



JOINT BOARD OF MANAGEMENT

Wednesday, February 27, 2019
9:00 AM

Unico Community Room,
37 Beech Street, Kingsville
(behind A&A Flooring)

AGENDA

A. Call to Order:

B. Disclosures of Pecuniary Interest:

C. Approval of Minutes:

Minutes of the meeting of the Union Water Supply System Joint Board of Management Meeting held Wednesday, January 16, 2019
Pages 3 - 9

D. Business Arising Out of the Minutes

E. Items for Consideration:

1. UW/06/19 dated February 22, 2019 re: Status Update of UWSS Operations & Maintenance Activities and Capital Works to February 22, 2019
Pages 10 - 11
2. UW/07/19 dated February 21, 2019 re: Ontario Regulation 453/07 Financial Plan Update for the Union Water Supply System
Pages 12 - 15
3. UW/08/19 dated February 21, 2019 re: 2018 Annual Report under the Safe Drinking Water Act and Ontario Regulation 170/03
Page 16
4. UW/09/19 dated February 21, 2019 re: 2018 Summary Report for Municipalities under Regulation 170/03 made under the Safe Drinking Water Act.
Pages 17 - 18
5. UW/10/19 dated February 10, 2019 re: Payments from December 16, 2016 to January 13, 2019
Pages 19 - 27

F. **New Business:**

G. **Adjournment:**

H. **Date of Next Meeting:** March 20, 2019, 9:00 am, Kingsville Community Room,
1941 Jasperson Road, Kingsville Arena

/kmj



JOINT BOARD OF MANAGEMENT

Wednesday, January 16, 2019
9:00 AM

Kingsville Community Room
Kingsville Arena
1741 Jasperson Road, Kingsville

MINUTES

Members Present: Mayor MacDonald (Chair); Deputy Mayor Verbeke, Councillors Hammond, Tiessen (alternate), Wilkinson - Leamington
Mayor Nelson Santos (Vice-Chair); Deputy Mayor Queen,
Councillors DeYong, Neufeld, Patterson - Kingsville
Councillor Walstedt - Lakeshore

Members Absent: Councillors Dunn and Jacobs - Leamington
Councillor VanderDoelen - Essex

UWSS Staff: Rodney Bouchard, Manager UWSS
Christine Johnson - Recording Secretary

Staff Present: Shannon Belleau - Leamington
Shaun Martinho - Kingsville
Kevin Girard - Lakeshore

OCWA Staff Present: Dale Dillen, Ken Penney

Call to Order: 9:05 am

The Manager welcomes everyone to the new board. He asks each members to introduce themselves. He explains that he will lead the board until the Chair of the Board is elected, which will be the first order of business.

Election of Chair for the Union Water Supply System Joint Board of Management

The Manager opens the floor for nominations for the position of Chair. He notes that the position will last until December 31, 2019.

No. UW-01-19

Moved by: Deputy Mayor Verbeke

Seconded by: Councillor Hammond

That Mayor, Hilda MacDonald, is nominated to the position of Chair for a term ending December 31, 2019.

Carried

Mayor MacDonald accepts the position of Chair.

No. UW-02-19

Moved by: Councillor Patterson

Seconded by: Councillor Hammond

That Mayor, Nelson Santos, is nominated for the position of Vice Chair for a term ending December 31, 2019.

Carried

Mayor Santos accepts the position of Vice Chair.

Disclosures of Pecuniary Interest: none

Adoption of UWSS Joint Board of Management Minutes:

No. UW-03-19

Moved by: Deputy Mayor Queen

Seconded by: Councillor Neufeld

That Minutes of the UWSS Joint Board of Management meeting of November 21, 2019 be received.

Carried

Business Arising Out of the Minutes:

There was none.

Report UW/02/19 dated January 11, 2019 re: Status Update of the UWSS Operations & Maintenance Activities and Capital Works to January 11, 2019

The Manager reminds everyone it's been a few months since the last meeting of the UWSS Board. He notes that many projects have been moving along since that time. He explains to new members that regular maintenance by OCWA staff is ongoing.

He explains that Continental Carbon Group (CCG) had been retained to supply and install filter media in the last two (2) filters, #6 and #8. He confirms that those filters are back in service. With all eight (8) filters having media replaced over the last few years the filter media will last another 15-20 years. Some filters are shut down for annual maintenance.

The Cottam Booster Reservoir soil rehabilitation project has been delayed due to the warmer weather experienced in December. The Manager notes that the ground has been too soft for the excavation company to commence the project. They are waiting for more ideal conditions and will inform UWSS when they plan on beginning.

The Manager notes that the water rate study being conducted by Watson & Associates and should be completed this week. He further explains that the study is being completed in order for the UWSS to apply for its Municipal Drinking Water Licence (MDWL). The Financial Plan is part of the requirement to apply for the MDWL. The Manager confirms that this report will be presented to the Board at a later meeting.

Annual MOECP Inspection of the UWSS commenced on January 8th and should be completed by the end of February. He does not anticipate any problems and notes he is working closely with OCWA staff and the MOECP Inspector.

The Manager explains that ASL Roteq has been retained to inspect and refurbish Low Lift Pump #1 and anticipates that this work be completed by the end of January. The UWSS also purchased four (4) new drain valves for Filters #2 and #7 and OCWA staff were able to install them.

A small vibration has been felt in High Lift Pump #4 and Nevro has been hired to inspect the cause. A new clamp on flow meter was purchased for Clarifier #2, in anticipation of the CO2 system. A new pH probe has been installed at the Low Lift intake #1. A Board members notes that pump vibrations seem common over the years and is this really a concern. The Operations Manager explains that allowing a pump vibration to continue could wear out parts, such as bearings, much sooner than anticipated. The preventative maintenance saves money in the long run.

The Manager then provides an update on the SCADA upgrade project. He explains to the new members of the board that SCADA is the brains of the water treatment plant. He notes that Associated Engineering (AE) has been hired to assist with this project as UWSS/OCWA did not have the expertise in house. Summa Engineering has been working on the design and narrative controls are currently being written. Further the new software has been purchased. This is a large project, with a budget of \$1 million and he anticipates that it should be completed by the Fall.

The Manager then provides an update on the CO2 pH Adjustment /Chlorine System Project. He explains that this will adjust the pH of the raw water coming in as the source water is not optimal and this will help make the system work more effectively. He notes that both projects will work in tandem to reduce costs. He explains that there is very little room in the Chlorine Building (and shows members of the board pictures) of the tight space that staff have to work in. OCWA Operations Manager then explains how the process of unloading the chlorine tonners works and the challenges that face the staff

members in terms of safety. There is some concern from Board members over this process. The Operations Manager explains that there are SOPs in place and policies in place to ensure staff are safe, but safety could definitely be improved. There was also an explanation regarding the size of the chlorine tanks and whether smaller tanks would be better utilized within the space. The Operations Manager explains there are only two (2) sizes of tanks and the small ones would only last a few hours and therefore not feasible in this location.

The Manager discusses water demands to date and explains that it's only been 17 days and it will take a few months to see what water demands will be like for this year.

No. UW-04-19

Moved by: Deputy Mayor Verbeke

Seconded by: Councillor Wilkinson

That report UW/20/17 dated June 15, 2017 re: Status Update of the UWSS Operations & Maintenance Activities and Capital Works to July 15, 2017 is received.

Carried (UW/02/19)

Report UW/03/19 dated January 9, 2019 re: Draft UWSS Operations & Capital Budget Report

The Manager hopes everyone has had a chance to review the draft budget. He moves to page 16 of the agenda, which sets out the highlights of his report. Here he discusses the wholesale rates and investment income, sundry revenue, expenditures, debts, operational expenses and capital program highlights. He mentions that he doesn't anticipate an increase in hydro expenses this year and notes that he has moved watermain breaks and residuals management over to operational expenses.

The Manager reminds members of the Board that he is currently working on the OCWA contract negotiations. This was originally slated to renew at the end of 2018, however, the old contract has been extended until December 31, 2019. He does anticipate that a new ten (10) year contract will be in place before the end of the year. At this point price and structure are still being negotiated.

This year there is a large capital budget being proposed for the UWSS, which is sitting at \$5.7 million, this includes two (2) very large projects with the SCADA upgrades and the CO2/chlorine updates. The Manager confirms that the UWSS does have enough money to cover this hearty budget.

The Board asks the Manager if there is an increase in the wholesale water rates. The Manager confirms that there is a slight increase of \$0.05 per 1000 gallons (\$0.0109/m³), which will take place during the second quarter on April 1, 2019. The municipalities are aware of this change. He then confirms that Highbury CanCo. is now a Leamington customer and UWSS now has just one (1) rate.

Turning to page 25 of the agenda the Manager then reviews the list of capital works he is hoping to achieve in 2019. After going through this list the Board asks the Manager if he has considered using solar energy. The Manager explains that over the last few year the UWSS was looking at co-generation, using natural gas for heat and the steam would be used by a local greenhouse. A study had been completed and forwarded on to the Province. Since that time, things have changed with the Province and additionally research has shown that co-generation did not benefit other adopters as the conditions placed on them were too strict and the reductions expected couldn't be met, therefore, resulting in penalties. The Manager now indicates that UWSS will be looking into solar energy more intently since the battery storage technology has improved dramatically in the last few years and cost for solar has decreased.

The Board expresses concern over the safety of staff with regards to the Chlorine Building. They want to ensure that all safety protocols are in place until the improvements to the building can be made. The OCWA Operations Manager assures the Board members that Standard Operating Procedures are being followed and explains the safety procedures that are in place.

The Board then expresses some concern over the long list of capital items that have been presented. The Manager states which capital items would be desirable to have completed, but notes everything listed will eventually need to be completed as the facility is very old. There is also a concern that the capital budget items might be too aggressive to complete in one year.

Mayor MacDonald leaves the meeting at 9:49 am and Mayor Santos takes over as Chair.

The Manager explains that often times there are some budget adjustments throughout the year and that he generally brings forward a mid-year variance report so Board members are aware of any changes.

The Board asks the Manager when he would like to start on the capital projects listed. He explains that he and the OCWA team are ready to begin, the sooner the better.

Deputy Mayor Verbeke asks the Manager if he is looking for a motion to approve the budget today. The Manager explains that initially he had provided the report for information, however, he would like the option to move forward with the budget rather than delay for another month if the Board felt it was appropriate.

There is a question regarding how revenue is determined for the UWSS. The Manager asks members to turn to page 33 of the Agenda. He reviews the wholesale water rates, the annual flows (three (3) year average used).

No. UW-05-19

Moved by: Deputy Mayor Verbeke

Seconded by: Councillor Hammond

That the Union Water Supply System Joint Board of Management (UWSS) adopts the Draft 2019 Operational and Capital Budget for the Union Water Supply System;

And further, that the UWSS Board endorses an increase of \$0.05 per thousand gallons (\$0.0109 per cubic metre) for UWSS wholesale Rate from \$2.77 per thousand gallons (\$0.6088 per cubic metre) to \$2.82 per thousand gallons (\$0.6110 per cubic metre) to be put into effect on April 1, 2019.

And further, that the UWSS Board endorses the Capital Budget Program for 2019, which will result in budgeted net deficit of **\$3,570,000** and that the deficit will be funded using UWSS Reserves.

Carried (UW/03/19)

Report UW/04/19 dated January 11, 2019 re: CO₂ pH Adjustment/ Chlorine System Improvements Project Tender Result

The Manager reminds member that project is the combination of two (2) projects and that UWSS has hired Associated Engineering (AE) to assist with the management of the project. This project required a very specific contractor to meet all of the requirements and therefore only select companies were invited to participate in the tender process. Eventually, six (6) were pre-qualified to participate at the mandatory site meeting. However, two (2) opted out as the project was too small, one (1) decided not to make a bid and one (1) did not show up to the site meeting and were therefore disqualified. Therefore, two (2) contenders remained.

The site tour allowed the remaining contenders to prepare a budget and answer to the tender. The tender results were received on December 14th, 2018. AE prepared a letter of recommendations, which included a contingency budget as well.

After review of the all of the documentation both the Manager, OCWA Operations Manager and AE have determined that the prices submitted are fair and comparable. AE has concluded that Maple Reinders Constructors should be awarded the contract. They are ready to begin the process and feel that it will take 40 weeks to complete.

The Manager asks for budget approval of \$3,100,000 taken from reserves.

No. UW-06-18

Moved by: Deputy Mayor Queen

Seconded by: Councillor Patterson

That the UWSS Board approves a budget of \$3,100,000 for the CO₂ pH Adjustment/ Chlorine System Improvements Project to be funded from UWSS Reserves Fund; and

That the UWSS Board authorized the UWSS General Manager to award the Tender for the Union Water Supply System Ruthven Water Treatment Plant CO₂ Injection and

Chlorine Gas System Implementation Project to Maple Reinders Constructors Limited in the amount of \$2,937,000 (\$2,437,000 plus a Contingency Allowance of \$500,000).

Carried (UW/04/19)

Report UW/05/19 dated January 11, 2019 re: Payments from November 16, 2018 to January 11, 2019

No. UW-07-19

Moved by: Councillor Hammond

Seconded by: Councillor Neufeld

That report UW/05/19 dated January 11, 2019 re: Payments from November 16, 2018 to January 11, 2019 is received.

Carried (UW/05/19)

New Business

The Administrative Assistant apologies for not including a list of meeting dates for 2019. She reads through the dates of the upcoming meetings and reminds members that generally the UWSS Joint Board of Management meets on the third (3rd) Wednesday of each month. At times changes are necessary due to conflicts and members will be notified in advance of any changes.

There is a brief discussion about February's meeting date and it is decided that Wednesday February 27th will be the new meeting date.

Adjournment

No. UW-08-19

Moved by: Councillor Patterson

Seconded by: Councillor DeYong

That the meeting adjourn at 10:08 am

Carried

Date of Next Meeting: Wednesday, February 27, 2019 at the Unico Hall, 37 Beech Street (Behind A&A Flooring), Kingsville

UW/06/19

To: Chair and Members of the Union Water Supply System Joint Board of Management

From: Rodney Bouchard, Union Water Manager

Date: February 22, 2019

Re: Status Update of UWSS Operations & Maintenance Activities and Capital Works to February 22, 2019



Aim:

To inform the UWSS Board about operational and maintenance activities and capital works projects for the Union Water Supply System since the last Board meeting on January 16, 2019.

Discussion:

The UWSS Manager conducts regular meeting with OCWA Operations staff in regards to on-going operations and maintenance programs for the UWSS facilities. The following provides an update on UWSS operations, regular maintenance and major maintenance and Capital Works at UWSS facilities:

1. Regular Maintenance on all process equipment and analyzers continue to be completed through OCWA's Workplace Maintenance Management System.
2. An MOECP annual inspection for the UWSS was started on January 8th, 2019. The inspection is on-going.
3. ASL Rotech was retained to inspect and refurbish Low lift pump #1. ASL Rotech removed the pump, refurbished it and reinstalled the pump on February 4-5, 2019. The pump is currently in service.
4. Nevtro Pumps and Mechanical of London, Ontario was retained to investigate a vibration that was detected in High Lift Pump #4. The pump was removed by Nevtro on January 28, 2019 for repairs. It is anticipated that the pump will be reinstalled in early March 2019.
5. New clamp-on flow meters for Clarifier #1 and #3 raw water lines have been purchased, installed and tested to replace some older pressure differential flow meters on the raw water lines in preparation for the new CO2 system.
6. New Turbidity Meters for Clarifiers #1 and #3 have been purchased and installed.
7. An electric actuator has been purchased and installed on Filter #2. This unit has been installed as a test case to see how the electric actuator functions as compared to the previous pneumatic actuator.

8. SCADA Upgrade Project Update: A workshop was held on February 19-20, 2019 at the Ruthven Water Treatment Plant to review draft Program Control Narratives (PCNs) and PLC design items for the new SCADA system. The workshop included representatives from Union Water, OCWA operations and maintenance, the project engineer (Associated Engineers) and the SCADA integrator (SUMMA Engineering). This project is on track for completion at the end of November 2019.
9. CO2 pH Adjustment/ Chlorine System Improvements Project Update: - A project kick-off meeting was held at the Ruthven Water Treatment Plant on February 20th, 2019. Attendees included UWSS, OCWA staff, Associated Engineering (Project Engineer) and Maple Reinders Constructors (successful contractor). Notice to Proceed for this work will be issued by February 28, 2019, at which time the contractor will have 40 weeks to complete the work. This work is anticipated to be completed by the end of November 2019.
10. The Ruthven Water Treatment Plant is scheduled to be shut-down on February 28, 2019 for a few hours to allow for the installation of a temporary gas chlorination system that will be used during the upgrades of the primary gas chlorination system as part of the CO2 pH Adjustment/ Chlorine System Improvements project.

Comparative Flows for 2015 through 2019 in Millions of Imperial Gallons (for the period 1 January to February 21, 2019)

	2015	2016	2017	2018	2019
Flow to Date (MG)	310.12	297.27	309.68	343.06	352.27
Max Day (MGD)	7.15	7.17	7.64	7.96	8.98
Min Day (MGD)	3.79	4.29	4.56	5.18	4.43
Average Day (MGD)	5.96	5.72	5.96	6.60	6.77
No of Days	52	52	52	52	52

Flows to date are up 9.21 MIG or 2.68% from last year. The 2019 flows to date are up 11.82% over the previous 4 year average.

Recommendation:

That this report be received by the UWSS Board for information purposes.

Respectfully submitted,



Rodney Bouchard, Manager
Union Water Supply System Joint Board of Management

/kmj

UW/07/19

To: Chair and Members of the Union Water Supply System Joint Board of Management

From: Rodney Bouchard, Union Water Manager

Date: February 21, 2019

Re: Ontario Regulation 453-07 Financial Plan Update for Union Water Supply System



Recommendation

That the Union Water Supply Joint Board of Management (Board) receives this report for information;

And further, The Union Water Supply System Water Financial Plan prepared by Watson & Associates Economists Ltd. dated January 17, 2019 be approved

And further, that Notice of availability of the Financial Plan be advertised

And further, that the Financial Plan and the Board Resolution approving the Financial Plan be submitted to the Ministry of Municipal Affairs and Housing. (O.Reg. 453/07, Section 3 (1) 6);

And further, that the Financial Plan and the Board Resolution approving the Financial Plan be submitted to the Ministry of Environment, Conservation and Parks, thus satisfying the requirements under the Safe Drinking Water Act. (SDWA Section 32 (5) 2 ii))

Report Highlights

- The UWSS submitted an application to the Ministry of Environment, Conservation and Parks (MECP) on January 20th, 2019 for renewal of its Municipal Drinking Water License.
- The Drinking Water Licensing program requires that the Drinking Water Financial Plan, under Ontario Regulation 453/07, be updated as part of a drinking water license renewal.
- UWSS retained Watson & Associates Economists, Ltd to update the UWSS O.Reg. 453/07 Financial Plan.
- Watson & Associates was also retained to undertake a Water Rate Analysis for the UWSS. The results of the Water Rate Analysis were used for the preparation of the UWSS Financial Plan Update.
- The UWSS Financial Plan update requires UWSS Board endorsement before it can be submitted to the MECP and Ministry of Municipal Affairs and Housing (MMAH);
- The UWSS Board endorsed O.Reg 453/07 Financial Plan needs to be made available to the public free of charge. The public notice of the availability of the UWSS Financial Plan will be advertised.

At the Regular Meeting of the UWSS Board on July 18th, 2018, the UWSS General Manager informed the Board that the UWSS had received notification on July 6th, 2018 from the Ministry of Environment Conservation and Parks indicating that the Municipal Drinking Water License (Licence Number: 041-101 under the *Safe Drinking Water Act, 2002*) for the UWSS needed to be renewed in 2019 and that the renewal application deadline was January 20, 2019.

The UWSS Manager also informed the Board that as part of the Drinking Water License renewal process, the UWSS was also required to prepare an update to its existing Ontario Regulation 453/07 Water Financial Plan prepared by Watson & Associates Economists, Ltd and dated April 29, 2014.

The UWSS Manager recommended the undertaking of a Water Rate Study to facilitate the preparation of the Financial Plan update. As part of the Board approval of the 2018 Amended UWSS Budget (Resolution UW-05-14) at the July 18, 2018 UWSS Board meeting, a budget of \$50,000 was approved for the Renewal of the UWSS MDWL including preparation of the Financial Plan Update and Water Rate Analysis.

Discussion:

In order to obtain a Municipal Drinking Water License, a municipal drinking water system must satisfy five key requirements as per section 44(1) of the *Safe Drinking Water Act, 2002*:

1. Obtain a drinking water works permit
2. Acceptance of the operational plan for the system based on the Drinking Water Quality Management Standard.
3. Accreditation of the Operating Authority.
4. Prepare and provide a financial plan.
5. Obtain permit to take water.

The UWSS has met the above criteria for licensing. For MDWL renewals, the application must be accompanied by proof that the financial plan meets the prescribed requirements as per the Act s. 32(5)2.ii. The preparation of a financial plan is a key requirement for licensing and as such, must be undertaken by all municipal water providers.

Ontario Regulation (O.Reg.) 453/07 provides details with regards to the financial plans for existing water system. The requirements for existing systems are summarized as follows:

- Financial plans must be approved by resolution of Council or governing body. In the case of UWSS, the UWSS Board is the governing body;

- Financial plans must include a statement that the financial impacts have been considered and apply for a minimum six-year period commencing in the year of licence expiry;
- Financial plans must include detail regarding the “Statement of Operations” components as per the Public Sector Accounting Board (P.S.A.B) including proposed or projected financial operations itemized by total revenues, total expenses, annual surplus/deficit and accumulated surplus/deficit for each year in which the financial plans apply;
- Financial plans must include components of the “Statement of Financial Position” as per P.S.A.B itemized by total financial assets, total liabilities, net debt, non-financial assets, and tangible capital assets;
- Financial Plans must include the components of “Statement of Cash Flow” as per P.S.A.B such as gross cash receipts/payments itemized by operating transactions, capital transactions, investing transactions and financial transactions for each year in which the financial plans apply;
- Financial plans applicable to two or more solely-owned drinking water systems can be prepared as if they are for one drinking water system;
- Financial plans are to be made available to the public upon request and at no charge; posting on a website is required if a website exists;
- Notice of the availability of the financial plans is to be given to the public; and
- Financial plan is to be submitted to the Ministry of Municipal Affairs and Housing.

As indicated above, the MDWL renewal process requires an update to the O.Reg. 453/07 Financial Plan. As per the *Safe Drinking Water Act, 2002* the application for renewal of UWSS’ Drinking Water License (Licence Number: 041-101) was submitted to the MECP Approvals and Licensing Branch on January 18, 2019. In discussions with the MECP Approvals Licensing Branch representative during the preparation of the MDWL Renewal application, the MECP representative indicated that the O.Reg 453/07 Financial Plan update need not be submitted with the application; the Financial Plan could be submitted separately once the Plan was endorsed by the UWSS Board.

UWSS retained Watson & Associates Economists Ltd (Watson & Associates) to complete a Water Rate Analysis for the UWSS and then prepare an update to the UWSS’ O.Reg 453/07 Financial Plan based on the Water Rate Analysis. A copy of the *Water Ontario Regulation 453/06 Financial Plan, Financial Plan #041-301, Union Water Supply System, January 17, 2019* by Watson & Associates is available for viewing and download on the Union Water Supply System website at www.unionwater.ca .

The rate structure and associated rates as per the Watson & Associates water rate analysis for the UWSS have been included in the Financial Plan document. A copy of

the *2018/2019 Water Rate Study, Union Water Supply System, December 19, 2018* is available for viewing and download at www.unionwater.ca .

It is important to note that the UWSS Board has every right to change the water rate structure and associated water rates as needed to meet its financial obligations. These changes to water rates and rate structure do not require an amendment to the Financial Plan. The updated Financial Plan will be updated in the next 5-year cycle as per regulatory requirements.

Once endorsed by the UWSS Board, the UWSS Financial Plan update will be submitted to MMAH and MECP. The Financial Plan update will also be made available to the public free of charge and a notification of the Plan's availability will be advertised to the public.

Conclusion

Watson & Associates Financial Plan report dated January 17, 2019 presents the water financial plan for Union Water Supply System in accordance with the mandatory reporting formats for water system as detailed in O.Reg. 453/07. It is important to note that the financial plan is provided for the Board's interest and approval. However, for decision making purposes, it may be more informative to rely on the information contained within Watson & Associates 2018/2019 Water Rate Study for the Union Water Supply System, dated December 19, 2018.

Respectfully submitted,



Rodney Bouchard, General Manager
Union Water Supply System Joint Board of Management

/kmj

Filename: t:\union wtr\reports to board\2019\uw07-19 ontario regulation 453 07 financial plan for union water supply system.docx

UW/08/19

To: Chair and Members of the Union Water Supply System Joint Board of Management

From: Rodney Bouchard, Union Water Manager

Date: February 21, 2019

Re: 2018 Annual Report under the Safe Drinking Water Act and Ontario Regulation 170/03



Aim:

To present to the Board the Annual Report for 2018 as required under Regulation 170/03 made under the Safe Drinking Water Act 2002.

Background

Section 11 of Regulation 170/03 made under the Safe Drinking Water Act 2002 requires that an Annual Report be prepared for a water system and submitted to any water systems that are supplied from that water system. This is required to be done before February 28 of the following year.

Discussion

The attached Annual Report has been prepared in accordance with O. Reg. 170/03. A copy has been provided to each of the four participating municipalities therefore satisfying the requirement that it must be received before February 28, 2019.

There was one instance in 2018 when the Union Water Supply System was out of compliance with the requirements of the Safe Drinking Water Act 2002.

- May 19, 2018 - Ruthven Water Treatment Plant experienced the loss of coagulation to Clarifier #4, due to PLC failure, for 51 minutes. Maintenance personnel were called in to restore the PLC.

Recommendation:

That the Board receive the Annual Report for 2018 prepared under Section 11 of Regulation 170/03 made under the Safe Drinking Water Act 2002.

Respectfully submitted,

Rodney Bouchard, Manager
Union Water Supply System Joint Board of Management

Rb/kmj

Filename: t:\union wtr\reports to board\2019\uw08-19 annual report for 2018 (board report).docx



Ontario Clean Water Agency
Agence Ontarienne Des Eaux



Annual Performance Report

Union Area Water Supply System

Drinking Water System # 210000853

2018

Prepared for the Corporation of the Town of Kingsville, the Corporation of the Town of Essex,
the Town of Lakeshore & the Municipality of Leamington

By the Ontario Clean Water Agency
Ken Penney
Process & Compliance Technician
kpenney@ocwa.com
519-326-4447



ANNUAL REPORT

Drinking-Water System Number:	210000853
Drinking-Water System Name:	Union Area Water Supply System
Drinking-Water System Owner:	Union Area Water Supply System Joint Board of Management (Municipality of Leamington, Town of Kingsville, Town of Essex, Town of Lakeshore)
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	01-January-2018 to 31-December-2018

<p><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [<input checked="" type="checkbox"/>] No [<input type="checkbox"/>]</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [<input checked="" type="checkbox"/>] No [<input type="checkbox"/>]</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px;"> <p><i>Union Water Treatment Plant P.O. Box 340, 1615 Union Ave., Ruthven, Ont. N0P 2G0</i></p> </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <input type="text" value="N/A"/></p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [<input type="checkbox"/>] No [<input type="checkbox"/>]</p> <p>Number of Interested Authorities you report to: <input type="text" value="N/A"/></p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [<input type="checkbox"/>] No [<input type="checkbox"/>]</p>
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Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
Municipality of Leamington	220004992
Town of Kingsville	220003403
Town of Essex	220003680
Town of Lakeshore	260004995



Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?

Yes [X] No []

Indicate how you notified system users that your annual report is available, and is free of charge.

- [X] Public access/notice via the web
[] Public access/notice via Government Office
[] Public access/notice via a newspaper
[X] Public access/notice via Public Request
[] Public access/notice via a Public Library
[X] Public access/notice via other method: Municipal Offices

Describe your Drinking-Water System

The Union Water Treatment Plant (UWTP) is a chemically assisted conventional filtration plant, which draws water from Lake Erie.

The UWTP supplies potable water to the Town of Kingsville, Municipality of Leamington, a portion of the Town of Essex and a portion of the Town of Lakeshore with an estimated service population of 65,000.

The treatment process includes chemically assisted up-flow clarification, filtration with dual media filters, primary disinfection using chlorine gas and secondary disinfection using chloramination. As per approval from MOECP, the ammonia system was not in use from June 04, 2018 – December 31, 2018.

Seasonally, the UWTP uses sodium hypochlorite at its intakes to control Zebra Mussel formation.

There are also four water towers and a booster/storage station located on the Union Water Supply System.

List all water treatment chemicals used over this reporting period

Zebra Mussel Control:

- Sodium Hypochlorite – (Seasonal)

Clarification Chemicals:

- DelPac 2020 – Coagulant
DelPac XG-15 - Coagulant
Hyper+Ion 1090 – Coagulant
Magnafloc LT22S (polymer) - Coagulant Aid
Powdered Activated Carbon – Taste and Odor Control

Filtration:

- Cat-Floc 8103 Plus (polymer) – Filter Aid (Seasonal)

Disinfection:

- Primary: Chlorine Gas
Secondary: Aqua Ammonia & Chlorine (to form chloramines)

Were any significant expenses incurred to?

- Install required equipment
- Repair required equipment
- Replace required equipment

Please provide a brief description and a breakdown of monetary expenses incurred

<u>Item Description</u>	Expenditures to 2018 Year End
<u>Capital Works and Major Maintenance</u>	
Low Lift Pump #1 Major Maintenance	\$19,500
Microstrainer Floors - Microstrainer #2	\$2,941
Filter Media Replacement -Filters 6 and 8	\$119,705
Turbidity Meters for Filter Backwash	\$20,581
High Lift Pump #7 New Pump and Motor	\$0
New Kitchen/ Lunchroom	\$24,847
New Laboratory	\$0
Maintenance Shop Roof	\$26,404
Lighting Upgrades	\$8,881
Essex Water Tower Rehabilitation (interior and exterior)	\$1,128,891
Distribution System Maintenance	\$45,000
Cathodic Protection System for Leamington Water Tower	\$23,225
Security System Install	\$0
SCADA System Upgrade - Complete new system*	\$164,471
Cottam Booster Reservoir Cover Regrading **	\$11,545
High Lift #1 Motor Repair	\$0
Main Wash #1 Actuator Upgrade	\$9,340
Admin Area upgrades	\$19,261
Total Capital Works/Major Maintenance:	\$1,624,592

New Capital Works	
CO2 pH Adjustment System/ Chlorine System Improvements	\$142,395
SCADA System Upgrade - Complete new system*	\$1,055,529
Distribution System Maintenance	\$55,000
High Lift Pump #7 Install	\$85,000
Master Water Meter Communication System	\$50,000
Laboratory Upgrades	\$50,000
Security System Install	\$45,000
Turbidity Meters for Filter Backwash	\$25,000
Low Lift Pump #1 Major Maintenance	\$35,000
Maintenance Shop Roof	\$30,000
Lighting Upgrades	\$30,000
Microstrainer #2 Floor	\$30,000
Blue-Green Algae Chlorophyll Instrument – Low Lift	\$25,000
Total New Capital Works:	\$1,657,924
Total Capital Works:	\$3,282,516

Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

Incident Date	Incident description	Corrective Action	AWQI #	Corrective Action Date
May 19, 2018	Loss of coagulant	Re-initialized coagulant	139437	May 19, 2018

Note: Corrective action Date is Date of resolution.

Microbiological testing is done under Schedule 10 of Regulation 170/03, during this reporting period.

	Number of Samples	Range of Ecoli Or Fecal Results (min #)-(max #) (ct/100 mL)	Range of Total Coliform Results (min #)-(max #) (ct/100 mL)	Number of HPC Samples	Range of HPC Results (min #)-(max #) (ct/mL)
Raw	51	2 - 56	18 - 400	0	N/A
Treated	51	0 - 0	0 - 0	51	<10 - 20
Distribution	Please See Individual Annual Reports for Distribution System Information: Leamington (220004992), Kingsville (220003403), Essex (220003680), and Lakeshore (260004995).				

Operational testing is done under Schedule 7 of Regulation 170/03 during the period Covered by this annual report.

	Number of Grab Samples	Range of Results (min #)-(max #)
Turbidity	8760	0.02 – 2.0 NTU
Chlorine - Free	8760	1.21 – 2.21 mg/L
Fluoride (If the DWS provides fluoridation)	N/A	N/A

NOTE: For continuous monitors use 8760 as the number of samples.

*NOTE: Record the unit of measure if it is **not** milligrams per litre.*

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

Date of legal instrument issued	Parameter: (Suspended Solids)	Date Sampled	Result	Unit of Measure
16- Feb.- 2018 Municipal Drinking Water Licence Number: 041-101	South Settling Pond	Jan 02/18	<3.0	mg/L
	South Settling Pond	Feb 05/18	3.0	mg/L
	South Settling Pond	Mar 05/18	3.0	mg/L
	South Settling Pond	April 02/18	5.0	mg/L
	South Settling Pond	May 07/18	<3.0	mg/L
	South Settling Pond	June 04/18	<3.0	mg/L
	South Settling Pond	July 03/18	<3.0	mg/L
	North Settling Pond	July 03/18	<3.0	mg/L
	South Settling Pond	Aug 07/18	<3.0	mg/L
	North Settling Pond	Aug 07/18	<3.0	mg/L
	South Settling Pond	Sept 04/18	4.0	mg/L
	North Settling Pond	Sept 04/18	<3.0	mg/L
	South Settling Pond	Oct 01/18	<3.0	mg/L
	North Settling Pond	Oct 01/18	<3.0	mg/L
	South Settling Pond	Nov 06/18	<3.0	mg/L
	North Settling Pond	Nov 06/18	<3.0	mg/L
	South Settling Pond	Dec 03/18	8.0	
Limit 25.0 mg/L		Annual Average:	3.5	mg/L

Summary of Inorganic parameters tested during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	January 09, 2018	0.08	ug/L	No
Arsenic	January 09, 2018	0.3	ug/L	No
Barium	January 09, 2018	17.9	ug/L	No
Boron	January 09, 2018	15.0	ug/L	No
Cadmium	January 09, 2018	0.007	ug/L	No
Chromium	January 09, 2018	0.18	ug/L	No
*Lead	n/a			
Mercury	January 09, 2018	0.01	ug/L	No
Sodium	January 09, 2018	7.74	mg/L	No
Selenium	January 09, 2018	0.10	ug/L	No
Uranium	January 09, 2018	0.105	ug/L	No
Fluoride	January 09, 2018	0.09	mg/L	No
Nitrite (N)	October 15, 2018	< 0.1	mg/L	No
Nitrate (N)	October 15, 2018	< 0.1	mg/L	No
Nitrite + Nitrate (N)	October 15, 2018	0.1	mg/L	No
Ammonia (N) - Total	October 15, 2018	0.08	mg/L	No

*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems

Summary of lead testing under Schedule 15.1 during this reporting period

(Applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Number of Exceedances
Plumbing	Please See Individual Annual Reports for Distribution System Information: Leamington (220004992), Kingsville (220003403), Essex (220003680), and Lakeshore (260004995).		
Distribution	Please See Individual Annual Reports for Distribution System Information: Leamington (220004992), Kingsville (220003403), Essex (220003680), and Lakeshore (260004995).		



Summary of Organic parameters sampled during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	January 09, 2018	0.02	ug/L	No
Atrazine + N-dealkylated metabolites	January 09, 2018	0.02	ug/L	No
Atrazine	January 09, 2018	0.02	ug/L	No
Azinphos-methyl	January 09, 2018	0.05	ug/L	No
Benzene	January 09, 2018	0.32	ug/L	No
Benzo(a)pyrene	January 09, 2018	0.004	ug/L	No
Bromoxynil	January 09, 2018	0.33	ug/L	No
Carbaryl	January 09, 2018	0.05	ug/L	No
Carbofuran	January 09, 2018	0.01	ug/L	No
Carbon Tetrachloride	January 09, 2018	0.16	ug/L	No
Chlorpyrifos	January 09, 2018	0.02	ug/L	No
Desethyl atrazine	January 09, 2018	0.01	ug/L	No
Diazinon	January 09, 2018	0.02	ug/L	No
Dicamba	January 09, 2018	0.20	ug/L	No
1,2-Dichlorobenzene	January 09, 2018	0.41	ug/L	No
1,4-Dichlorobenzene	January 09, 2018	0.36	ug/L	No
1,2-Dichloroethane	January 09, 2018	0.35	ug/L	No
1,1-Dichloroethene (vinylidene chloride)	January 09, 2018	0.33	ug/L	No
Dichloromethane	January 09, 2018	0.35	ug/L	No
2-4 Dichlorophenol	January 09, 2018	0.15	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	January 09, 2018	0.19	ug/L	No
Diclofop-methyl	January 09, 2018	0.40	ug/L	No
Dimethoate	January 09, 2018	0.03	ug/L	No
Diquat	January 09, 2018	1.0	ug/L	No
Diuron	January 09, 2018	0.03	ug/L	No
Glyphosate	January 09, 2018	1.0	ug/L	No
HAA (NOTE: show latest annual average)	Please See Individual Annual Reports for Distribution System Information: Leamington (220004992), Kingsville (220003403), Essex (220003680), and Lakeshore (260004995).			

Summary of Organic parameters sampled during this reporting period or the most recent sample results continued

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Malathion	January 09, 2018	0.02	ug/L	No
MCPA	January 09, 2018	0.12	ug/L	No
Metolachlor	January 09, 2018	0.01	ug/L	No
Metribuzin	January 09, 2018	0.02	ug/L	No
Monochlorobenzene	January 09, 2018	0.3	ug/L	No
Paraquat	January 09, 2018	1.0	ug/L	No
Pentachlorophenol	January 09, 2018	0.15	ug/L	No
Phorate	January 09, 2018	0.01	ug/L	No
Picloram	January 09, 2018	1.0	ug/L	No
Polychlorinated Biphenyls(PCB)	January 09, 2018	0.04	ug/L	No
Prometryne	January 09, 2018	0.03	ug/L	No
Simazine	January 09, 2018	0.01	ug/L	No
THM (NOTE: show latest annual average)	Please See Individual Annual Reports for Distribution System Information: Leamington (220004992), Kingsville (220003403), Essex (220003680), and Lakeshore (260004995).			
Terbufos	January 09, 2018	0.01	ug/L	No
Tetrachloroethylene	January 09, 2018	0.35	ug/L	No
2,3,4,6-Tetrachlorophenol	January 09, 2018	0.20	ug/L	No
Triallate	January 09, 2018	0.01	ug/L	No
Trichloroethylene	January 09, 2018	0.44	ug/L	No
2,4,6-Trichlorophenol	January 09, 2018	0.25	ug/L	No
Trifluralin	January 09, 2018	0.02	ug/L	No
Vinyl Chloride	January 09, 2018	0.17	ug/L	No

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Parameter	Result Value	Unit of Measure	Date of Sample
None			

UW/09/19

To: Chair and Members of the Union Water Supply System Joint Board of Management

From: Rodney Bouchard, Union Water Manager

Date: February 21, 2019

Re: 2018 Summary Report for Municipalities under Regulation 170/03 made under the Safe Drinking Water Act



Aim:

To provide to the Board a Summary Report for Municipalities for 2018 as required under Schedule 22 of Regulation 170/03 made under the Safe Drinking Water Act 2002.

Background

Schedule 22 of O. Reg. 170/03 requires a water system owner to prepare a "Summary Report for Municipalities". This requirement is applicable only to large and small municipal residential water systems. The UWSS is classified as a large municipal residential water system since it provides drinking water to greater than 10,000 year round residents.

The Summary Report for the preceding year is to be prepared and issued by March 31 of the following year.

The Summary Report must be distributed by the owner of the water system. In particular it must be given to the council or board that owns the system. There are three (3) ownership cases described under the Schedule:

- If the water supply is owned by a municipality then all members of council are to receive the report.
- If owned by a municipal service board established under Section 195 of the Municipal Act, 2001 then all members of that board are to receive the report.
- If owned by a corporation then the board of directors is to receive the report.

Although not explicitly covered by any of the situations above, the UWSS Board is clearly the owner of the Union Water Supply System for the purposes of the regulation.

Also, where a water system provides potable water to another system under contract then the owner of the supplying system shall give, by March 31, a copy of the Summary Report to the system being supplied. Since UWSS provides drinking water to the local municipal drinking water systems owned and operated by the Town of Lakeshore, Town of Essex, Town of Kingsville and Municipality of Leamington

The contents of the Summary Report for Municipalities must include the following:

1. A list of the requirements of the Safe Drinking Water Act and its Regulations that the water system failed to meet during the year covered including the duration of the failure.
2. A list of the requirements of the water system's Certificate of Approval, drinking water works permit or municipal drinking water license that the water system failed to meet during the year covered including the duration of the failure.
3. A list of any Orders that the water system failed to meet during the year covered including the duration of the failure.
4. For each of the above failures, a description of the measures taken to correct the failures.
5. A summary of the quantities and flow rates of the water supplied during the year covered "including monthly average and maximum daily flows and daily instantaneous peak flow rates." (Information is to enable the owner to assess the capability of the water system to meet existing and future uses.).
6. A statement that captures the comparison of the flow information above to the rated capacity and flow rates approved in the water supply's approval.

Discussion

The attached Summary Report fulfils the requirements of Schedule 22 listed above. It will also fulfil the requirements for the municipalities when it is presented to each municipal council for the municipal water supply system supplied with water by the Union Water Supply System if council so wishes.

The UWSS and its participating municipalities were in compliance with all requirements of Ontario Drinking Water legislation and regulations in 2018, except for the noted occurrences in the Summary Report.

Recommendation

That the Board receive the Summary Report for 2018 which fulfils the requirements of Schedule 22 of Ontario Regulation 170/03; and

That the Summary Report be forwarded to the four participating municipalities namely the Town of Kingsville, Town of Essex, Town of Lakeshore, and Municipality of Leamington.

Respectfully submitted,



Rodney Bouchard, Manager
Union Water Supply System Joint Board of Management

rb/kmj

Filename: t:\union wtr\reports to board\2019\uw09-19 summary report for 2018 (board report).docx

UNION WATER SUPPLY SYSTEM SUMMARY REPORT 2018

For the Union Water Supply System
(Made under Schedule 22 of Ontario Regulation 170/03, a regulation made under
the Safe Drinking Water Act, 2002)

EXPLANATION

Schedule 22 of Ontario Regulation 170/03, a regulation made under the Safe Drinking Water Act, 2002 requires that a large municipal residential drinking-water system must provide to its board members a Summary Report on various aspects of the system before March 31 of the following year. The Union Water Supply System is classed as a large municipal residential drinking-water system and all of the municipal water systems that obtain water from it are classified as large municipal residential drinking-water systems and are therefore subject to Schedule 22.

The Summary Report must list the following:

- The requirements of the Safe Drinking Water Act, 2002 that the system failed to meet during the period covered by the Summary Report
- The requirements of the regulations made under the Safe Drinking Water Act, 2002 that the system failed to meet during the period covered by the Summary Report
- Any condition of the drinking-water system's drinking water works permit or municipal drinking water license that the system failed to meet during the period covered by the Summary Report
- Any order that the system failed to meet during the period covered by the Summary Report, the duration of any such failure and any measures that were taken to correct such failure
- A summary of the quantities and flow rates of water supplied by the drinking-water system by monthly average and maximum daily flow rates and instantaneous peak flow rates
- A comparison of actual flow rates with rated capacity and flow rates in the systems approval

A drinking-water system that supplies water to another drinking water system must provide a copy of the Summary Report to that system's owner by March 31 of the year following the year covered in the Summary Report.

The sections below details the occasions on which the Union Water Supply System (UWSS) and the connected municipal water systems failed to meet the requirements of the Safe Drinking Water Act 2002, associated regulations, system approvals and provincial officer orders in 2018.

Union Water Supply System (UWSS)

The following provides details of occurrences where the Union Water Supply System was not in compliance with the requirements of the Safe Drinking Water Act 2002, associated regulations, system approvals and provincial officer orders.

Non-Compliance Item:

The following Adverse Water Quality Incident (AWQI) identified for the Union Water Supply System.

- AWQI #139437 - May 19, 2018 loss of coagulant to Clarifier #4. It was discovered that coagulant was not flowing continuously to Clarifier #4 for 51 minutes, due to PLC failure. Maintenance personnel was called in to restore the failed PLC.

Leamington Water Distribution System

Non-Compliance Item:

The following Adverse Water Quality Incident (AWQI) identified for the Leamington Distribution System that is supplied by the Union Water Supply System.

- AWQI #139992 - June 22, 2018
- AWQI #140847 - July 20, 2018
(same for both) Adverse residual at sample station SS-L-22. Town of Leamington staff flushed affected area: the residual came up to acceptable levels in both instances.

Kingsville Water Distribution System

Non-Compliance Item:

The following Adverse Water Quality Incident (AWQI) identified for the Kingsville Distribution System that is supplied by the Union Water Supply System

There were no non-compliances or AWQIs identified for the portion of the Town of Kingsville Water Distribution System that is supplied by Union Water Supply System:

Essex Water Distribution System

Non-Compliance Item:

The following Adverse Water Quality Incident (AWQI) identified for the Essex Distribution System that is supplied by the Union Water Supply System

There were no non-compliances or AWQIs identified for the portion of the Town of Essex Water Distribution System that is supplied by Union Water Supply System:

Lakeshore Water Distribution System

Non-Compliance Item:

The following Adverse Water Quality Incident (AWQI) identified for the Lakeshore Distribution System that is supplied by the Union Water Supply System

- AWQI #139698 - June 9, 2018 adverse residual during extra sampling for conversion from chloramination to free chlorine. Lakeshore staff was contacted and flushing was conducted until acceptable residual was reached.

SUMMARY OF THE QUANTITIES AND FLOW RATES OF WATER SUPPLIED DURING THE PERIOD COVERED BY THE REPORT, INCLUDING MONTHLY AVERAGE AND MAXIMUM DAILY FLOWS, AND DAILY INSTANTANEOUS PEAK FLOW RATES

The following sections provide information in regards to the Union Water Supply System's Permit to Take Water, issued under Ontario Regulation 387/04 and Drinking Water License issued under the Safe Drinking Water Act, 2002.

Permit to Take Water

The Union Water Supply System operated under Permit to Take Water (PTTW) Number 0816-9T9SVT, which expires at the end of 2025. The PTTW has the following flow conditions:

- Maximum Allowable Amount Taken per Minute (Litres/Min) 113,650
- Maximum Allowable Amount Taken Per Day (Litres/Day) 163,656,000

The maximum amounts of raw water taken during 2018 (see Table 1 below) are as follows:

- Maximum Amount Taken per Minute in 2018 (Litres/Min) 65,456
- Maximum Amount Taken Per Day in 2018 (Litres/Day) 94,256,000

The system did not exceed the PTTW limits in 2018.

Drinking Water License

The UWSS operates under Municipal Drinking Water Licence 041-01; issue Number 4 which has been issued for the period July 21, 2014 to July 20, 2019. The Certificate of Approval and licence had the following condition:

- The drinking water system shall not be operated to exceed 124,588 m³/d (27.4 MIGD) on any calendar day, conveyed from the treatment system to the distribution system.
- The maximum daily volume of water pumped into the distribution system was 82,478 m³ (18.15 MIGD).

Tables 1A through 3B below provide the monthly average, maximum and peak flows for raw and treated water for the Union Water Supply System.

Table 1A
2018 Raw Water Taking from Lake Erie in Metric Units

	Maximum Allowed Flow Rate (m3/Day)	Average Flow (m3/Day)	Maximum Flow (m3/Day)	Maximum Flow (Litres/Day)	Maximum Allowed Flow Rate (Litres/Minute)	Peak Flow (Litres/Minute)
January	163,656	31,887	41,547	41,547,250	113,650	28,673
February	163,656	34,478	46,742	46,742,310	113,650	28,663
March	163,656	46,745	58,846	58,846,290	113,650	39,368
April	163,656	43,556	57,854	57,854,120	113,650	40,882
May	163,656	56,401	84,355	84,355,270	113,650	56,403
June	163,656	66,429	85,454	85,453,940	113,650	55,426
July	163,656	73,878	94,256	94,256,390	113,650	55,153
August	163,656	64,561	79,579	79,579,280	113,650	54,275
September	163,656	54,206	41,687	41,687,190	113,650	43,880
October	163,656	41,687	52,795	52,795,370	113,650	34,954
November	163,656	31,583	38,362	38,362,300	113,650	48,820
December	163,656	29,462	36,738	36,738,190	113,650	28,856

Table 1B
2018 Raw Water Taking from Lake Erie in Imperial Units

	Maximum Allowed Flow Rate (MGD)	Average Flow (MGD)	Maximum Flow (MGD)	Maximum Allowed Flow Rate (Gallons/Minute)	Peak Flow (Gallons/Minute)
January	36.00	7.01	9.14	25,000	6,307
February	36.00	7.58	10.28	25,000	6,305
March	36.00	10.28	12.94	25,000	8,660
April	36.00	9.58	12.73	25,000	8,993
May	36.00	12.41	18.56	25,000	12,407
June	36.00	14.61	18.80	25,000	12,192
July	36.00	16.25	20.73	25,000	12,132
August	36.00	14.20	17.50	25,000	11,939
September	36.00	11.92	9.17	25,000	9,652
October	36.00	9.17	11.61	25,000	7,689
November	36.00	6.95	8.44	25,000	10,739
December	36.00	6.48	8.08	25,000	6,347

Table 2A**2018 Treated Water Flow Into Distribution System in Metric Units**

	Maximum Allowed Flow Rate (m ³ /Day)	Average Daily Flow (m ³ /Day)	Maximum Daily Flow (m ³ /Day)	Peak Instantaneous Flow (Litres/ Second)
January	124,588	29,240	35,250	546
February	124,588	31,665	38,482	712
March	124,588	36,841	45,614	871
April	124,588	41,315	53,133	927
May	124,588	51,521	70,209	1,129
June	124,588	61,045	78,992	1,167
July	124,588	69,489	82,478	1,233
August	124,588	61,696	74,819	1,145
September	124,588	52,561	67,718	1,044
October	124,588	38,787	47,701	802
November	124,588	29,266	33,944	601
December	124,588	26,624	30,987	483

Table 2B**2018 Treated Water Flow Into Distribution System in Imperial Units**

	Maximum Allowed Flow Rate (MGD)	Average Daily Flow (MGD)	Maximum Daily Flow (MGD)	Peak Instantaneous Flow (Gallons/ Second)
January	27.4	6.43	7.76	120
February	27.4	6.97	8.47	157
March	27.4	8.10	10.04	192
April	27.4	9.09	11.69	204
May	27.4	11.33	15.45	248
June	27.4	13.43	17.38	257
July	27.4	15.29	18.15	271
August	27.4	13.57	16.46	252
September	27.4	11.56	14.90	230
October	27.4	8.53	10.49	176
November	27.4	6.44	7.47	132
December	27.4	5.86	6.82	106

Table 3A
2018 Treated Flow to Local Municipalities in Metric Units

	<u>Leamington</u>		<u>Kingsville</u>		<u>Essex</u>		<u>Lakeshore</u>	
	Monthly Total (m3)	Average Day (m3/day)	Monthly Total (m3)	Average Day (m3/day)	Monthly Total (m3)	Average Day (m3/day)	Monthly Total (m3)	Average Day (m3/day)
January	449,036	14,485	307,329	9,914	59,480	1,919	37,901	1,223
February	454,972	15,689	326,663	11,264	53,984	1,862	31,957	1,102
March	543,023	17,517	419,638	13,537	52,455	1,692	30,898	997
April	649,702	21,657	671,015	22,367	70,778	2,359	39,954	1,332
May	734,691	23,700	671,518	21,662	61,525	1,985	35,141	1,134
June	992,661	33,089	720,181	24,006	80,361	2,679	52,122	1,737
July	1,165,664	37,602	935,489	30,177	93,819	3,026	57,042	1,840
August	973,568	31,405	608,791	19,638	79,418	2,562	42,631	1,375
September	1,071,255	35,709	619,877	20,663	74,901	2,497	46,108	1,537
October	680,504	21,952	385,759	12,444	58,142	1,876	34,937	1,127
November	548,265	18,276	312,427	10,414	63,862	2,129	37,901	1,263
December	379,001	12,226	282,547	9,114	47,088	1,519	33,181	1,070
Total	8,642,342	23,609	6,261,234	17,100	795,813	2,175	479,773	1,311

Table 3A
2018 Treated Flow to Local Municipalities in Imperial Units

	<i><u>Leamington</u></i>		<i><u>Kingsville</u></i>		<i><u>Essex</u></i>		<i><u>Lakeshore</u></i>	
	Monthly Total (Imperial Gallons)	Average Day (MGD)	Monthly Total (Imperial Gallons)	Average Day (MGD)	Monthly Total (Imperial Gallons)	Average Day (MGD)	Monthly Total (Imperial Gallons)	Average Day (MGD)
January	98,774,111	3.19	67,602,929	2.18	13,083,771	0.42	8,337,054	0.27
February	100,079,849	3.45	71,855,815	2.48	11,874,820	0.41	7,029,557	0.24
March	119,448,361	3.85	92,307,455	2.98	11,538,487	0.37	6,796,610	0.22
April	142,914,461	4.76	147,602,665	4.92	15,568,983	0.52	8,788,651	0.29
May	161,609,427	5.21	147,713,310	4.76	13,533,608	0.44	7,729,939	0.25
June	218,354,894	7.28	158,417,673	5.28	17,676,949	0.59	11,465,237	0.38
July	256,410,234	8.27	205,778,812	6.64	20,637,295	0.67	12,547,486	0.40
August	214,155,021	6.91	133,915,299	4.32	17,469,518	0.56	9,377,509	0.30
September	235,643,157	7.85	136,353,878	4.55	16,475,917	0.55	10,142,342	0.34
October	149,689,953	4.83	84,855,117	2.74	12,789,452	0.41	7,685,066	0.25
November	120,601,440	4.02	68,724,332	2.29	14,047,676	0.47	8,337,054	0.28
December	83,368,565	2.69	62,151,651	2.00	10,357,912	0.33	7,298,800	0.24
Total	1,901,049,473	5.19	1,377,278,936	3.76	175,054,387	0.48	105,535,306	0.29

UW/10/19

To: Chair and Members of the Union Water Supply System Joint Board of Management

From: Rodney Bouchard, Union Water Manager

Date: February 22, 2019

Re: Payments for the UWSS from January 11 to February 22, 2019



Aim:

To provide the Board with a copy of payments made by the Union Water Supply System from January 11 to February 22, 2019.

Recommendation:

For information purposes.

Respectfully submitted,



Rodney Bouchard, Manager
Union Water Supply System Joint Board of Management

rb/kmj

Filename: t:\union wtr\reports to board\2019\uw10-19 payments from jan to feb 2019.docx



Vendor : 0011450 To PT00000151

Batch : All

Department : All

Cheque Print Date : 17-Jan-2019 To 18-Jan-2019

Bank : 07 To 08

Class : All

Vendor Invoice	Vendor Name Description				Batch Invc Date	Invc Due Date	Amount
G.L. Account	CC1 CC2 CC3 GL Account Name						
DEPARTMENT 0700 Union Water System							
030004 C3 WATER INC							
201812-288	WATER MODELING UPDATES				707 31-Dec-2018	17-Jan-2019	
70-5-0700-7989	002075			Operational Programs & Studies			1,228.03
030215 CANADIAN WATER AND WASTEWATER ASSOCIATION							
33343	2019 CWWA MEMBERSHIP				25 01-Jan-2019	17-Jan-2019	
70-5-0700-7020	002070			Dues, Memberships and Subscriptions			1,772.97
030217 CANADIAN WATER NETWORK							
2019CMWC16	2019 STUDIES MEMBERSHIP				25 01-Jan-2019	17-Jan-2019	
70-5-0700-7989	002075			Operational Programs & Studies			25,000.00
180325 RICOH CANADA INC							
SCO92231717	COPIER CONTRACT - NOV20-DEC21				707 31-Dec-2018	17-Jan-2019	
70-5-0700-7010	002070			Office Supplies			88.25
190755 SUN LIFE ASSURANCE COMPANY OF CANADA							
JAN-19	JAN/19 UNION WATER LOAN 3724:1				25 01-Jan-2019	17-Jan-2019	
70-5-0700-6000	002020 006901			Debenture Principal			26,968.22
70-5-0700-6100	002010 006901			Debenture Interest			112,969.78
Department Totals :							168,027.25



Vendor : 0011450 To PT00000151
 Batch : All
 Department : All

EFT Paid Date : 17-Jan-2019 To 18-Jan-2019
 Bank : 07 To 08
 Class : All

Vendor Code	Vendor Name				Batch	Inv Date	Inv Due Date	
Invoice No.	Description							Amount
G.L. Account	CC1	CC2	CC3	GL Account Name				
DEPARTMENT 0700				Union Water System				
080250				HYDRO ONE NETWORKS INC				
200141677460-I	DEC/18	HYDRO - RUTHVEN WATER TREATMENT			706	31-Dec-2018	17-Jan-2019	
70-5-0700-7420		002073		Electricity				45,723.75
200141680692-I	DEC/18	HYDRO - LOW LIFT			706	31-Dec-2018	17-Jan-2019	
70-5-0700-7420		002073		Electricity				-5.07
70-5-0700-7420		002073		Electricity				21,933.81
200152134969-I	DEC/18	HYDRO - METER#17			706	31-Dec-2018	17-Jan-2019	
70-5-0700-7420		002073		Electricity				-2.72
70-5-0700-7420		002073		Electricity				38.44
Department Totals :								67,688.21

MUNICIPALITY OF LEAMINGTON
Council/Board Report By Dept-(Computer)



AP5130
 Date : Jan 25, 2019

Page 38 of 43
 Time : 9:33 am

Vendor : 0011450 To PT00000151
 Batch : All
 Department : All

Cheque Print Date : 24-Jan-2019 To 24-Jan-2019
 Bank : 07 To 08
 Class : All

Vendor Invoice	Vendor Name Description	Batch	Inv Date	Inv Due Date	Amount
G.L. Account	CC1 CC2 CC3 GL Account Name				
DEPARTMENT 0700	Union Water System				
997507	JDC.CA INC				
10438	COMMUNICATION UPGRADES	714	30-Dec-2018	24-Jan-2019	
70-7-0700-8775	Communication System				203.40
10439	COMMUNICATION UPGRADES	714	30-Dec-2018	24-Jan-2019	
70-7-0700-8775	Communication System				584.07
150365	ONTARIO CLEAN WATER AGENCY				
INV000110485	2018 CAPITAL/CHEMICAL RECONCILABLE	714	31-Dec-2018	24-Jan-2019	
70-5-0700-6720	002071 OCWA Operating Contract				30,565.99
160592	PUBLIC SECTOR DIGEST INC				
11355	2019 CITYWIDE ASSET MANAGER SOFTWARE	33	11-Jan-2019	24-Jan-2019	
70-5-0700-7260	002070 002131 Software Licensing & Support				3,111.00
230089	WATSON & ASSOCIATES ECONOMISTS LTD				
0024904	WATER RATE STUDY-FIN.PLAN O.REG.453/07	714	31-Dec-2018	24-Jan-2019	
70-5-0700-7950	002070 Professional Services				7,219.34
230440	WILLIS BUSINESS LAW				
9778	LEGAL FEES - RESTRUCTURING	714	31-Dec-2018	24-Jan-2019	
70-5-0700-7950	002070 Professional Services				1,863.31
Department Totals :					43,547.11

MUNICIPALITY OF LEAMINGTON
Council/Board Report By Dept-(EFT)



AP5130

Date :

Jan 25, 2019

Page 39 of 43
 Time : 9:38am

Vendor : 0011450 To PT00000151
Batch : All
Department : All

EFT Paid Date : 24-Jan-2019 **To** 24-Jan-2019
Bank : 07 To 08
Class : All

Vendor Code	Vendor Name				Batch	Inv Date	Inv Due Date	Amount
Invoice No.	Description							
G.L. Account	CC1	CC2	CC3	GL Account Name				
DEPARTMENT 0700 Union Water System								
080250 HYDRO ONE NETWORKS INC								
200208899066-I	DEC/18 HYDRO - METER #16				713	31-Dec-2018	24-Jan-2019	
70-5-0700-7420		002073		Electricity				-13.65
70-5-0700-7420		002073		Electricity				192.80
210120 UNION GAS LTD								
1929770177678	1218.025M3 GAS - COTTAM BOOSTER STATION				713	31-Dec-2018	24-Jan-2019	
70-5-0700-7410		002073		Gas				333.47
Department Totals :								512.62



Vendor : 0011450 To PT00000151
 Batch : All
 Department : All

Cheque Print Date : 07-Feb-2019 To 07-Feb-2019
 Bank : 07 To 08
 Class : All

Vendor Invoice	Vendor Name Description	Batch	Inv Date	Inv Due Date	Amount
G.L. Account	CC1 CC2 CC3 GL Account Name				
DEPARTMENT 0700 Union Water System					
010103 ASSOCIATED ENGINEERING (ONT) LTD					
525229	SCADA UPGRADES - JAN11	59	18-Jan-2019	07-Feb-2019	
70-7-0700-8780	SCADA System				6,610.50
040070 DEVINE & ASSOCIATES LIMITED					
55225	VC#9 DISTRIBUTION VALVE	59	23-Jan-2019	07-Feb-2019	
70-7-0700-8750	002203 Watermains				9,382.08
130838 MUNICIPALITY OF LEAMINGTON					
530-17700	FEE TAXES - LEAMINGTON WATER TOWER	59	06-Feb-2019	07-Feb-2019	
70-5-0700-6750	002072 Property Tax				843.21
150365 ONTARIO CLEAN WATER AGENCY					
INV000110677	LEAM WATER TOWER REHAB - SEP27	727	27-Sep-2018	07-Feb-2019	
70-7-0700-8715	Leamington Water Tower				12,453.45
INV000110925	LEAM WATER TOWER REHAB (WARRANTY)	727	31-Dec-2018	07-Feb-2019	
70-7-0700-8715	Leamington Water Tower				3,104.53
190635 STANTEC CONSULTING LTD					
1347101	COTTAM BOOSTER - RESERVOIR COVER - DEC31	727	31-Dec-2018	07-Feb-2019	
70-7-0700-8775	Communication System				3,298.13
190893 SYLVAN AUTOMATION LTD					
S95784	CLARIFIER #1&3 FLOW METERS	59	16-Jan-2019	07-Feb-2019	
70-7-0700-8720	700001 Clarifiers				3,062.87
70-7-0700-8720	700003 Clarifiers				3,062.86
230690 WJF INSTRUMENTATION (1990) LTD					
222785	CLARIFIER #3&4 TURBIDITY METER	59	17-Jan-2019	07-Feb-2019	
70-7-0700-8720	700003 Clarifiers				6,780.00
70-7-0700-8720	700004 Clarifiers				6,780.00
Department Totals :					55,377.63



Vendor : 0011450 To PT00000151
 Batch : All
 Department : All

EFT Paid Date : 07-Feb-2019 To 07-Feb-2019
 Bank : 07 To 08
 Class : All

Vendor Code	Vendor Name	Description			Batch	Inv Date	Inv Due Date	Amount
Invoice No.		CC1	CC2	CC3				
G.L. Account		GL Account Name						
DEPARTMENT 0700 Union Water System								
080250 HYDRO ONE NETWORKS INC								
200141681706-	JAN/18 HYDRO - METER#2				60	28-Jan-2019	07-Feb-2019	
70-5-0700-7420		002073		Electricity				-3.43
70-5-0700-7420		002073		Electricity				48.43
200141683524-	JAN/19 HYDRO - METER#8				60	28-Jan-2019	07-Feb-2019	
70-5-0700-7420		002073		Electricity				-3.08
70-5-0700-7420		002073		Electricity				43.40
200141683726-	JAN/19 HYDRO - METER#15				60	24-Jan-2019	07-Feb-2019	
70-5-0700-7420		002073		Electricity				-3.43
70-5-0700-7420		002073		Electricity				48.96
200141687362-	JAN/19 HYDRO - METER#22				60	28-Jan-2019	07-Feb-2019	
70-5-0700-7420		002073		Electricity				-2.28
70-5-0700-7420		002073		Electricity				32.15
200141687766-	JAN/19 HYDRO - METER#29				60	28-Jan-2019	07-Feb-2019	
70-5-0700-7420		002073		Electricity				-3.00
70-5-0700-7420		002073		Electricity				42.45
200141687867-	JAN/19 HYDRO - METER#24				60	28-Jan-2019	07-Feb-2019	
70-5-0700-7420		002073		Electricity				-2.28
70-5-0700-7420		002073		Electricity				32.15
200141690190-	JAN/19 HYDRO - METER#26				60	25-Jan-2019	07-Feb-2019	
70-5-0700-7420		002073		Electricity				-4.40
70-5-0700-7420		002073		Electricity				62.09
190185 SGS CANADA INC. ENVIRONMENTAL SERVICES								
11216376	WATER QUALITY STUDIES CORROSION-UWSS				60	30-Jan-2019	07-Feb-2019	
70-5-0700-7989		002075		Operational Programs & Studies				520.93
11216762	WATER QUALITY STUDIES CORROSION-LAKESHORE				60	30-Jan-2019	07-Feb-2019	
70-5-0700-7989		002075		Operational Programs & Studies				98.31
11216818	WATER QUALITY STUDIES CORROSION-LEAMINGTON				60	30-Jan-2019	07-Feb-2019	
70-5-0700-7989		002075		Operational Programs & Studies				98.31
11216826	WATER QUALITY STUDIES CORROSION-KINGSVILLE				60	30-Jan-2019	07-Feb-2019	
70-5-0700-7989		002075		Operational Programs & Studies				98.31
210120 UNION GAS LTD								
1929770217397	2239.413M3 GAS - LOW LIFT				60	24-Jan-2019	07-Feb-2019	
70-5-0700-7410		002073		Gas				588.32
Department Totals :								1,691.91



Vendor : 0011450 To PT00000165
 Batch : All
 Department : All

Cheque Print Date : 21-Feb-2019 To 21-Feb-2019
 Bank : 07 To 08
 Class : All

Vendor Invoice	Vendor Name Description	Batch	Inv Date	Inv Due Date	Amount
G.L. Account	CC1 CC2 CC3 GL Account Name				
DEPARTMENT 0700	Union Water System				
010094 ASL ROTEQ LTD					
4526 REPAIR LOW LIFT PUMP#1		92	31-Jan-2019	21-Feb-2019	
70-7-0700-8735 700050 Low Lift Station					16,340.93
010103 ASSOCIATED ENGINEERING (ONT) LTD					
525357 SCADA UPGRADES - FEB8		92	13-Feb-2019	21-Feb-2019	
70-7-0700-8780 SCADA System					3,046.59
525359 CO2 WATER PH ADJUSTMENT - FEB8		92	13-Feb-2019	21-Feb-2019	
70-7-0700-8745 700200 Treatment Plant					7,331.89
030004 C3 WATER INC					
201901-288 WATER MODELING UPDATES		92	15-Feb-2019	21-Feb-2019	
70-5-0700-7989 002075 Operational Programs & Studies					2,746.75
030256 CARMEN'S CATERING SERVICE INC					
6836 LUNCHEON		92	22-Jan-2019	21-Feb-2019	
70-5-0700-7052 002070 Meeting Expenses					293.80
050003 E.L.K. ENERGY INC					
40010915-JAN JAN/19 HYDRO - ESSEX WATER TOWER		79	01-Feb-2019	14-Feb-2019	
70-5-0700-7420 002073 Electricity					-9.52
70-5-0700-7420 002073 Electricity					134.50
40047150-JAN JAN/19 HYDRO - METER#9		79	01-Feb-2019	14-Feb-2019	
70-5-0700-7420 002073 Electricity					-2.50
70-5-0700-7420 002073 Electricity					35.37
51976611-JAN JAN/19 HYDRO - KINGSVILLE WATER TOWER		79	01-Feb-2019	14-Feb-2019	
70-5-0700-7420 002073 Electricity					-20.80
70-5-0700-7420 002073 Electricity					293.83
90006300-JAN JAN/19 HYDRO - COTTAM BOOSTER STATION		79	02-Feb-2019	14-Feb-2019	
70-5-0700-7420 002073 Electricity					2,540.31
130360 METCON SALES & ENGINEERING LTD					
4005290 CHLORINE ANALYZERS		92	11-Feb-2019	21-Feb-2019	
70-7-0700-8795 Water Quality/Level Instrumentation					26,476.13
150365 ONTARIO CLEAN WATER AGENCY					
INV000110614 JAN/19 OPER&MTCE		92	31-Jan-2019	21-Feb-2019	
70-5-0700-6720 002071 OCWA Operating Contract					241,376.00
180325 RICOH CANADA INC					
SCO92268441 COPIER CONTRACT - DEC21-JAN30		92	31-Jan-2019	21-Feb-2019	
70-5-0700-7010 002070 Office Supplies					98.86
190755 SUN LIFE ASSURANCE COMPANY OF CANADA					
FEB-19 FEB/19 UNION WATER LOAN 3724:1		81	19-Feb-2019	21-Feb-2019	
70-5-0700-6000 002020 006901 Debenture Principal					27,205.23
70-5-0700-6100 002010 006901 Debenture Interest					112,732.77
230043 WALKERTON CLEAN WATER CENTRE					
3044352 DWQMS TRAINING - APR16&17		92	28-Jan-2019	21-Feb-2019	
70-5-0700-7040 002070 Training					1,028.30
230440 WILLIS BUSINESS LAW					
9950 LEGAL FEES - RESTRUCTURING		92	31-Jan-2019	21-Feb-2019	
70-5-0700-7950 002070 Professional Services					8,376.92

Department Totals : 450,025.36



Vendor : 0011450 To PT00000165
 Batch : All
 Department : All

EFT Paid Date : 21-Feb-2019 To 21-Feb-2019
 Bank : 07 To 08
 Class : All

Vendor Code	Vendor Name					Batch	Inv Date	Inv Due Date	Amount
Invoice No.	Description								
G.L. Account	CC1	CC2	CC3	GL Account Name					
DEPARTMENT 0700	Union Water System								
080250	HYDRO ONE NETWORKS INC								
200141677460-	JAN/19 HYDRO - RUTHVEN WATER TOWER				78	06-Feb-2019	21-Feb-2019		
70-5-0700-7420	002073			Electricity				43,315.73	
200141680692-	JAN/19 HYDRO - LOW LIFT				78	06-Feb-2019	21-Feb-2019		
70-5-0700-7420	002073			Electricity				-4.29	
70-5-0700-7420	002073			Electricity				20,301.92	
200152134969-	JAN/19 HYDRO - METER#17				78	06-Feb-2019	21-Feb-2019		
70-5-0700-7420	002073			Electricity				-2.68	
70-5-0700-7420	002073			Electricity				37.91	
200208899066-	JAN/19 HYDRO - METER#16				78	13-Feb-2019	21-Feb-2019		
70-5-0700-7420	002073			Electricity				-11.78	
70-5-0700-7420	002073			Electricity				166.38	
130620	MONARCH OFFICE SUPPLY INC								
133502	BINDERS, PENS, PAPER, PAPER CUPS				78	31-Jan-2019	21-Feb-2019		
70-5-0700-7010	002075			Office Supplies				90.33	
210120	UNION GAS LTD								
1929770177678	1344.923M3 GAS - COTTAM BOOSTER				78	11-Feb-2019	21-Feb-2019		
70-5-0700-7410	002073			Gas				362.47	
Department Totals :								64,255.99	