Ontario

POWASSAN DRINKING WATER SYSTEM
LOT:17, CONCESSION:13, GEOTOWNSHIP:SOUTH HIMSWORTH, POWASSAN, ON,

Inspection Report

System Number:	220000576
Entity:	ONTARIO CLEAN WATER AGENCY THE CORPORATION OF THE MUNICIPALITY OF POWASSAN
Inspection Start Date:	10/06/2022
Inspection End Date:	10/12/2022
Inspected By:	Erin Spires
Badge #:	1540

(signature)

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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: DRINKING WATER | **Regulated Activity:**

Question ID	MRDW1001001	**Question Type**	Information
Question: What was the scope of this inspection?			
Legislative Requirement	Not Applicable		
Observation			

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.

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.

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.

On October 6th, 2022, Ministry of the Environment, Conservation and Parks' Water Inspector Erin Spires was accompanied during the announced, focused inspection of the Powassan Drinking Water System (DWS) by Dan Finnigan, Operator with Overall Responsibility, Ontario Clean Water Association (OCWA).

The Corporation of the Municipality of Powassan is the owner of the Powassan Drinking Water System. OCWA is the operating authority for the system.

The drinking water system inspection included a physical inspection of the treatment plant and document review. Ministry records indicate that the last inspection occurred on December 21st, 2021. The inspection period is from December 20th, 2021 to September 30th, 2022.

Specifically, this included a review and assessment of operating practices in relation to the following documents:

- Drinking Water System Regulation O. Reg. 170/03
- Certification of Drinking Water Systems Operators Regulation O. Reg. 128/04
- Permit to Take Water (PTTW) No. 7867-CDEJHF dated April 14th, 2022
- Municipal Drinking Water Licence (Licence) No. 266-101 (Issue No. 3) dated April 9th, 2021
- Drinking Water Works Permit (Permit) No. 266-201 (Issue No. 3) dated April 9th, 2021
- Previous ministry inspection reports dated December 21st, 2021 and November 26th, 2020

Question ID	MRDW1000001	Question Type	Information
Question: Does this drinking water system provide primary disinfection?			
Legislative Requirement	Not Applicable		
Observation			
This Drinking Water System provides for both primary and secondary disinfection and distribution of water.			

Question ID	MRDW1018001	Question Type	Legislative
Question: Has the owner ensured that all equipment is installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit?			
Legislative Requirement	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	MRDW1024001	Question Type	Legislative
Question: Do records confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated as required?			
Legislative Requirement	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.

A review of the Powassan Distribution System Chlorine Monitoring sheets for the inspection period indicates that the lowest free chlorine residual was measured on January 10th, 2022 at 1.11 mg/L.

Question ID	MRDW1038001	Question Type	Legislative
Question: 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 Requirement	SDWA | O. Reg. 170/03 | 6-5 | (1)1-4;		
Observation			
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.			

Question ID	MRDW1035001	Question Type	Legislative
Question: Are operators examining continuous monitoring test results and are they examining the results within 72 hours of the test?			
Legislative Requirement	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	MRDW1037001	Question Type	Legislative
Question: 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 6?			

Legislative Requirement	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

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.

Section 6-5(1)5(i) and (ii) of Schedule 6 of O. Reg. 170/03 requires that the continuous monitoring equipment must have a feature that ensures that no water is directed to users in the event that the equipment malfunctions, losses power, or if a test result for free chlorine residual is below the minimum alarm standard.

A review of the Alarm Set Points provided by the operating authority indicates that there is a low free chlorine residual alarm set at 0.8 mg/L which triggers a lockout and alarm call out without delay.

Question ID	MRDW1040000	Question Type	Legislative

Question:

Are all continuous analysers calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation?

Legislative Requirement	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.

A review of the Work Order Summary Report for the inspection period indicates that the POE free chlorine analyzer is verified and cleaned on a monthly basis and calibrated as needed.

Question ID	MRDW1108001	Question Type	Legislative

Question:

Where continuous monitoring equipment used for the monitoring of free chlorine residual, total chlorine residual, combined chlorine residual or turbidity, required by O. Reg. 170/03, 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 Requirement	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	MRDW1033001	Question Type	Legislative

Question:

Is the secondary disinfectant residual measured as required for the large municipal residential distribution system?

Legislative Requirement	SDWA | O. Reg. 170/03 | 7-2 | (3); SDWA | O. Reg. 170/03 | 7-2 | (4);

Observation

The secondary disinfectant residual was measured as required for the large municipal residential distribution system.

Question ID	MRDW1099001	Question Type	Information

Question:

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)?

Legislative Requirement	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	MRDW1081001	Question Type	Legislative

Question:

For LMR systems, are all microbiological water quality monitoring requirements for distribution samples being met?

Legislative Requirement	SDWA | O. Reg. 170/03 | 10-2 | (1); SDWA | O. Reg. 170/03 | 10-2 | (2); SDWA | O. Reg. 170/03 | 10-2 | (3);

Observation
All microbiological water quality monitoring requirements prescribed by legislation for distribution samples in a large municipal residential system were being met. Section 10-2 of Schedule 10 of O. Reg. 170/03 requires that the owner and operating authority for the drinking water system must ensure that at least nine distribution samples are taken every month, with at least one of the samples being taken each week. The owner and operating authority must ensure that each of the samples are tested for E.coli, total coliforms, and that at least 25% of the samples are tested for general bacteria population expressed as colony counts on a heterotrophic plate count (HPC). A review of the certificates of analysis for the inspection period indicates that three distribution samples are taken each week and tested for E.coli and total coliforms. One of the distribution samples is also tested for HPC.

Question ID	MRDW1096001	Question Type	Legislative
Question: 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 Requirement	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	MRDW1086001	Question Type	Legislative
Question: Are all haloacetic acid water quality monitoring requirements prescribed by legislation conducted within the required frequency and at the required location?			
Legislative Requirement	SDWA | O. Reg. 170/03 | 13-6.1 | (1); SDWA | O. Reg. 170/03 | 13-6.1 | (2); SDWA | O. Reg. 170/03 | 13-6.1 | (3); SDWA | O. Reg. 170/03 | 13-6.1 | (4); SDWA | O. Reg. 170/03 | 13-6.1 | (5); SDWA | O. Reg. 170/03 | 13-6.1 | (6);		
Observation			
All haloacetic acid water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location. Section 13-6.1 of Schedule 13 of O. Reg. 170/03 requires the owner and operating authority of the drinking water system that provides chlorination must ensure that at least			

one distribution sample is taken in each calendar quarter, from a point in the distribution system that is likely to have an elevated potential for the formation of haloacetic acids and tested for haloacetic acids (HAAs). O. Reg. 170/03 defines "calendar quarter" as the three-month period that begins on January 1, April 1, July 1, or October 1.

Effective January 1, 2020, the standard for HAAs of 0.08 mg/L (80 µg/L) was introduced and is expressed as a running annual average (RAA) of quarterly results.

A review of the certificates of analysis for the inspection period indicates that sampling for HAAs occurred on January 24th, 2022 (5.3 µg/L), April 11th, 2022 (5.3 µg/L), and July 14th, 2022 (5.3 µg/L).

The RAA for HAAs at the time of the inspection is 5 µg/L.

Question ID	MRDW1087001	**Question Type**	Legislative

Question:

Have all trihalomethane water quality monitoring requirements prescribed by legislation been conducted within the required frequency and at the required location?

Legislative Requirement	SDWA | O. Reg. 170/03 | 13-6 | (1); SDWA | O. Reg. 170/03 | 13-6 | (2); SDWA | O. Reg. 170/03 | 13-6 | (3); SDWA | O. Reg. 170/03 | 13-6 | (4); SDWA | O. Reg. 170/03 | 13-6 | (5); SDWA | O. Reg. 170/03 | 13-6 | (6);

Observation

All trihalomethane water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.

Section 13-6 of Schedule 13 of O. Reg. 170/03 requires the owner and operating authority of drinking water system that provides chlorination must ensure that at least one distribution sample is taken in each calendar quarter from a point in the distribution system that is likely to have an elevated potential for the formation of trihalomethanes and tested for trihalomethanes (THMs).
O. Reg. 169/03 sets the standard for THMS as 0.1 mg/L (100 ug/L) expressed as a RAA. RAA is defined as "the running annual average of quarterly results".

O. Reg. 170/03 defines the "calendar quarter" as the three-month period that begins on January 1, April 1, July 1, or October 1.

A review of the certificates of analysis for the inspection period indicates that sampling for THMs occurred on January 24th, 2022 (1.8 µg/L), April 11th, 2022 (1.3 µg/L), and July 14th, 2022 (9.1 µg/L).

The RAA for THMs at the time of the inspection is 5 µg/L.

Question ID	MRDW1113000	**Question Type**	Legislative
Question: Have all changes to the system registration information been provided to the Ministry within ten (10) days of the change?			
Legislative Requirement	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.			

Question ID	MRDW1059000	**Question Type**	Legislative
Question: Do the operations and maintenance manuals contain plans, drawings and process descriptions sufficient for the safe and efficient operation of the system?			
Legislative Requirement	SDWA | O. Reg. 128/04 | 28;		
Observation			
The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.			

Question ID	MRDW1060000	**Question Type**	Legislative
Question: Do the operations and maintenance manuals meet the requirements of the DWWP and MDWL issued under Part V of the SDWA?			
Legislative Requirement	SDWA | 31 | (1);		
Observation			
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.			

Question ID	MRDW1061001	**Question Type**	Legislative
Question: Are logbooks properly maintained and contain the required information?			

Legislative Requirement	SDWA | O. Reg. 128/04 | 27 | (1); SDWA | O. Reg. 128/04 | 27 | (2); SDWA | O. Reg. 128/04 | 27 | (3); SDWA | O. Reg. 128/04 | 27 | (4); SDWA | O. Reg. 128/04 | 27 | (5); SDWA | O. Reg. 128/04 | 27 | (6); SDWA | O. Reg. 128/04 | 27 | (7);

Observation

Logbooks were properly maintained and contained the required information.

Question ID	MRDW1062001	Question Type	Legislative

Question:

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 Requirement	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	MRDW1071000	Question Type	BMP

Question:

Has the owner provided security measures to protect components of the drinking water system?

Legislative Requirement	Not Applicable

Observation

The owner had provided security measures to protect components of the drinking water system.

The Powassan Water Treatment Plant is equipped with a security alarm and the door is kept locked at all times unless operators are onsite. The security alarm is tested monthly.

Question ID	MRDW1073001	Question Type	Legislative

Question:

Has the overall responsible operator been designated for all subsystems which comprise the drinking water system?

Legislative Requirement	SDWA | O. Reg. 128/04 | 23 | (1);

Observation

The overall responsible operator had been designated for each subsystem.

Darren Aljoe and Dan Finnigan act as Operators with Overall Responsibility for the Powassan Drinking Water System and alternate the responsibility on a weekly basis.

Question ID	MRDW1074001	Question Type	Legislative

Question:

Have operators-in-charge been designated for all subsystems for which comprise the drinking water system?

Legislative Requirement	SDWA | O. Reg. 128/04 | 25 | (1);

Observation

Operators-in-charge had been designated for all subsystems which comprise the drinking water system.

Operators act as operators-in-charge on a rotational basis depending on who is acting as operator with overall responsibility and onsite.

Question ID	MRDW1075001	Question Type	Legislative

Question:

Do all operators possess the required certification?

Legislative Requirement	SDWA | O. Reg. 128/04 | 22;

Observation

All operators possessed the required certification.

Question ID	MRDW1076001	Question Type	Legislative

Question:

Do only certified operators make adjustments to the treatment equipment?

Legislative Requirement	SDWA | O. Reg. 170/03 | 1-2 | (2);

Observation

Only certified operators made adjustments to the treatment equipment.

Question ID	MRDW1007001	**Question Type**	Legislative
Question: Is the owner maintaining the production well(s) in a manner sufficient to prevent entry into the well of surface water and other foreign materials?			
Legislative Requirement	SDWA | O. Reg. 170/03 | 1-2 | (1);		
Observation			
The owner was maintaining the production well(s) in a manner sufficient to prevent entry into the well of surface water and other foreign materials.			

Question ID	MRDW1009001	**Question Type**	Legislative
Question: Are measures in place to protect the groundwater and/or GUDI source in accordance with any MDWL and DWWP issued under Part V of the SDWA?			
Legislative Requirement	SDWA | 31 | (1);		
Observation			
Measures were in place to protect the groundwater and/or GUDI source in accordance with the Municipal Drinking Water Licence and Drinking Water Works Permit issued under Part V of the SDWA. Section 16.2.8 through 16.2.10 of Schedule B of the Licence requires that the operations and maintenance manual shall include, at a minimum, an inspection schedule for all wells associated with the drinking water system, well inspection and maintenance procedures, and remedial action plans for situations of non-compliance and/or risk to the raw water quality. Standard Operating Procedure for the Above Grade Well Inspection of Well Components of the Powassan Wells (dated May 12th, 2017) is located in the operations and maintenance manuals. The above ground well components are inspected annually. The most recent inspection was completed on June 8th, 2022.			

Question ID	MRDW1014001	**Question Type**	Legislative
Question: Is there sufficient monitoring of flow as required by the MDWL or DWWP issued under Part V of the SDWA?			

Legislative Requirement	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.

Question ID	MRDW1016001	Question Type	Legislative

Question:

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 Requirement	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.

Condition 1.1 of Schedule C of the Licence indicates that the maximum daily volume of treated water that flows from Well No. 1 and 2 to the distributions system shall not exceed the rated capacity of 1 313 m3/day.

A review of the Powassan Water Treatment Plant's Well No. 1 and 2 Flows indicates that the maximum daily flow for the inspection period occurred in June 2022 at 885.51 m3/day.

Question ID	MRDW1023001	Question Type	Legislative

Question:

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 Requirement	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 O. Reg. 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.

For groundwater supplies, O. Reg. 170/03 Schedule 1-3 requires the owner and operating authority for the system to ensure that the water treatment equipment, designed to comply

with the Ministry's "Procedure for Disinfection of Drinking Water in Ontario" is operated to achieve at least 99% (2.0 log) removal or inactivation of viruses by the time treated water enters the distribution system.

The Standard Operating Procedure (SOP) for CT (Chlorine Concentration x Time) at the Powassan Drinking Water System, dated November 23rd, 2017, indicates that a CT of 4.74 mg/L*min would be achieved under the following worst-case conditions:

- Free chlorine residual below: 0.45 mg/L
- Treated flow above: 15.2 L/sec reviewed flows
- pH above 9.5
- temperature of 5 deg. Celsius

A review of the continuous free chlorine residual trends reviewed onsite and provided by the operating authority indicate that primary disinfection was achieved for the inspection period.

Question ID	MRDW1030000	**Question Type**	Legislative
Question: 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 Requirement	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. The chlorine analyzer located in the pumphouse measures the treated free chlorine residual after the intended chlorine contact time has been achieved through the CT pipe and before the water is directed to users.			

Question ID	MRDW1083001	**Question Type**	Legislative
Question: For LMR systems, are all microbiological water quality monitoring requirements for treated samples being met?			
Legislative Requirement	SDWA | O. Reg. 170/03 | 10-3;		

Observation
All microbiological water quality monitoring requirements prescribed by legislation for treated samples were being met. Section 10-3 of Schedule 10 of O. Reg. 170/03 requires the owner and operating authority of the drinking water system must ensure that a treated water sample is taken at least once every week and tested for E.coli, total coliforms and HPC. A review of the certificates of analysis for the inspection period indicates that a weekly treated water sample was taken and tested for E.coli, total coliforms, and HPC.

Question ID	MRDW1084001	Question Type	Legislative
Question: Are all inorganic water quality monitoring requirements prescribed by legislation conducted within the required frequency?			
Legislative Requirement	SDWA | O. Reg. 170/03 | 13-2;		
Observation			
All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency. Section 13-2 of Schedule 13 of O. Reg. 170/03 requires that the owner and operating authority for the system must ensure that at least one treated water sample is taken every 36 months, if the system obtains water from a raw water supply that is ground water and test for every parameter set out in Schedule 23 (Inorganics). From the last inspection report, Schedule 23 parameters were last sampled for on January 18th, 2021.			

Question ID	MRDW1088000	Question Type	Legislative
Question: Are all nitrate/nitrite water quality monitoring requirements prescribed by legislation conducted within the required frequency for the DWS?			
Legislative Requirement	SDWA | O. Reg. 170/03 | 13-7;		
Observation			
All nitrate/nitrite water quality monitoring requirements prescribed by legislation were conducted within the required frequency for the DWS.			

Section 13-7 of Schedule 13 of O. Reg. 170/03 requires that the owner and operating authority for the system must ensure that at least one treated water sample is taken every three months and tested for nitrate and nitrite.

A review of the certificates of analysis for the inspection period indicates that treated water samples were taken on January 24th, 2022, April 11th, 2022, and July 14th, 2022 and tested for nitrate and nitrite.

Question ID	MRDW1089000	Question Type	Legislative
Question: Are all sodium water quality monitoring requirements prescribed by legislation conducted within the required frequency?			
Legislative Requirement	SDWA | O. Reg. 170/03 | 13-8;		
Observation			
All sodium water quality monitoring requirements prescribed by legislation were conducted within the required frequency. Section 13-8 of Schedule 13 of O. Reg. 170/03 requires the owner and operating authority of the system must ensure that at least one treated water sample is taken every 60 months and tested for sodium. A review of the certificates of analysis indicates that a treated water sample was tested for sodium on January 24th, 2022 with a result of 11.9 mg/L.			

Question ID	MRDW1090000	Question Type	Legislative
Question: Where fluoridation is not practiced, are all fluoride water quality monitoring requirements prescribed by legislation conducted within the required frequency?			
Legislative Requirement	SDWA | O. Reg. 170/03 | 13-9;		
Observation			
All fluoride water quality monitoring requirements prescribed by legislation were conducted within the required frequency. Section 13-9 of Schedule 13 of O. Reg. 170/03 requires that the owner and operating authority for the system ensure that at least one treated water sample is taken every 60 months and tested for fluoride. The most recent sample was collected and tested for fluoride on January 14th, 2019. The			

next sample is to be taken by January 14th, 2024 (+/- 90 days).

Question ID	MRDW1085001	Question Type	Legislative
Question: Are all organic water quality monitoring requirements prescribed by legislation conducted within the required frequency?			
Legislative Requirement	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			
All organic water quality monitoring requirements prescribed by legislation were conducted within the required frequency. Section 13-4 of Schedule 13 of O. Reg. 170/03 requires that the owner and operating authority for the system must ensure that at least one treated water sample is taken every 36 months, if the system obtains water from a raw water supply that is ground water and test for every parameter set out in Schedule 24 (Organics). From the last inspection report, Schedule 24 parameters were last sampled for on January 18th, 2021.			

Components Information

DWS Component Information Report for 220000576

as of 12-OCT-2022

Drinking Water System Profile Information

DWS #	220000576
MOE Assigned Name	Powassan Drinking Water System
Category	LMRS
Regulation	O.REG 170/03
DWS Type	Well Supply
Source Type	Ground Water
Address	Concession 13, Lot 17, South Himsworth (Geographic Township)
Region	Northern Region
District	North Bay Area Office
Municipality	Powassan
Public Health Unit	North Bay Parry Sound District Health Unit

LWIS Component Name	LWIS Component Type	LWIS Component Sub-Type	Component Address	Comments
Well #2 (Raw Water)	Source	Ground	Lot: 17, Conc.: 13,	The Drinking Water Works Permit (DWWP) no. 266-201 issue No. 2 describes Well # 2 as follows: - The well is located at Lot 17, Concession 13 in the Municipality of Powassan, Ontario. - 300 mm diameter x 18.6 m deep drilled overburden production well including 7.6 m of screen. - The well is equipped with a submersible pump with a rated capacity of 15.2 L/second at a total dynamic head of 92 m and one (1) 100 mm diameter flowmeter. Note: The well is located within the Genesee Creek flood plain. There is a 150 mm diameter test well located approximately 3.0 m to the east of Well # 2.
Distribution	Other	Other		The distribution system services an approximate population of 1071 connected residents. The First Engineer's Report estimated the distribution system at approximately 9.2 km. The system was comprised of asbestos concrete, polyvinyl chloride and cast iron piping in 100 mm, 150 mm and 200 mm diameters. In 2008, the municipality installed or replaced watermains on Clark St, Joseph St, Chisholm St, Edward St, South St, and a portion along Big Bend Ave. All replaced and new watermains are 250 mm polyvinyl chloride and have been brought into service.
Well #1 (Raw Water)	Source	Ground	Lot: 17, Conc.: 13,	The Drinking Water Works Permit (DWWP) no. 266-201 issue No. 2 describes Well # 1 as follows: - The well is located at Lot 17, Concession 13 in the Municipality of Powassan, Ontario - 150 mm diameter x 23.2 m deep drilled overburden production well including 3.8 m of screen, discharging into the distribution system through the pumphouse process piping. - The well is equipped with a submersible pump with a rated capacity of 15.2 L/second at a total dynamic head of 92.2 m and one (1) 100 mm diameter flowmeter. Note: There is a monitoring well located 5 m to the south of Well # 1 and protected by a 450 mm diameter, vertical

DWS Component Information Report for 220000576

as of 12-OCT-2022

LWIS Component Name	LWIS Component Type	LWIS Component Sub-Type	Component Address	Comments
				corrugated steel pipe around the well casing and standing 1.2 m above ground level.
Treated Water	Treated Water Poe	Pumphouse	Lot: 17, Conc.: 13,	The treatment process at the Powassan Drinking Water System is comprised of primary and secondary disinfection using 12% sodium hypochlorite. The Drinking Water Works Permit (DWWP) no. 266-201 issue No. 2 describes the treatment facility as follows: - The treatment facility is located at 76 Fairview Lane, Municipality of Powassan, Ontario. - Pumphouse consisting of a 4.7 m x 6.9 m masonry building containing process piping, flowmeters, raw and treated water sample points, disinfection system, pump system controls, electrical systems, a drainage system with an external soak away pit sized for 1440 L/day and all associated appurtenances. - Chlorination system consisting of two (2) sodium hypochlorite chemical feed pumps (1 duty and 1 standby), flow paced and equipped with auto switchover controls feeding at the discharge header. Chlorine is kept in two (2) sodium hypochlorite chemical solution tanks (duty, standby) and one spill containment basin. - Chlorine contact pipe consisting of a 49 m length of 600 mm diameter serpentine pipeline installed below grade to provide adequate contact time at maximum flow and before the first consumer together with two (2) sample lines (duty, standby), each installed with a backflow preventer, feeding back to pump house for continuous water quality monitoring. - Standby power consisting of one (1) 65 kW/81 kVA minimum rated standby diesel generator set, complete with a double walled fuel tank and automatic transfer switch, all installed in an external weatherproof and acoustic enclosure. - Monitoring equipment consisting of two (2) magnetic flowmeters, one at each of the raw water feed pipes and online instrumentation that continuously monitors and records free chlorine residual at point of entry, and raw flows.
In-Ground Reservoir	Other	Reservoir		The Drinking Water Works Permit (DWWP) no. 266-201 issue No. 2 describes the off-site storage reservoir as follows: - The reservoir is located at 34 McRae Drive, Municipality of Powassan, Ontario. - The storage reservoir is in-ground with interconnected two cells. Each reservoir cell sized approximately 9.3 m x 13 m x 5.5 m water depth and complete with an inlet/outlet line, level sensor and a 300 mm diameter emergency overflow pipe. - Total capacity of the reservoir is 1,278 m^3. - The equipment in the reservoir consists of a 250 mm diameter inlet line to reservoir cell no. 1 complete with two (2) control valves, a check valve and a 200 mm diameter bypass line with a control valve and a 250 mm diameter outlet line to reservoir cell no. 2 complete with two (2) control valves, a magnetic flowmeter, a check

DWS Component Information Report for 220000576

as of 12-OCT-2022

LWIS Component Name	LWIS Component Type	LWIS Component Sub-Type	Component Address	Comments
				valve and a 200 mm diameter bypass line with a control valve. The top operating water level (TWL) of the in-ground reservoir is at 310 m A.S.L. The facility has a prefabricated re-chlorination building located on top of an in-ground valve chamber with the following equipment: - Two (2) sodium hypochlorite chemical feed pumps (duty and standby), injecting sodium hypochlorite solution (on demand) into the reservoir outlet line. - One (1) sodium hypochlorite chemical storage tank with low level switch and spill containment. - One (1) chlorine residual analyzer sampling water from reservoir outlet line approximately 70 m of 250 mm diameter reservoir feeder main from reservoir site boundary to valve chamber - All instrumentation and controls for operation and communication of status and fault conditions. - One (1) eight kW natural gas generator

Key Reference and Guidance Material for Municipal Residential Drinking Water Systems

March 2019

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

PIBS 8990b01

Ontario

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 Avis de demande de services de laboratoire Avis de résultats d'analyse insatisfaisants et de règlement des problèmes	012-2149F 012-2148F 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 portable 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

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