



**JOINT BOARD OF
MANAGEMENT**
Wednesday, March 16, 2022
9:00 AM
Virtually in 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, February 16, 2022
Pages 2 - 5

D. Business Arising Out of the Minutes

E. Items for Consideration:

1. UW/06/22 dated March 11, 2022 re: Status Update of UWSS Operations & Maintenance Activities and Capital Works to March 10, 2022
Pages 6 - 20
2. UW/07/22 dated March 9, 2022 re: Extension of Moratorium on Applications UWSS Treated Water Allocations
Pages 21 - 29
3. UW/08/22 dated March 10, 2022 re: MECP Drinking Water Inspection Report for the UWSS - February 2022 Inspection
Pages 30 - 52

F. New Business:

G. Adjournment:

H. Date of Next Meeting: Wednesday, April 20, 2022, Virtually in Zoom

/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: Kevin Girard, Andy Graf - Town of Essex
Andrew Plancke, Shaun Martinho - Town of Kingsville
Albert Dionne - Municipality of Lakeshore
Laura Rauch, Shannon Belleau - Municipality of Leamington

OCWA Staff Present: Dale Dillen, Robin Trepanier, Susan Budden
Ken Penney, Dave Jubenville

Call to Order: 9:00 am

Disclosure of Pecuniary Interest: none

Adoption of Board Minutes:

No. UW-06-22

Moved by: Deputy Mayor Verbeke

Seconded by: Councillor Dunn

That the Minutes of the UWSS Joint Board of Management meeting of Wednesday, January 19, 2022 is received.

Carried

Business Arising out of Minutes:

There was none

Report UW/03/22 dated February 11, 2022 re: Status Update of the UWSS Operations and Maintenance Activities and Capital Works to February 11, 2022

The Manager reviews his report with members of the Board. He explains that Clarifier #1 was put back into service on February 4, 2022. It had been out of service for winter maintenance and valve work. The chemical blanket was in place by February 14th and the clarifier is now back in full service, this is good news as flows are starting to increase.

The new flange and piping were installed in the valve room during the week of February 4th. This project was a bit challenging in sourcing the necessary parts but operations staff worked with the contractors on site to secure the items needed. The Manager notes that some of the filters were offline for maintenance and the valve work. He anticipates that the filters will be back online in the coming weeks. He further notes that there has been a string of back luck with operational parts breaking over the last little bit. Staff is working hard to maintain these items.

New radar level transmitters were installed on Filters 1-4, while they were out of service, and on influent channel #1. He explains that these transmitters are more responsive to changes and will improve the efficiency of the filters.

The Manager reminds the members of the hydrant pressure monitoring system in place throughout the UWSS supplied distribution systems. He further notes that some of the hydrants monitors have failed due to a processor/board issue. The equipment supplier has completed the upgrades and the new hardware will be installed this week. A few more hydrants monitors will be added this year in areas where watermain breaks tend to occur.

Work on the former lab and the new washroom area is expected to start in the coming weeks.

The Manager provides an update on the DAF project. He notes that there has been some delays in the shipping of some of the materials, as they are coming from overseas. This does put the project a few weeks behind. He explains that there are weekly meetings and engineering staff is tracking and monitoring the supply chains. He notes that the project is about 2-3 weeks behind. Once the project has been completed in April, the Manager indicates that it will take approximately 2-3 weeks to bring the system online. He notes that the auxiliary building is moving ahead and the piping work is being done.

Part of the DAF system is scheduled to arrive on Feb. 18. The remaining components are scheduled to arrive in early to mid-March. The Manager directs the Board to the latest DAF report provided by Associated Engineering to see how the project is progressing.

The Low Lift pump #7 rehabilitation is ongoing by OCWA maintenance staff, as part of their maintenance program. The Manager notes that High Lift pumps #7 and #8

Minutes of the Union Water Supply System Joint Board of Management

Date: February 16, 2022

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components failed. Parts are somewhat difficult to get but staff seems to be managing the situation well.

The Manager notes that flows are similar to last year and it is too early in the year to determine any pattern.

No. UW-07-22

Moved by: Deputy Mayor Queen

Seconded by: Councillor Jones

That Report UW/03/22 dated February 11, 2022 re: Status Update of the UWSS Operations and Maintenance Activities and Capital Works to February 11, 2022 is received.

Carried (UW/03/22)

Report UW/04/22 dated February 11, 2022 re: 2021 Annual Report under the Safe drinking Water Act and Ontario Regulation 170/03

This report is provided to the Board each year as a requirement under the Safe Drinking Water Act. The report is then posted to the public and provided to the municipalities. The report contains details regarding weekly sampling for raw water and treated water, systems operations and upgrades that have taken place throughout the Union Water Supply System. The Manager notes that there was no areas of non-compliance for the year 2021.

No. UW-08-22

Moved by: Councillor Patterson

Seconded by: Councillor Walstedt

That Report dated February 11, 2022 re: 2021 Annual Report under the Safe Drinking Water Act and Ontario Regulation 170/03 is received.

Carried (UW/04/22)

Report UW/05/22 dated February 11, 2022 re: 2021 Summary Report for Municipalities under Regulation 170/03 made under the Safe Drinking Water Act

The Manager notes that this report is another yearly report that is to be provide to the Board and owners of the water system. This report provides more specific details regarding the flows pertaining to raw and treated water within the Union Water Supply System. This report also provides information pertaining to whether the UWSS was out of conformance. The Manager notes that there was one item within the Lakeshore zone, but was more of a sampling issue.

No. UW-09-22

Moved by: Councillor Hammond

Seconded by: Councillor Tiessen

That report UW/05/22 dated February 11, 2022 re: 2021 Summary Report for Municipalities under Regulation 170/03 made under the Safe Drinking Water Act is received.

Carried (UW/05/22)

New Business:

The Manager notes that Susan Budden, former OCWA business manager for UWSS was participating in today's meeting and wanted to address the Board. Susan speaks to the Board and thanks them for the opportunity to work with UWSS over the years. She looks forward to seeing members and upcoming conferences.

The Chair thanks Susan for her years of service to UWSS.

Adjournment:

No. UW-10-22

Moved by: Councillor Dunn

Seconded by: Councillor DeYong

Date of Next Meeting: March 16, 2022 - virtually in zoom.

/kmj

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

From: Rodney Bouchard, UWSS General Manager

Date: March 11, 2022

Re: Status Update of UWSS Operations & Maintenance Activities and Capital
Works to March 11, 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 February 16, 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. The Ministry of Environment, Conservation and Parks (MECP) conducted and inspection of the UWSS drinking water system on February 24, 2022. The MECP Inspection report was issued on March 2nd, 2022. No issues were identified during the inspection.
2. Four (4) new hydrant pressure/temperature monitoring devices have been ordered. These will complement the existing real-time pressure monitoring network that is being developed by the UWSS with support from local municipalities. The new hydrant monitoring devices will be installed in in early April 2022 in Kingsville (3) and Essex (1) in areas where additional water pressure information would be beneficial.
3. Annual filter maintenance has been completed on Filters #1-#4. These filters were disinfected and returned to service during the first week of March 2022.
4. Leamington water tower is scheduled for an inspection in early April 2022. Repairs are also needed to the corrosion protection system installed within the water tower. This work will be conducted contiguous to the inspection. The water tower will need to be drained to complete the repairs. UWSS and OCWA will work with Leamington water department staff to minimize any impact to the Leamington water system as a result of this work.
5. DAF Phase 1 Update: Masonry work is underway for the new auxiliary building and will continue until the 3rd week of March. Installation of new influent and effluent pipe is being completed. The contractor has assembled most of the components for the new bridge that will span the DAF basin. The work for next 4 weeks will focus on completion of the building block walls, installation of building's precast roof, completion of influent and effluent pipe work and DAF

Re: UW/06/22 - Status Update of UWSS Operations & Maintenance Activities and Capital Works to March 11, 2022

tank equipment installation in auxiliary building. Completion of the DAF project is 3-4 weeks behind schedule due to equipment shipping delays. A copy of the weekly progress report for the week ending February 4th, 2022, prepared by UWSS' consultant (Associated Engineering) site inspector, is attached to this report.

6. Low Lift Pump #7 rehabilitation is behind schedule due to shipping delays with the new pump impellers. These are expected to be received the last week of March. The other components of the pump and motor have been refurbished and are being stored at the water treatment plant building. Re-installation of the pump is scheduled for the first two weeks of April 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 March 9, 2022.

	2018	2019	2020	2021	2022
Flow to Date (ML)	2,104.03	2,195.16	2,372.46	2,746.48	2,706.76
Max Day (ML)	40.25	45.20	46.65	52.55	50.57
Min Day (ML)	23.56	20.13	25.44	26.74	27.58
Average Day (ML)	30.94	32.28	34.38	40.39	39.81
No of Days	68	68	69	68	68

	2018	2019	2020	2021	2022
Flow to Date (MG)	462.83	482.88	521.88	604.15	595.41
Max Day (MGD)	8.85	9.94	10.26	11.56	11.12
Min Day (MGD)	5.18	4.43	5.60	5.88	6.07
Average Day (MGD)	6.81	7.10	7.56	8.88	8.76
No of Days	68	68	69	68	68

The flows to date are down 39.72 ML (8.74 MIG) or 1.44% from last year. The 2022 flows to date are up 14.95% 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

Prepared By:	Sommer Lee, SI/CA	Date:	2022-03-07	File:	2020-5461.05.05
		Report No.:	24	Proj. No.	2020-5461
		Report Period:	2022-02-28 to 2022-03-04		
		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	0	As of 2022-03-07 , 77 days to contract completion (Original Contract Completion 2022-05-17 + 6 days lost to weather → Revised Contract Completion of 2022-05-23)

KEY EQUIPMENT ON SITE

QTY.	NAME	USE	DAYS IN OPERATION
1	Crawler Loader	Material Movement	N/A
1	Crane	Unload DAF Equipment	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	Trench Bedding and Lifts Compaction	2022-02-28 to 2022-03-01
1	Bulldozer	Material Stock Piling & Movement	2022-02-28 to 2022-03-02
1	Dump Truck	Material Movement	2022-02-28 to 2022-03-02
1	Mini Excavator	Trenching Backfill and Blowdown Chamber Perimeter Backfill	2022-02-28 to 2022-03-02
1	Telescopic Handler	DAF No. 1 Assembly and General Cleaning/set-up	2022-02-28 to 2022-03-03
	Miscellaneous Tools & Equipment		2022-02-28 to 2022-03-04

KEY DELIVERIES TO SITE

DATE	MATERIALS / EQUIPMENT DELIVERED	NOTES
2022-03-01	• Insulation for Dome for Clarifier No. 2 (Future DAF No. 1)	Dupont Styrofoam XPS SM
2022-03-01	• Masonry Blocks and Mortar Cement	Auxiliary Building Masonry Products

WORK COMPLETED

DATE & WEATHER	SUMMARY OF WORK	ASSOCIATED PHOTOS
2022-02-28 Mostly Sunny -1°C/-4°C	<ul style="list-style-type: none"> NJS completing backfill on trench from WTP to in-ground Pull Box to Auxiliary Building. NJS backfilling perimeter of Future DAF No. 1 Blowdown Chamber. Backfill with Granular B Type 2. Water service line was placed through the cored hole in the first level down of the Blowdown Chamber. Maple assembling the bridge for Future DAF No. 1. Napier Reid on site to inspect equipment and assembly progress. 	1 – 8

2022-03-01 Mostly Cloudy 6°C/-3°C	<ul style="list-style-type: none"> NJS completing backfilling the perimeter of Future DAF No. 1 Blowdown Chamber. Backfilled in compacted lifts with Granular B Type 2 finished with clean excavation material to top. Maple assembling the bridge for Future DAF No. 1. Napier Reid on site to inspect equipment and assembly progress. Jack and 2x4's used to slightly alter the centre well back to circle-shaped as it was delivered to site oval-shaped (on the flat-bed truck) instead of circle-shaped. Greatario on site to accept insulation delivery and for general planning in preparation for the dome installation. 	9 – 22
2022-03-02 Cloudy 4°C/-7°C	<ul style="list-style-type: none"> Maple near complete assembling the bridge for Future DAF No. 1. Aluma Safway on site to continue the scaffolding set up and hoarding setup (temporary works) in preparation for masonry installation on Auxiliary Building. Maple doing pipe take offs within the Future DAF No. 1 tank. Greatario on site to commence insulation installation within the Dome for Future DAF No. 1. Insulation product: Dupont Styrofoam Extruded Polystyrene Foam (XPS) SM. Two layers of insulation used with the dome struts to secure the insulation to the interior. NJS on site to clean-up material in material laydown area on southwest end of the plant property. 	23 – 26
2022-03-03 Mostly Sunny -1°C/-8°C	<ul style="list-style-type: none"> Greatario on site to continue insulation installation within the Dome for Future DAF No. 1. Insulation product: Dupont Styrofoam Extruded Polystyrene Foam (XPS) SM. Two layers of insulation used with the dome struts to secure the insulation to the interior. Aluma Safway on site to continue the scaffolding set up and hoarding setup (temporary works) in preparation for masonry installation on Auxiliary Building. 	27 – 37
2022-03-04 Sunny 1°C/-2°C	<ul style="list-style-type: none"> Greatario on site to continue insulation installation within the Dome for Future DAF No. 1. Aluma Safway on site to continue the scaffolding set up and hoarding setup (temporary works) in preparation for masonry installation on Auxiliary Building. 	38 – 39

KEY CONTRACTORS AND SUBCONTRACTORS ON SITE

- Maple Reinders Constructors Ltd. (Maple), 2022-02-28 to 2022-03-04
- Maple Electric, N/A
- NJS Excavation (NJS), 2022-02-28 to 2022-03-02
- Velez Construction (Velez), N/A
- Tarpon, N/A
- Lakeshore / Lake Erie Concrete Supply, N/A
- AGF, N/A

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- KT Excavating, 2022-02-28 to 2022-03-02
 - Jake's Crane Service, N/A
 - Moir Crane Service, N/A
 - Brevon Concrete Cutting and Coring, N/A
 - Red Line Contracting, N/A
 - Vito Masonry, N/A
 - Aluma Safway, 2022-03-02 to 2022-03-04
 - Napier Reid, 2022-02-28 to 2022-03-01
 - Greatario, 2022-03-01 to 2022-03-04

VISITORS AND PURPOSE OF VISIT:

- N/A

REQUESTED REVISIONS OR INTERPRETATIONS, FIELD INSTRUCTIONS, CHANGE DIRECTIVES

- RFI 045 – Commissioning Manager Request (Received 2022-03-01)
- Request to use Ladder Reinforcement instead of Truss Reinforcement for horizontal reinforcement for unit masonry (Received 2022-03-04)

NONCONFORMING WORK REPORTED TO CONTRACTOR:

- None to note during this period.

ISSUES THAT MAY LEAD TO DELAYS IN PROJECT DELIVERY:

- None to note during this period.

ATTACHMENTS AND OTHER INSPECTION/OBSERVATION REPORTS:

- None to include during this period.

PHOTOS



1. Blowdown Chamber – Insulation and Backfill (2022-02-28)



2. Trenching Backfill – WTP to Pull Box to Auxiliary Building (2022-02-28)



3. Trenching Backfill – WTP to Pull Box to Auxiliary Building (2022-02-28)



4. Trenching Backfill – WTP to Pull Box to Auxiliary Building (2022-02-28)

	
5. Trenching Backfill – WTP to Pull Box to Auxiliary Building (2022-02-28)	6. DAF Laydown Area (2022-02-28)
	
7. DAF Laydown Area (2022-02-28)	8. DAF Laydown Area (2022-02-28)



9. DAF Laydown Area (2022-03-01)



10. Blowdown Chamber Backfill (2022-03-01)



11. Materials Laydown Area (2022-03-01)



12. Materials Laydown Area (2022-03-01)

	
13. Site Trailers Area (2022-03-01)	14. Dome Insulation Delivery (2022-03-01)
	
15. Dome Insulation Delivery (2022-03-01)	16. Masonry Products Delivery (2022-03-01)

	
17. Masonry Products Delivery (2022-03-01)	18. Auxiliary Building Scaffolding and Hoarding (2022-03-01)
	
19. Blowdown Chamber Backfill (2022-03-01)	20. Blowdown Chamber Backfill (2022-03-01)



21. General Site (2022-03-01)



22. Dome Pre-Insulation Install (2022-03-01)



23. DAF Bridge (2022-03-02)



24. DAF Bridge (2022-03-02)



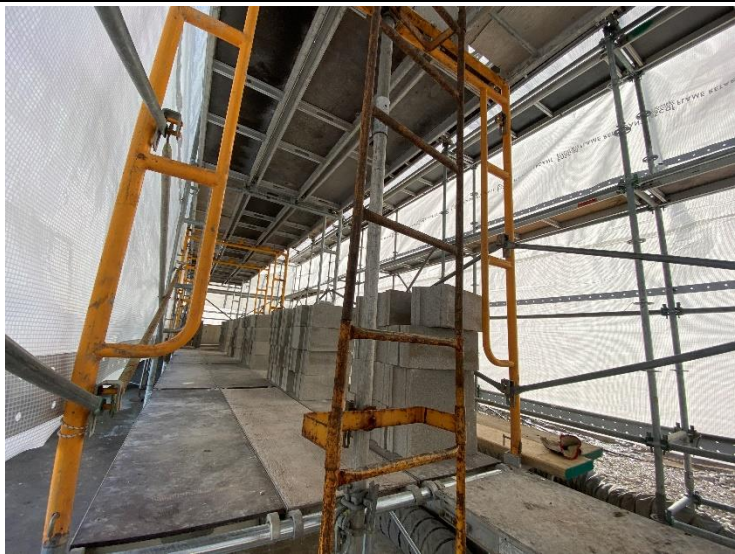
25. DAF Bridge (2022-03-02)



26. DAF Bridge (2022-03-02)



27. Auxiliary Building Hoarding & Masonry Preparation (2022-03-03)



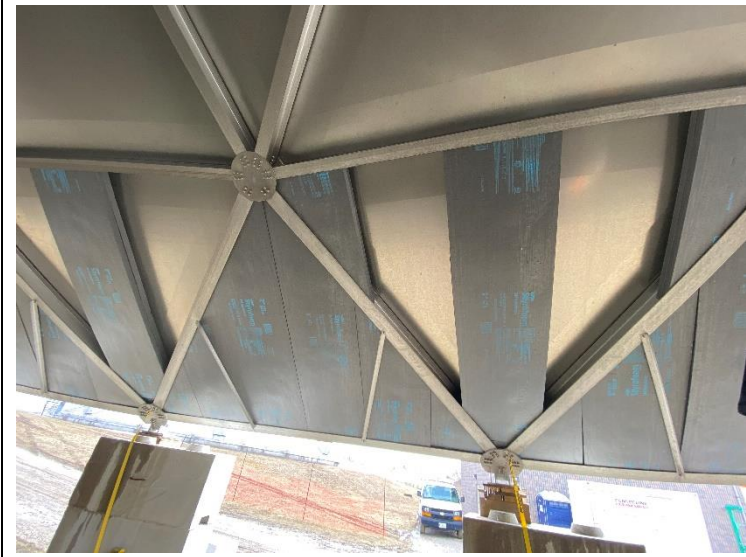
28. Auxiliary Building Hoarding & Masonry Preparation (2022-03-03)



29. Dome Interior Insulation Installation (2022-03-03)



30. Dome Interior Insulation Installation (2022-03-03)



31. Dome Interior Insulation Installation (2022-03-03)



32. Dome Interior Insulation Installation (2022-03-03)

	
33. Dome Interior Insulation Installation (2022-03-03)	34. Dome Interior Insulation Installation (2022-03-03)
	
35. Auxiliary Building: Masonry Preparation (2022-03-03)	36. Auxiliary Building: Masonry Preparation (2022-03-03)



37. Auxiliary Building: Masonry Rebar (2022-03-03)



38. Rapid Inline Mixer Drive (2022-03-04)



39. Auxiliary Building: Masonry Preparation (2022-03-04)

UW/07/22

Report



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

From: Rodney Bouchard, UWSS General Manager

Date: March 9, 2022

Re: Extension of Moratorium on Applications for UWSS Treated Water Allocations

Recommendation:

That the Union Water Supply Joint Board of Management (UWSS Board) extends by 12 months the existing moratorium on new requests for treated water allocations from new or existing entities that use more than 50,000 litres per day;

And further, that the moratorium would not apply to any type of residential development.

Background:

At the March 17, 2021 Regular meeting of the UWSS Board, the UWSS General Manager recommended the imposition of a moratorium on new requests for treated water allocations over 50,000 litres per day. This recommendation was presented in report *UW16-21 Moratorium on Applications for UWSS Treated Water Allocations*, dated March 11, 2021. A copy of report UW16-21 is attached to this report. The recommendation was approved as per the following resolution by the UWSS Board and the moratorium took effect on March 17, 2021.

No. UW-22-21

Moved by: Deputy Mayor Queen

Seconded by: Councillor Walstedt

That the Union Water Supply Joint Board of Management (UWSS Board) implements a moratorium to take effect immediately on new requests for treated water allocations from new or existing entities that use more than 50,000 litres per day;

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Re: Moratorium on Applications for UWSS Treated Water Allocations

And further, that the moratorium would not apply to any type of residential development;

And further, that the moratorium will be in effect for up to 12 months;

And further, that the UWSS Board directs the UWSS General Manager, with support from the UWSS-Municipal Treatment Capacity Allocation Working Group (Working Group), to undertake an evaluation of all approved treated water allocations to identify any discrepancies between approved allocations versus actual water usage;

And further, that the UWSS Board directs the UWSS General Manager to deliver a report to the UWSS Board by October 31st, 2021 that provides the Working Group's conclusions and recommendations in regards to the evaluation of approved treated water allocations.

Carried (UW/16/21)

The UWSS-Municipal Treatment Capacity Allocation Working Group has met a number of times since the imposition of the moratorium on March 17, 2021. These meetings have resulted in improvements with the sharing of information (e.g. subdivision planning and associated water usage, building permit information, etc) between UWSS and owner municipalities in regards to proposed residential developments greenhouse sector growth and construction.

UWSS has also been working to review historical and approved greenhouse treated water allocations with municipal staff and the consultant (Stantec) responsible for water demand modeling and review of applications for greenhouse water allocation applications. Further review of these approved allocations and actual 2021 greenhouse water demand will be completed once this data is consolidated. Subdivision planning information, greenhouse growth information, approved greenhouse allocations and actual 2021 greenhouse water demand data will be used to develop a better system for allocation of treated water and to improve the application process for requests for large treated water allocations. Recommended improvements to the application/approval process will be reported to the Board at a later date in 2022.

Discussion:

The UWSS General Manager proposes an extension of up to one year to the existing moratorium on UWSS allocations of treated water capacity for applications exceeding 50,000 litres per day. The existing moratorium is set to expire on March 17, 2022.

The existing moratorium on applications/requests for large treated water allocations was put into place because most of the UWSS' treatment capacity has already been allocated

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Re: Moratorium on Applications for UWSS Treated Water Allocations

to existing/approved residential, commercial, industrial and greenhouse developments. The remaining unallocated treatment plant capacity has been reserved for residential development. A secondary reason for the imposition on the moratorium was due to peak daytime demands during the June-August 2020 period that regularly exceeded the output of the treatment plant and was thus placing the UWSS supplied drinking water systems at risk.

The UWSS has been undertaking a number of capital improvements to the treatment system to advance the treatment plant's efficiency and increase the treatment capacity. This work includes Phase 1 of the new Dissolved Air Flotation (DAF) clarification system which is designed to address the existing bottleneck with the treatment plant's clarification process. With increased clarification capacity, the UWSS anticipates that it should be able to increase total treated water output. This DAF #1 system is being retrofitted into the existing Clarifier #2 basin.

Phase I of the DAF system is currently underway and was scheduled to be completed in April 2021 and tested for 4 weeks prior to going into service. However, due to COVID related manufacturing and shipping delays, this work is behind schedule. At this time, it is anticipated that the work will be completed by early June 2022 and put into service sometime in July 2022. It will likely take 6 months to fully test the limits of the DAF system at which point UWSS will seek to complete treatment plant capacity re-rating studies. Due to the delays with this project, the UWSS treatment plant is currently operating with reduced clarification capacity since Clarifier #2 is no longer in operation. This may pose a challenge, especially during early summer peak daytime demands, until the DAF #1 system is in operation. Restrictions on drinking water takings may be needed if the UWSS experiences excessive demands during this period.

It should be noted that 2021 total treated water demands were 4% higher than 2020. The 2021 annual treated water output from the plant was the highest ever recorded for UWSS. Although still early in the year, 2022 water demands are currently tracking with 2021 water demands.

Based on the delays with the DAF #1 works and the increased treated water demands in 2021 over 2020, it would be prudent to extend the existing moratorium for up to 1 year to allow UWSS to fully implement DAF #1 system and then complete treatment plant output capacity studies.

Closing Comments and Recommendations:

The proposed 12-month extension to the existing moratorium on new applications/requests for large treated water allocations will allow the UWSS time to complete improvements to the water treatment process that are designed to improve efficiency with potential to increase treatment plant output capacity.

March 9, 2022- UW/07/22

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Re: Moratorium on Applications for UWSS Treated Water Allocations

The extension will allow the UWSS (in consultation with its owner municipalities) time to complete the evaluations of existing and proposed future treatment capacity allocations and to evaluate actual use versus allocations, especially for large users, so as to develop a more effective process for allocating future treated water requests..

Respectfully submitted,



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

Attachments

Filename: t:\union wtr\reports to board\2022\uw07-22 proposed extension of moratorium on applications for uwss treatment capacity allocations.docx

UW/16/21

Report

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

From: Rodney Bouchard, Union Water Manager

Date: March 11, 2021

Re: Moratorium on Applications for UWSS Treated Water Allocations



Recommendation:

That the Union Water Supply Joint Board of Management (UWSS Board) implements a moratorium to take effect immediately on new requests for treated water allocations from new or existing entities that use more than 50,000 litres per day;

And further, that the moratorium would not apply to any type of residential development;

And further, that the moratorium will be in effect for up to 12 months;

And further, that the UWSS Board directs the UWSS General Manager, with support from the UWSS-Municipal Treatment Capacity Allocation Working Group (Working Group), to undertake an evaluation of all approved treated water allocations to identify any discrepancies between approved allocations versus actual water usage;

And further, that the UWSS Board directs the UWSS General Manager to deliver a report to the UWSS Board by October 31st, 2021 that provides the Working Group's conclusions and recommendations in regards to the evaluation of approved treated water allocations.

Background:

The Union Water Supply System Board of Management is responsible under Transfer Order Union W1/1999 for considering any application by a municipality within its service area for adding a large water service.

New applicants for large water services (i.e. large water users) in the UWSS service area are required to seek approval from the UWSS for treatment capacity allocation and from the local municipality for water distribution capacity. Review of large service applications for water treatment capacity allocation is completed by a consultant on behalf of the

March 11, 2021 - UW/16/21

Re: Moratorium on Applications for UWSS Treated Water Allocations

UWSS. Upon completion of an application review, the consultant issues a letter to UWSS and the local municipality that provides a recommendation in regards to treatment capacity allocation for the proposed development.

A review of available records indicates that since the creation of the UWSS in 2001, almost all large service applications have been for greenhouse expansions and new greenhouse developments. It should also be noted that records indicate that most large service applications for UWSS treatment capacity have been reviewed and addressed on a “first come, first served” basis.

At the January 20th, 2021 meeting of the UWSS Board, the UWSS General Manager presented report *UW06-21 UWSS Water Treatment Capacity Allocation* (copy attached). The report highlighted the following:

- Potable water demand from the UWSS has been on a steady increase since 2015. Water demand in 2020 was 32.8% greater than 2015 demand. Most of this increase (approx. 21%) occurred between 2018 and 2020.
- The recent significant increase in water demand is attributed to moderate increase in residential growth but mainly due to significant greenhouse growth in Kingsville and Leamington. Further, some of the water demand increase is likely related to greenhouse crop switchover from food crop to cannabis, which appears to be a more water intensive crop.
- Of the UWSS’ approved 24.7 million imperial gallons per day (IGPD) treatment capacity for the UWSS, approximately 2 million IGPD remains “unallocated” and is available to support growth in the UWSS service area. This remaining “unallocated” treatment capacity has been apportioned to each owner municipality based on UWSS ownership share.

Report UW06-21 also recommended the formation of a working group consisting of UWSS and municipal administration representatives to address the issue of treatment capacity allocation and to develop a more robust and equitable application process for allocation of UWSS treatment capacity. This was supported by the UWSS Board.

The UWSS-Municipal Treatment Capacity Allocation Working Group (Working Group) was created in January 2021 with support from the UWSS’ 4 owner municipalities. The Working Group held its first meeting on February 24, 2021.

Discussion:

The introductory meeting of the Working Group was held on February 24th, 2020 via Zoom. The meeting included 13 participants: 2 from UWSS and 11 from the municipalities of Leamington, Kingsville, Essex and Lakeshore. Discussions at the meeting were related to various items relating to existing treatment capacity allocations,

March 11, 2021 - UW/16/21

Re: Moratorium on Applications for UWSS Treated Water Allocations

planned and projected growth in various sectors within municipalities and projected water demands.

The main item of discussion was the existing situation with greenhouse industry growth and the limited remaining treatment capacity at UWSS. This discussion resulted in agreement by Working Group participants that a moratorium should be imposed on new applications from Large Water Users, including greenhouse developments, due to the limited remaining treatment capacity. This moratorium would be in place to ensure that residential and commercial developments that are already in the planning/approval process can move ahead from a water requirement perspective. The proposed moratorium would be temporary until additional UWSS treatment capacity is made available.

Based on the comments and feedback received from municipal representatives at the February 24th, 2021 meeting of the Working Group and from subsequent consultations with staff from owner municipalities, the UWSS General Manager proposes that a temporary moratorium be implemented immediately on new applications for UWSS treated water allocations for large water users. The temporary moratorium is proposed as follows:

- Applications for new requests for treated water allocations from new or existing operation that use more than 50,000 litres per day would no longer be reviewed for approval;
- All types of residential developments would be exempt from the moratorium;
- The moratorium would extend for a period of up to 12 months and may be rescinded or extended at the discretion of the UWSS Board based on review of supporting information.

The proposed upper threshold limit of 50,000 litres/day for new applications is based on the Permit to Take Water (PTTW) application under Ontario Regulation 387/04 (Water Taking and Transfer) made under the *Ontario Water Resources Act, 1990*. By law, a person/entity must have a permit from the Ministry of Environment, Conservation and Parks (MECP) if that person/entity plans to take greater than 50,000 litres of water in a day from the environment. The UWSS General Manager stipulates that this value provides a good basis for establishing what could be considered a “large water user”.

Also, as per the feedback received from the Working Group, the UWSS General Manager proposes that an evaluation of existing approved treatment capacity allocations be completed. The purpose of the evaluation would be as follows:

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Re: Moratorium on Applications for UWSS Treated Water Allocations

-
- Identify historical approved allocations that may never have been used. It has been recently noted during an application review that some historical allocation approvals for greenhouses have not been used. These allocations should be cancelled so that the associated treated water capacity is available for future use.
 - Identify discrepancies between approved allocations and actual water usage for each operation. It should be noted that for greenhouse allocations, some historical allocations were based on 10,000 IGPD/ acre. However, based on technological improvements and conservation measures in the greenhouse industry, water usage per acre has decreased. As such, through the years, allocations were decreased to 8,000 IGPD/acre and now the standard for new applications is 6,000 IGPD/acre. Actual water usage for all allocations should be reviewed so that historical higher allocations can be reassessed to lower allocations thus freeing up treatment capacity for future growth.
 - Provide recommendations for water allocation that would identify proposed volume rates for future applications.
 - Provide recommendations for a revised application process that is more comprehensive and based on actual needed treated water volumes.

This evaluation would be led by UWSS with support and advice from the Working Group. The consultant that currently reviews applications for treated water allocations would also be retained to assist with this evaluation. The UWSS General Manager anticipates that a report would be provided to the UWSS Board no later than the October 20th, 2021 UWSS Board meeting.

It should be noted that support for the moratorium has been received by Working Group participants. Owner municipalities have been consulted in regards to this proposed moratorium.

Closing Comments and Recommendations:

Current treatment capacity allocation methodology has been mostly focused on the growth in the greenhouse industry and has not really taken into consideration other types of growth in the UWSS service area.

The proposed moratorium on new applications by large water users for treated water is intended to allow for continued residential development (and commercial/industrial developments that are not treated water intensive) while restricting non-residential developments that are dependent on large volumes of UWSS treated water.

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Re: Moratorium on Applications for UWSS Treated Water Allocations

This will allow the UWSS (in consultation with its owner municipalities) time to complete the required evaluations of existing and proposed future treatment capacity allocations so as to identify “unused” treatment capacity that is already allocated and to develop a more effective process for allocating future treated water requests..

Respectfully submitted,



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

Attachments

UW/08/22

To: Chair and Members of the Union Water Supply System (UWSS) Management Board

From: Rodney Bouchard, UWSS Manager

Date: March 10, 2022

Re: MECP Drinking Water Inspection Report for the UWSS - February 24, 2022 Inspection



RECOMMENDATION

That the Union Water Supply System (UWSS) Board receives this report for information.

BACKGROUND

The UWSS is subject to annual inspections by the Ontario Ministry of Environment, Conservation and Parks (MECP) under the Safe Drinking Water Act, 2002 (SDWA) and its associated regulations.

The UWSS was inspected on February 24, 2022 and the final report for that inspection was issued by the MECP on March 2, 2022. The previous inspection was conducted on January 28, 2021.

DISCUSSION:

MECP inspection reports are written to identify actions that need to be taken due to non-compliance with regulations. The March 2, 2022 inspection report includes a section on page 3 titled ***Non-Compliance/ Non-Conformance Items***. No items of non-compliance or non-conformances were identified at the time of the inspection.

It should be noted that weekly grab samples are collected from the residuals settling ponds/lagoons effluent for analysis of chlorine residuals. As noted in the last paragraph of Page 12 of the Inspection Report, the average annual lagoon effluent chlorine residual for 2021 was 0.08mg/L which exceeds the annual average concentration limit of 0.02 mg/L as noted in Table 3, Schedule C of the UWSS' Municipal Drinking Water License. The MECP was notified of this non-compliance in correspondence dated January 4, 2022. The correspondence also indicated that a new on-line chlorine residual analyzer was installed on October 12, 2021 to accurately identify the chlorine residuals in the effluent and a temporary dechlorinating system was installed at that time to address the chlorine residual issue.

As required by the regulations under the SDWA, the municipal water systems which receive drinking water from the UWSS have been provided with copies of the inspection

March 10, 2022 - UW/08/22

Re: MECP Drinking Water Inspection Report for the UWSS-February 24, 2022
Inspection

report for the February 24, 2022 inspection. Further, the inspection has been posted on the UWSS website www.unionwater.ca.

CONCLUSION

This report is being provided to the Board for information purposes.

Respectfully submitted,



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

Filename: t:\union wtr\reports to board\2022\uw08-22 mecpc drinking water inspection report for the uwss for the february 24 2022 inspection.docx

Ministry of the Environment,
Conservation and Parks

Ministère de l'Environnement, de la
Protection de la nature et des Parks

Southwestern Region

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File# SI-ES-KI-540

March 2, 2022

Union Area Water Supply System
1615 Union Avenue
Ruthven, ON
N0P 2G0

Attention: Mr. Rodney Bouchard, Manager
rbouchard@unionwater.ca

Re: Union Area Water Supply System
Inspection Report

Please find enclosed the Drinking Water System Inspection Report for the Union Area Water Supply System (DWS#210000853). The review period for this inspection was January 1 to December 31, 2021. A field visit to the water treatment plant, low lift station and the Cottam reservoir/booster station was conducted on February 24, 2022.

Section 19 of the Safe Drinking Water Act (Standard of Care) creates a number of obligations for individuals who exercise decision-making authority over municipal drinking water systems. Please be aware that the Ministry has encouraged such individuals, particularly municipal councillors, to take steps to be better informed about the drinking water systems over which they have decision-making authority. These steps could include asking for a copy of this inspection report and a review of its findings. Further information about Section 19 can be found in *"Taking Care of Your Drinking Water: A guide for members of municipal council"* found on the Drinking Water Ontario website at www.ontario.ca/drinkingwater.

In order to measure individual inspection results, the Ministry has established an inspection compliance risk framework based on the principles of the Inspection, Investigation & Enforcement (II&E) Secretariat and advice of internal/external risk experts. The Inspection Summary Rating Record (IRR) provides the Ministry, the system owner and the local Public Health Units with a

summarized quantitative measure of the drinking water system's annual inspection and regulated water quality testing performance.

Please note that due to a change in IT systems, the Inspection Rating Report (IRR) cannot be generated at the same time as the inspection report. The IRR will be sent separately and prior to any public release (typically within 1-2 month of the completion of the inspection).

IRR ratings are published (for the previous inspection year) in the Ministry's Chief Drinking Water Inspectors' Annual Report. If you have any questions or concerns regarding the rating, please contact Marc Bechard, Water Compliance Supervisor, at (519) 490-0761.

Likewise, if you have any questions or concerns regarding this report, please call me at (226) 280-1556.

Yours truly,



Neil Gilbert, P.Eng.
Provincial Officer – Water Inspector
Southwestern Region
Ministry of the Environment, Conservation and Parks
Sarnia District – Windsor Area Office

Encl.

cc: Dr. Shanker Nesathurai, Medical Officer of Health, Windsor-Essex County HU, snathurai@wechu.org
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Appendix A: Stakeholder Appendix



UNION AREA WATER SUPPLY SYSTEM
1615 UNION AVE, KINGSVILLE, ON, N9Y 2G5
Inspection Report

System Number:	210000853
Inspection Start Date:	01/24/2022
Inspection End Date:	02/25/2022
Inspected By:	Neil Gilbert
Badge #:	1072



(signature)

NON-COMPLIANCE/NON-CONFORMANCE ITEMS

This should not be construed as a confirmation of full compliance with all potential applicable legal requirement and BMPs. These inspection findings are limited to the components and/or activities that were assessed, and the legislative framework(s) that were applied. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

If you have any questions related to this inspection, please contact the signed Provincial Officer.

INSPECTION DETAILS

This section includes all questions that were assessed during the inspection.

Ministry Program: Regulated Activity: DRINKING WATER : DW Municipal Residential

Question ID	MRDW1001000		
Question	Question Type	Legislative Requirement	
What was the scope of this inspection?	Information	Not Applicable	
Observation			
<p>The primary focus of this inspection is to confirm compliance with Ministry of the Environment, Conservation and Parks (MECP) legislation as well as evaluating conformance with ministry drinking water policies and guidelines during the inspection period. The ministry utilizes a comprehensive, multi-barrier approach in the inspection of water systems that focuses on the source, treatment, and distribution components as well as management practices.</p>			
<p>This drinking water system is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O.Reg. 170/03). This inspection has been conducted pursuant to Section 81 of the SDWA.</p>			
<p>This inspection report does not suggest that all applicable legislation and regulations were evaluated. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements. The review period for this inspection was January 1 to December 31, 2021. A field visit to the water treatment plant, low lift station and the Cottam reservoir/booster station was conducted on February 24, 2022.</p>			

Question ID	MRDW1000000		
Question		Question Type	Legislative Requirement
Does this drinking water system provide primary disinfection?		Information	Not Applicable
Observation			
This Drinking Water System provides for both primary and secondary disinfection and distribution of water.			

Question ID	MRDW1011000		
Question		Question Type	Legislative Requirement
Does the owner have a harmful algal bloom monitoring plan in place?		BMP	Not Applicable
Observation			
The owner had a harmful algal bloom monitoring plan in place. The Union Area Water Supply			

System's Harmful Bloom Monitoring, Reporting and Sampling Plan (SOP #OCWA-C6-15) is a procedure in place to respond to a blue-green algae bloom.
From May 15 to November 1, 2021, raw and treated water samples were typically collected 2-3 times per week and tested for microcystin. All of the microcystin results were reported as below the Method Detection Limit (0.1ug/L<MDL) with the exception of three raw samples (collected on August 23 and 25, 2021 and September 13, 2021) which had a concentration of 0.1 ug/L.

Question ID	MRDW1012000		
Question		Question Type	Legislative Requirement
Does the owner have a harmful algal bloom monitoring plan in place that meets the requirements of the MDWL?		Legislative	SDWA 31 (1)
Observation			
The owner had a harmful algal bloom monitoring plan in place. Condition 6.1 under Schedule C of the Union Area Water Supply System's Municipal Drinking Water Licence (MDWL) #041-101 notes that the owner shall develop and keep up to date a Harmful Algal Bloom monitoring, reporting and sampling plan. As previously noted, a Harmful Algal Bloom monitoring, reporting and sampling plan is detailed in SOP#OCWA-C6-15 and it appears to satisfy the requirements of the MDWL.			

Question ID	MRDW1014000		
Question	Question Type	Legislative Requirement	
Is there sufficient monitoring of flow as required by the MDWL or DWWP issued under Part V of the SDWA?	Legislative	SDWA 31 (1)	
Observation			
There was sufficient monitoring of flow as required by the Municipal Drinking Water Licence or Drinking Water Works Permit issued under Part V of the SDWA. Schedule C, Condition 2.1 of the Municipal Drinking Water Licence #041-101 requires that continuous flow measurement and recording shall be undertaken for: 2.1.1 The flow rate (L/s) and daily volume (m3/day) of treated water that flows from the treatment subsystem to the distribution system. 2.1.2 The flow rate (L/s) and daily volume (m3/day) of water that flows into the treatment subsystem. The Union Area Water Supply System has flow meters for both the raw water entering the treatment plant and for treated water flowing from the plant to the distribution system.			

Question ID	MRDW1016000		
Question		Question Type	Legislative Requirement
Is the owner in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the MDWL issued under Part V of the SDWA?		Legislative	SDWA 31 (1)
Observation			

The owner was in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the Municipal Drinking Water Licence issued under Part V of the SDWA. Schedule C, Condition 1.1 of the Municipal Drinking Water Licence #041-101 states that the maximum daily volume of treated water that flows from the Union Area Water Supply System to the distribution system shall not exceed 124,588 m³/day.

During the inspection review period (January 1 to December 31, 2021) the Union Area Water Supply System did not exceed the maximum rated capacity. The observed maximum daily volume of treated water conveyed to the distribution system was 93,829m³/day (75% of the rated capacity) which occurred in May 2021.

Also, during the inspection review period, the average daily volume of treated water conveyed to the distribution system was approximately 54,350 m³/day. This is approximately 44% of the rated capacity of the drinking water system.

Question ID	MRDW1030000	
Question	Question Type	Legislative Requirement
Is primary disinfection chlorine monitoring being conducted at a location approved by MDWL and/or DWWP issued under Part V of the SDWA, or at/near a location where the intended CT has just been achieved?	Legislative	SDWA O. Reg. 170/03 7-2 (1), SDWA O. Reg. 170/03 7-2 (2)
Observation		
Primary disinfection chlorine monitoring was conducted at a location approved by Municipal Drinking Water Licence and/or Drinking Water Works Permit issued under Part V of the SDWA, or at/near a location where the intended CT has just been achieved. Primary disinfection chlorine monitoring is conducted at the outlet of Reservoir #2 (chlorine monitor CRA-7) and this is at/near a location where the intended CT has just been achieved.		

Question ID	MRDW1032000	
Question	Question Type	Legislative Requirement
If the drinking water system obtains water from a surface water source and provides filtration, is continuous monitoring of each filter effluent line being performed for turbidity?	Legislative	SDWA O. Reg. 170/03 7-3 (2)
Observation		
Continuous monitoring of each filter effluent line was being performed for turbidity.		

Question ID	MRDW1037000	
Question	Question Type	Legislative Requirement
Are all continuous monitoring equipment utilized for sampling and testing required by O. Reg.170/03, or MDWL or DWWP or order, equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule	Legislative	SDWA O. Reg. 170/03 6-5 (1) 1-4,SDWA O. Reg. 170/03 6-5

6?		(1)5-10,SDWA O. Reg. 170/03 6-5 (1.1)
Observation		
<p>All continuous monitoring equipment utilized for sampling and testing required by O. Reg.170/03, or Municipal Drinking Water Licence or Drinking Water Works Permit or order, were equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 6. Free chlorine is measured on the reservoir's outlet (CRA-7) for monitoring primary disinfection CT. Chlorine alarm setpoints for CRA-7 are currently LoLo: 1.00ppm, Lo: 1.15ppm, Hi: 1.75ppm and HiHi: 1.85ppm.</p> <p>Each filter effluent line is equipped for continuous measurement of turbidity. Filter turbidity alarm setpoints are Hi: 0.16 NTU and HiHi: 0.20 NTU. At 0.20 NTU, the filter is automatically directed to waste; however, this setting is operator modifiable between 0-0.9 NTU (i.e. to keep a filter online).</p>		

Question ID	MRDW1038000	
Question	Question Type	Legislative Requirement
Is continuous monitoring equipment that is being utilized to fulfill O. Reg. 170/03 requirements performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 and recording data with the prescribed format?	Legislative	SDWA O. Reg. 170/03 6-5 (1) 1-4
Observation		
<p>Continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements was performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 and recording data with the prescribed format. O. Reg. 170/03, s 6-5 requires the continuous monitoring equipment to record the date, time, sampling location and result of every test for the parameter with at least the minimum frequency prescribed as follows:</p> <ol style="list-style-type: none"> 1. Free chlorine residual required to achieve primary disinfection: 5 minutes 2. Filter effluent turbidity: 15 minutes. <p>Monitoring of free chlorine residual at CRA-7 and turbidity at each filter effluent was typically occurring at 2 minute intervals.</p>		

Question ID	MRDW1035000	
Question	Question Type	Legislative Requirement
Are operators examining continuous monitoring test results and are they examining the results within 72 hours of the test?	Legislative	SDWA O. Reg. 170/03 6-5 (1) 1-4,SDWA O. Reg. 170/03 6-5 (1)5-10
Observation		
Operators were examining continuous monitoring test results and they were examining the results		

within 72 hours of the test.

Question ID	MRDW1040000	
Question	Question Type	Legislative Requirement
Are all continuous analysers calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation?	Legislative	SDWA O. Reg. 170/03 6-5 (1) 1-4,SDWA O. Reg. 170/03 6-5 (1)5-10
Observation		
All continuous analysers were calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation.		

Question ID	MRDW1108000	
Question	Question Type	Legislative Requirement
Where continuous monitoring equipment used for the monitoring of free chlorine residual, total chlorine residual, combined chlorine residual or turbidity, required by Regulation 170, an Order, MDWL, or DWWP issued under Part V, SDWA, has triggered an alarm or an automatic shut-off, did a qualified person respond in a timely manner and take appropriate actions?	Legislative	SDWA O. Reg. 170/03 6-5 (1) 1-4,SDWA O. Reg. 170/03 6-5 (1)5-10,SDWA O. Reg. 170/03 6-5 (1.1)
Observation		
Where required continuous monitoring equipment used for the monitoring of chlorine residual and/or turbidity triggered an alarm or an automatic shut-off, a qualified person responded in a timely manner and took appropriate actions.		

Question ID	MRDW1018000	
Question	Question Type	Legislative Requirement
Has the owner ensured that all equipment is installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit?	Legislative	SDWA 31 (1)
Observation		
The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit.		

Question ID	MRDW1021000	
Question	Question Type	Legislative Requirement
Is the owner/operating authority able to demonstrate that,	Legislative	SDWA 31 (1)

when required during the inspection period, Form 2 documents were prepared in accordance with their Drinking Water Works Permit?		
Observation		
The owner/operating authority was in compliance with the requirement to prepare Form 2 documents as required by their Drinking Water Works Permit during the inspection period.		

Question ID	MRDW1023000	
Question	Question Type	Legislative Requirement
Do records indicate that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a DWWP and/or MDWL issued under Part V of the SDWA at all times that water was being supplied to consumers?	Legislative	SDWA O. Reg. 170/03 1-2 (2)
Observation		
Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a Drinking Water Works Permit and/or Municipal Drinking Water Licence issued under Part V of the SDWA at all times that water was being supplied to consumers.		

Question ID	MRDW1024000	
Question	Question Type	Legislative Requirement
Do records confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free or 0.25 mg/l combined?	Legislative	SDWA O. Reg. 170/03 1-2 (2)
Observation		
Records confirmed that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free or 0.25 mg/l combined.		

Question ID	MRDW1025000	
Question	Question Type	Legislative Requirement
Were all parts of the drinking water system that came in contact with drinking water (added, modified, replaced or extended) disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit?	Legislative	SDWA 31 (1)
Observation		
All parts of the drinking water system were disinfected in accordance with a procedure listed in		

Schedule B of the Drinking Water Works Permit.

Question ID	MRDW1062000	
Question	Question Type	Legislative Requirement
Do records or other record keeping mechanisms confirm that operational testing not performed by continuous monitoring equipment is being done by a certified operator, water quality analyst, or person who meets the requirements of O. Reg. 170/03 7-5?	Legislative	SDWA O. Reg. 170/03 7-5
Observation		
Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was being done by a certified operator, water quality analyst, or person who suffices the requirements of O. Reg. 170/03 7-5.		

Question ID	MRDW1060000	
Question	Question Type	Legislative Requirement
Do the operations and maintenance manuals meet the requirements of the DWWP and MDWL issued under Part V of the SDWA?	Legislative	SDWA 31 (1)
Observation		
<p>The operations and maintenance manuals met the requirements of the Drinking Water Works Permit and Municipal Drinking Water Licence issued under Part V of the SDWA. Condition 16.2 under Schedule B of the Union Area Water Supply System's Licence (#041-101) notes that the operations and maintenance manuals shall include (at a minimum) the following:</p> <p>16.2.1 The requirements of this licence and associated procedures;</p> <p>16.2.2 The requirements of the drinking water works permit for the drinking water system;</p> <p>16.2.3 A description of the processes used to achieve primary and secondary disinfection within the drinking water system including where applicable:</p> <p>a) A copy of the CT calculations that were used as the basis for primary disinfection under worst case operating conditions and other operating conditions, if applicable; and</p> <p>b) The validated operating conditions for UV disinfection equipment, including a copy of the validation certificate;</p> <p>16.2.4 Procedures for monitoring and recording the in-process parameters necessary for the control of any treatment subsystem and for assessing the performance of the drinking water system;</p> <p>16.2.5 Procedures for the operation and maintenance of monitoring equipment;</p> <p>16.2.6 Contingency plans and procedures for the provision of adequate equipment and material to deal with emergencies, upset conditions and equipment breakdown;</p> <p>16.2.7 Procedures for dealing with complaints related to the drinking water system, including the recording of the nature of the complaint and any investigation and corrective action taken in respect of the complaint;</p> <p>A review of the Union Area Water Supply System's Operation Manual suggests that these conditions appear to be satisfied.</p>		

--

Question ID	MRDW1071000		
Question		Question Type	Legislative Requirement
Has the owner provided security measures to protect components of the drinking water system?		BMP	Not Applicable
Observation			
The owner had provided security measures to protect components of the drinking water system.			

Question ID	MRDW1073000		
Question	Question Type	Legislative Requirement	
Has the overall responsible operator been designated for all subsystems which comprise the drinking water system?	Legislative	SDWA O. Reg. 128/04 23 (1)	
Observation			
The overall responsible operator has been designated for each subsystem.			

Question ID	MRDW1074000		
Question	Question Type	Legislative Requirement	
Have operators in charge been designated for all subsystems for which comprise the drinking water system?	Legislative	SDWA O. Reg. 128/04 25 (1)	
Observation			
Operators-in-charge had been designated for all subsystems which comprised the drinking water system.			

Question ID	MRDW1075000		
Question		Question Type	Legislative Requirement
Do all operators possess the required certification?		Legislative	SDWA O. Reg. 128/04 22
Observation			
All operators possessed the required certification.			

Question ID	MRDW1076000		
Question	Question Type	Legislative Requirement	
Do only certified operators make adjustments to the treatment equipment?	Legislative	SDWA O. Reg. 170/03 1-2 (2)	
Observation			

Only certified operators made adjustments to the treatment equipment.

Question ID	MRDW1099000	
Question	Question Type	Legislative Requirement
Do records show that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards (O. Reg.. 169/03)?	Information	Not Applicable
Observation		
Records showed that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards (O.Reg. 169/03).		

Question ID	MRDW1094000	
Question	Question Type	Legislative Requirement
Are all water quality monitoring requirements imposed by the MDWL and DWWP being met?	Legislative	SDWA 31 (1)
Observation		
<p>All water quality monitoring requirements imposed by the MDWL or DWWP issued under Part V of the SDWA were being met. Additional environmental discharge sampling parameters, locations and frequencies are noted in Table 7, Schedule C of the Municipal Drinking Water Licence #041-101. These additional parameters are total suspended solids (monthly composite), filtered and unfiltered aluminum (monthly grab) and total chlorine residual (monthly grab). During the inspection review period (Jan.1 - Dec. 31, 2021), TSS composite samples were collected monthly from the north and/or south waste management settling ponds. The TSS results ranged from <3 to 3 mg/L and the average being approximately 3 mg/L which is well below the annual average limit of 25 mg/L (noted in Table 3, Schedule C of the Licence).</p> <p>Filtered and unfiltered aluminum grab samples were collected from various lagoon sludge pile runoffs (SP#1, SP#2, SP#3 and SP#4) during the inspection review period. No runoff samples were available from January to April, July to September and November 2021. The total (unfiltered) aluminum results ranged from 0.171 to 13.4 mg/L and the dissolved (filtered) results ranged from 0.008 to 0.073 mg/L. There are no limits noted for aluminum in Table 3, Schedule C of the Licence.</p> <p>Also during the inspection review period, grab samples were collected weekly from the north and/or south lagoon effluents and tested for total chlorine residual. The total chlorine residuals ranged from 0.02 to 0.13 mg/L with an average being 0.08 mg/L which exceeds the annual average concentration of 0.02 mg/L (noted in Table 3, Schedule C of the Licence). The ministry was notified of this non-compliance via letter on January 4, 2022. It was noted in this letter that a TOR online chlorine residual analyzer was installed on Oct. 12, 2021. Also, a dechlorinating diffuser was installed on the discharge storm sewer and that dechlorinating pucks will be used to control the discharge chlorine residuals.</p>		

Question ID	MRDW1096000		
Question		Question Type	Legislative Requirement
Do records confirm that chlorine residual tests are being conducted at the same time and at the same location that microbiological samples are obtained?		Legislative	SDWA O. Reg. 170/03 6-3 (1)
Observation			
Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.			

Question ID	MRDW1083000		
Question		Question Type	Legislative Requirement
Are all microbiological water quality monitoring requirements for treated samples being met?		Legislative	SDWA O. Reg. 170/03 10-3
Observation			
All microbiological water quality monitoring requirements for treated samples were being met. As per O.Reg. 170/03 s10-3, the owner/operating authority for the system shall ensure that a water sample (treated) is taken at least once every week and tested for E. coli, total coliforms and general bacteria population expressed as colony counts on a heterotrophic plate count (HPC). During the inspection review period (January 1 to December 31, 2021) all microbiological water monitoring requirements for treated water samples were performed.			

Question ID	MRDW1084000		
Question	Question Type	Legislative Requirement	
Are all inorganic water quality monitoring requirements prescribed by legislation conducted within the required frequency?	Legislative	SDWA O. Reg. 170/03 13-2	
Observation	All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency. As per O.Reg. 170/03 s13-2, the owner/operating authority of a large municipal residential system that obtains water from a raw water supply that is surface water shall ensure that at least one water sample is taken every 12 months and tested for every inorganic parameter set out in Schedule 23. During the inspection review period (January 1 to December 31, 2021) this sample was collected on January 5, 2021.		

Question ID	MRDW1085000		
Question	Question Type	Legislative Requirement	
Are all organic water quality monitoring requirements prescribed by legislation conducted within the required frequency?	Legislative	SDWA O. Reg. 170/03 13-4 (1),SDWA O.	

		Reg. 170/03 13-4 (2),SDWA O. Reg. 170/03 13-4 (3)
Observation		
<p>All organic water quality monitoring requirements prescribed by legislation were conducted within the required frequency. As per O.Reg. 170/03 s13-4, the owner/operating authority of a large municipal residential system that obtains water from a raw water supply that is surface water shall ensure that at least one water sample is taken every 12 months and tested for every organic parameter set out in Schedule 24.</p> <p>During the inspection review period (January 1 to December 31, 2021) this sample was collected on January 5, 2021.</p>		

Question ID	MRDW1088000	
Question	Question Type	Legislative Requirement
Are all nitrate/nitrite water quality monitoring requirements prescribed by legislation conducted within the required frequency for the DWS?	Legislative	SDWA O. Reg. 170/03 13-7
Observation		
<p>All nitrate/nitrite water quality monitoring requirements prescribed by legislation were conducted within the required frequency for the DWS. As per O.Reg. 170/03 s13-7, the owner/operating authority of a system shall ensure that at least one water sample is taken every three months and have the sample tested for nitrate and nitrite.</p> <p>During the inspection review period (January 1 to December 31, 2021) these samples were collected on January 4, April 7, July 5 and October 7, 2021.</p>		

Question ID	MRDW1089000	
Question	Question Type	Legislative Requirement
Are all sodium water quality monitoring requirements prescribed by legislation conducted within the required frequency?	Legislative	SDWA O. Reg. 170/03 13-8
Observation		
<p>All sodium water quality monitoring requirements prescribed by legislation were conducted within the required frequency. As per O.Reg. 170/03 s13-8, the owner/operating authority of a drinking water system shall ensure that at least one water sample is taken every 60 months (+/- 90 days) and tested for sodium.</p> <p>The operating authority is sampling and testing for sodium annually, which exceeds the testing requirements prescribed by O.Reg. 170/03. During the inspection review period (January 1 to December 31, 2021) a sodium test was performed on January 5, 2021 (7.35 mg/L) and no concerns were identified.</p>		

Question ID	MRDW1090000	
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Question	Question Type	Legislative Requirement
Where fluoridation is not practiced, are all fluoride water quality monitoring requirements prescribed by legislation conducted within the required frequency?	Legislative	SDWA O. Reg. 170/03 13-9
Observation		
All fluoride water quality monitoring requirements prescribed by legislation were conducted within the required frequency. As per O.Reg. 170/03 s13-9, the owner/operating authority of a drinking water system shall ensure that at least one water sample is taken every 60 months (+/- 90 days) and tested for fluoride. The operating authority is sampling and testing for fluoride annually, which exceeds the testing requirements prescribed by O.Reg. 170/03. During the inspection review period (January 1 to December 31, 2021) a fluoride test was performed on January 5, 2021 (0.06 mg/L) and no concerns were identified.		

Question ID	MRDW1100000	
Question	Question Type	Legislative Requirement
Did any reportable adverse/exceedance conditions occur during the inspection period?	Information	Not Applicable
Observation		
There were no reportable adverse/exceedances during the inspection period.		

Question ID	MRDW1113000	
Question	Question Type	Legislative Requirement
Have all changes to the system registration information been provided to the Ministry within ten (10) days of the change?	Legislative	SDWA O. Reg. 170/03 10.1 (3)
Observation		
All changes to the system registration information were provided within ten (10) days of the change.		



Ministry of the Environment,
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Drinking Water System Inspection Report
Appendix A

Stakeholder Appendix

Key Reference and Guidance Material for Municipal Residential Drinking Water Systems

Many useful materials are available to help you operate your drinking water system. Below is a list of key materials owners and operators of municipal residential drinking water systems frequently use.

To access these materials online click on their titles in the table below or use your web browser to search for their titles. Contact the Ministry if you need assistance or have questions at 1-866-793-2588 or waterforms@ontario.ca.

For more information on Ontario's drinking water visit www.ontario.ca/drinkingwater



PUBLICATION TITLE	PUBLICATION NUMBER
FORMS: Drinking Water System Profile Information Laboratory Services Notification Adverse Test Result Notification	012-2149E 012-2148E 012-4444E
Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils	Website
Procedure for Disinfection of Drinking Water in Ontario	Website
Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids	Website
Filtration Processes Technical Bulletin	Website
Ultraviolet Disinfection Technical Bulletin	Website
Guide for Applying for Drinking Water Works Permit Amendments, & License Amendments	Website
Certification Guide for Operators and Water Quality Analysts	Website
Guide to Drinking Water Operator Training Requirements	9802E
Community Sampling and Testing for Lead: Standard and Reduced Sampling and Eligibility for Exemption	Website
Drinking Water System Contact List	7128E01
Ontario's Drinking Water Quality Management Standard - Pocket Guide	Website
Watermain Disinfection Procedure	Website
List of Licensed Laboratories	Website

Principaux guides et documents de référence sur les réseaux résidentiels municipaux d'eau potable

De nombreux documents utiles peuvent vous aider à exploiter votre réseau d'eau potable. Vous trouverez ci-après une liste de documents que les propriétaires et exploitants de réseaux résidentiels municipaux d'eau potable utilisent fréquemment. Pour accéder à ces documents en ligne, cliquez sur leur titre dans le tableau ci-dessous ou faites une recherche à l'aide de votre navigateur Web. Communiquez avec le ministère au 1-866-793-2588, ou encore à waterforms@ontario.ca si vous avez des questions ou besoin d'aide.



Pour plus de renseignements sur l'eau potable en Ontario, consultez le site www.ontario.ca/eaupotable

TITRE DE LA PUBLICATION	NUMÉRO DE PUBLICATION
Renseignements sur le profil du réseau d'eau potable	012-2149F
Avis de demande de services de laboratoire	012-2148F
Avis de résultats d'analyse insatisfaisants et de règlement des problèmes	012-4444F
Prendre soin de votre eau potable - Un guide destiné aux membres des conseils municipaux	Site Web
Marche à suivre pour désinfecter l'eau potable en Ontario	Site Web
Stratégies pour minimiser les trihalométhanes et les acides haloacétiques de sous-produits de désinfection	Site Web
Filtration Processes Technical Bulletin (en anglais seulement)	Site Web
Ultraviolet Disinfection Technical Bulletin (en anglais seulement)	Site Web
Guide de présentation d'une demande de modification du permis d'aménagement de station de production d'eau potable	Site Web
Guide sur l'accréditation des exploitants de réseaux d'eau potable et des analystes de la qualité de l'eau de réseaux d'eau potable	Site Web
Guide sur les exigences relatives à la formation des exploitants de réseaux d'eau potable	9802F
Échantillonnage et analyse du plomb dans les collectivités : échantillonnage normalisé ou réduit et admissibilité à l'exemption	Site Web
Liste des personnes-ressources du réseau d'eau potable	Site Web
L'eau potable en Ontario - Norme de gestion de la qualité - Guide de poche	Site Web
Procédure de désinfection des conduites principales	Site Web
Laboratoires autorisés	Site Web