



JOINT BOARD OF MANAGEMENT

Wednesday, May 18, 2022

9:00 AM

Zoom

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, April 20, 2022
Pages 2 - 7

D. Business Arising Out of the Minutes

E. Items for Consideration:

1. UW/11/22 dated May 13, 2022 re: Status Update of UWSS Operations & Maintenance Activities and Capital Works to May 13, 2022
Pages 8 - 35
2. UW/12/22 dated May 12, 2022 re: UWSS-WUC Water Supply Emergency Servicing Study - Next Steps
Pages 36 - 42
3. Correspondence from Nevan Developments dated May 11, 2022 re: Ruthven Hamlet - Settlement Area (1529 Union Avenue)
Page 43

F. New Business:

G. Adjournment:

H. Date of Next Meeting: June 15, 2022, 9:00 am To be discussed

/kmj



MINUTES

Members Present Mayor MacDonald (Vice-chair); Deputy Mayor Verbeke, Councillors Dunn, Hammond, Jones Tiessen - Leamington
Mayor Santos (Chair), Deputy Mayor Queen, Councillor DeYong, Patterson - Kingsville
Councillor VanderDoelen - Essex
Councillor Walstedt - Lakeshore

Also in Attendance: Rodney Bouchard, Union Water Supply System Manager
Khristine Johnson, Recording Secretary

Municipal Staff Present: Andrew Plancke, Shaun Martinho - Town of Kingsville
Albert Dionne, Krystal Kalbol - Municipality of Lakeshore
Laura Rauch - Municipality of Leamington

OCWA Staff Present: Dale Dillen, Robin Trepanier
Ken Penney

Auditors Present Ashely Meyer - Hicks, MacPherson, latonna, Driedger LLP

OGVG Rob Petro

Call to Order: 9:02 am

Disclosure of Pecuniary Interest: none

Adoption of Board Minutes:

No. UW-17-22

Moved by: Deputy Mayor Verbeke

Seconded by: Councillor Dunn

That the Minutes of the UWSS Joint Board of Management meeting of Wednesday, March 16, 2022 is received.

Carried

Business Arising out of Minutes:

There was none

Report UW/09/22 dated April 14, 2022 re: Status Update of the UWSS Operations and Maintenance Activities and Capital Works to April 14, 2022

The Manager reviews his report with the Board. He explains that on April 5th a leak was found on the 24" raw water transmission main at the water treatment plant (WTP). DiMenna Excavating was retained to assist with the repairs. OCWA staff were able to complete the necessary repairs on the exposed waterline. The couplings were tightened and then a corrosion protection system (Denso) was wrapped around. The watermain was never out of service during the times of repair.

Four (4) new hydrant pressure/temperature monitoring devices have been ordered and received. Three will be located in Kingsville and one in Essex. Installation should be completed by April 21st.

The Manager reminds members that the Low Lift Pump #7 rehabilitation work is still ongoing and is scheduled for re-install later in the week and then returned to service. High Lift Pump #9 has been rehabilitated and ready for installation. OCWA staff will require a crane to reinstall this pump so the motor can be lifted back into place. Some parts are on back order and therefore this pump likely won't return to service until the first week of May 2022.

Operations staff noticed a significant vibration coming from High Lift Pump #6. Inspection indicated that the bearings needed replacing and the pump needed to be rebalanced as well. DTM assisted with these repairs and the pump was returned to service at the end of March.

Another pump, High Lift Pump #4, required refurbishment. This pump was sent to Phasor in Kingsville and should be reinstalled shortly.

The Manager informs the board that on March 31st the current coagulant supplier informed OCWA that they would no longer be able to supply UWSS with the DelPAC coagulant that is currently used. This change would be effective at the end of April. ControlChem is located in Ohio and indicated that it would not be able to supply Canadian customers. Therefore, OCWA/UWSS secured a similar coagulant from Kemira Water Solutions out of Brantford. Operations started transitioning over to SternPAC on April 13th. The north tank was cleaned out in preparation for the new coagulant. Operations staff took this opportunity to put in new tank covers upgrade the system.

The Ministry of Environment, Conservation and Parks (MECP) has given UWSS a risk rating of 100% on its annual inspection that was completed on February 24, 2022.

The Manager provides an update on the DAF project. He notes that the weather has not been cooperative during this project, however, things are still moving along. There have also been delays with material shipments however, the last of the containers are currently

Minutes of the Union Water Supply System Joint Board of Management

Date: April 20, 2022

Page 3

in Toronto and should arrive on site by the end of the week. The next four (4) weeks will be quite busy on the project site.

He notes that new aluminum stairs and access hatch for the blowdown chamber have been installed. The focus over the next four (4) weeks will concentrate on the auxiliary building, blowdown chamber, DAF Tank and electrical work. He also confirms that this project is approximately four (4) weeks behind.

Finally, the Manager notes that the flows are down at this point of the year as the weather has been considerably cooler and wetter.

Councillor Patterson ask the Manager if all watermain repairs are using Denso as a form of corrosion control. He notes that it is more expensive but does a great job. The operations Manager notes that there is not a policy set in stone to use Denso, but he believes a lot of distribution staff use it as it provides peace of mind.

Councillor Jones asks for clarification on the change in coagulant. He would like to know if this was a shipping issue or a legislative issue. The Manager notes that the change did take staff by surprise as this coagulant worked best at the time. However he explains that having a supplier only 3.5 hours away in Brantford and not having to cross the border is a good change and Kemira is a reputable company with a very similar product.

The Chair asks for clarification on the waste product of the new coagulant. The Operations Manager explains that there is a small concern that the this new coagulant won't perform as well, but notes that there are ways to tweak the coagulation process to make it work for effectively. In the past there have been issues with the aluminum residual in the hot summer weather from other coagulants used in the past. This will be closely monitored.

No. UW-18-22

Moved by: Deputy Queen

Seconded by: Councillor Walstedt

That Report dated April 14, 2022 re: Status Update of the UWSS Operations and Maintenance Activities and Capital Words to April 14, 2022 is received.

Carried

Report UW/10/22 dated April 12, 2022 re: UWSS 2021 Financial Report

Director of Finance and Business Services for the Municipality of Leamington, Laura Rauch, was in attendance to provide members of the Board with her report. Ms. Rauch noted that the auditor, Ashley Meyer of HMID, was present as well.

She directed members to highlights of her report, noting the following

- Financial Assets increased by \$719,000, primarily due to cash
- Financial Liabilities increased by \$721,000, as a result of increased amounts owing for related party transactions

- Non-financial assets have increased by \$7.0 million which includes 2021 capital additions
- Capital asset purchases include Land, DAF, KWT rehabilitation, Filter Replacement/Rehab and Low Lift Station rehabilitation
- The 2021 ending balance of accumulated surplus under PSAB has increased by \$5.5 million

The auditors have provided their opinion that this report is a fair representation of the UWSS's financial position as of December 31, 2021.

No. UW-19-22

Moved by: Councillor Hammond

Seconded by: Councillor Tiessen

That the 2021 Financial Report for the Union Water Supply System Joint Board of Management is approved.

Carried

Ashely Meyer leaves the meeting.

Presentation by the UWSS Manager on the results of the UWSS-WUC Emergency Water Supply Study

The Manager reminds members of the ongoing study between UWSS and Windsor Utilities Commission (WUC) to determine whether either water system could supply the other in the case of an emergency situation.

He notes that the study was conducted with UWSS and WUC with the assistance of consulting firms Stantec and C3 Water. The object of the study was to determine whether or not the risk to each system could be reduced in an emergency by improving existing interconnects between the systems or adding new infrastructure..

The scope of the study looked at the water treatment plants, pump stations, elevated storage facilities, water model review, and population projections and then provided a report with a summary of findings.

The study looked at just providing enough water to allow each system to basically keep things running until any emergency was over. In the case of the WUC they would experience a significantly reduced demand due to the smaller available capacity of UWSS. WUC would be able to meet UWSS' average day demand. In such cases, restrictions would be placed on was uses to lower demands to the appropriate emergency servicing levels.

The Manager noted there is a significant hydraulic gradient difference between both systems, with UWSS being at a higher gradient than WUC. This would mean that WUC would require pumps to push the water back up and over to the UWSS system.

The Manager then reviewed the four (4) short listed options provided for in the engineering consultants report. He reviewed each option and the costs of each potential option. He does explain that the costs for any option are quite high, but reviews how some of the options could be beneficial to UWSS and the areas north of the system and reminds members that costs would be shared with WUC.

Councillor Jones asks if other systems in Ontario have this type of redundancy in place, and if so how is this type of project funded. The Operations Manager explains that through the DWQMS system there is a risk assessment conducted and is reviewed every three (3) years. Many other municipalities that have this type of emergency redundancy in place fund such projects through their funding model.

Councillor Walstedt and Hammond both have to leave the meeting.

Again, the Manager reminds members that this is a solution for linking the two (2) systems for emergency purposes only. Not with the intent of ever becoming one system. He notes that there could be grant funding available for such an interesting and dynamic project.

The Chair and Vice Chair provide their opinions, noting that being prepared for any potential emergency is forward thinking and should be considered. UWSS doesn't want to find out too late that they weren't prepared.

Councillor Tiessen notes that any of the industries locally losing water during some of the key summer months could be absolutely devastating for our area. He further explains that everyone carries insurance for their cars and homes, why not consider this idea as an insurance policy for the UWSS.

Councillor DeYong, considers who is paying for the growth within the UWSS. Does this fall back on the ratepayers? She notes that since the governance/restructuring agreement for UWSS has not been sorted out as of yet, does UWSS really want to start getting into a complicated agreement with the WUC? The Manager notes that the system is always at risk due to our water storage issues, the system is old and issues are always creeping up. He does also note that restructuring is moving along nicely, with his intent to go before councils in June of 2022 with the hopes that UWSS Corp. would be live by January 2023.

Councillor VanderDoelen notes that the 3rd option presented seems logical. He notes that spending slightly more money to obtain better emergency coverage seems prudent.

Deputy Mayor Verbeke asks whether consideration was given to interconnects to other smaller systems surrounding UWSS. The Manager notes that all of the other systems are too small to be able to provide a significant amount of water to UWSS.

The Manager indicates he is looking for direction from the Board as to what next steps might look like and whether this should be explored further.

No. UW-20-22

Moved by: Deputy Mayor Queen

Seconded by: Councillor Jones

That the presentation UWSS-WUC Emergency Water Supply Study is received; and

That the Manager bring a follow up report to the Board at the May 2022 Board meeting, with the potential to consider moving forward with more details.

Carried

New Business:

No new business

Adjournment:

No. UW-21-22

Moved by: Councillor Dunn

Seconded by: Councillor Tiessen

Time: 10:15 am

Date of Next Meeting: May 18th, 2022 (TBD)

/kmj

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

From: Rodney Bouchard, UWSS General Manager

Date: May 13, 2022

Re: Status Update of UWSS Operations & Maintenance Activities and Capital
Works to May 13, 2022



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 April 20, 2022.

Discussion:

The UWSS General 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. Filter #6 flow control actuator failed on April 21st. This was an air actuated valve, it has now been converted to an electrically controlled actuator.
2. Four new “fixed” hydrant pressure/temperature monitoring devices were installed on April 21, 2022 to complement the existing real-time pressure monitoring network that is being developed by the UWSS with support from local municipalities. Three of the new hydrant monitoring devices were installed in Kingsville and one in Essex. An additional 10 smart hydrant devices are being ordered for installation in July 2022. These will be divided between the 4 municipalities. UWSS/OCWA staff are working with local municipal water staff to identify best locations for installation of these devices.

UWSS also has 10 seasonal hydrant smart monitoring devices. These will be reinstalled during the week of May 16th at selected locations identified by UWSS/OCWA/municipal staff. The seasonal devices are also equipped to transmit pressure data in real-time.

3. Low Lift Pump #7 rehab work is complete and the pump was reinstalled by OCWA staff during the week of April 25-29, 2022. The pump is ready to be used, however, it is being kept idle at this time until pump balancing services can be completed. These services will be completed at the same time for all pumps that have recently been/ or just completing rehabilitation including High Lift pump #4. The balancing work should be completed by end of May 2022.
4. High Lift pump #9 is still inoperative. Air relief valve parts for this pump are still on back order. UWSS and OCWA staff are reaching out to other water plants in the province to try and secure these components. Otherwise, the back ordered parts are not anticipated until August 2022 at the earliest.

Re: UW/11/22 - Status Update of UWSS Operations & Maintenance Activities and Capital Works to May 13, 2022

5. The new Pipe Scan analyzer has been installed at Albuna water Tower. This work was completed on April 26 and 27 by the supplier, Aquatic Life, Ltd. This unit replaces three existing chlorine analyzers, pressure transmitters and provide addition chemical analysis such as, pH, Turbidity, temperature, UV254 and TOC. The data and analytics can be observed in real-time.
6. Main wash #2 flow control valve will be converted from pneumatic to an electric actuator. Parts will be delivered Thursday May 19th, 2022.
7. Leamington Tower will be taken out of service May 30th for some cathodic protection work and an internal inspection. It will be offline for a week to allow for disinfection procedures. Municipality of Leamington water department staff have been notified of this work.
8. Reservoir #2 has a suspected leak. Watech services has been retained to conduct reservoir inspection. This work will occur the last week of May or first week of June.
9. DAF Phase 1 Update: The Auxiliary building work is moving along. Spray foam insulation work has been completed Brick work is scheduled for the week of May 16th. Saturation skids have been delivered and are situated in the auxiliary building. Piping work and electrical work will occur over the next 4 weeks to tie in the saturations skids to the water line and recirculation piping between the DAF tank and auxiliary building.

The majority of the DAF system components have been received. A few hardware pieces are yet to be delivered but should be received in the next week or so.

The DAF tank wall extension work is basically complete. Concrete for the wall extension was poured on May 12, 2022. Concrete strength testing will continue until the necessary strength is achieved to proceed with installation of DAF tank components (approx. 5-7 days after the pour).

Installation of the center pipe column and bridge on DAF tank is scheduled for the week ending May 20, once concrete strength testing is adequate.

The work for next 4 weeks will focus on installation of DAF tank equipment, installation of all DAF related equipment in auxiliary building; installation of electrical MCC; completion of electrical and piping work.

Completion of the DAF project is running 8-10 weeks behind schedule. This is mostly attributed to manufacturing and shipping delays related to COVID supply chain issues. The DAF system start up is anticipated for late July 2022 and will include a 30-day testing run as per the contract.

A copy of the weekly progress report for the week ending May 6th, 2022, prepared by UWSS' consultant (Associated Engineering) site inspector, is attached to this report.

Re: UW/11/22 - Status Update of UWSS Operations & Maintenance Activities and Capital Works to May 13, 2022

The first chart shows comparative flows for 2018 through 2022 in Mega Litres (ML) and the second chart shows Millions of Imperial Gallons (MIG) for the period January 1st to May 12, 2022.

	2018	2019	2020	2021	2022
Flow to Date (ML)	4,765.56	4,821.81	5,407.75	6,236.43	6,105.01
Max Day (ML)	59.00	55.08	65.55	64.70	77.95
Min Day (ML)	23.56	20.13	25.44	26.74	27.58
Average Day (ML)	36.10	36.53	40.66	47.25	46.25
No of Days	132	132	133	132	132

	2018	2019	2020	2021	2022
Flow to Date (MG)	1048.30	1060.67	1189.56	1371.85	1343.61
Max Day (MGD)	12.98	12.12	14.42	14.23	17.15
Min Day (MGD)	5.18	4.43	5.60	5.88	6.07
Average Day (MGD)	7.94	8.04	8.94	10.39	10.18
No of Days	132	132	133	132	132

Flows to date are down 131.42 ML (28.24 MIG) or 2% from last year. The 2022 flows to date are up 15% over the previous 4 year average.

Recommendation:

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

Respectfully submitted,



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

/kmj

Filename: t:\union wtr\reports to board\2022\uw11-22 uwss operations report for may 2022.docx

Prepared By:	Sommer Lee, SI/CA	Date:	2022-05-09	File:	2020-5461.05.05
		Report No.:	33	Proj. No.	2020-5461
		Report Period:	2022-05-02 to 2022-05-06		
		Client :	Union Water Supply System (UWSS)		
		Client Contact :	Rodney Bouchard		
		Project:	UWSS Ruthven WTP DAF Retrofit Project Phase 1		

PROGRESS REPORT

TOTAL DAYS ON SITE THIS WEEK	DAYS LOST TO WEATHER THIS WEEK	REMAINING DAYS TO CONTRACT COMPLETION
5	1	As of 2022-05-09 , 16 days to contract completion (Original Contract Completion 2022-05-17 + 8 days lost to weather → Revised Contract Completion of 2022-05-25) (Note the contract completion will be adjusted pending completed compilation of Notices 2 and 3 from Contractor)

KEY EQUIPMENT ON SITE

QTY.	NAME	USE	DAYS IN OPERATION
1	Crawler Loader	N/A	N/A
1	Crane	N/A	N/A
1	Skid Steer	N/A	N/A
1	Excavator	N/A	N/A
1	Plate Compactor	N/A	N/A
1	Jumping Jack Compactor	N/A	N/A
1	Bulldozer	N/A	N/A
1	Dump Truck	N/A	N/A
1	Mini Excavator	N/A	N/A
2	Telescopic Handler	General Cleaning/set-up	2022-05-02 to 2022-05-06
2	Skyjack	DAF No. 1 Tank Works Spray Foam Insulation Application on Auxiliary Building	2022-05-02 to 2022-05-05
	Miscellaneous Tools & Equipment		2022-05-02 to 2022-05-06

KEY DELIVERIES TO SITE

DATE	MATERIALS / EQUIPMENT DELIVERED	NOTES
2022-05-02	• Napier Reid DAF Equipment - Packing List 4	• Sludge Scrapers, scum skimmers, remaining effluent trough pieces
2022-05-02	• Spray Foam – Auxiliary Building	• Insulthane Extreme
2022-05-04	• DAF Saturation Skid	• Saturation Skid including compressors, saturation tank,

WORK COMPLETED

DATE & WEATHER	SUMMARY OF WORK	ASSOCIATED PHOTOS
2022-05-02 Cloudy 14°C/8°C	• Maple accepting a delivery (Packing List 4). Due to Union of Operating Engineers strike (see “Issues that may lead to Delay in Project Delivery”), the previously booked crane was cancelled by the crane operator on 2022-05-01 and Maple unloaded the delivery with a telescopic handler.	1 – 22

	<ul style="list-style-type: none"> • Maple and Velez cutting ends of rebar around DAF No. 1 Tank to provide adequate concrete cover. • Maple and Velez installing 2x4's for formply support for DAF No. 1 Tank wall extension on interior walls. Maple commencing form tie installation. • Cutting Edge Insulation commencing spray foam insulation (Insulthane Extreme) application on cavity of exterior concrete walls of the Auxiliary Building – completed ~70% of the first 2" insulation on the exterior walls. • Maple Electric installing conduit on the DAF Bridge. • Stonhard on site to observe the cured epoxy flooring within the Auxiliary Building – no concerns noted. 	
2022-05-03 Cloudy with Moderate – Heavy Rain 12°C/8°C	<ul style="list-style-type: none"> • Maple and Velez completing installing 2x4's for formply support for DAF No. 1 Tank wall extension on interior walls. Maple completing form tie installation. • Maple and Velez cutting 2x4's for formply support for DAF No. 1 Tank exterior walls. • Maple commencing formwork on the centre cone for DAF No. 1 Tank. • Maple Electric commencing rough-ins for electrical conduit within the Auxiliary Building. • Maple installing the Victaulic coupling to connect a short spool piece on the DAF No. 1 Influent line in the Valve Room. • Adam Luffman from Urethane Foam Consultants (UFC) on site to conduct a third-party inspection of the spray foam insulation (to-date) on the Auxiliary Building. Samples taken for density and uniformity. Minimal few areas marked due to hollowness (lack of adhesion) to block walls. No major concerns noted during inspection. 	22– 41
2022-05-04 Cloudy with Light Rain 14°C/2°C	<ul style="list-style-type: none"> • Velez leveling and completed aligning chamfer strip on the interior DAF No. 1 Tank walls. • Maple surveying DAF No. 1 Tank to confirm the saturation piping penetration through wall prior to placing pipe sleeve. • Maple and Velez commencing exterior formply install for DAF No. 1 Tank walls. • Maple applying adhesive and waterstop along the DAF No. 1 Tank walls. • Maple accepting the DAF saturation skid delivery into the Auxiliary Building. • Maple Electric continuing rough-ins for electrical conduit within the Auxiliary Building. • Maple Electric continuing conduit installs on the DAF Bridge. 	42– 55

2022-05-05 Partly Cloudy 14°C/8°C	<ul style="list-style-type: none"> Maple continuing exterior formply install for DAF No. 1 Tank walls. Maple continuing applying adhesive and waterstop along the DAF No. 1 Tank walls. Maple Electric continuing conduit installs on the DAF Bridge. Maple covered the DAF No. 1 Tank walls with tarp in anticipation of rain tomorrow. Cutting Edge Insulation completing spray foam insulation (Insulthane Extreme) application on cavity of exterior concrete walls of the Auxiliary Building. Napier Reid on site to work on Scum Troughs (installing scum trough supports) and inspecting DAF equipment. 	56 – 79
2022-05-06 Rainy 14°C/7°C	<ul style="list-style-type: none"> Maple Electric continuing conduit installs within the Auxiliary Building. Napier Reid on site to inspect laydown / storage of DAF equipment. Few notes made to contractor on storing center well pieces side by side and storing scum troughs open side up. Maple cutting 2 x 4's for exterior formply supports. 	80 – 82

KEY CONTRACTORS AND SUBCONTRACTORS ON SITE

- Maple Reinders Constructors Ltd. (Maple), 2022-05-02 to 2022-05-06
- Maple Electric, 2022-05-02 to 2022-05-06
- NJS Excavation (NJS), N/A
- Velez Construction (Velez), 2022-05-02 to 2022-05-04
- Tarpon, N/A
- Lakeshore / Lake Erie Concrete Supply, N/A
- AGF, N/A
- KT Excavating, N/A
- Jake's Crane Service, N/A
- Moir Crane Service, N/A
- Brevon Concrete Cutting and Coring, N/A
- Red Line Contracting, N/A
- Gillett Roofing, N/A
- Vito Masonry, N/A
- Cutting Edge Insulation, 2022-05-02 and 2022-05-05
- Aluma Safway, N/A
- Napier Reid, 2022-05-05 to 2022-05-06
- Greatario, N/A
- Prestressed Systems Incorporated (PSI), N/A
- Earl S Ross, N/A
- Stonhard, 2022-05-02

VISITORS AND PURPOSE OF VISIT:

- Adam Luffman, General Manager (Urethane Foam Consultants) – Spray Foam Insulation Inspection for Auxiliary Building (2022-05-03)

REQUESTED REVISIONS OR INTERPRETATIONS, FIELD INSTRUCTIONS, CHANGE DIRECTIVES

- None to note during this period.

NONCONFORMING WORK REPORTED TO CONTRACTOR:

- None to note during this period.

ISSUES THAT MAY LEAD TO DELAYS IN PROJECT DELIVERY:

- Notice regarding Union of Operating Engineers Rejection of Union Contract Agreement (Notification from Union to Contractors on 2022-05-02). Impacts to construction logistics may be expected i.e. crane & equipment rentals, excavation, foundation, etc. (Issued from Maple on 2022-05-05).

ATTACHMENTS AND OTHER INSPECTION/OBSERVATION REPORTS:

- None to include during this period.

PHOTOS



1. DAF Delivery – Scum Troughs (2022-05-02)



2. DAF No. 1 Tank – Interior Form (2022-05-02)



3. DAF No. 1 Tank – Interior Form (2022-05-02)



4. DAF No. 1 Tank – Interior Form (2022-05-02)



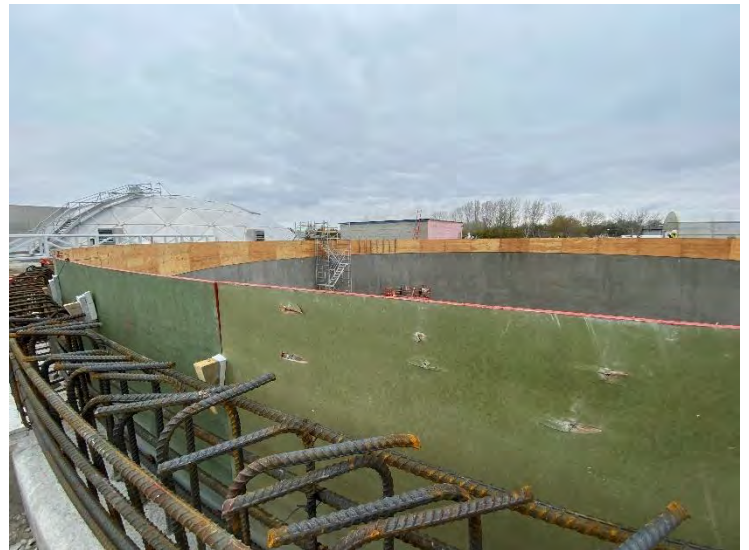
5. DAF Delivery – Scum Scrappers (2022-05-02)



6. DAF Delivery – Weir Plates (2022-05-02)



7. DAF Delivery – Scum Scrappers (2022-05-02)



8. DAF No. 1 Tank – Interior Form (2022-05-02)



9. DAF No. 1 Tank – Interior Form (2022-05-02)



10. DAF No. 1 Tank – Interior Form (2022-05-02)



11. DAF No. 1 Tank – Saturation Pipe Reinforcement (2022-05-02)



12. Auxiliary Building – Spray Foam Insulation (2022-05-02)



13. Auxiliary Building – Spray Foam Insulation (2022-05-02)



14. Auxiliary Building – Spray Foam Insulation (2022-05-02)



15. Auxiliary Building – Spray Foam Insulation (2022-05-02)



16. Auxiliary Building – Spray Foam Insulation (2022-05-02)



17. Auxiliary Building – Spray Foam Insulation (2022-05-02)



18. Auxiliary Building – Spray Foam Insulation (2022-05-02)



19. Auxiliary Building – Spray Foam Insulation (2022-05-02)



20. Auxiliary Building – Spray Foam Insulation (2022-05-02)



21. Auxiliary Building – Spray Foam Insulation (2022-05-02)



22. DAF No. 1 Tank – Interior Forms and Support (2022-05-02)



23. Auxiliary Building – Spray Foam Insulation Inspection (2022-05-03)



24. DAF No. 1 Tank – Interior Forms and Support and Form ties (2022-05-03)



25. Auxiliary Building (2022-05-03)



26. DAF No. 1 Tank – Interior Forms and Form Ties (2022-05-03)



27. DAF No. 1 Tank – Interior Forms and Form Ties (2022-05-03)



28. DAF No. 1 Tank – Interior Forms and Supports (2022-05-03)



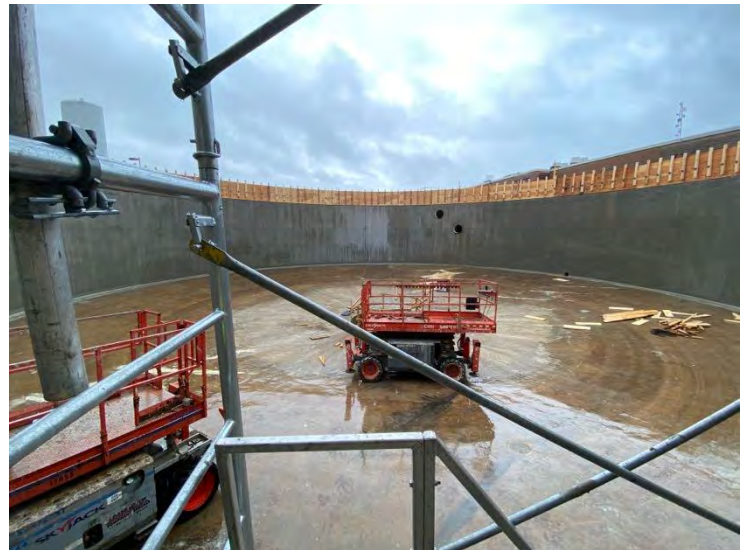
29. DAF No. 1 Tank – Interior Forms and Supports with Form tie (2022-05-03)



30. DAF No. 1 Bridge – Conduit (2022-05-03)



31. Conduit for DAF No. 1 Bridge (2022-05-03)



32. DAF No. 1 Tank – Interior Forms (2022-05-03)



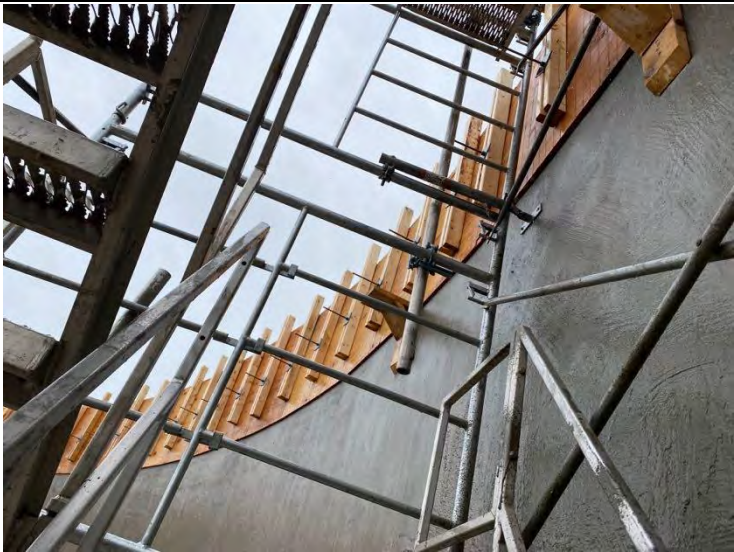
33. DAF No. 1 Tank – Interior Forms (2022-05-03)



34. DAF No. 1 Tank – Interior Forms (2022-05-03)



35. DAF No. 1 Tank – Interior Forms (2022-05-03)



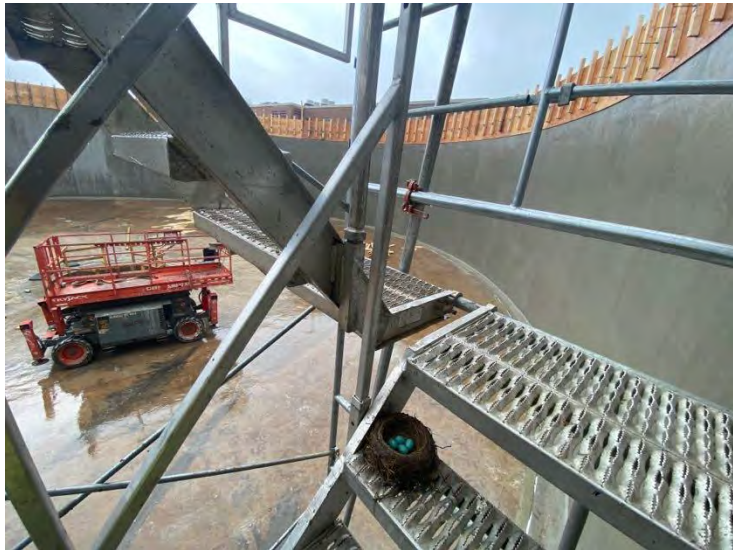
36. DAF No. 1 Tank – Interior Forms (2022-05-03)



37. DAF No. 1 Tank – Interior Forms on Walls and Centre Cone Form (2022-05-03)



38. DAF No. 1 Tank – Interior Forms (2022-05-03)



39. DAF No. 1 Tank – Stairs with Bird Nest (2022-05-03)



40. DAF No. 1 Tank – Interior Forms (2022-05-03)



41. Auxiliary Building and Accessway (2022-05-03)



42. Auxiliary Building – Spray Foam Third Party Inspection Hollow Area Marked Out (2022-05-04)



43. Auxiliary Building – Spray Foam Third Party Inspection Hollow Area Marked Out (2022-05-04)



44. Auxiliary Building – Spray Foam Third Party Inspection Sampling Area (2022-05-04)



45. Auxiliary Building – Spray Foam Third Party Inspection Sampling Area (2022-05-04)



46. DAF No. 1 Tank (2022-05-04)



47. DAF No. 1 Saturation Skid (2022-05-04)



48. DAF No. 1 Saturation Skid (2022-05-04)



49. DAF No. 1 Saturation Skid (2022-05-04)



50. DAF No. 1 Saturation Skid (2022-05-04)



51. Valve Room – DAF No. 1 Influent Line Pipe Spool and Gasket for Victaulic Coupling (2022-05-04)



52. DAF No. 1 Tank – Interior Formply Chamfer Strip (2022-05-04)



53. DAF No. 1 Tank – Interior Formply Chamfer Strip (2022-05-04)



54. DAF No. 1 Tank – Interior Formply Chamfer Strip (2022-05-04)



55. DAF No. 1 Tank – Interior Formply Chamfer Strip (2022-05-04)



56. DAF No. 1 Tank (2022-05-05)



57. DAF No. 1 Tank (2022-05-05)



58. DAF No. 1 Tank (2022-05-05)



59. DAF No. 1 Tank – Exterior Form (2022-05-05)



60. DAF No. 1 Tank – Exterior Form (2022-05-05)



61. DAF No. 1 Tank (2022-05-05)



62. Auxiliary Building – Spray Foam (2022-05-05)



63. DAF No. 1 Tank – Spool with Partial Flange for Saturation Pipe (2022-05-05)



64. Water Stop (2022-05-05)



65. Water Stop Adhesive (2022-05-05)



66. Auxiliary Building – Spray Foam (2022-05-05)



67. Auxiliary Building – Spray Foam at Block Connector (2022-05-05)



68. Auxiliary Building – Spray Foam (2022-05-05)



69. Auxiliary Building – Spray Foam at Block Connector (2022-05-05)



70. Auxiliary Building – Spray Foam (2022-05-05)



71. Auxiliary Building – Spray Foam and Vapour Barrier Intersection / Overlap (2022-05-05)



72. Auxiliary Building – Spray Foam and Vapour Barrier Intersection / Overlap (2022-05-05)



73. Auxiliary Building – Spray Foam and Vapour Barrier Intersection / Overlap (2022-05-05)



74. Auxiliary Building – Spray Foam and Vapour Barrier Intersection / Overlap (2022-05-05)



75. Auxiliary Building – Spray Foam and Vapour Barrier Intersection / Overlap (2022-05-05)



76. DAF No. 1 Tank – Walls Tarped (2022-05-05)



77. DAF No. 1 Tank – Bent Plate with Nelson Studs Welded and Attached to Rebar (2022-05-05)



78. DAF No. 1 Tank – Bent Plate with Nelson Studs Welded and Attached to Rebar (2022-05-05)



79. DAF No. 1 Tank (2022-05-05)



80. DAF No. 1 Bridge – Conduit Supports (2022-05-06)



81. DAF No. 1 Bridge – Conduit (2022-05-06)



82. DAF No. 1 Tank – Bent Plate for Bridge and Dome Edge(2022-05-06)

UW/12/22

Report

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

From: Rodney Bouchard, Union Water Manager

Date: May 12, 2022

Re: UWSS-WUC Water Supply Emergency Servicing Study - Next
Steps



Recommendation:

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

And further, that the Board agrees to a joint meeting between the UWSS Board and Windsor Utilities Commission (WUC) Board to review and identify next steps in regards to the UWSS-WUC Water Supply Emergency Servicing work.

Background:

At the October 21st, 2020 UWSS Board meeting, the UWSS Board approved the undertaking of joint study by UWSS and Windsor Utilities Commission (WUC) to investigate the potential for future water supply servicing between these two water systems to address emergency situations that would require partial or full shutdown of a water treatment plant for one of the systems. A budget of \$140,000 was approved for this study, of which UWSS would be reimbursed \$70,000 by WUC for the work. A copy of report UW26-20 UWSS-WUC Water Supply Emergency Servicing Study is attached to this report.

A consultant team consisting of C3 Water, Inc. and Stantec Consulting was retained to complete the work. The study consisted of a review of existing infrastructure for the two water systems and connection of both systems' hydraulic models. The goal of the study was to identify the feasibility of hydraulically interconnecting both systems for emergency water supply and identifying capital improvements that would be needed to achieve emergency level water servicing should an unplanned water treatment plant shutdown occur in one of the water systems.

UWSS and WUC/ENWIN staff met on numerous occasions with the consultant team to review background data and identify alternatives for considerations. The consultant team, led by C3 Water issued a Technical Memorandum on December 22, 2021 for review by UWSS and WUC/ENWIN. The technical memorandum summarized the data and information reviewed, hydraulic analyses undertaken and identified a short list of 4 alternatives for consideration. The technical memo also provided an opinion of probable costs for each of the 4 short listed alternatives.

Discussion:

A meeting was held on April 6, 2022 with the UWSS General Manager, Chair and Vice Chair of UWSS, Chair of WUC, CEO of ENWIN/WUC and Vice-President of Water Services for ENWIN/WUC. The purpose of this meeting was to provide an opportunity for UWSS and WUC/ENWIN staff to present the results of the C3 Water Technical Memorandum and identify the best identified alternative for interconnecting both water systems for emergency water supply redundancy. At this meeting, the respective water system Chairs, Vice-Chairs and executives agreed that the results of this study and list of emergency water supply servicing alternatives should be presented to respective Boards.

At the April 20, 2022 UWSS Board meeting, the UWSS General Manager gave a presentation to the UWSS Board that provided the results of the study, as per the December 22, 2021 C3 Water Technical memorandum. The UWSS General Manager's presentation summarized the work that was completed, scenarios that were considered, short list of emergency servicing alternatives that were identified, benefits and drawbacks of each alternative and provided an opinion of probable cost for each identified alternative.

The UWSS Board received the presentation and directed the UWSS General Manager to report back to the Board at the May 2022 Board meeting with recommendations on next steps for the study.

The UWSS General Manager was informed by ENWIN/WUC staff that the WUC Board was also informed of the study results at a meeting of the WUC Board on April 27, 2022.

In subsequent discussions between pertinent UWSS and WUC/ENWIN staff, it was agreed that a joint meeting of both the UWSS and WUC Boards should be held to establish next steps for this work.

Concluding Comments:

The results of the UWSS-WUC Emergency Water Supply Redundancy study as provided in the consultant's December 22nd, 2022 Technical Memorandum identifies a short list of 4 alternatives and associated costs, that could be implemented to address the lack of water supply redundancy for UWSS should an emergency arise. In light of the potential threats to the UWSS system, such as a large toxic algal bloom in Lake Erie that could

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Re: UWSS-WUC Water Supply Emergency Servicing Study - Next Steps

result in the extended shut-down of the Ruthven Water Treatment Plant and consequences associated with not have an emergency backup water supply, the UWSS General Manager believes that further work should be undertaken in regards to the identified emergency water supply redundancy alternatives between UWSS and WUC. The UWSS General Manager recommends that the UWSS Board hold a joint meeting with the WUC Board to establish the next steps for this work.

Respectfully submitted,



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

rb/kmj

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UW/26/20

Report

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

From: Rodney Bouchard, Union Water Manager

Date: October 6, 2020

Re: UWSS-WUC Water Supply Emergency Servicing Study



Recommendation:

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

And further, that the Board approves a budget of \$140,000 to be funded from the 2020 UWSS Operations Budget for to undertake the UWSS-WUC Water Supply Emergency Servicing Study;

And further, that the UWSS Board authorizes the UWSS General Manager to enter into a funding agreement with the Windsor Utilities Commission/ ENWIN to reflect that the UWSS-WUC Water Supply Emergency Servicing Study will be equally funded between UWSS and WUC;

And further, that the UWSS Board authorizes the UWSS General Manager to undertake a direct negotiation with C3 Water, Inc. for the UWSS-WUC Water Supply Emergency Servicing Study;

Background:

In 1992 the Ministry of the Environment (MOE) contracted consultants LaFontaine, Cowie, Burratto and Associates Limited to conduct an Essex County Water Study. The study reviewed all drinking water treatment facilities and distribution systems within the County of Essex and provided recommendations on future planning and development of alternatives to provide and/or improve water service throughout various municipalities.

The two largest drinking water utilities in Essex County, Union Water Supply System (UWSS) and Windsor Utilities Commission (WUC), are investigating opportunities that will ensure that our customers are protected against any disruption in water supply. It was agreed that both utilities would partner to undertake a study to investigate the potential for water supply servicing between these two water systems during an emergency

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Re: UWSS-WUC Water Supply Emergency Servicing Study

situation that would require partial or full shutdown of a water treatment plant for one of the systems.

Discussion:

On September 10, 2019 the UWSS General Manager attended a meeting at the City of Windsor's City Hall to discuss potential interconnectivity between the Windsor Utilities Commission water system and the UWSS' water system to ensure water supply to both water systems' customers during emergency situations. The driver for this meeting was due to a recent "near miss" situation in the Detroit River that threatened the drinking water intake for the WUC's only water treatment plant. Had the incident occurred, the WUC's drinking water system would likely have been taken out of service for an extended period of time. Since the WUC water system does not have a redundant water supply, this would have resulted in a serious water shortage emergency for the system. It was noted during this meeting that the UWSS is in a similar position should an incident require the shutdown of the UWSS' drinking water intakes in Lake Erie. An example of such an incident could be a large toxic algal bloom in Lake Erie that would require an extended shutdown of the UWSS drinking water intakes.

As a result of this meeting and follow up discussions between WUC/ENWIN and UWSS administration, WUC/ENWIN and UWSS are committed to undertake a joint study to investigate the possibility for further interconnection of the UWSS and WUC water systems that would allow one water system to supply the minimum amount of water to support the other water system in an emergency situation.

During a meeting on July 22nd, 2020 between the UWSS General Manager and Enwin Vice President of Water Operations, it was agreed that it would be best to retain a consultant with in-depth knowledge of the area water systems and hydrodynamic water modelling expertise to complete this work. It was noted that water modelling would be the main component of this study. A consultant team approach was identified as the best option for this study. The proposed team would include the following consultants:

- C3 Water Inc: C3 Water Inc. is a consulting firm that specializes in water system engineering services including expertise in hydrodynamic water modeling for municipal drinking water systems. C3 Water recently completed the update to the UWSS water model for the larger distribution system supplied by UWSS. C3 Water Since water modeling was deemed to be the larger component of this proposed study, it was agreed that C3 Water would be the lead consultant on the consulting team.
- Stantec Consulting - Windsor Office: Stantec Consulting senior staff from their Windsor office have been involved in many Essex area water supply system projects over the last 30 years both as part of Stantec and as part of Lafontaine, Cowie, Burratto and Associates before this firm was amalgamated into Stantec Windsor. . Mr. Tony Berardi, the current Managing Director of Stantec Windsor has been involved in area water system projects (including UWSS) since the days

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of LaFontaine, Cowie, Burratto and Associates Limited. Mr. Berardi possesses a vast knowledge of the interconnections between the Essex region water system. Mr. Berardi, through Stantec, will serve as technical advisor on the consultant team so that we can access his knowledge and engineering expertise.

As part of the meeting of July 22nd, 2020, it was also agreed that UWSS would take the lead on this study in regards to consultant procurement and financial management. UWSS would retain the consultant and pay consultant invoices. UWSS would then in turn invoice WUC/Enwin for half of the consultant costs for this study.

On August 31, 2020 a meeting was held between UWSS General Manager, WUC/Enwin Vice President of Water Operations, C3 Water Inc Vice-President (Mr. Samuel Ziemman) and Stantec (Mr. Tony Berardi) to set the consulting team arrangements and study goals.

It is anticipated that the completion of this Study will provide a blueprint and starting point for the UWSS and WUC boards to begin discussions and planning for a redundant system that at minimum benefits the two entities in regards to emergency water supply servicing. It is expected that the Study will provide recommendations on possible connections or future infrastructure that would provide the UWSS and WUC systems some redundancy in order to provide drinking water to their customers in the event of an unforeseen disruption. These recommendations will include considerations for different factors such as:

- a. Raw Water back up supply and estimated costs associated with the implementation;
- b. Drinking water connections to provide supply between the two systems that can provide emergency service and estimated costs associated with the implementation;
- c. Any facilities/storage requirements to provide that supply to all municipalities serviced by Union and WUC and estimated costs associated with the implementation;
- d. Any changes or additional treatment requirements in order to ensure compatibility of treated water supplied to either system

Financial Impact:

The UWSS General Manager requested a proposal from the C3 Water/Stantec team for this study. At this time, this proposal was solicited solely from this consultant team due to their in-depth knowledge of Essex Region water supply systems, expertise in hydrodynamic water modeling for municipal drinking water systems, previous work experience between UWSS and these consultants.

Based on C3 Water/Stantec's proposal, the costs for undertaking the UWSS-WUC Water Supply Emergency Servicing Study is \$133,421. Although UWSS would manage the study from a financial perspective, half of the study cost will be recouped from WUC.

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Re: UWSS-WUC Water Supply Emergency Servicing Study

It should be noted that as part of the 2020 UWSS Budget, UWSS Board approved \$30,000 to undertake this study. Since the proposal has identified a cost of \$133,421 for this study, the UWSS General Manager recommends that the UWSS Board approves a new budget of \$140,000 to fund this study. Again, it is noted that UWSS will recoup up to \$70,000 of the study costs from WUC.

Closing Comments:

In light of the potential threats to the UWSS system, such as a large toxic algal bloom in Lake Erie that could result in the extended shut-down of the Ruthven Water Treatment Plant and consequences associated with not have an emergency backup water supply, the UWSS General Manager believes that the completion of this Study would provide a good starting point to develop a strategy to ensure that UWSS customers will continue to have a safe and secure source of drinking water.

Respectfully submitted,



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



May 11, 2022
Union Water Supply System
1615 Union Avenue
Box 340
Ruthven, ON
N0P 2G0

Attn: Mr. Rodney R. Bouchard
General Manager

Re: Ruthven Hamlet - Settlement Area

Dear Mr. Bouchard

Further to our previous discussions, we are writing this letter to you as our formal request to obtain board authorization concerning U.W.S.S. property located at 1529 Union Avenue (County Road 45), in the Town of Kingsville. Specifically in reference to the release of approximately 6 Acres of existing residential settlement area land designation as identified in the Town of Kingsville's official plan, which is currently occupied by Greenhouse structure for agricultural use.

As such this letter serves as an official notice to you of our intention to request that the Town of Kingsville remove this residential 6 Acre portion of the property (see attached plan) currently designated as Ruthven residential hamlet land use on their official plan and re-allocate/transfer this designation over to our proposed development property (Hope Valley Estates) located at 1478 Road 2 East. There is no cost for this to proceed, all we request is that you provide your board approved signed authorization thus agreeing to the land re-designation as stated herein.

Yours truly,

A handwritten signature in blue ink, appearing to read 'R. Molliconi', enclosed within a blue oval.

Robert Molliconi, P.Eng
Nevan Developments Inc.

cc: Mr. Richard J.H. Wyma, CSLA, Director of Community and Development Services
Town of Kingsville

Nevan Developments Inc.
950 Seaclyff Drive Kingsville Ontario N9Y 2K9
P: 519-733-3332 F: 519-733-6514