron
Primary Water Supply System

Information for this report was provided by Erin McLeod, Quality Assurance & Compliance Manager, Kate Butts, Budget and Finance Analyst, and Debbie Gibson, Financial Business Administrator.

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

Attachment: Consolidated Financial Information for MDWL Renewal Application

APPENDIX A: CONSOLIDATED FINANCIAL INFORMATION FOR MDWL RENEWAL APPLICATION

LAKE HURON PRIMARY WATER SUPPLY SYSTEM
Statement of Financial Position

	Audited	Forecast (unaudited)						
	2017	2018	2019	2020	2021	2022	2023	2024
Financial assets								
Due from Corporation of the City of London [1]	**23,505,532**	**28,241,253**	**28,427,375**	**29,799,961**	**35,380,174**	**37,439,989**	**42,509,883**	**52,823,485**
Trade and other receivables	**627,445**	**718,777**	**644,765**	**678,522**	**688,897**	**734,740**	**743,107**	**759,894**
Total financial assets	**24,132,978**	**28,960,030**	**29,072,140**	**30,478,483**	**36,069,071**	**38,174,729**	**43,252,990**	**53,583,379**
Financial liabilities								
Accounts payable and accrued liabilities	**2,260,810**	**2,439,541**	**2,586,649**	**2,655,985**	**2,635,764**	**2,842,396**	**2,845,672**	**2,827,084**
Deferred revenue [2]	**674,777**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Accrued interest on long-term debt	**54,196**	**47,232**	**40,146**	**32,935**	**25,598**	**18,130**	**11,693**	**6,154**
Net long-term debt	**9,254,783**	**8,065,505**	**6,855,466**	**5,624,221**	**4,371,161**	**3,096,037**	**1,996,776**	**1,050,968**
Total financial liabilities	**12,244,566**	**10,552,278**	**9,482,261**	**8,313,141**	**7,032,523**	**5,956,563**	**4,854,141**	**3,884,206**
Net financial assets / (debt)	**11,888,412**	**18,407,752**	**19,589,879**	**22,165,342**	**29,036,548**	**32,218,166**	**38,398,849**	**49,699,173**
Non-financial assets								
Tangible capital assets (net)	**157,682,748**	**156,421,402**	**156,952,489**	**156,703,149**	**152,426,624**	**152,336,249**	**149,319,172**	**141,746,833**
Prepaid expenses	**206,664**	**155,517**	**160,183**	**164,988**	**169,938**	**175,036**	**180,287**	**185,696**
Total non-financial assets	**157,889,412**	**156,576,919**	**157,112,672**	**156,868,137**	**152,596,562**	**152,511,285**	**149,499,459**	**141,932,529**
Accumulated surplus	**169,777,824**	**174,984,671**	**176,702,551**	**179,033,479**	**181,633,110**	**184,729,451**	**187,898,308**	**191,631,702**

* subject to rounding

Notes:

(1) As the Administering Municipality, the Corporation of the City of London manages the daily operations of the Lake Huron Primary Water Supply System (LHPWSS). The Corporation maintains a separate general ledger on behalf of the LHPWSS. All funds are paid and received through the Corporation's bank account and are held for use by the LHPWSS.

(2) Deferred revenue consists of funding received from the Province of Ontario related to the HELP program.

Disclaimer

These Proforma Financial Statements were prepared for purposes of the Municipal Drinking Water License Renewal. They are based on the approved 2016 Financial plan, as well as assumptions and calculations used by staff for budget purposes. Readers are cautioned that they may not be appropriate for other uses. For internal use only – please do not share publicly.

LAKE HURON PRIMARY WATER SUPPLY SYSTEM
Pro-forma Statement of Operations

	Audited	Forecast (unaudited)						
	2017	2018	2019	2020	2021	2022	2023	2024
Revenues								
User charges	21,583,674	23,295,777	22,080,000	22,773,000	23,592,000	24,439,000	25,317,000	25,823,340
Investment income	297,350	509,484	484,637	453,021	517,105	594,458	689,269	770,429
Transfer payments [1]								
Provincial	36,300	674,777	-	-	-	-	-	-
Federal	35,845	674,777	-	-	-	-	-	-
Other [2]	5,313	-	-	520,000		680,000	-	-
Total revenues	21,958,483	25,154,815	22,564,637	23,746,021	24,109,105	25,713,458	26,006,269	26,593,769
Expenses								
Salaries, wages and benefits	520,345	748,866	750,099	771,922	794,386	817,510	841,313	866,525
Materials and supplies	10,396,226	10,602,046	11,120,753	11,513,518	11,866,677	12,341,296	12,670,504	13,105,339
Contracted services [3]	441,603	875,188	1,095,793	1,029,340	550,021	1,092,982	754,745	199,141
Rents and financial expenses	47,174	80,912	82,500	84,150	85,833	87,549	89,300	91,086
Interest on long-term debt	195,819	186,570	168,933	148,135	124,344	97,782	66,995	40,320
Amortization	7,064,735	7,246,134	7,415,220	7,649,233	7,863,948	7,950,126	8,178,936	8,316,456
Administrative charges	203,173	208,252	213,459	218,795	224,265	229,872	235,619	241,509
Total expenses	18,869,075	19,947,968	20,846,757	21,415,093	21,509,474	22,617,117	22,837,412	22,860,376
Annual surplus	3,089,408	5,206,847	1,717,880	2,330,928	2,599,631	3,096,341	3,168,857	3,733,393
Accumulated surplus, beginning of year	166,688,416	169,777,824	174,984,671	176,702,551	179,033,479	181,633,110	184,729,451	187,898,308
Accumulated surplus, end of year	169,777,824	174,984,671	176,702,551	179,033,479	181,633,110	184,729,451	187,898,308	191,631,702

* subject to rounding

Notes:

(1) Transfer payments are primarily comprised of funding received from the Federal and Provincial governments relating to the HELP program.

(2) Other Revenue includes Miscellaneous Revenue and estimated one-time incentive payments from Independent Electricity System Operator (IESO) for High Lift Pump Replacements.

(3) Contracted services includes capital expenditures which do not qualify as a Tangible Capital Asset under the PSAB 3150 definition.

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LAKE HURON PRIMARY WATER SUPPLY SYSTEM
Projected Statement of Net Financial Assets

	Audited	Forecast (unaudited)						
	2017	2018	2019	2020	2021	2022	2023	2024
Annual surplus	3,089,408	5,206,847	1,717,880	2,330,928	2,599,631	3,096,341	3,168,857	3,733,393
Acquisition of tangible capital assets	(6,352,470)	(5,984,788)	(7,946,307)	(7,399,893)	(3,587,423)	(7,859,751)	(5,161,859)	(744,117)
Amortization of tangible capital assets	7,064,735	7,246,134	7,415,220	7,649,233	7,863,948	7,950,126	8,178,936	8,316,456
	3,801,673	6,468,193	1,186,793	2,580,268	6,876,156	3,186,716	6,185,934	11,305,732
Change in prepaid expenses	(43,368)	51,147	(4,666)	(4,805)	(4,950)	(5,098)	(5,251)	(5,409)
Change in net financial assets	3,758,305	6,519,340	1,182,127	2,575,463	6,871,206	3,181,618	6,180,683	11,300,323
Net financial assets, beginning of year	8,130,107	11,888,412	18,407,752	19,589,879	22,165,342	29,036,548	32,218,166	38,398,849
Net financial assets, end of year	11,888,412	18,407,752	19,589,879	22,165,342	29,036,548	32,218,166	38,398,849	49,699,173

* subject to rounding

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LAKE HURON PRIMARY WATER SUPPLY SYSTEM
Statement of Cash Flows

	Audited	Forecast (unaudited)						
	2017	2018	2019	2020	2021	2022	2023	2024
Cash provided by:								
Operating activities:								
Annual surplus	3,089,408	5,206,847	1,717,880	2,330,928	2,599,631	3,096,341	3,168,857	3,733,393
Items not involving cash:								
Amortization	7,064,735	7,246,134	7,415,220	7,649,233	7,863,948	7,950,126	8,178,936	8,316,456
Amortization of debt discount	8,066	8,202	8,202	8,202	8,202	8,202	6,974	5,944
Change in non-cash assets and liabilities:								
Due from Corporation of City of London	(2,804,625)	(4,735,722)	(186,122)	(1,372,586)	(5,580,213)	(2,059,815)	(5,069,894)	(10,313,601)
Prepaid expenses	(43,368)	51,147	(4,666)	(4,805)	(4,950)	(5,098)	(5,251)	(5,409)
Trade and other receivables	425,718	(91,332)	74,012	(33,757)	(10,375)	(45,843)	(8,367)	(16,787)
Accounts payable and accrued liabilities	(613,967)	178,731	147,108	69,336	(20,221)	206,632	3,276	(18,588)
Deferred revenue	(36,300)	(674,777)	-	-	-	-	-	-
Accrued interest on long-term debt	(1,688)	(6,964)	(7,086)	(7,211)	(7,337)	(7,468)	(6,437)	(5,539)
Net change in cash from operating activities	7,087,979	7,182,266	9,164,548	8,639,340	4,848,685	9,143,077	6,268,094	1,695,869
Capital activities:								
Purchase of tangible capital assets	(6,352,470)	(5,984,788)	(7,946,307)	(7,399,893)	(3,587,423)	(7,859,751)	(5,161,859)	(744,117)
Cash used in capital activities	(6,352,470)	(5,984,788)	(7,946,307)	(7,399,893)	(3,587,423)	(7,859,751)	(5,161,859)	(744,117)
Financing activities:								
Proceeds of long term debt	404,232	-	-	-	-	-	-	-
Repayment of long-term debt	(1,139,741)	(1,197,478)	(1,218,241)	(1,239,447)	(1,261,262)	(1,283,326)	(1,106,235)	(951,752)
Cash used in financing activities	(735,509)	(1,197,478)	(1,218,241)	(1,239,447)	(1,261,262)	(1,283,326)	(1,106,235)	(951,752)
Net change in cash flows	-	-	-	-	-	-	-	-
Cash and short-term investments, beginning of year	-	-	-	-	-	-	-	-
Cash and short-term investments, end of year	-	-	-	-	-	-	-	-

* subject to rounding

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Lake Huron
Primary Water Supply System

Report No.:	LH-2018-03-12
Report Page:	1 **of** 3
Meeting Date:	October 4, 2018
File No.:	LH1219

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

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

Subject: LH1219 Filter Backwash Turbidity Meter Project

RECOMMENDATION

That the Board of Management for the Lake Huron Water Supply System take the following actions with regard to project LH1219 – Filter Backwash Turbidity Meters Project:

a) That the project budget be **INCREASED** by $150,000 for a total budget of $250,000, with the additional funds being provided from the Capital Reserve Fund; and,

b) The Board **RECEIVE** this report regarding the status of the Filter Backwash Turbidimeters Project for information.

PREVIOUS AND RELATED REPORTS

October 1, 2015	2016 Operating & Capital Budgets
October 6, 2016	Capital Status Report
October 5, 2017	Capital Status Report

BACKGROUND

A previous assessment of the filter backwash process has recommended that turbidity meters be installed on each filter in order to monitor the cleanliness of the waste discharge during the backwash process. This will result in the reduction of the amount of backwash water required to clean the filters, with consequential beneficial impacts on the new Residuals Management Facility.

DISCUSSION

Once the majority of work was completed in the filter area, the Board's contracted operating authority, the Ontario Clean Water Agency (OCWA), was asked procure and manage the installation of the new turbidity meters pursuant to the Service Agreement with OCWA . OCWA engaged an Engineering consultant to review and prepare the necessary specifications for the purchase and install of these meters.

With the completion of the engineering assessment, the revised cost estimate for the project is approximately $177,000 including necessary engineering required to complete the project. The original estimate for the 2016 budget included the purchase and wiring of the meters, but did not anticipate the need for the greater engineering scope of work and the extensive amount of programming needed for the installation.

It is anticipated that this upgraded backwash control system can save approx. 10%-30% of treated water required (varies seasonally) to clean each filter, amounting to between 180 million to 540 million litres annually. The value of this treated water based on 2018 rates of $\$0.4846/m^3$ is equal to $87,228 – $261,684 in savings annually. The reduction in backwash process water will also save on energy use, chemical use, and the amount of water directed to the Residuals Management facility and (ultimately) discharged back to the lake.

This project will ultimately help assist the water supply system in achieving our environment objectives and targets as part of the ISO 14001 Environmental Management System.

PROJECT FINANCIAL STATUS

Capital Project LH1219 Filter Backwash Turbidimeter Replacement Project has a current approved budget of $100,000.

Summary of Projected Costs:

Construction	$ 150,000
Engineering	35,000
Contingency	35,000
Net HST (@ 1.76%)	4,000
OCWA Contract Administration Fee	14,000
Total	**$238,000**

CONCLUSION

It is the recommendation of Board staff that the budget be increased to allow for the installation of the turbidity meters in order to undertake the project as originally planned, and assist in overall plant efficiency.

This report was written by John Walker, Operations Manager.

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

Lake Huron
Primary Water Supply System

Report No.:	LH-2018-03-10
Report Page:	1 **of** 3
Meeting Date:	October 4, 2018
File No.:	LH1230

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

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

Subject: LH1230 High Lift Pump Replacements Project

RECOMMENDATION

That the following actions be taken with regard to Lake Huron Primary Water Supply System LH1230 High Lift Pump Replacements Project:

a) That the detailed design engineering proposal from AECOM Canada Ltd. in the amount of $415,178, including contingency and excluding HST, **BE ACCEPTED**; it being noted that this is a single source procurement in order to meet the funding deadlines set by the Independent Electricity Systems Operator;

b) That the Board Chair and Chief Administrative Officer **BE AUTHORIZED** to execute a consulting services agreement with AECOM Canada Ltd. for the completion of the above-noted project; and,

c) That this report **BE RECEIVED**, for information.

PREVIOUS AND RELATED REPORTS

October 5, 2017 2018 Operating & Capital Budgets

BACKGROUND

The recently completed Energy Audit and Pump Optimization study identified a significant opportunity for energy savings and the optimization of pump operations with the replacement of the high lift pump system that are original to the plant construction and nearing the end of their useful life. This engineering assignment will provide the detailed engineering of the pump replacements, confirm construction requirements, anticipated savings, and available funding from Independent Electricity Systems Operator (IESO), Hydro One and other senior government programs.

DISCUSSION

Since the completion of the Energy Study, Board staff have continued the discussions with IESO regarding possible project incentives and associated program timing in relation to the health of the Capital Reserve Fund.

As determined through the 2018 budget deliberations, the project was only able to be partially funded by the Capital Reserve Fund in 2018 such that a preliminary design could be undertaken to reaffirm and expand upon the study findings, particularly in regards to the recommended installation of a pressure sustaining valve (PSV) upstream of the Arva reservoir which was included in the modeling analysis upon which the recommendations of the study were based. The preliminary design undertaken by AECOM has determined that the PSV is not required at this time and recommends the following:

1. Replace the least efficient duty pump with a jockey pump and place an additional jockey pump in the spare pump slot; and,
2. Replace two least efficient duty pumps with new efficient duty pumps.

The remaining two original high lift pumps at the water treatment plant, and the four original high lift pumps at the McGillivray Pump Station will be replaced at a future date.

The IESO has advised that the in-service deadline for the two jockey pumps is on or before December 31, 2020 and the in-service deadline for the two new duty pumps is on or before December 31, 2022. The estimated total financial incentives from IESO for the jockey ($500K) and duty pumps ($575K) is $1.075M.

In order to meet the strict funding deadlines and associated reporting requirements set by the IESO associated with the installation of the two jockey pumps, the detailed design will need to be accelerated primarily due to the estimated 12-14 months that will be required to manufacture and deliver the pumps of this size. In addition, it will take approximately 6 months for a contractor to install the pumps once they are delivered to site.

If the current Board meeting schedule were followed, the detailed design engineering assignment would be normally be awarded near the end of January 2019. With the manufacturing and construction timing requirements noted above, this would leave 3 months for detailed engineering design and tender award which is insufficient time to deliver the engineering required by the project. For this reason, it is recommended that the single-source engineering proposal from AECOM Canada Ltd. (AECOM) be accepted in advance of 2019 budget approval to garner an additional 4 months of design time needed to meet the deadlines set by the IESO.

Board staff have reviewed the proposal from AECOM and determined that the proposed work plan provides the necessary engineering in order to deliver the project within the strict IESO funding deadline. This single source procurement process is in keeping with the Section 14.4.i of the City of London's Procurement of Goods and Service Policy (*strictly used as a guide*):

> *Another organization [IESO] is funding or substantially funding the acquisition and has determined the supplier and the terms and conditions of the commitment into which the City will enter are acceptable to the City.*

Based on the proposed work plan, AECOM estimates the fees associated with the detailed design assignment to be $415,178 including contingency and excluding HST. It is therefore anticipated that the total engineering cost for this project will remain within the proposed budget that is presented in the 2019 Budget Report. On this basis, Board staff recommends the proposal from AECOM be accepted.

CONCLUSION

In order to meet the strict funding deadlines set by the Independent Electricity Systems Operator (IESO) Board staff initiated a single source procurement process, subject to the final approval of the Board, for detailed design engineering associated with the high lift pump replacements at the Lake Huron water treatment plant. The work plan and schedule proposed by AECOM will ensure that the project meets the IESO funding deadline requirements and therefore Board staff recommends the proposal from AECOM be accepted.

This report was written by Billy Haklander, Environmental Services Engineer.

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

Lake Huron
Primary Water Supply System

Report No.:	LH-2018-03-08
Report Page:	1 **of** 4
Meeting Date:	October 4, 2018
File No.:	LH1317

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

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

Subject: LH1317 Distressed Pipe Replacement Program

RECOMMENDATION

That the Board of Management **RECEIVE** this report with regard to the Distressed Pipe Replacements Project for information.

PREVIOUS AND RELATED REPORTS

October 5, 2017 2018 Operating & Capital Budgets

BACKGROUND

As a result of the condition assessment and subsequent real-time data collected from the Acoustic Fibre Optic Monitoring System within the 1200mm high pressure transmission pipeline, the water system has recently replaced two high-risk pipe segments on the pipeline. This purpose of the Distressed Pipe Replacement program is to replace high pressure pipe segments that are at risk of catastrophic failure on a systemic and proactive basis. The 2018 program also included a detailed assessment of the monitoring data accumulated to date to develop a predictive model to further refine the program and assist with determining targeted replacements in future years.

DISCUSSION

In January 2019, Board staff retained the services of Pure Technologies Ltd. (Pure) to develop a predictive model which focuses on the1200-millimetre diameter pre-stressed concrete pipe (PCCP) portions of Pipeline A and is used as a tool to help the water supply system better manage the pipeline by reviewing the pipeline degradation rates over a projected 25-year period. This predictive approach provides the water system with information regarding the anticipated rate at which pipe segments may reach their yield failure limits. This projected degradation rate for each of the nearly 10,000 pipe segments may be included in capital budget planning process over the next 5 to 25 years.

Lake Huron Pipeline A has experienced four catastrophic failures since its installation in 1965-1966. After the latest failure on May 23, 2012, a PureEM^{TM} electromagnetic inspection was performed to assess the condition of the pre-stressing wire wraps in each pipe section. The electromagnetic (EM) inspection evaluates each pipe section and quantifies the amount and

location of damage along the transmission pipeline. However, this technology only provides a snapshot of the pipeline condition at the time of inspection and does not provide any information regarding the deterioration rate of the pipeline as it ages. Accordingly, to monitor the pipeline on a continuous basis and record wire wrap breaks in real-time, a SoundPrint™ Acoustic Fiber Optic (AFO) monitoring system was installed in June 2015. The EM and AFO data from the Lake Huron Pipeline A, along with the data from Pure's EM and AFO database, were used to calculate deterioration rates using a Monte Carlo simulation statistical analysis.

This information was then used to estimate the probability of an individual pipe segment, with varying levels of deterioration, reaching or exceeding the defined high-risk limit in each year up to 2045. The statistical probabilities were then applied to pipes in each baseline physical condition (i.e. starting with 0, 5, 10, 15, etc. broken wire wraps) to develop the projected deterioration rates for pipes with varying levels of distress.

The projections estimate that 925 pipes (out of 9,763 pipes) on the Lake Huron Pipeline A are estimated to exceed their yield limits with a medium probability (30% to 50%) and 89 pipes are expected to exceed their yield limit with a high probability (> 50%) by the year 2045. Yield limit ranges from 20 to 100 broken wire wraps for different pipes. Although the broken wire wraps could be non-contiguous (spread across the length of the pipe) and the pipes may still have some remaining life, the pipes have been identified as exceeding the threshold for "high-risk."

The analysis performed as part of this study should not be treated as though the results are exact. The results are probabilistic and are based both on site-specific monitoring and inspection data, and on data from Pure's worldwide database, in order to ensure there is enough data to perform the analysis with respect to degradation rates of the pipeline. As such, there is a degree of uncertainty associated with the results that the reader needs to be aware of when interpreting the results. In the future, as more site-specific data is collected and less data is used from Pure's database, it is anticipated that the degree of uncertainty associated with this analysis will reduce. Based on the current analysis, it is recommended that the pipeline should be re-evaluated in 5 to 10 years to re-establish and refine the failure prediction results based on the expanded dataset.

For planning purposes, the current projected distress estimates can be used to set repair/replacement budget estimates. Board staff recommend that funds be made available to repair or replace the projected number of pipes as part of the subsequent Financial Plan Updates; however, actual repair decisions be made based on addressing the highest-risk pipes identified by the AFO monitoring system.

As the program matures and the rate of pipe segment deteriorations change, the replacement program will evolve from the replacement of individual pipes, to the targeted replacement or twinning of the pipeline in specified high-risk areas.

The recommendations for the pipe replacement program are as follows:

Near-term (<5 years):

1. Install Transient Pressure Monitors to calibrate pipeline Performance Curves.
2. Rely on AFO monitoring results to prioritize pipe replacements.

Mid-term (5-10 years):

1. Prepare medium-term budget estimates based on Predictive Modelling numbers for pipes needing replacement.
2. Perform re-evaluation of Pipeline A to update failure predictions based on additional AFO monitoring data.
3. Consider an electromagnetic inspection of the pipeline to re-calibrate the baseline data.

Long-term (>10 years):

1. Prepare long-term budget estimates based on Predictive Modelling numbers for pipes needing replacement.
2. Perform re-evaluation of Pipeline A to update failure predictions based on additional AFO monitoring data.
3. Prioritize sections for replacement (instead of individual pipe segments) or additional pipeline twinning based on Predictive Modelling and real-time performance monitoring.

Based on the findings of this study, Pure Technologies has recommended the consideration of the installation of transient pressure sensors along the length of the pipeline, especially on the twinned sections which have been affected by higher pressures and more significant fatigue loads compared to other areas. The installation of pressure monitoring sensors is beneficial as it provides additional information regarding recurring transient pressure events along the length of pipeline, as well as atypical operating conditions in the system (e.g. short succession pump shut-off-re-start operations or short pump cycles). Such operations should be avoided or minimized as much as possible to mitigate the overall stresses on the system.

Additionally, the evaluation of transient pressure data would be helpful in determining whether additional surge mitigation measures would be a cost-effective technique to be considered in planning distressed pipe replacements. The proposed pressure/transient monitoring program is included within the 2019 Budget Report for the Board’s consideration.

CONCLUSION

Board staff retained the services of Pure Technologies Ltd. to develop a predictive model that provides the water system with information and guidance related to when pipes along the 1200mm transmission main may reach their yield failure limits, and aid in the development of business that may be included in capital budget planning over the next 5 to 25 years. This information along with the AFO continuous monitoring program and proposed transient monitoring is used to replace high-risk pipe segments on a systemic basis.

This report was written by Billy Haklander, Environmental Services Engineer.

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

Lake Huron
Primary Water Supply System

Report No.:	LH-2018-03-11
Report Page:	1 **of** 3
Meeting Date:	October 4, 2018
File No.:	LH1384

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

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

Subject: LH1384 Filter Rate Meter Replacement Project

RECOMMENDATION

That the Board of Management for the Lake Huron Water Supply System take the following actions with regard to project LH1384 – Filter Rate Meter Replacement Project:

a) That the project budget be **INCREASED** by $120,000 for a total budget of $320,000, with the additional funds being provided from the Asset Replacement Reserve Fund; and,

b) The Joint Board **RECEIVE** this report regarding the status of the Filter Rate Meter Replacement Project for information.

PREVIOUS AND RELATED REPORTS

October 6, 2016	2017 Operating & Capital Budgets
October 5, 2017	Capital Status Report

BACKGROUND

The existing flow meters used to manage and control the rate of filtration on each of the twelve filters are original to the plant, are well past their useful life, and their inaccuracies are becoming increasingly problematic for the reliable operation of the water treatment plant. As part of the 2017 Capital Budget, plans were put in place to have the filter rate meters replaced as time permitted, ideally in conjunction with the filter media replacement program. Due to the large amount of capital works going on at the plant, the installation of these meters was delayed to prevent contractors working in the same location and to avoid Constructor issues under the Occupational Health and Safety Act.

DISCUSSION

Once the majority of work was completed in the filter area of the water treatment plant the Board's contracted operating authority, the Ontario Clean Water Agency (OCWA), was asked procure and manage the installation of the replacement meters pursuant to the Service Agreement with OCWA. With the participation of Board staff, OCWA prepared the specifications and issued a public tender for the meters. The tender closed August 28 and included a 90-day price validity period.

The results of the tender were significantly higher than expected. Upon detailed analysis, staff believe the higher costs are attributed to a combination of several factors, including:

- Greater SCADA integration costs based on the updated SCADA requirements (i.e. newer telemetry protocols to have a proper totalizer and not one based on a sum of instantaneous flows)
- Different power requirements for the new meters than the original filter rate meters
- Additional piping modifications required, as the new meters will not fit into the space taken up by the old meters
- Increased cost of steel and materials

PROJECT FINANCIAL STATUS

Capital Project LH1384 Filter Rate Meter Replacement Project has a current approved budget of $200,000.

Summary of Projected Costs:

Tender Value	$ 277,970
Contingency	15,000
Net HST (@ 1.76%)	5,156
OCWA Contract Administration Fee	17,906
Total	**$316,032**

CONCLUSION

It is the recommendation of Board staff that the budget be increased to allow for the installation of the filter rate meters in order to secure the current pricing, and to assist in overall plant efficiency.

This report was written by John Walker, Operations Manager.

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