

Gore Bay Water Treatment

Large Municipal Residential Drinking Water System

January 1, 2020 – December 31, 2020

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 Town of Gore Bay



Ontario Clean Water Agency
Agence Ontarienne Des Eaux



Drinking-Water System Number: 210002208
Drinking-Water System Name: GORE BAY DRINKING WATER SYSTEM
Drinking-Water System Owner: The Corporation of the Town of Gore Bay
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, 2021.

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. The report 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 Gore Bay WTP shall not be operated to exceed a maximum flow of 1250 m³/d to the distribution system.

The highest daily treated water maximum flow was 869.4 m³ in July and represents 70% of capacity. In 2020, the total volume of water sent to the distribution system was 185,208m³

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

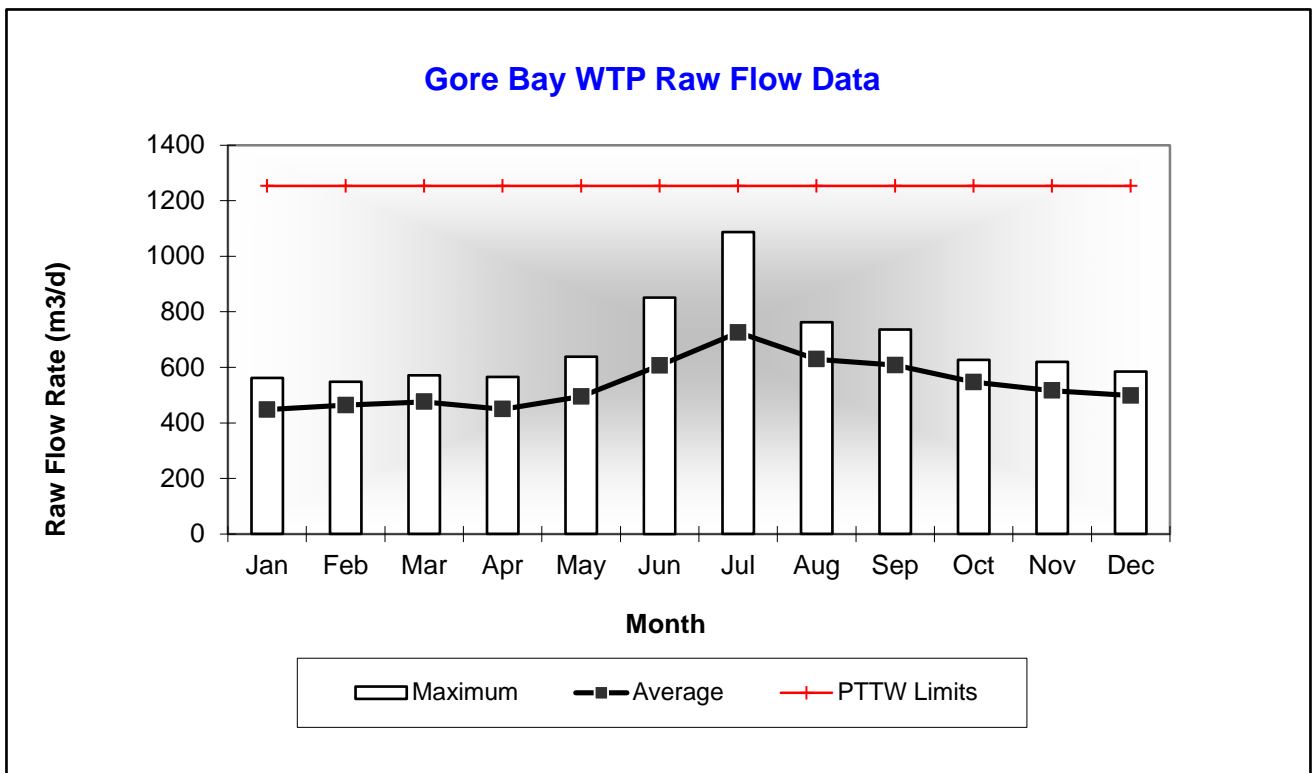
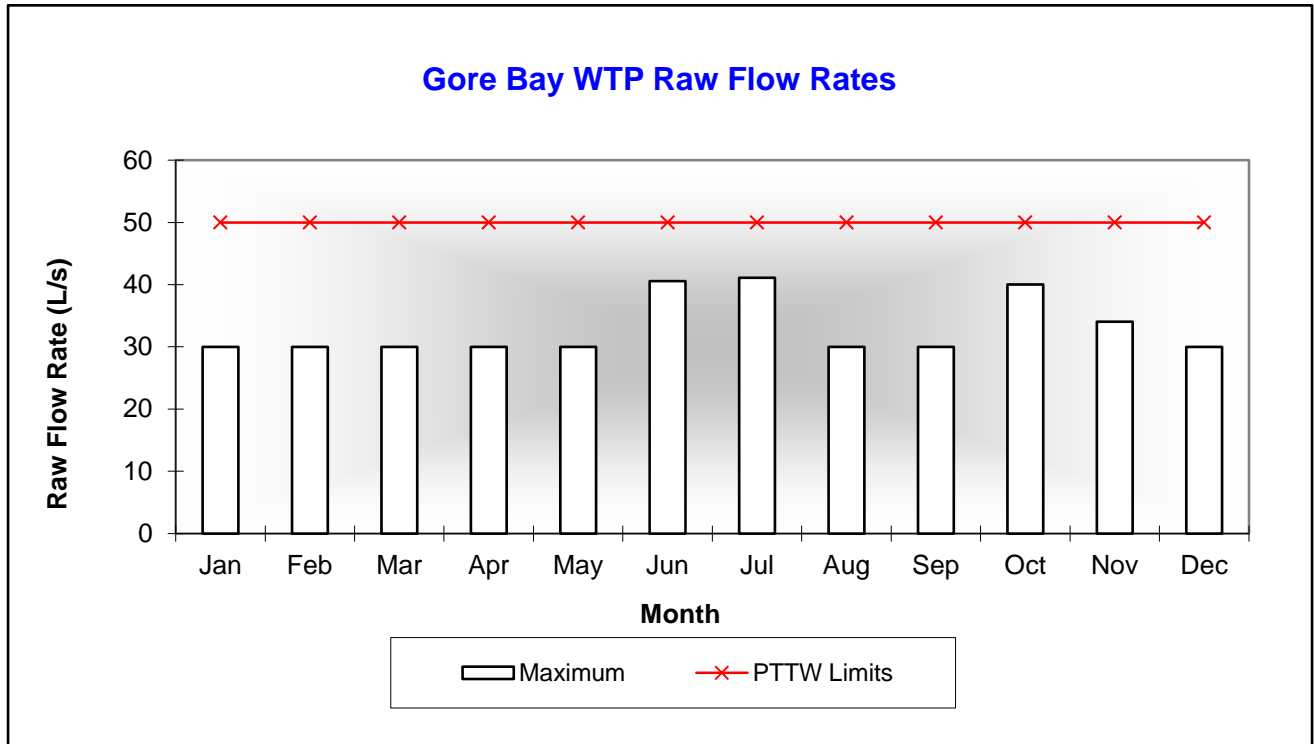
Flows – Raw

Daily raw maximum instantaneous flow is stated in the PTTW at a maximum rate of flow of 50 L/s and a maximum daily volume of 1252.8 m³/d.

The average monthly raw water flow for this reporting period was 538.79m³/d. The maximum daily flow was 1,087 m³/d representing 87% of water taking limits. In 2020, the total volume of water taken from the environment was 197,196 m³

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

<i>RAW WATER FLOW DATA - TOTAL ALL SOURCES</i>						
Month	Total Monthly Flow (m ³)	Average Flow (m ³ /d)	Maximum Flow (m ³ /d)	Maximum Flow Rate (L/s)	Limits	
					L/s (PTTW)	m ³ /d (PTTW)
January	13,876.3	447.62	561.4	30	50	1252.8
February	13,452.9	463.89	547.6	30	50	1252.8
March	14,758	476.06	570.8	30	50	1252.8
April	13,486.7	449.56	565	30	50	1252.8
May	15,342.3	494.91	6378	30	50	1252.8
June	18,199.5	606.65	851.2	40.55	50	1252.8
July	22,486.7	725.38	1,086.6	41.11	50	1252.8
August	19,494.5	628.85	762	30	50	1252.8
September	18,227.9	607.6	735.7	30	50	1252.8
October	16,938.7	546.41	626.4	40.03	50	1252.8
November	15,481.5	516.05	619.2	34.05	50	1252.8
December	15,450.9	498.42	584.3	30	50	1252.8
Total	197,196					
Average		538.79				
Maximum			1,086.6	41.11	50	1252.8





Annual Raw Water Review

Raw Water Taking	Total Taking (m3/d)	Average Day (m3/d)	Max Day (m3/d)	Max Day % of PTTW allowable 1,252.8 (m3/d)
2020	197,196	538.79	1,086.6	87%
2019	191,757	525.36	1,052	83.9%
2018	206,008.3	564.41	1,520.3	121.4 %
2017	179,542.7	491.9	1,562.3	124.7 %
2016	186,284	509	913	73.0 %

System Failures and Corrective Actions

The latest inspection of the drinking water facility took place on [August 26, 2020](#). The facility scored [0/440](#) providing a rating of [100%](#).

AWQIs reported to the Ministry

Incident Date	Parameter	Result	Unit of Measure	Corrective Action/Comment	Corrective Action Date
12-Sep-20	Pressure	0	Psi	AWQI#15996 – During a dig, a contractor broke a watermain interrupting service to two streets. Repairs were made, flashing completed and two sets of bacti samples were collected.	18-Sep-20

SECTION 4: SECTION 11 REPORT

Information to be provided

Population Served 867 (Stats Canada – 2016)	
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.	Town of Gore Bay, Municipal Office 15 Water Street Gore Bay, Ontario P0P 1H0
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:	NA



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?	NA
Indicate how you notified system users that your annual report is available, and is free of charge.	Public access/notice via a Public Library
Indicate if you notified system users that your annual report is available and is free of charge using an alternate method	Yes

Facility Description

A US Filter membrane filtration plant supplying water to the Town of Gore Bay, drawing water from the North Channel of Lake Huron, consisting of two packaged membrane units, each with 32 microfiltration membrane modules, chlorine contact tank, clean water reservoir and high lift pump well supplying the Town. The rated capacity of the system is 1250 m³/d. The plant consists of various chemical feed systems and utilizes sodium hypochlorite for disinfection. There is a 237 kW standby diesel generator to provide power during emergency situations. Non-chemical membrane wash water is returned to Gore Bay while chemical membrane wash water is neutralized and discharged to the sanitary sewer system.

Chemicals Used

Sodium Hypochlorite 12%	- Disinfection
Calcium Thiosulphate (Captor)	- De-chlorination of wastewater
Citric Acid	- Cleaner for membranes
Sodium Hydroxide	- Neutralize the citric acid before disposal

Significant Expenses

Significant expenses incurred to

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

Work Order	Completion Date	Comment
1749423	08-May-20	Purchased chlorine pump rebuild kits
1751730	28-May-20	Purchased spare bray valves for emergency use
1962334	21-Oct-20	Purchased spare valves and actuators for filters
1999828		Replaced existing two diesel fuel tanks with one 250 gallon tank

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	Corrective Action/Comment	Corrective Action Date
12-Sep-20	Pressure	0	Psi	AWQI#15996 – During a dig, a contractor broke a watermain interrupting service to two streets. Repairs were made, flushing completed and two sets of bacti samples collected.	18-Sep-20



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	52	0	3	0	47	N/A	N/A	N/A
Treated Water	53	0	0	0	0	53	0	1
Distribution	114	0	0	0	0	55	0	62

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	0.22	NTU
Turbidity – Filter 2	8760	0.2	0.14	NTU
Free Chlorine Residual – TW	8760	0.60	3.89	mg/L
Free Chlorine Residual – DW 1	105	0.56	2.2	mg/L
Free Chlorine Residual – DW 2	105	0.68	1.96	mg/L
Free Chlorine Residual – DW 3	105	0.70	2.28	mg/L
Free Chlorine Residual – DW 4	52	0.87	2.2	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 Filter 1	Result Filter 2	Unit of Measure
MDWL 258-101 24-May-11 Renewed on May 20, 2016	Backwash (BW) Total Suspended Solids (TSS) 25 mg/L annual average	Jan	7	17	21	mg/L
		Feb				
		Mar				
		Apr	1	5	3	mg/L
		May				
		Jun				
		Jul	2	11	16	mg/L
		Aug				
		Sep				
		Oct	5	54	29	mg/L
		Nov				
		Dec				
Annual Average				21.75	17.25	mg/L



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	2020/01/07	0.11	6.0	No	No
Arsenic: As (ug/L) - TW	2020/01/07	0.4	25.0	No	No
Barium: Ba (ug/L) - TW	2020/01/07	11.9	1000.0	No	No
Boron: B (ug/L) - TW	2020/01/07	11.0	5000.0	No	No
Cadmium: Cd (ug/L) - TW	2020/01/07	0.006	5.0	No	No
Chromium: Cr (ug/L) - TW	2020/01/07	0.16	50.0	No	No
Mercury: Hg (ug/L) - TW	2020/01/07	<MDL 0.01	1.0	No	No
Selenium: Se (ug/L) - TW	2020/01/07	0.13	10.0	No	No
Uranium: U (ug/L) - TW	2020/01/07	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	2016/01/05	0.07	1.5	No	No
Nitrite (mg/L) - TW	2020/01/06	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2020/04/01	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2020/07/02	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2020/10/05	<MDL 0.003	1.0	No	No
Nitrate (mg/L) - TW	2020/01/06	0.247	10.0	No	No
Nitrate (mg/L) - TW	2020/04/01	0.257	10.0	No	No
Nitrate (mg/L) - TW	2020/07/02	0.175	10.0	No	No
Nitrate (mg/L) - TW	2020/10/05	0.199	10.0	No	No
Sodium: Na (mg/L) - TW	2016/01/05	5.48	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)	2	0.07	0.71	10	N/A
Distribution - Alkalinity (mg/L)	7*	60	65	N/A	N/A
Distribution - pH In-House	4	6.53	8.21	N/A	N/A

*Three alkalinity samples were missing field pH



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	2020/01/07	<MDL 0.02	5.0	No	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	2020/01/07	<MDL 0.01	5.0	No	No
Azinphos-methyl (ug/L) - TW	2020/01/07	<MDL 0.05	20.0	No	No
Benzene (ug/L) - TW	2020/01/07	<MDL 0.32	1.0	No	No
Benzo(a)pyrene (ug/L) - TW	2020/01/07	<MDL 0.004	0.01	No	No
Bromoxynil (ug/L) - TW	2020/01/07	<MDL 0.33	5.0	No	No
Carbaryl (ug/L) - TW	2020/01/07	<MDL 0.05	90.0	No	No
Carbofuran (ug/L) - TW	2020/01/07	<MDL 0.01	90.0	No	No
Carbon Tetrachloride (ug/L) - TW	2020/01/07	<MDL 0.17	2.0	No	No
Chlorpyrifos (ug/L) - TW	2020/01/07	<MDL 0.02	90.0	No	No
Diazinon (ug/L) - TW	2020/01/07	<MDL 0.02	20.0	No	No
Dicamba (ug/L) - TW	2020/01/07	<MDL 0.2	120.0	No	No
1,2-Dichlorobenzene (ug/L) - TW	2020/01/07	<MDL 0.41	200.0	No	No
1,4-Dichlorobenzene (ug/L) - TW	2020/01/07	<MDL 0.36	5.0	No	No
1,2-Dichloroethane (ug/L) - TW	2020/01/07	<MDL 0.35	5.0	No	No
1,1-Dichloroethylene (ug/L) - TW	2020/01/07	<MDL 0.33	14.0	No	No
Dichloromethane (Methylene Chloride) (ug/L) - TW	2020/01/07	<MDL 0.35	50.0	No	No
2,4-Dichlorophenol (ug/L) - TW	2020/01/07	<MDL 0.15	900.0	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	2020/01/07	<MDL 0.19	100.0	No	No
Diclofop-methyl (ug/L) - TW	2020/01/07	<MDL 0.4	9.0	No	No
Dimethoate (ug/L) - TW	2020/01/07	<MDL 0.06	20.0	No	No
Diquat (ug/L) - TW	2020/01/07	<MDL 1.0	70.0	No	No
Diuron (ug/L) - TW	2020/01/07	<MDL 0.03	150.0	No	No
Glyphosate (ug/L) - TW	2020/01/07	<MDL 1.0	280.0	No	No
Malathion (ug/L) - TW	2020/01/07	<MDL 0.02	190.0	No	No
Metolachlor (ug/L) - TW	2020/01/07	<MDL 0.01	50.0	No	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (mg/L) - TW	2020/01/07	<MDL 0.02	80.0	No	No
Metribuzin (ug/L) - TW	2020/01/07	<MDL 0.3	80.0	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW	2020/01/07	<MDL 1.0	10.0	No	No
Paraquat (ug/L) - TW	2020/01/07	<MDL 0.04	3.0	No	No
PCB (ug/L) - TW	2020/01/07	<MDL 0.15	60.0	No	No
Pentachlorophenol (ug/L) - TW	2020/01/07	<MDL 0.01	2.0	No	No
Phorate (ug/L) - TW	2020/01/07	<MDL 1.0	190.0	No	No
Picloram (ug/L) - TW	2020/01/07	<MDL 0.03	1.0	No	No
Prometryne (ug/L) - TW	2020/01/07	<MDL 0.01	10.0	No	No
Simazine (ug/L) - TW	2020/01/07	<MDL 0.01	1.0	No	No
Terbufos (ug/L) - TW	2020/01/07	<MDL 0.35	10.0	No	No
Tetrachloroethylene (ug/L) - TW	2020/01/07	<MDL 0.2	100.0	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	2020/01/07	<MDL 0.01	230.0	No	No
Triallate (ug/L) - TW	2020/01/07	<MDL 0.44	5.0	No	No



Trichloroethylene (ug/L) - TW	2020/01/07	<MDL 0.25	5.0	No	No
2,4,6-Trichlorophenol (ug/L) - TW	2020/01/07	<MDL 0.12	100.0	No	No
Trifluralin (ug/L) - TW	2020/01/07	<MDL 0.02	45.0	No	No
Vinyl Chloride (ug/L) - TW	2020/01/07	<MDL 0.17	1.0	No	No
DISTRIBUTION WATER					
Trihalomethane: Total (ug/L) Annual Average - DW	2020/12/31	64.5	100.0	No	Yes
HAA Total (ug/L) Annual Average - DW1	2020/12/31	38.85	80.0	No	No

SECTION 5: RAW WATER SUBMISSIONS

Raw water flows were submitted to the Ministry on [January 25, 2021](#).



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: 7461-AK4JRX
Permit Holder: THE CORPORATION OF THE TOWN OF GORE BAY.
Received on: Jan 25, 2021 2:37 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.

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SECTION 6: CONCLUSION

The Gore Bay 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 [2020](#) operating year, the Gore Bay 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 01/01/2020 To 12/31/2020

Facility: GORE BAY DRINKING WATER SYSTEM-1112
 Tag: Raw Flow: Sum (m3/d)
 Tag Group: Raw Water

Permit#: 7461-AK4JRX
 Source Name: Lake Huron
 Source: Lake
 Type:
 Purpose: Other - Water Supply

Coordinate Zone: 17
 Easting: 386484
 Northing: 5086993
 Method deter: Metered

Date Measured	Value (m³/d)	Value (Litres)
01/01/2020	466.1000	466100.0061
02/01/2020	372.4000	372399.9939
03/01/2020	512.0000	512000.0000
04/01/2020	362.5000	362500.0000
05/01/2020	482.2000	482200.0122
06/01/2020	469.6000	469600.0061
07/01/2020	317.0000	317000.0000
08/01/2020	482.9000	482899.9939
09/01/2020	375.2000	375200.0122
10/01/2020	494.6000	494600.0061
11/01/2020	442.8000	442799.9878
12/01/2020	425.1000	425100.0061
13/01/2020	380.0000	380000.0000
14/01/2020	516.9000	516900.0244
15/01/2020	448.6000	448600.0061
16/01/2020	455.6000	455600.0061
17/01/2020	371.6000	371600.0061
18/01/2020	471.6000	471600.0061
19/01/2020	561.4000	561400.0244
20/01/2020	510.8000	510799.9878
21/01/2020	514.6000	514599.9756
22/01/2020	402.3000	402299.9878
23/01/2020	388.9000	388899.9939
24/01/2020	457.7000	457700.0122
25/01/2020	478.3000	478299.9878
26/01/2020	458.2000	458200.0122
27/01/2020	446.7000	446700.0122
28/01/2020	386.6000	386600.0061
29/01/2020	466.4000	466399.9939
30/01/2020	543.8000	543799.9878
31/01/2020	413.9000	413899.9939
01/02/2020	526.9000	526900.0244
02/02/2020	478.0000	478000.0000
03/02/2020	392.9000	392899.9939
04/02/2020	486.5000	486500.0000
05/02/2020	388.1000	388100.0061
06/02/2020	530.8000	530799.9878
07/02/2020	430.2000	430200.0122
08/02/2020	439.3000	439299.9878
09/02/2020	450.8000	450799.9878
10/02/2020	364.8000	364799.9878
11/02/2020	524.6000	524599.9756

12/02/2020	476.2000	476200.0122
13/02/2020	434.7000	434700.0122
14/02/2020	521.3000	521299.9878
15/02/2020	396.2000	396200.0122
16/02/2020	514.3000	514299.9878
17/02/2020	395.0000	395000.0000
18/02/2020	547.6000	547599.9756
19/02/2020	379.9000	379899.9939
20/02/2020	524.6000	524599.9756
21/02/2020	450.3000	450299.9878
22/02/2020	477.5000	477500.0000
23/02/2020	509.1000	509100.0061
24/02/2020	385.1000	385100.0061
25/02/2020	532.5000	532500.0000
26/02/2020	401.6000	401600.0061
27/02/2020	530.6000	530599.9756
28/02/2020	474.0000	474000.0000
29/02/2020	489.5000	489500.0000
01/03/2020	570.8000	570799.9878
02/03/2020	567.8000	567799.9878
03/03/2020	551.0000	551000.0000
04/03/2020	431.5000	431500.0000
05/03/2020	525.4000	525400.0244
06/03/2020	530.2000	530200.0122
07/03/2020	430.5000	430500.0000
08/03/2020	537.2000	537200.0122
09/03/2020	544.7000	544700.0122
10/03/2020	369.1000	369100.0061
11/03/2020	518.4000	518400.0244
12/03/2020	374.3000	374299.9878
13/03/2020	520.8000	520799.9878
14/03/2020	414.6000	414600.0061
15/03/2020	548.0000	548000.0000
16/03/2020	379.2000	379200.0122
17/03/2020	471.1000	471100.0061
18/03/2020	491.9000	491899.9939
19/03/2020	510.1000	510100.0061
20/03/2020	496.4000	496399.9939
21/03/2020	383.4000	383399.9939
22/03/2020	496.9000	496899.9939
23/03/2020	517.9000	517900.0244
24/03/2020	429.5000	429500.0000
25/03/2020	433.1000	433100.0061
26/03/2020	432.6000	432600.0061
27/03/2020	430.9000	430899.9939
28/03/2020	509.1000	509100.0061
29/03/2020	495.8000	495799.9878
30/03/2020	420.7000	420700.0122
31/03/2020	425.1000	425100.0061
01/04/2020	481.8000	481799.9878
02/04/2020	255.5000	255500.0000
03/04/2020	553.1000	553099.9756
04/04/2020	329.1000	329100.0061
05/04/2020	562.1000	562099.9756
06/04/2020	314.1000	314100.0061
07/04/2020	565.0000	565000.0000
08/04/2020	309.3000	309299.9878
09/04/2020	558.4000	558400.0244
10/04/2020	361.8000	361799.9878
11/04/2020	537.7000	537700.0122
12/04/2020	419.3000	419299.9878

13/04/2020	464.5000	464500.0000
14/04/2020	424.7000	424700.0122
15/04/2020	467.1000	467100.0061
16/04/2020	354.4000	354399.9939
17/04/2020	532.6000	532599.9756
18/04/2020	459.7000	459700.0122
19/04/2020	458.4000	458399.9939
20/04/2020	446.6000	446600.0061
21/04/2020	449.9000	449899.9939
22/04/2020	443.9000	443899.9939
23/04/2020	560.1000	560099.9756
24/04/2020	446.9000	446899.9939
25/04/2020	499.5000	499500.0000
26/04/2020	460.9000	460899.9939
27/04/2020	463.8000	463799.9878
28/04/2020	411.5000	411500.0000
29/04/2020	337.2000	337200.0122
30/04/2020	557.8000	557799.9878
01/05/2020	439.2000	439200.0122
02/05/2020	388.4000	388399.9939
03/05/2020	504.0000	504000.0000
04/05/2020	493.6000	493600.0061
05/05/2020	474.3000	474299.9878
06/05/2020	443.1000	443100.0061
07/05/2020	462.0000	462000.0000
08/05/2020	420.9000	420899.9939
09/05/2020	454.1000	454100.0061
10/05/2020	502.4000	502399.9939
11/05/2020	484.4000	484399.9939
12/05/2020	447.2000	447200.0122
13/05/2020	345.5000	345500.0000
14/05/2020	613.1000	613099.9756
15/05/2020	357.3000	357299.9878
16/05/2020	570.4000	570400.0244
17/05/2020	391.0000	391000.0000
18/05/2020	529.9000	529900.0244
19/05/2020	516.3000	516299.9878
20/05/2020	637.8000	637799.9878
21/05/2020	635.8000	635799.9878
22/05/2020	613.6000	613599.9756
23/05/2020	566.7000	566700.0122
24/05/2020	457.0000	457000.0000
25/05/2020	395.3000	395299.9878
26/05/2020	628.4000	628400.0244
27/05/2020	557.5000	557500.0000
28/05/2020	590.9000	590900.0244
29/05/2020	543.9000	543900.0244
30/05/2020	469.0000	469000.0000
31/05/2020	409.3000	409299.9878
01/06/2020	575.8000	575799.9878
02/06/2020	584.1000	584099.9756
03/06/2020	491.6000	491600.0061
04/06/2020	661.4000	661400.0244
05/06/2020	483.4000	483399.9939
06/06/2020	641.1000	641099.9756
07/06/2020	454.7000	454700.0122
08/06/2020	657.1000	657099.9756
09/06/2020	658.7000	658700.0122
10/06/2020	478.7000	478700.0122
11/06/2020	471.3000	471299.9878
12/06/2020	511.0000	511000.0000

13/06/2020	551.2000	551200.0122
14/06/2020	565.6000	565599.9756
15/06/2020	524.6000	524599.9756
16/06/2020	733.0000	733000.0000
17/06/2020	705.7000	705700.0122
18/06/2020	686.0000	686000.0000
19/06/2020	697.7000	697700.0122
20/06/2020	686.9000	686900.0244
21/06/2020	653.1000	653099.9756
22/06/2020	636.3000	636299.9878
23/06/2020	575.1000	575099.9756
24/06/2020	474.4000	474399.9939
25/06/2020	612.4000	612400.0244
26/06/2020	623.1000	623099.9756
27/06/2020	389.3000	389299.9878
28/06/2020	829.4000	829400.0244
29/06/2020	735.6000	735599.9756
30/06/2020	851.2000	851200.0122
01/07/2020	749.2000	749200.0122
02/07/2020	747.0000	747000.0000
03/07/2020	749.4000	749400.0244
04/07/2020	788.6000	788599.9756
05/07/2020	849.7000	849700.0122
06/07/2020	1086.6000	1086599.9756
07/07/2020	817.1000	817099.9756
08/07/2020	930.7000	930700.0122
09/07/2020	871.9000	871900.0244
10/07/2020	738.8000	738799.9878
11/07/2020	751.4000	751400.0244
12/07/2020	685.0000	685000.0000
13/07/2020	811.5000	811500.0000
14/07/2020	966.4000	966400.0244
15/07/2020	593.7000	593700.0122
16/07/2020	667.6000	667599.9756
17/07/2020	696.9000	696900.0244
18/07/2020	498.6000	498600.0061
19/07/2020	606.9000	606900.0244
20/07/2020	626.6000	626599.9756
21/07/2020	513.0000	513000.0000
22/07/2020	671.6000	671599.9756
23/07/2020	623.1000	623099.9756
24/07/2020	667.1000	667099.9756
25/07/2020	534.9000	534900.0244
26/07/2020	730.9000	730900.0244
27/07/2020	665.2000	665200.0122
28/07/2020	584.6000	584599.9756
29/07/2020	708.3000	708299.9878
30/07/2020	811.9000	811900.0244
31/07/2020	742.5000	742500.0000
01/08/2020	680.7000	680700.0122
02/08/2020	679.7000	679700.0122
03/08/2020	468.4000	468399.9939
04/08/2020	642.4000	642400.0244
05/08/2020	560.0000	560000.0000
06/08/2020	669.3000	669299.9878
07/08/2020	762.0000	762000.0000
08/08/2020	663.3000	663299.9878
09/08/2020	627.8000	627799.9878
10/08/2020	705.8000	705799.9878
11/08/2020	551.7000	551700.0122
12/08/2020	717.8000	717799.9878

13/08/2020	706.5000	706500.0000
14/08/2020	737.8000	737799.9878
15/08/2020	597.2000	597200.0122
16/08/2020	642.0000	642000.0000
17/08/2020	499.6000	499600.0061
18/08/2020	679.6000	679599.9756
19/08/2020	638.6000	638599.9756
20/08/2020	515.5000	515500.0000
21/08/2020	645.8000	645799.9878
22/08/2020	647.9000	647900.0244
23/08/2020	483.2000	483200.0122
24/08/2020	725.1000	725099.9756
25/08/2020	633.9000	633900.0244
26/08/2020	536.5000	536500.0000
27/08/2020	636.2000	636200.0122
28/08/2020	536.9000	536900.0244
29/08/2020	624.5000	624500.0000
30/08/2020	655.6000	655599.9756
31/08/2020	623.2000	623200.0122
01/09/2020	672.5000	672500.0000
02/09/2020	712.3000	712299.9878
03/09/2020	716.6000	716599.9756
04/09/2020	714.5000	714500.0000
05/09/2020	684.4000	684400.0244
06/09/2020	650.7000	650700.0122
07/09/2020	730.8000	730799.9878
08/09/2020	665.6000	665599.9756
09/09/2020	674.1000	674099.9756
10/09/2020	693.0000	693000.0000
11/09/2020	681.5000	681500.0000
12/09/2020	712.1000	712099.9756
13/09/2020	735.7000	735700.0122
14/09/2020	714.1000	714099.9756
15/09/2020	560.2000	560200.0122
16/09/2020	611.2000	611200.0122
17/09/2020	489.7000	489700.0122
18/09/2020	506.9000	506899.9939
19/09/2020	517.1000	517099.9756
20/09/2020	526.1000	526099.9756
21/09/2020	525.1000	525099.9756
22/09/2020	523.4000	523400.0244
23/09/2020	524.5000	524500.0000
24/09/2020	566.8000	566799.9878
25/09/2020	496.5000	496500.0000
26/09/2020	515.5000	515500.0000
27/09/2020	508.1000	508100.0061
28/09/2020	564.9000	564900.0244
29/09/2020	523.9000	523900.0244
30/09/2020	510.1000	510100.0061
01/10/2020	516.7000	516700.0122
02/10/2020	537.7000	537700.0122
03/10/2020	480.6000	480600.0061
04/10/2020	566.1000	566099.9756
05/10/2020	545.8000	545799.9878
06/10/2020	519.5000	519500.0000
07/10/2020	508.4000	508399.9939
08/10/2020	525.9000	525900.0244
09/10/2020	518.1000	518099.9756
10/10/2020	533.7000	533700.0122
11/10/2020	523.1000	523099.9756
12/10/2020	557.0000	557000.0000

13/10/2020	597.4000	597400.0244
14/10/2020	609.9000	609900.0244
15/10/2020	563.9000	563900.0244
16/10/2020	559.8000	559799.9878
17/10/2020	533.9000	533900.0244
18/10/2020	547.9000	547900.0244
19/10/2020	575.5000	575500.0000
20/10/2020	622.1000	622099.9756
21/10/2020	564.6000	564599.9756
22/10/2020	528.0000	528000.0000
23/10/2020	549.1000	549099.9756
24/10/2020	458.6000	458600.0061
25/10/2020	626.4000	626400.0244
26/10/2020	613.4000	613400.0244
27/10/2020	546.7000	546700.0122
28/10/2020	537.9000	537900.0244
29/10/2020	527.5000	527500.0000
30/10/2020	537.8000	537799.9878
31/10/2020	505.7000	505700.0122
01/11/2020	537.1000	537099.9756
02/11/2020	549.9000	549900.0244
03/11/2020	619.2000	619200.0122
04/11/2020	553.5000	553500.0000
05/11/2020	506.6000	506600.0061
06/11/2020	517.5000	517500.0000
07/11/2020	513.3000	513299.9878
08/11/2020	507.1000	507100.0061
09/11/2020	510.4000	510399.9939
10/11/2020	535.6000	535599.9756
11/11/2020	501.3000	501299.9878
12/11/2020	516.3000	516299.9878
13/11/2020	486.7000	486700.0122
14/11/2020	423.5000	423500.0000
15/11/2020	488.4000	488399.9939
16/11/2020	505.3000	505299.9878
17/11/2020	518.2000	518200.0122
18/11/2020	546.8000	546799.9878
19/11/2020	544.0000	544000.0000
20/11/2020	485.1000	485100.0061
21/11/2020	482.9000	482899.9939
22/11/2020	513.2000	513200.0122
23/11/2020	510.9000	510899.9939
24/11/2020	532.6000	532599.9756
25/11/2020	502.7000	502700.0122
26/11/2020	520.7000	520700.0122
27/11/2020	520.1000	520099.9756
28/11/2020	521.2000	521200.0122
29/11/2020	517.5000	517500.0000
30/11/2020	493.9000	493899.9939
01/12/2020	529.0000	529000.0000
02/12/2020	496.2000	496200.0122
03/12/2020	511.1000	511100.0061
04/12/2020	502.2000	502200.0122
05/12/2020	503.6000	503600.0061
06/12/2020	517.6000	517599.9756
07/12/2020	518.7000	518700.0122
08/12/2020	496.8000	496799.9878
09/12/2020	506.4000	506399.9939
10/12/2020	497.5000	497500.0000
11/12/2020	491.9000	491899.9939
12/12/2020	482.4000	482399.9939

13/12/2020	490.9000	490899.9939
14/12/2020	488.2000	488200.0122
15/12/2020	511.4000	511399.9939
16/12/2020	471.4000	471399.9939
17/12/2020	543.6000	543599.9756
18/12/2020	402.6000	402600.0061
19/12/2020	584.3000	584299.9878
20/12/2020	408.8000	408799.9878
21/12/2020	546.1000	546099.9756
22/12/2020	534.3000	534299.9878
23/12/2020	545.0000	545000.0000
24/12/2020	478.4000	478399.9939
25/12/2020	424.7000	424700.0122
26/12/2020	526.7000	526700.0122
27/12/2020	514.1000	514099.9756
28/12/2020	395.7000	395700.0122
29/12/2020	523.2000	523200.0122
30/12/2020	517.1000	517099.9756
31/12/2020	491.0000	491000.0000