



Ontario Clean Water Agency
Agence Ontarienne Des Eaux

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February 28, 2023

Alton Hobbs, Chief Administrative Officer
The Corporation of the Township of Assiginack
156 Arthur St. P.O. Box 238
Manitowaning, Ontario
POP 1N0



Re: O. Reg. 170 Section 11 & Schedule 22 Annual Reporting under SDWA
O. Reg 387 Section 9 Annual Reporting under OWRA
For the Manitowaning Water Treatment Plant
Waterworks No.: 210001013

Dear Mr. Hobbs;

Attached are the 2022 Annual and Summary Reports for the Manitowaning Water System. The Reports are based on information provided by Operators as of February 22, 2023 in accordance with Section 11 and Schedule 22 of O. Reg. 170/03, under the Safe Drinking Water Act. A confirmation of submission of the PTTW reporting, as required by O.Reg 387, is included as part of the report.

Please note that any Orders that you have received directly from the MOE or any major expense incurred by the Municipality which is not listed should be reviewed and added to the report.

As per Schedule 22 of O. Reg. 170/03, this Summary Report is to be provided to the members of the municipal council no later than March 31, 2023. Please ensure this distribution.

Section 12 of O. Reg. 170/03, requires both the Summary Report and the Annual Report be made available for inspection by any member of the public during normal business hours, without charge. The reports should be made available for inspection at the office of the municipality or at a location that is reasonably convenient to the users of the water system.

Sincerely,

Sarah Beaulieu
Process & Compliance Technician
Ontario Clean Water Agency

Manitowaning Water Treatment

Large Municipal Residential Drinking Water System

January 1, 2022 – December 31, 2022

***O.Reg 170/03 Schedule 22 Summary Report
O.Reg 170/03 Section 11 Annual Report
&
O.Reg 387/04 Annual Record of Water Taking***

Prepared by the Ontario Clean Water Agency
For The Corporation of the Municipality of Assiginack



**Ontario Clean Water Agency
Agence Ontarienne Des Eaux**



Drinking-Water System Number: 210001013
Drinking-Water System Name: Manitowaning Drinking Water System
Drinking-Water System Owner: Corporation of the Municipality of Assignack
Drinking-Water System Category: Large Municipal Residential

SECTION 1: INTRODUCTION

This document is prepared in accordance with Section 11 and Schedule 22 of O.Reg.170/03 under the Safe Drinking Water Act and with Section 9 of O.Reg.387/04 under the Ontario Water Resources Act. The reports are prepared by the Ontario Clean Water Agency. Acronyms and definitions can be found at the end of the report.

A copy of the Summary Report must be provided to the members of the municipal council by March 31, 2023.

SECTION 2: REQUIREMENTS OF THE REPORTS

Schedule 22 Report

The report must list the requirements of the Act, the regulations, the system's approval and any order that the system **failed to meet** at any time during the period covered by the report. It must also specify the duration of the failure, and for each failure referred to, describe the measures that were taken to correct the failure.

For the purpose of enabling the owner of the system to assess the rated capability of their system to meet existing and future planned water uses, the following information is required to be included in this report:

- A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows.
- A comparison of the summary to the rated capacity and flow rates approved in the systems approval.

Section 11 Report

The annual report must contain the following:

- A brief description of the drinking water system and a list of chemicals used by the system.
- A description of any major expenses incurred during the period covered by the report to install, repair or replace required equipment.
- A summary of all adverse water quality incidents (AWQI) reported to the Ministry
- A summary of corrective actions taken in response all AWQIs
- A summary of all test results required under the regulation, under an approval, municipal drinking water licence or order, including an OWRA order.
- A statement of where a Schedule 22 report will be available for inspection.

The report must be prepared not later than February 28 of the following year.

Regulation 387 Report

On or before March 31 in every year, every holder of a permit to take water (PTTW) shall submit to a Director the data collected and recorded for the previous year.

A record of annual water taking can be found in Appendix A.



SECTION 3: SCHEDULE 22 REPORT

Flows - Treated

In accordance with the Municipal Drinking Water License (MDWL), the Manitowaning WTP shall not be operated to exceed a maximum daily volume of 1045 m³/d to the distribution system.

The daily treated water maximum flow was 610 m³ in July and represents 58% of capacity. In 2022, the total volume of water sent to the distribution system was 108,652.1 m³

The quantity of treated water supplied during the reporting period **did not** exceed the rated maximum capacity.

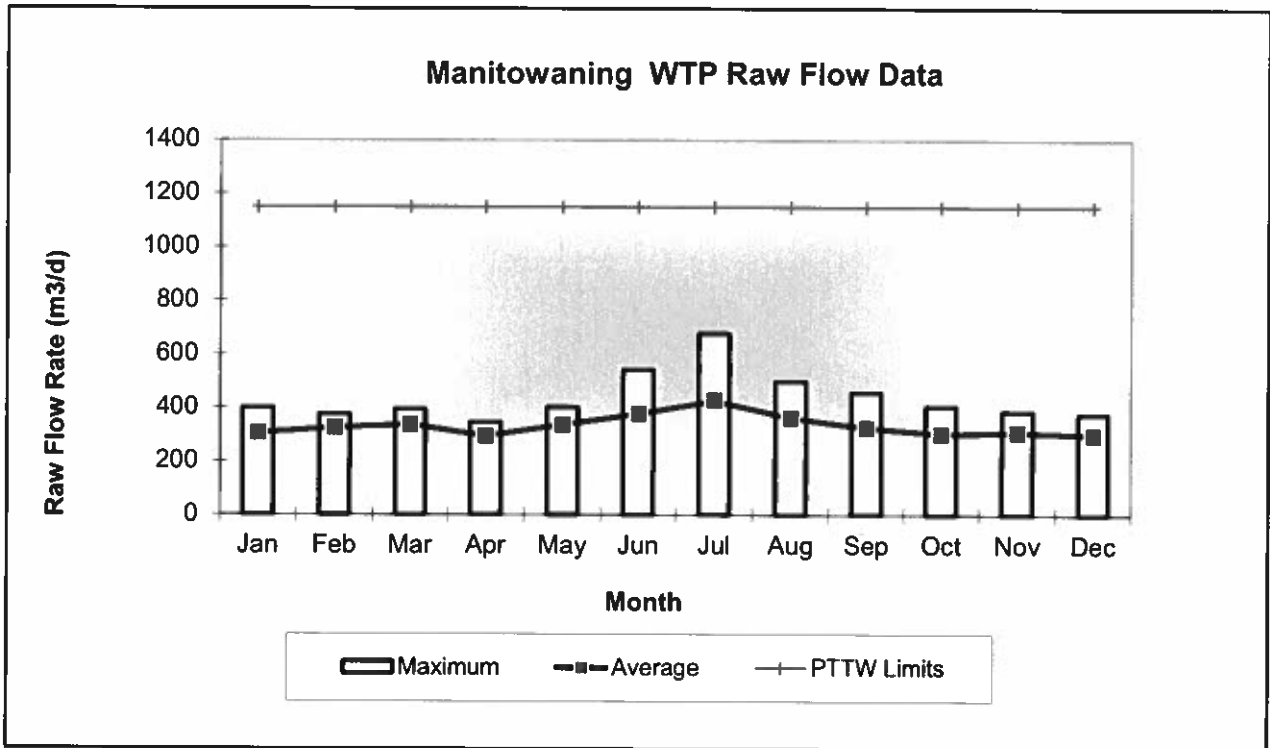
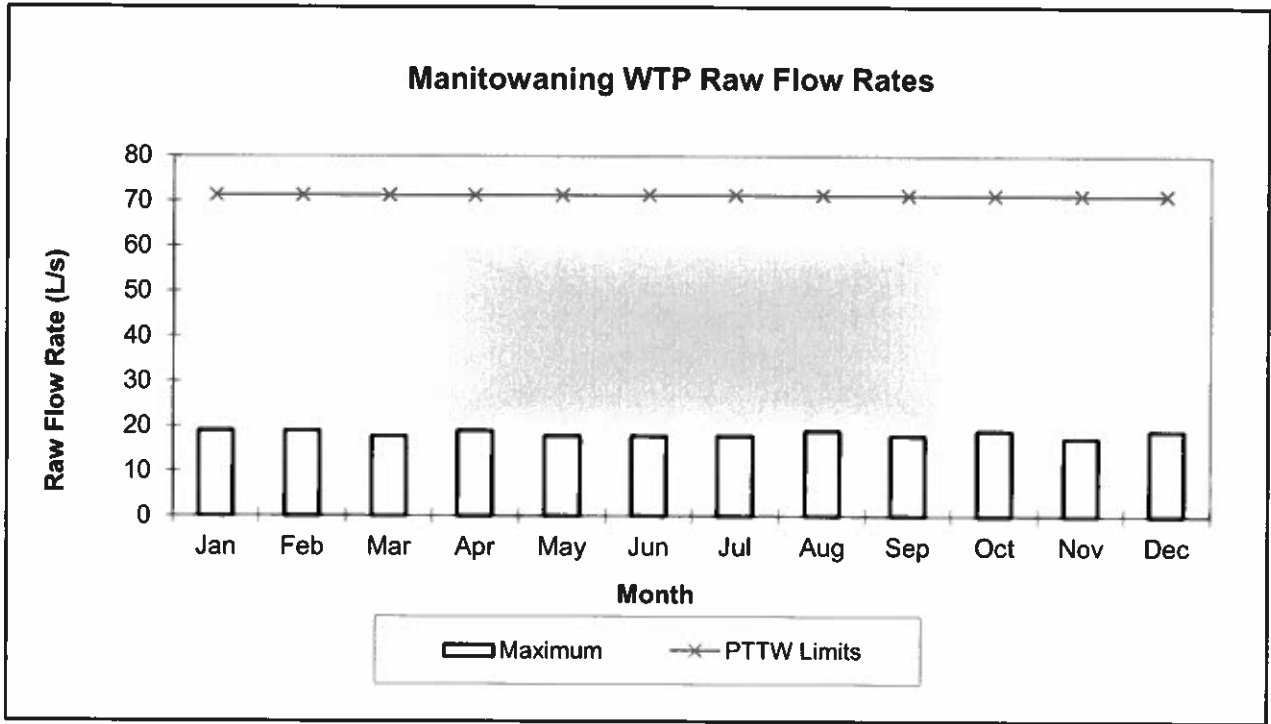
Flows - Raw

Daily raw maximum instantaneous flow is stated in the PTTW at a maximum rate of flow of 71.32 L/s and a maximum daily volume of 1149.12m³/d.

The average monthly raw water flow for this reporting period was 333.8 m³/d. The maximum daily flow was 678 m³/d representing 59% of water taking limits. In 2022, the total volume of water taken from the environment was 121,824.8 m³.

The quantity of raw water taken **did not** exceed any limits stipulated within the PTTW.

<i>RAW WATER FLOW DATA - TOTAL ALL SOURCES</i>						
Month	Total Monthly Flow (m³)	Average Flow (m³/d)	Maximum Flow (m³/d)	Maximum Flow Rate (L/s)	Limits	
					L/s (PTTW)	m³/d (PTTW)
January	9,473	305.58	399	18.92	71.32	1149.12
February	9,097	324.89	375	18.92	71.32	1149.12
March	10,448	337.03	395	17.69	71.32	1149.12
April	8,810	293.67	345	18.92	71.32	1149.12
May	10,452	337.16	402	17.77	71.32	1149.12
June	11,319	377.3	544	17.78	71.32	1149.12
July	13,219.8	426.44	678	17.76	71.32	1149.12
August	11,238	362.52	497	18.92	71.32	1149.12
September	9,770	325.67	457	17.87	71.32	1149.12
October	9,416	303.74	405	18.92	71.32	1149.12
November	9,310	310.03	386	17.28	71.32	1149.12
December	9,281	299.39	377	18.92	71.32	1149.12
Total	121,824.8					
Average		333.8				
Maximum			678	8.92	71.32	1149.12





Annual Raw Water Review

Raw Water Taking	Total Taking m3/d	Average Day m3/d	Max Day m3/d	Max Day % of PTTW allowable 1149.12 m3/d
2022	121,824.8	333.8	678	59%
2021	141,509.4	387.7	822	71.5%
2020	132,013	360.69	682	59%
2019	104,954	287.55	497	43.3%
2018	147,007	402.76	987	85.9%

System Failures and Corrective Actions

The latest inspection of the drinking water facility took place on October 20, 2022. The facility scored 14/506 providing a rating of 97.23%

The following non-compliance was identified in the inspection report:

Question ID MRDW1060000. Do the operations and maintenance manuals meet the requirements of the DWWP and MDWL issued under Part V of the SDWA?

The operations and maintenance manuals did not meet the requirements of the Drinking Water Works Permit and Municipal Drinking Water Licence issued under Part V of the SDWA.

DWI notes: Generally the ops manual is sufficient when grouped with the associated SOPs, to meet requirements listed in the MDWL. In January 2022, Condition 1.5, Schedule C was added to include a requirement for a standard operating procedure to be put in place for use of higher capacity highlift pumps. The SOP was not written.

It is noted that the higher capacity (fire) pumps which can be used in parallel with other pumps are limited by the capacity of the filters.

OCWA staffs are writing an SOP which outlines pumping capacity versus filter capacity and how CT can be accomplished given resulting maximum flow rates.

AWQIs reported to the Ministry

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
n/a	n/a	n/a	n/a	n/a	n/a



SECTION 4: SECTION 11 REPORT

Information to be provided

Population Served		550	
Does your Drinking-Water System serve more than 10,000 people?			No
Is your annual report available to the public at no charge on a web site on the Internet?			Yes
Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.		Township of Assiginack, Municipal Office 156 Arthur Street Manitowaning, Ontario POP 1N0	
Number of Designated Facilities served:			0
Did you provide a copy of your annual report to all Designated Facilities you serve?			NA
Number of Interested Authorities you report to:			0
Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?			NA
List all Drinking-Water Systems (if any), and their DWS Number which receive all of their drinking water from your system:		N/A	
Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?			N/A
Indicate how you notified system users that your annual report is available, and is free of charge.		Public access/notice via newspaper	
Indicate if you notified system users that your annual report is available and is free of charge using an alternate method			Yes

An Evoqua membrane filtration plant supplying water to the Town of Manitowaning drawing water from Lake Huron, consisting of three membrane filter trains a chlorine contact reservoir, clear well and five high lift pumps supplying the Town. Sodium Hypochlorite is used for primary disinfection as well as seasonally for zebra mussel control in the raw water intake. The rated capacity of the system is 12.1 L/s. Wastewater from backwash and filter cleans is neutralized and diverted to the sanitary sewer system.

Chemicals Used

Sodium Hypochlorite (12%)	Disinfection and clean-in-place
Sodium Hydroxide	Neutralization of wastewater
Citric Acid	Clean-in-place
Calcium Thiosulphate (Captor)	Dechlorination of reject water & wastewater



Significant Expenses

Significant expenses incurred to

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

Work Order	Date Completed	Comment
2497878	14-Mar-22	Purchased and installed new treated water turbidity analyzer equipment – \$6,808.53

Adverse Water Quality Incidents

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

Incident Date	Parameter	Result	Unit of Measure	Comment / Corrective Action	Corrective Action Date
n/a	n/a	n/a	n/a	n/a	n/a

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03.

	No. of Samples Collected	Range of E.Coli		Range of Total Coliform Results		Number of HPC Samples	Range of HPC Results	
		Min #	Max #	Min #	Max #		Min #	Max #
Raw Water	54	0	NDOGT	0	NDOGT	0	N/A	N/A
Treated Water	54	0	0	0	0	54	0	2
Distribution	104	0	0	0	0	52	0	10

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03

	No. of Samples Collected	Range of Results		Units of Measure
		Minimum	Maximum	
Turbidity – Filter 1	8760	0	0.23	(NTU)
Turbidity – Filter 2	8760	0	0.43	(NTU)
Turbidity – Filter 3	8760	0	0.098	(NTU)
Free Chlorine Residual – TW	8760	1.08	2.09	(mg/L)
Free Chlorine Residual, Distribution Location 1	105	1.19	2.15	(mg/L)
Free Chlorine Residual, Distribution Location 2	105	0.90	2.118	(mg/L)
Free Chlorine Residual, Distribution Location 3	105	1.28	2.13	(mg/L)
Free Chlorine Residual, Distribution Location 4	52	1.24	2.07	(mg/L)



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

Date of legal instrument issued	Parameter and limits	Month Sampled	Day Sampled	Result	Unit of Measure
254-202 Issue Date: January 24, 2022 Expiry Date: January 23, 2027	Backwash (BW) Total Suspended Solids (TSS) 25 mg/L annual average Quarterly samples when discharging into Manitowaning Bay	Jan	N/A		mg/L
		Feb	N/A		mg/L
		Mar	N/A		mg/L
		Apr	N/A		mg/L
		May	N/A		mg/L
		Jun	N/A		mg/L
		Jul	N/A		mg/L
		Aug	N/A		mg/L
		Sep	N/A		mg/L
		Oct	N/A		mg/L
		Nov	N/A		mg/L
		Dec	N/A		mg/L
		Annual Average			

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

TREATED WATER	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
				MAC	1/2 MAC
Antimony: Sb (ug/L) - TW	2022/01/10	<MDL 0.6	6.0	No	No
Arsenic: As (ug/L) - TW	2022/01/10	0.4	25.0	No	No
Barium: Ba (ug/L) - TW	2022/01/10	12.2	1000.0	No	No
Boron: B (ug/L) - TW	2022/01/10	16.0	5000.0	No	No
Cadmium: Cd (ug/L) - TW	2022/01/10	<MDL 0.003	5.0	No	No
Chromium: Cr (ug/L) - TW	2022/01/10	0.16	50.0	No	No
Mercury: Hg (ug/L) - TW	2022/01/10	<MDL 0.01	1.0	No	No
Selenium: Se (ug/L) - TW	2022/01/10	0.09	50.0	No	No
Uranium: U (ug/L) - TW	2022/01/10	0.179	20.0	No	No

TREATED WATER	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
				MAC	1/2 MAC
Fluoride (mg/L) - TW	2019/01/08	<MDL 0.06	1.5	No	No
Nitrite (mg/L) - TW	2022/01/10	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2022/04/11	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2022/07/11	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2022/10/11	<MDL 0.003	1.0	No	No
Nitrate (mg/L) - TW	2022/01/10	0.158	10.0	No	No
Nitrate (mg/L) - TW	2022/04/11	0.164	10.0	No	No
Nitrate (mg/L) - TW	2022/07/11	0.128	10.0	No	No
Nitrate (mg/L) - TW	2022/10/11	0.123	10.0	No	No
Sodium: Na (mg/L) - TW	2019/01/08	6.37	20*	No	No

*There is no "MAC" for Sodium. The aesthetic objective for sodium in drinking water is 200 mg/L. The local Medical Officer of Health should be notified when the sodium concentration exceeds 20 mg/L so that this information may be communicated to local physicians for their use with patients on sodium restricted diets.



Summary of Lead testing under Schedule 15.1 during this reporting period

Location Type	Number of Samples	Range of Results		MAC (ug/L)	Number of Exceedances
		Minimum	Maximum		
Distribution - Lead Results (ug/L)	n/a			10	0
Distribution - Alkalinity (mg/L)	4	73	76	n/a	n/a
Distribution - pH In-House	4	8.19	8.54	n/a	n/a

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

TREATED WATER	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Alachlor (ug/L) - TW	2022/01/10	<MDL 0.02	5.0	No	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	2022/01/10	0.02	5.0	No	No
Azinphos-methyl (ug/L) - TW	2022/01/10	<MDL 0.05	20.0	No	No
Benzene (ug/L) - TW	2022/01/10	<MDL 0.32	1.0	No	No
Benzo(a)pyrene (ug/L) - TW	2022/01/10	<MDL 0.004	0.01	No	No
Bromoxynil (ug/L) - TW	2022/01/10	<MDL 0.33	5.0	No	No
Carbaryl (ug/L) - TW	2022/01/10	<MDL 0.05	90.0	No	No
Carbofuran (ug/L) - TW	2022/01/10	<MDL 0.01	90.0	No	No
Carbon Tetrachloride (ug/L) - TW	2022/01/10	<MDL 0.17	2.0	No	No
Chlorpyrifos (ug/L) - TW	2022/01/10	<MDL 0.02	90.0	No	No
Diazinon (ug/L) - TW	2022/01/10	<MDL 0.02	20.0	No	No
Dicamba (ug/L) - TW	2022/01/10	<MDL 0.2	120.0	No	No
1,2-Dichlorobenzene (ug/L) - TW	2022/01/10	<MDL 0.41	200.0	No	No
1,4-Dichlorobenzene (ug/L) - TW	2022/01/10	<MDL 0.36	5.0	No	No
1,2-Dichloroethane (ug/L) - TW	2022/01/10	<MDL 0.35	5.0	No	No
1,1-Dichloroethylene (ug/L) - TW	2022/01/10	<MDL 0.33	14.0	No	No
Dichloromethane (Methylene Chloride) (ug/L) - TW	2022/01/10	<MDL 0.35	50.0	No	No
2,4-Dichlorophenol (ug/L) - TW	2022/01/10	<MDL 0.15	900.0	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	2022/01/10	<MDL 0.19	100.0	No	No
Diclofop-methyl (ug/L) - TW	2022/01/10	<MDL 0.4	9.0	No	No
Dimethoate (ug/L) - TW	2022/01/10	<MDL 0.06	20.0	No	No
Diquat (ug/L) - TW	2022/01/10	<MDL 1.0	70.0	No	No
Diuron (ug/L) - TW	2022/01/10	<MDL 0.03	150.0	No	No
Glyphosate (ug/L) - TW	2022/01/10	<MDL 1.0	280.0	No	No
Malathion (ug/L) - TW	2022/01/10	<MDL 0.02	190.0	No	No
Metolachlor (ug/L) - TW	2022/01/10	<MDL 0.01	50.0	N/A	N/A
Metribuzin (ug/L) - TW	2022/01/10	<MDL 0.02	80.0	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW	2022/01/10	<MDL 0.3	80.0	No	No
Paraquat (ug/L) - TW	2022/01/10	<MDL 1.0	10.0	No	No
PCB (ug/L) - TW	2022/01/10	<MDL 0.04	3.0	No	No
Pentachlorophenol (ug/L) - TW	2022/01/10	<MDL 0.15	60.0	No	No
Phorate (ug/L) - TW	2022/01/10	<MDL 0.01	2.0	No	No



Picloram (ug/L) - TW	2022/01/10	<MDL 1.0	190.0	No	No
Prometryne (ug/L) - TW	2022/01/10	<MDL 0.03	1.0	No	No
Simazine (ug/L) - TW	2022/01/10	<MDL 0.01	10.0	No	No
Terbufos (ug/L) - TW	2022/01/10	<MDL 0.01	1.0	No	No
Tetrachloroethylene (ug/L) - TW	2022/01/10	<MDL 0.35	10.0	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	2022/01/10	<MDL 0.2	100.0	No	No
Triallate (ug/L) - TW	2022/01/10	<MDL 0.01	230.0	No	No
Trichloroethylene (ug/L) - TW	2022/01/10	<MDL 0.44	5.0	No	No
2,4,6-Trichlorophenol (ug/L) - TW	2022/01/10	<MDL 0.25	5.0	No	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (ug/L) - TW	2022/01/10	<MDL 0.12	100.0	No	No
Trifluralin (ug/L) - TW	2022/01/10	<MDL 0.02	45.0	No	No
Vinyl Chloride (ug/L) - TW	2022/01/10	<MDL 0.17	1.0	No	No
DISTRIBUTION WATER					
Trihalomethane: Total (ug/L) Annual Average - DW	2022/12/31	44.25	100.00	No	No
HAA Total (ug/L) Annual Average - DW	2022/12/31	24.225	80.0	No	No

SECTION 5: RAW WATER SUBMISSIONS

Raw water flows were submitted to the Ministry on January 12, 2023.



Location: WTRS / WT DATA / Input WT Record

WTRS-WT-008

Water Taking Data submitted successfully.

Confirmation:

Thank you for submitting your water taking data online.

Permit Number: 7278-BALLLV
Permit Holder: THE CORPORATION OF THE TOWNSHIP OF ASSIGNACK.
Received on: Jan 12, 2023 3:05 PM

This confirmation indicates that your data has been received by the Ministry, but should not be construed as acceptance of this data if it differs from that specified on the Permit Number, assigned to the Permit Holder stated above.

[Return to Main Page](#)

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SECTION 6: CONCLUSION

The Manitowaning WTP delivers water that, in all its treated and distribution samples, indicates the water to be free of bacteriological contamination.

Based on information available for the 2022 operating year, the Manitowaning WTP was able to meet the demand of water use without exceeding the PTTW or the MDWL.



List of Acronyms and Definitions

Alkalinity	The capacity of water for neutralizing an acid solution
AWQI	Adverse Water Quality Incident- when a water sample test result exceeds the Ontario Drinking Water Quality Standards
Backwash	Water pumped backwards to clean filters
BWA	Boil Water Advisory; Issued when risk of contamination is possible in drinking water
CFU	Colony Forming Units
Chlorine Residual	A low level of chlorine remaining in water after disinfection occurs
DW	Distribution Water
DWA	Drinking Water Advisory; Issued when water cannot be consumed by any means
DWWP	Drinking Water Works Permit - provides a description of the overall system
E.Coli	Bacteria used as indicators to measure the degree of pollution and sanitary quality of water
GUDI 170/03	Groundwater Under Direct Influence – Considered to be surface water under O.Reg
HPC	Heterotrophic Plant Count
L/s	Litres per Second
m ³ /d	Cubic Metres per Day
MAC	Maximum Acceptable Concentration
MDL	Minimum Detection Level
MDWL requirements	Municipal Drinking Water Licence - relates to the operation and performance
mg/L	Miligrams per Litre
Ministry	Ministry of the Environment and Climate Change
MOECC	Ministry of the Environment and Climate Change
O.Reg	Ontario Regulation
PTTW water	Permit to Take Water – Permit which allows water taking from groundwater or surface
RW	Raw Water
TC	Total Coliforms
TSS	Total Suspended Solids
Turbidity	Cloudiness or haziness of water
TW	Treated Water



Appendix A

Raw Water Flows

Ontario Clean Water Agency
Annual Water Taking and Transfer Report
 From 01/01/2022 To 12/31/2022

Facility: MANITOWANING DRINKING WATER SYSTEM-5883
 Tag: Raw Flow: Sum (m3/d)
 Tag Group: Raw Water

Permit#: 7278-BALLLV
 Source Name: Lake Huron (Georgian Bay)
 Source: Lake
 Type:
 Purpose: Municipal

Coordinate Zone: 17
 Easting: 437565
 Northing: 5065825
 Method deter: Metered

Date Measured	Value (m ³ /d)	Value (Litres)
01/01/2022	220.0000	220000.0000
02/01/2022	234.0000	234000.0000
03/01/2022	252.0000	252000.0000
04/01/2022	325.0000	325000.0000
05/01/2022	258.0000	258000.0000
06/01/2022	222.0000	222000.0000
07/01/2022	243.0000	243000.0000
08/01/2022	317.0000	317000.0000
09/01/2022	305.0000	305000.0000
10/01/2022	270.0000	270000.0000
11/01/2022	280.0000	280000.0000
12/01/2022	264.0000	264000.0000
13/01/2022	286.0000	286000.0000
14/01/2022	275.0000	275000.0000
15/01/2022	302.0000	302000.0000
16/01/2022	328.0000	328000.0000
17/01/2022	399.0000	399000.0000
18/01/2022	336.0000	336000.0000
19/01/2022	345.0000	345000.0000
20/01/2022	317.0000	317000.0000
21/01/2022	335.0000	335000.0000
22/01/2022	336.0000	336000.0000
23/01/2022	337.0000	337000.0000
24/01/2022	331.0000	331000.0000
25/01/2022	341.0000	341000.0000
26/01/2022	323.0000	323000.0000
27/01/2022	343.0000	343000.0000
28/01/2022	339.0000	339000.0000
29/01/2022	342.0000	342000.0000
30/01/2022	339.0000	339000.0000
31/01/2022	329.0000	329000.0000
01/02/2022	320.0000	320000.0000
02/02/2022	375.0000	375000.0000
03/02/2022	338.0000	338000.0000
04/02/2022	303.0000	303000.0000
05/02/2022	279.0000	279000.0000
06/02/2022	309.0000	309000.0000
07/02/2022	337.0000	337000.0000
08/02/2022	274.0000	274000.0000
09/02/2022	351.0000	351000.0000
10/02/2022	333.0000	333000.0000
11/02/2022	332.0000	332000.0000

12/02/2022	307.0000	307000.0000
13/02/2022	307.0000	307000.0000
14/02/2022	285.0000	285000.0000
15/02/2022	353.0000	353000.0000
16/02/2022	333.0000	333000.0000
17/02/2022	342.0000	342000.0000
18/02/2022	326.0000	326000.0000
19/02/2022	297.0000	297000.0000
20/02/2022	335.0000	335000.0000
21/02/2022	351.0000	351000.0000
22/02/2022	322.0000	322000.0000
23/02/2022	318.0000	318000.0000
24/02/2022	313.0000	313000.0000
25/02/2022	328.0000	328000.0000
26/02/2022	333.0000	333000.0000
27/02/2022	343.0000	343000.0000
28/02/2022	353.0000	353000.0000
01/03/2022	344.0000	344000.0000
02/03/2022	364.0000	364000.0000
03/03/2022	347.0000	347000.0000
04/03/2022	377.0000	377000.0000
05/03/2022	372.0000	372000.0000
06/03/2022	374.0000	374000.0000
07/03/2022	351.0000	351000.0000
08/03/2022	356.0000	356000.0000
09/03/2022	352.0000	352000.0000
10/03/2022	347.0000	347000.0000
11/03/2022	321.0000	321000.0000
12/03/2022	345.0000	345000.0000
13/03/2022	335.0000	335000.0000
14/03/2022	365.0000	365000.0000
15/03/2022	362.0000	362000.0000
16/03/2022	383.0000	383000.0000
17/03/2022	395.0000	395000.0000
18/03/2022	325.0000	325000.0000
19/03/2022	303.0000	303000.0000
20/03/2022	321.0000	321000.0000
21/03/2022	317.0000	317000.0000
22/03/2022	315.0000	315000.0000
23/03/2022	310.0000	310000.0000
24/03/2022	310.0000	310000.0000
25/03/2022	259.0000	259000.0000
26/03/2022	310.0000	310000.0000
27/03/2022	308.0000	308000.0000
28/03/2022	344.0000	344000.0000
29/03/2022	300.0000	300000.0000
30/03/2022	256.0000	256000.0000
31/03/2022	380.0000	380000.0000
01/04/2022	293.0000	293000.0000
02/04/2022	289.0000	289000.0000
03/04/2022	290.0000	290000.0000
04/04/2022	289.0000	289000.0000
05/04/2022	275.0000	275000.0000
06/04/2022	286.0000	286000.0000
07/04/2022	290.0000	290000.0000
08/04/2022	292.0000	292000.0000
09/04/2022	298.0000	298000.0000
10/04/2022	283.0000	283000.0000
11/04/2022	288.0000	288000.0000
12/04/2022	290.0000	290000.0000
13/04/2022	262.0000	262000.0000

14/04/2022	327.0000	327000.0000
15/04/2022	305.0000	305000.0000
16/04/2022	300.0000	300000.0000
17/04/2022	266.0000	266000.0000
18/04/2022	324.0000	324000.0000
19/04/2022	299.0000	299000.0000
20/04/2022	311.0000	311000.0000
21/04/2022	297.0000	297000.0000
22/04/2022	289.0000	289000.0000
23/04/2022	280.0000	280000.0000
24/04/2022	291.0000	291000.0000
25/04/2022	302.0000	302000.0000
26/04/2022	345.0000	345000.0000
27/04/2022	278.0000	278000.0000
28/04/2022	284.0000	284000.0000
29/04/2022	285.0000	285000.0000
30/04/2022	302.0000	302000.0000
01/05/2022	318.0000	318000.0000
02/05/2022	346.0000	346000.0000
03/05/2022	323.0000	323000.0000
04/05/2022	274.0000	274000.0000
05/05/2022	322.0000	322000.0000
06/05/2022	309.0000	309000.0000
07/05/2022	323.0000	323000.0000
08/05/2022	311.0000	311000.0000
09/05/2022	396.0000	396000.0000
10/05/2022	312.0000	312000.0000
11/05/2022	353.0000	353000.0000
12/05/2022	333.0000	333000.0000
13/05/2022	308.0000	308000.0000
14/05/2022	391.0000	391000.0000
15/05/2022	402.0000	402000.0000
16/05/2022	363.0000	363000.0000
17/05/2022	317.0000	317000.0000
18/05/2022	354.0000	354000.0000
19/05/2022	360.0000	360000.0000
20/05/2022	327.0000	327000.0000
21/05/2022	332.0000	332000.0000
22/05/2022	364.0000	364000.0000
23/05/2022	376.0000	376000.0000
24/05/2022	330.0000	330000.0000
25/05/2022	326.0000	326000.0000
26/05/2022	252.0000	252000.0000
27/05/2022	358.0000	358000.0000
28/05/2022	346.0000	346000.0000
29/05/2022	348.0000	348000.0000
30/05/2022	360.0000	360000.0000
31/05/2022	318.0000	318000.0000
01/06/2022	342.0000	342000.0000
02/06/2022	348.0000	348000.0000
03/06/2022	323.0000	323000.0000
04/06/2022	361.0000	361000.0000
05/06/2022	336.0000	336000.0000
06/06/2022	279.0000	279000.0000
07/06/2022	380.0000	380000.0000
08/06/2022	273.0000	273000.0000
09/06/2022	369.0000	369000.0000
10/06/2022	368.0000	368000.0000
11/06/2022	308.0000	308000.0000
12/06/2022	361.0000	361000.0000
13/06/2022	356.0000	356000.0000

14/06/2022	362.0000	362000.0000
15/06/2022	346.0000	346000.0000
16/06/2022	365.0000	365000.0000
17/06/2022	406.0000	406000.0000
18/06/2022	406.0000	406000.0000
19/06/2022	325.0000	325000.0000
20/06/2022	400.0000	400000.0000
21/06/2022	441.0000	441000.0000
22/06/2022	458.0000	458000.0000
23/06/2022	450.0000	450000.0000
24/06/2022	544.0000	544000.0000
25/06/2022	449.0000	449000.0000
26/06/2022	446.0000	446000.0000
27/06/2022	422.0000	422000.0000
28/06/2022	364.0000	364000.0000
29/06/2022	427.0000	427000.0000
30/06/2022	304.0000	304000.0000
01/07/2022	486.0000	486000.0000
02/07/2022	395.0000	395000.0000
03/07/2022	435.0000	435000.0000
04/07/2022	398.0000	398000.0000
05/07/2022	336.0000	336000.0000
06/07/2022	317.0000	317000.0000
07/07/2022	429.0000	429000.0000
08/07/2022	493.0000	493000.0000
09/07/2022	470.7900	470790.0000
10/07/2022	493.0000	493000.0000
11/07/2022	383.0000	383000.0000
12/07/2022	471.0000	471000.0000
13/07/2022	422.0000	422000.0000
14/07/2022	501.0000	501000.0000
15/07/2022	533.0000	533000.0000
16/07/2022	467.0000	467000.0000
17/07/2022	484.0000	484000.0000
18/07/2022	522.0000	522000.0000
19/07/2022	678.0000	678000.0000
20/07/2022	536.0000	536000.0000
21/07/2022	318.0000	318000.0000
22/07/2022	439.0000	439000.0000
23/07/2022	336.0000	336000.0000
24/07/2022	424.0000	424000.0000
25/07/2022	253.0000	253000.0000
26/07/2022	338.0000	338000.0000
27/07/2022	399.0000	399000.0000
28/07/2022	303.0000	303000.0000
29/07/2022	404.0000	404000.0000
30/07/2022	353.0000	353000.0000
31/07/2022	403.0000	403000.0000
01/08/2022	335.0000	335000.0000
02/08/2022	296.0000	296000.0000
03/08/2022	387.0000	387000.0000
04/08/2022	324.0000	324000.0000
05/08/2022	309.0000	309000.0000
06/08/2022	388.0000	388000.0000
07/08/2022	359.0000	359000.0000
08/08/2022	230.0000	230000.0000
09/08/2022	351.0000	351000.0000
10/08/2022	332.0000	332000.0000
11/08/2022	275.0000	275000.0000
12/08/2022	388.0000	388000.0000
13/08/2022	413.0000	413000.0000

14/08/2022	373.0000	373000.0000
15/08/2022	497.0000	497000.0000
16/08/2022	435.0000	435000.0000
17/08/2022	320.0000	320000.0000
18/08/2022	496.0000	496000.0000
19/08/2022	331.0000	331000.0000
20/08/2022	492.0000	492000.0000
21/08/2022	341.0000	341000.0000
22/08/2022	469.0000	469000.0000
23/08/2022	393.0000	393000.0000
24/08/2022	463.0000	463000.0000
25/08/2022	347.0000	347000.0000
26/08/2022	314.0000	314000.0000
27/08/2022	286.0000	286000.0000
28/08/2022	332.0000	332000.0000
29/08/2022	337.0000	337000.0000
30/08/2022	328.0000	328000.0000
31/08/2022	297.0000	297000.0000
01/09/2022	314.0000	314000.0000
02/09/2022	457.0000	457000.0000
03/09/2022	278.0000	278000.0000
04/09/2022	341.0000	341000.0000
05/09/2022	340.0000	340000.0000
06/09/2022	446.0000	446000.0000
07/09/2022	313.0000	313000.0000
08/09/2022	430.0000	430000.0000
09/09/2022	366.0000	366000.0000
10/09/2022	457.0000	457000.0000
11/09/2022	306.0000	306000.0000
12/09/2022	342.0000	342000.0000
13/09/2022	319.0000	319000.0000
14/09/2022	320.0000	320000.0000
15/09/2022	338.0000	338000.0000
16/09/2022	315.0000	315000.0000
17/09/2022	300.0000	300000.0000
18/09/2022	340.0000	340000.0000
19/09/2022	292.0000	292000.0000
20/09/2022	389.0000	389000.0000
21/09/2022	276.0000	276000.0000
22/09/2022	305.0000	305000.0000
23/09/2022	115.0000	115000.0000
24/09/2022	298.0000	298000.0000
25/09/2022	339.0000	339000.0000
26/09/2022	318.0000	318000.0000
27/09/2022	279.0000	279000.0000
28/09/2022	252.0000	252000.0000
29/09/2022	303.0000	303000.0000
30/09/2022	282.0000	282000.0000
01/10/2022	326.0000	326000.0000
02/10/2022	342.0000	342000.0000
03/10/2022	349.0000	349000.0000
04/10/2022	267.0000	267000.0000
05/10/2022	293.0000	293000.0000
06/10/2022	261.0000	261000.0000
07/10/2022	304.0000	304000.0000
08/10/2022	288.0000	288000.0000
09/10/2022	290.0000	290000.0000
10/10/2022	297.0000	297000.0000
11/10/2022	287.0000	287000.0000
12/10/2022	278.0000	278000.0000
13/10/2022	290.0000	290000.0000

14/10/2022	252.0000	252000.0000
15/10/2022	292.0000	292000.0000
16/10/2022	279.0000	279000.0000
17/10/2022	251.0000	251000.0000
18/10/2022	282.0000	282000.0000
19/10/2022	289.0000	289000.0000
20/10/2022	279.0000	279000.0000
21/10/2022	359.0000	359000.0000
22/10/2022	290.0000	290000.0000
23/10/2022	275.0000	275000.0000
24/10/2022	345.0000	345000.0000
25/10/2022	405.0000	405000.0000
26/10/2022	316.0000	316000.0000
27/10/2022	327.0000	327000.0000
28/10/2022	325.0000	325000.0000
29/10/2022	314.0000	314000.0000
30/10/2022	333.0000	333000.0000
31/10/2022	331.0000	331000.0000
01/11/2022	350.0000	350000.0000
02/11/2022	321.0000	321000.0000
03/11/2022	309.0000	309000.0000
04/11/2022	331.0000	331000.0000
05/11/2022	295.0000	295000.0000
06/11/2022	386.0000	386000.0000
07/11/2022	341.0000	341000.0000
08/11/2022	294.0000	294000.0000
09/11/2022	306.0000	306000.0000
10/11/2022	322.0000	322000.0000
11/11/2022	320.0000	320000.0000
12/11/2022	299.0000	299000.0000
13/11/2022	282.0000	282000.0000
14/11/2022	317.0000	317000.0000
15/11/2022	295.0000	295000.0000
16/11/2022	305.0000	305000.0000
17/11/2022	285.0000	285000.0000
18/11/2022	290.0000	290000.0000
19/11/2022	297.0000	297000.0000
20/11/2022	303.0000	303000.0000
21/11/2022	311.0000	311000.0000
22/11/2022	313.0000	313000.0000
23/11/2022	299.0000	299000.0000
24/11/2022	315.0000	315000.0000
25/11/2022	292.0000	292000.0000
26/11/2022	285.0000	285000.0000
27/11/2022	313.0000	313000.0000
28/11/2022	248.0000	248000.0000
29/11/2022	305.0000	305000.0000
30/11/2022	372.0000	372000.0000
01/12/2022	299.0000	299000.0000
02/12/2022	301.0000	301000.0000
03/12/2022	268.0000	268000.0000
04/12/2022	304.0000	304000.0000
05/12/2022	326.0000	326000.0000
06/12/2022	284.0000	284000.0000
07/12/2022	334.0000	334000.0000
08/12/2022	275.0000	275000.0000
09/12/2022	304.0000	304000.0000
10/12/2022	288.0000	288000.0000
11/12/2022	295.0000	295000.0000
12/12/2022	301.0000	301000.0000
13/12/2022	222.0000	222000.0000

14/12/2022	318.0000	318000.0000
15/12/2022	276.0000	276000.0000
16/12/2022	303.0000	303000.0000
17/12/2022	268.0000	268000.0000
18/12/2022	377.0000	377000.0000
19/12/2022	299.0000	299000.0000
20/12/2022	262.0000	262000.0000
21/12/2022	296.0000	296000.0000
22/12/2022	311.0000	311000.0000
23/12/2022	320.0000	320000.0000
24/12/2022	340.0000	340000.0000
25/12/2022	257.0000	257000.0000
26/12/2022	253.0000	253000.0000
27/12/2022	325.0000	325000.0000
28/12/2022	326.0000	326000.0000
29/12/2022	368.0000	368000.0000
30/12/2022	280.0000	280000.0000
31/12/2022	301.0000	301000.0000