

# *Echo Bay Water Treatment*

Large Municipal Residential Drinking Water System

*January 1, 2023 – December 31, 2023*

*Reg 170/03 Schedule 22 Summary Report*

*Reg 170/03 Section 11 Annual Report*

*&*

*Reg 387/04 Annual Record of Water Taking*

Prepared by the Ontario Clean Water Agency  
For The Corporation of the Township of Macdonald, Meredith and Aberdeen Additional





*Drinking-Water System Number:* 220009121  
*Drinking-Water System Name:* Echo Bay Drinking Water System  
*Drinking-Water System Owner:* The Corp. of the Township of Macdonald, Meredith and Aberdeen Additional  
*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, 2024.

## **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 Echo Bay WTP shall not be operated to exceed a maximum flow of 1,416 m<sup>3</sup>/d to the distribution system.

The daily treated water maximum flow was 354.1 m<sup>3</sup> in June and represents 25% of capacity. In 2023, the total volume of water sent to the distribution system was 57,077.4 m<sup>3</sup>

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

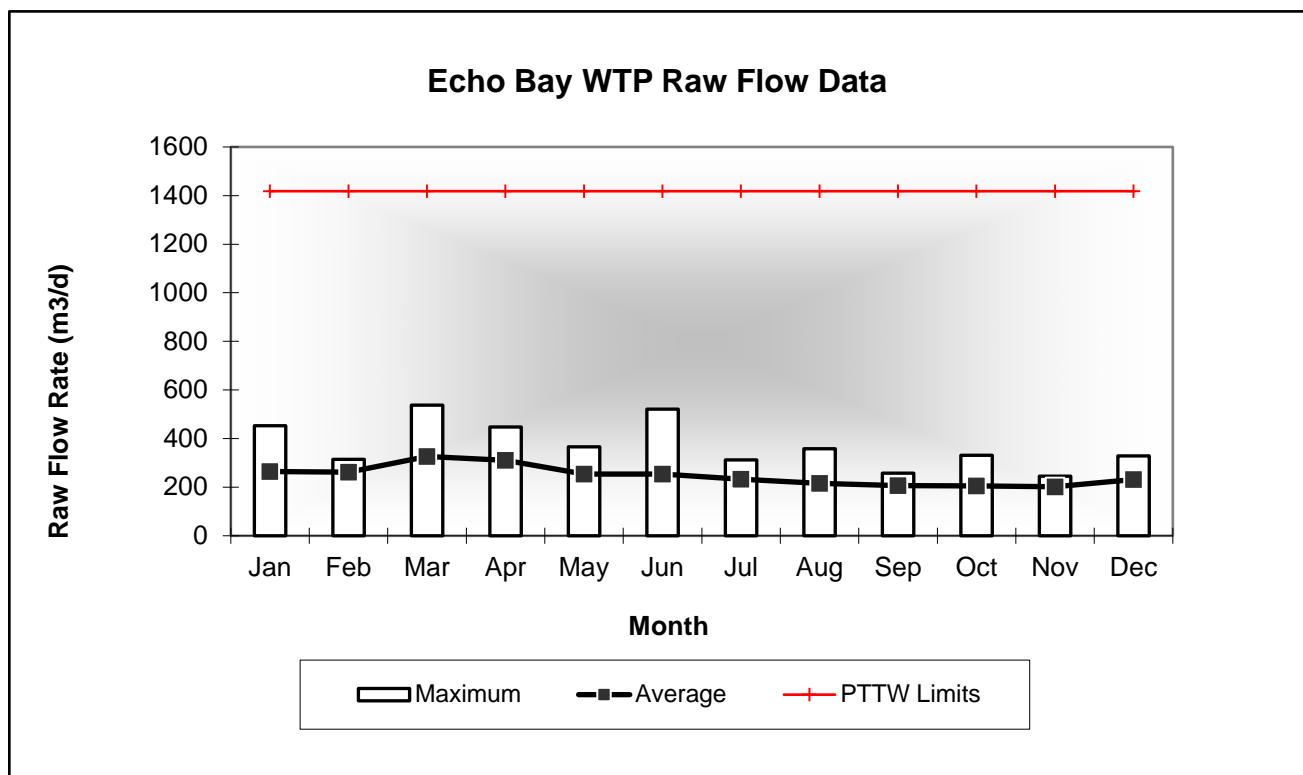
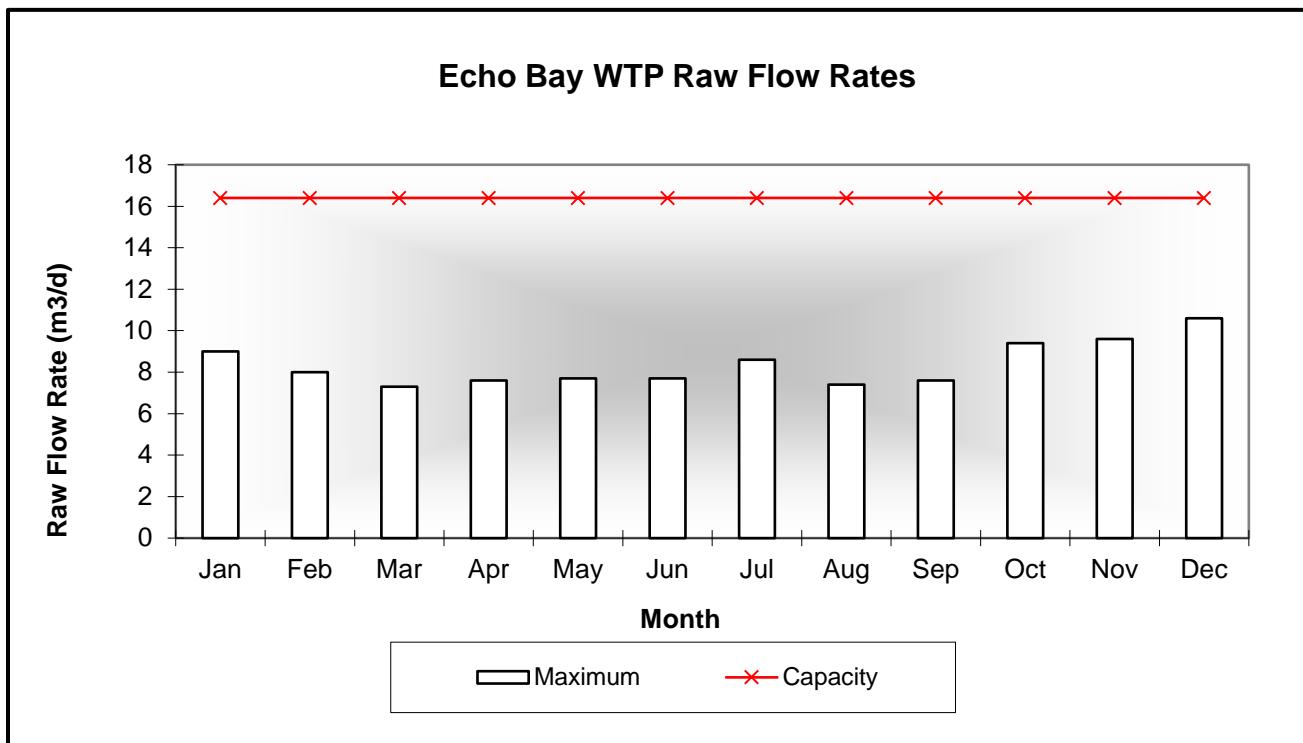
### **Flows - Raw**

Daily raw maximum instantaneous flow is stated in the PTTW at a maximum rate of flow of 16.4 L/s and a maximum daily volume of 1,418 m<sup>3</sup>/d.

The average monthly raw water flow for this reporting period was 246.8 m<sup>3</sup>/d. The maximum daily flow was 537.5 m<sup>3</sup>/d representing 38% of water taking limits. In 2023, the total volume of water taken from the environment was 90,082.8m<sup>3</sup>

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

RAW WATER FLOW DATA - TOTAL ALL SOURCES						
Month	Total Monthly Flow (m <sup>3</sup> )	Average Flow (m <sup>3</sup> /d)	Maximum Flow (m <sup>3</sup> /d)	Maximum Flow Rate (L/s)	Limits	
					L/s (PTTW)	m <sup>3</sup> /d (PTTW)
January	8,184.2	264.01	452.8	9	16.4	1,418
February	7,312.4	261.16	314.5	8	16.4	1,418
March	10,115.4	326.3	537.5	7.3	16.4	1,418
April	9,309.5	310.32	447.6	7.6	16.4	1,418
May	7,881.2	254.23	366	7.7	16.4	1,418
June	7,630.8	254.36	521	7.7	16.4	1,418
July	7,200.2	232.26	312.2	8.6	16.4	1,418
August	6,700.8	216.15	358.1	7.4	16.4	1,418
September	6,183.6	206.12	257.6	7.6	16.4	1,418
October	6,348.2	204.78	331.2	9.4	16.4	1,418
November	6,054.1	201.8	245.2	9.6	16.4	1,418
December	7,162.4	231.05	328.6	10.6	16.4	1,418
<b>Total</b>	<b>90,082.8</b>					
<b>Average</b>		<b>246.8</b>				
<b>Maximum</b>			<b>537.5</b>	<b>10.6</b>	<b>16.4</b>	<b>1,418</b>





## Annual Raw Water Review

Raw Water Taking	Total Taking m3/d	Average Day m3/d	Max Day m3/d	Max Day % of PTTW allowable
2023	90,082.8	246.8	537.5	38%
2022	76,210	208.8	519	37%
2021	69,277.6	189.8	368.3	26%
2020	66,228.1	180.95	474.9	33.5%
2019	63,695.2	174.51	370	26.1%

## System Failures and Corrective Actions

The latest inspection of the drinking water facility took place on [September 29, 2022](#). The facility scored 0/493 providing a rating of 100%. An inspection for the 2023-2024 MECP inspection period has not been conducted yet.

The following sampling error occurred during 2023.

While reviewing quarterly THM and HAA sampling results to calculate the fourth quarter running annual averages, the PCT discovered the THM and HAA samples had not been collected. The Operator was notified that they had missed collecting the samples and needed to do so immediately. The third quarter samples were collected on July 17, 2023 and the fourth quarter samples were collected on December 7, 2023; samples were collected 143 days apart. Therefore, the time between samples exceeded the 120 day timeframe.

AWQIs reported to the Ministry					
Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
n/a					

## SECTION 4: SECTION 11 REPORT

### Information to be provided

Population Served	530
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 Macdonald, Meredith and Aberdeen Additional, Municipal Office 208 Church St Echo Bay, Ontario PO5 1C0
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?	NA
Indicate how you notified system users that your annual report is available, and is free of charge.	Public access/notice via the web
Indicate if you notified system users that your annual report is available and is free of charge using an alternate method	YES

## Facility Description

Raw water drawn from Lake George is processed into potable water by the package water treatment plant through coagulation, flocculation, sedimentation, and filtration. Alum is used to assist the clarification process, chlorination is used for disinfection purposes, and Sodium Hydroxide (Caustic) is used for pH adjustment. The granular activated carbon filters are used primarily as a safeguard against the presence of organics in the supply water, as well as to prevent possible taste and odor problems. The rated capacity of the system is 1,416m<sup>3</sup>. Water is directed into two clearwells with a total storage volume of 630m<sup>3</sup> and four high lift pumps supply water to the Town and the elevated storage tank. A surge tank serves as backwash water storage from the dual media filters and GAC filters. Two submersible pumps convey wastewater from the surge tank to the wastewater clarifier in the attached sewage treatment plant. Stand-by power is available from a 180kW diesel generator.

## Chemicals Used

Aluminum Sulphate	Coagulation
MagnaFloc LT 20 (Polymer)	Coagulation aide
Sodium Hypochlorite 12%	Disinfection
Sodium Hydroxide	Sodium Hydroxide

## Significant Expenses

Significant expenses incurred to

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

Work Order	Completion Date	Comment
2405062	30-Apr-23	Filter #1 floc drive repair – \$1,908.87
3200943	20-Mar-23	Alum chemical system repair – \$4,188.04
3625530	18-Dec-23	Turbidity sensor replacement – \$4,037.51



## 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	Corrective Action Date
n/a					

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

	No. of Samples	Range of E.Coli		Range of Total Coliform Results		Number of HPC Samples	Range of HPC Results	
	Collected	Min #	Max #	Min #	Max #		Min #	Max #
Raw Water	52	0	NDOGT	0	NDOGT	0		
Treated Water	52	0	0	0	0	52	0	2
Distribution	104	0	0	0	0	52	0	1

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

	No. of Samples	Range of Results	
		Collected	Minimum
Turbidity, On-Line (NTU) - Filt1	8760	0.007	2.42
Turbidity, On-Line (NTU) - Filt2	8760	0	3.60
Free Chlorine Residual, Treated (mg/L)	8760	0.47	2.49
Free Chlorine Residual, Distribution Location 1	103	0.84	1.71
Free Chlorine Residual, Distribution Location 2	103	0.48	1.73
Free Chlorine Residual, Distribution Location 3	103	0.55	1.78
Free Chlorine Residual, Distribution Location 4	51	0.37	1.79

## Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument. (Use monitoring BW TSS sheet to Paste and Copy)

Date of legal instrument issued	Parameter and limits	Month Sampled	Day Sampled	Result	Unit of Measure
N/A	N/A	N/A	N/A	N/A	N/A
Annual Average				mg/L	

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

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
<b>TREATED WATER</b>				MAC	1/2 MAC
Antimony: Sb (ug/L) - TW	2023/01/05	< MDL 0.6	6	No	No
Arsenic: As (ug/L) - TW	2023/01/05	< MDL 0.2	10	No	No
Barium: Ba (ug/L) - TW	2023/01/05	7.8	1000	No	No



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Boron: B (ug/L) - TW	2023/01/05	8	5000	No	No
Cadmium: Cd (ug/L) - TW	2023/01/05	0.005	5	No	No
Chromium: Cr (ug/L) - TW	2023/01/05	0.13	50	No	No
Mercury: Hg (ug/L) - TW	2023/01/05	< MDL 0.01	1	No	No
Selenium: Se (ug/L) - TW	2023/01/05	0.23	50	No	No
Uranium: U (ug/L) - TW	2023/01/05	0.004	20	No	No

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
				MAC	1/2 MAC
<b>TREATED WATER</b>					
Fluoride (mg/L) - TW	2021/01/27	< MDL 0.06	1.5	No	No
Nitrate : (mg/L) - TW	2023/02/28	0.388	10	No	No
Nitrate : (mg/L) - TW	2023/05/02	0.357	10	No	No
Nitrate : (mg/L) - TW	2023/07/17	0.364	10	No	No
Nitrate : (mg/L) - TW	2023/12/07	0.351	10	No	No
Nitrite : (mg/L) - TW	2023/02/28	< MDL 0.003	1	No	No
Nitrite : (mg/L) - TW	2023/05/02	< MDL 0.003	1	No	No
Nitrite : (mg/L) - TW	2023/07/17	< MDL 0.003	1	No	No
Nitrite : (mg/L) - TW	2023/12/07	< MDL 0.003	1	No	No
Sodium / Na (mg/L) - TW	2021/01/27	5.42	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	Number of Exceedances
		Minimum	Maximum		
Distribution - Lead Results (ug/L)	1	0.16	0.16	10	0
Distribution - Alkalinity (mg/L)	2	30	34	n/a	n/a
Distribution - pH In-House	2	7.20	7.26	n/a	n/a

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

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
<b>TREATED WATER</b>				MAC	1/2 MAC
1,1-Dichloroethylene (ug/L)-TW	2023/01/05	< MDL 0.33	14	No	No
1,2-Dichlorobenzene (ug/L)-TW	2023/01/05	< MDL 0.41	200	No	No
1,2-Dichloroethane (ug/L)-TW	2023/01/05	< MDL 0.35	5	No	No
1,4-Dichlorobenzene (ug/L)-TW	2023/01/05	< MDL 0.36	5	No	No
2,3,4,6-Tetrachlorophenol (ug/L)-TW	2023/01/05	< MDL 0.2	100	No	No
2,4,6-Trichlorophenol (ug/L)-TW	2023/01/05	< MDL 0.25	5	No	No
2,4-Dichlorophenol (ug/L)-TW	2023/01/05	< MDL 0.15	900	No	No



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2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L)-TW	2023/01/05	< MDL 0.19	100	No	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (ug/L)-TW	2023/01/05	< MDL 0.12	100	No	No
Alachlor (ug/L) -TW	2023/01/05	< MDL 0.02	5	No	No
Atrazine + N-dealkylated metabolites (ug/L)-TW	2023/01/05	< MDL 0.01	5	No	No
Azinphos-methyl (ug/L)-TW	2023/01/05	< MDL 0.05	20	No	No
Benzene (ug/L)-TW	2023/01/05	< MDL 0.32	1	No	No
Benzo(a)pyrene (ug/L)-TW	2023/01/05	< MDL 0.004	0.01	No	No
Bromoxynil (ug/L)-TW	2023/01/05	< MDL 0.33	5	No	No
Carbaryl (ug/L)-TW	2023/01/05	< MDL 0.05	90	No	No
Carbofuran (ug/L) -TW	2023/01/05	< MDL 0.01	90	No	No
Carbon Tetrachloride (ug/L) -TW	2023/01/05	< MDL 0.17	2	No	No
Chlorpyrifos (ug/L) -TW	2023/01/05	< MDL 0.02	90	No	No
Diazinon (ug/L)-TW	2023/01/05	< MDL 0.02	20	No	No
Dicamba (ug/L)-TW	2023/01/05	< MDL 0.2	120	No	No
Dichloromethane (Methylene Chloride) (ug/L)-TW	2023/01/05	< MDL 0.35	50	No	No
Diclofop-methyl (ug/L)-TW	2023/01/05	< MDL 0.4	9	No	No
Dimethoate (ug/L)-TW	2023/01/05	< MDL 0.06	20	No	No
Diquat (ug/L)-TW	2023/01/05	< MDL 1	70	No	No
Diuron (ug/L)-TW	2023/01/05	< MDL 0.03	150	No	No
Glyphosate (ug/L)-TW	2023/01/05	< MDL 1	280	No	No
Malathion (ug/L)-TW	2023/01/05	< MDL 0.02	190	No	No
Metolachlor (ug/L)-TW	2023/01/05	< MDL 0.01	50	No	No
Metribuzin (ug/L)-TW	2023/01/05	< MDL 0.02	80	No	No
Monochlorobenzene (Chlorobenzene) (ug/L)-TW	2023/01/05	< MDL 0.3	80	No	No
Paraquat (ug/L)-TW	2023/01/05	< MDL 1	10	No	No
PCB (ug/L)-TW	2023/01/05	< MDL 0.04	3	No	No
Pentachlorophenol (ug/L)-TW	2023/01/05	< MDL 0.15	60	No	No
Phorate (ug/L)-TW	2023/01/05	< MDL 0.01	2	No	No
Picloram (ug/L)-TW	2023/01/05	< MDL 1	190	No	No
Prometryne (ug/L)-TW	2023/01/05	< MDL 0.03	1	No	No
Simazine (ug/L)-TW	2023/01/05	< MDL 0.01	10	No	No
Terbufos (ug/L)-TW	2023/01/05	< MDL 0.01	1	No	No
Tetrachloroethylene (ug/L)-TW	2023/01/05	< MDL 0.35	10	No	No
Triallate (ug/L) -TW	2023/01/05	< MDL 0.01	230	No	No
Trichloroethylene (ug/L)-TW	2023/01/05	< MDL 0.44	5	No	No
Trifluralin (ug/L)-TW	2023/01/05	< MDL 0.02	45	No	No
Vinyl Chloride (ug/L)-TW	2023/01/05	< MDL 0.17	1	No	No
<b>DISTRIBUTION WATER</b>					
Trihalomethane: Total (ug/L) Annual Average - DW	2023/12/31	26.5	100.00	No	No
HAA Total (ug/L) Annual Average – DW	2023/12/31	5.3	80.0	No	No



## SECTION 5: RAW WATER SUBMISSIONS

Raw water flows were submitted to the MOECC on [January 26, 2024](#).

The screenshot shows the WTRS website interface. At the top left is the Ontario government logo. In the center is the WTRS logo with the word "environment" in small letters above "WTRS". To the right is the text "Ministry of the Environment, Conservation and Parks". A navigation bar below the logo includes links for WT DATA, REPORTS, SEARCH WT DATA, ADMINISTRATION, USER PROFILE, CONTACT US, HELP, HOME, and LOGOUT. Below the navigation bar, the location is listed as "Location: WTRS / WT DATA / Input WT Record" and the record ID is "WTRS-WT-008". A green success message box contains the text "Water Taking Data submitted successfully.". Below this, a "Confirmation" section displays the following information:  
Thank you for submitting your water taking data online.  
Permit Number: 0256-A4JQAR  
Permit Holder: THE CORPORATION OF THE TOWNSHIP OF MACDONALD, MEREDITH AND ABERDEEN ADDITIONAL.  
Received on: Jan 26, 2024 9:42 AM  
A note below states: 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.

## SECTION 6: CONCLUSION

The Echo 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 [2023](#) operating year, the Echo 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 170/03
HPC	Heterotrophic Plant Count
L/s	Litres per Second
m3/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, Conservation and Parks
MECP	Ministry of the Environment, Conservation and Parks
NDOGN	No Data: Overgrown with Non Target Bacteria
NDOGT	No Data: Overgrown with Target Bacteria
O.Reg	Ontario Regulation
PTTW water	Permit to Take Water – Permit which allows water taking from groundwater or surface water
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 01/01/2023 To 12/31/2023

Facility: ECHO BAY DRINKING WATER SYSTEM-5057  
Tag: Raw Flow: Sum (m<sup>3</sup>/d)  
Tag Group: RW

Permit#: 0256-A4JQAR  
Source Name: Lake George (St. Mary's River)  
Source: Lake  
Type:  
Purpose: Municipal

Coordinate Zone: 16  
Easting: 722981  
Northing: 5152672  
Method deter: Metered

Date Measured	Value (m <sup>3</sup> /d)	Value (Litres)
01/01/2023	309.2000	309200.0122
02/01/2023	251.5000	251500.0000
03/01/2023	325.2000	325200.0122
04/01/2023	364.7000	364700.0122
05/01/2023	452.8000	452799.9878
06/01/2023	411.8000	411799.9878
07/01/2023	429.1000	429100.0061
08/01/2023	336.1000	336100.0061
09/01/2023	171.2000	171199.9969
10/01/2023	215.1000	215100.0061
11/01/2023	200.8000	200800.0031
12/01/2023	248.1000	248100.0061
13/01/2023	198.7000	198699.9969
14/01/2023	218.5000	218500.0000
15/01/2023	200.4000	200399.9939
16/01/2023	199.8000	199800.0031
17/01/2023	247.8000	247800.0031
18/01/2023	208.0000	208000.0000
19/01/2023	199.3000	199300.0031
20/01/2023	158.8000	158800.0031
21/01/2023	222.8000	222800.0031
22/01/2023	247.7000	247699.9969
23/01/2023	263.2000	263200.0122
24/01/2023	203.5000	203500.0000
25/01/2023	217.2000	217199.9969
26/01/2023	233.9000	233899.9939
27/01/2023	304.4000	304399.9939
28/01/2023	282.2000	282200.0122
29/01/2023	285.5000	285500.0000
30/01/2023	294.7000	294700.0122
31/01/2023	282.2000	282200.0122
01/02/2023	296.3000	296299.9878
02/02/2023	270.4000	270399.9939
03/02/2023	227.1000	227100.0061
04/02/2023	234.1000	234100.0061
05/02/2023	307.6000	307600.0061
06/02/2023	272.7000	272700.0122
07/02/2023	216.0000	216000.0000
08/02/2023	269.7000	269700.0122
09/02/2023	290.6000	290600.0061
10/02/2023	219.1000	219100.0061
11/02/2023	284.3000	284299.9878

12/02/2023	285.9000	285899.9939
13/02/2023	249.8000	249800.0031
14/02/2023	219.8000	219800.0031
15/02/2023	225.2000	225199.9969
16/02/2023	298.3000	298299.9878
17/02/2023	244.1000	244100.0061
18/02/2023	265.8000	265799.9878
19/02/2023	227.6000	227600.0061
20/02/2023	268.8000	268799.9878
21/02/2023	314.5000	314500.0000
22/02/2023	251.0000	251000.0000
23/02/2023	288.7000	288700.0122
24/02/2023	272.6000	272600.0061
25/02/2023	215.4000	215399.9939
26/02/2023	281.4000	281399.9939
27/02/2023	276.3000	276299.9878
28/02/2023	239.3000	239300.0031
01/03/2023	300.1000	300100.0061
02/03/2023	300.0000	300000.0000
03/03/2023	291.1000	291100.0061
04/03/2023	300.4000	300399.9939
05/03/2023	306.2000	306200.0122
06/03/2023	358.0000	358000.0000
07/03/2023	258.4000	258399.9939
08/03/2023	241.2000	241199.9969
09/03/2023	286.6000	286600.0061
10/03/2023	295.7000	295700.0122
11/03/2023	312.8000	312799.9878
12/03/2023	336.7000	336700.0122
13/03/2023	92.1000	92099.9985
14/03/2023	89.7000	89699.9969
15/03/2023	335.0000	335000.0000
16/03/2023	537.2000	537200.0122
17/03/2023	312.4000	312399.9939
18/03/2023	0.0000	0.0000
19/03/2023	279.5000	279500.0000
20/03/2023	521.4000	521400.0244
21/03/2023	537.5000	537500.0000
22/03/2023	515.5000	515500.0000
23/03/2023	428.8000	428799.9878
24/03/2023	346.7000	346700.0122
25/03/2023	337.2000	337200.0122
26/03/2023	345.5000	345500.0000
27/03/2023	351.4000	351399.9939
28/03/2023	326.7000	326700.0122
29/03/2023	352.6000	352600.0061
30/03/2023	444.9000	444899.9939
31/03/2023	374.1000	374100.0061
01/04/2023	307.2000	307200.0122
02/04/2023	347.0000	347000.0000
03/04/2023	331.9000	331899.9939
04/04/2023	404.6000	404600.0061
05/04/2023	354.2000	354200.0122
06/04/2023	263.1000	263100.0061
07/04/2023	294.4000	294399.9939
08/04/2023	290.6000	290600.0061
09/04/2023	310.5000	310500.0000
10/04/2023	256.9000	256899.9939
11/04/2023	251.1000	251100.0061
12/04/2023	228.8000	228800.0031
13/04/2023	269.0000	269000.0000

14/04/2023	275.6000	275600.0061
15/04/2023	371.4000	371399.9939
16/04/2023	272.5000	272500.0000
17/04/2023	281.6000	281600.0061
18/04/2023	334.6000	334600.0061
19/04/2023	322.5000	322500.0000
20/04/2023	439.3000	439299.9878
21/04/2023	436.6000	436600.0061
22/04/2023	425.0000	425000.0000
23/04/2023	23.8000	23799.9992
24/04/2023	314.4000	314399.9939
25/04/2023	447.6000	447600.0061
26/04/2023	358.4000	358399.9939
27/04/2023	267.6000	267600.0061
28/04/2023	262.5000	262500.0000
29/04/2023	292.6000	292600.0061
30/04/2023	274.2000	274200.0122
01/05/2023	284.1000	284100.0061
02/05/2023	279.4000	279399.9939
03/05/2023	233.2000	233199.9969
04/05/2023	253.6000	253600.0061
05/05/2023	216.4000	216399.9939
06/05/2023	229.4000	229399.9939
07/05/2023	276.3000	276299.9878
08/05/2023	231.1000	231100.0061
09/05/2023	174.0000	174000.0000
10/05/2023	235.4000	235399.9939
11/05/2023	257.4000	257399.9939
12/05/2023	217.0000	217000.0000
13/05/2023	320.9000	320899.9939
14/05/2023	210.9000	210899.9939
15/05/2023	199.8000	199800.0031
16/05/2023	267.9000	267899.9939
17/05/2023	324.6000	324600.0061
18/05/2023	145.0000	145000.0000
19/05/2023	206.7000	206699.9969
20/05/2023	221.6000	221600.0061
21/05/2023	223.9000	223899.9939
22/05/2023	224.4000	224399.9939
23/05/2023	262.5000	262500.0000
24/05/2023	203.4000	203399.9939
25/05/2023	295.2000	295200.0122
26/05/2023	333.3000	333299.9878
27/05/2023	260.2000	260200.0122
28/05/2023	366.0000	366000.0000
29/05/2023	332.3000	332299.9878
30/05/2023	283.1000	283100.0061
31/05/2023	312.2000	312200.0122
01/06/2023	200.2000	200199.9969
02/06/2023	299.3000	299299.9878
03/06/2023	326.8000	326799.9878
04/06/2023	148.3000	148300.0031
05/06/2023	298.1000	298100.0061
06/06/2023	232.7000	232699.9969
07/06/2023	237.4000	237399.9939
08/06/2023	242.3000	242300.0031
09/06/2023	88.7000	88699.9969
10/06/2023	244.9000	244899.9939
11/06/2023	264.4000	264399.9939
12/06/2023	162.7000	162699.9969
13/06/2023	81.4000	81400.0015

14/06/2023	147.7000	147699.9969
15/06/2023	328.7000	328700.0122
16/06/2023	521.0000	521000.0000
17/06/2023	414.0000	414000.0000
18/06/2023	350.8000	350799.9878
19/06/2023	295.1000	295100.0061
20/06/2023	94.5000	94500.0000
21/06/2023	307.9000	307899.9939
22/06/2023	263.1000	263100.0061
23/06/2023	433.7000	433700.0122
24/06/2023	248.7000	248699.9969
25/06/2023	191.3000	191300.0031
26/06/2023	250.6000	250600.0061
27/06/2023	196.2000	196199.9969
28/06/2023	248.6000	248600.0061
29/06/2023	319.9000	319899.9939
30/06/2023	191.8000	191800.0031
01/07/2023	276.0000	276000.0000
02/07/2023	221.0000	221000.0000
03/07/2023	255.3000	255300.0031
04/07/2023	162.2000	162199.9969
05/07/2023	231.5000	231500.0000
06/07/2023	222.2000	222199.9969
07/07/2023	237.8000	237800.0031
08/07/2023	280.9000	280899.9939
09/07/2023	259.3000	259299.9878
10/07/2023	253.1000	253100.0061
11/07/2023	190.5000	190500.0000
12/07/2023	273.5000	273500.0000
13/07/2023	292.5000	292500.0000
14/07/2023	251.4000	251399.9939
15/07/2023	227.1000	227100.0061
16/07/2023	312.2000	312200.0122
17/07/2023	126.8000	126800.0031
18/07/2023	229.0000	229000.0000
19/07/2023	288.0000	288000.0000
20/07/2023	147.5000	147500.0000
21/07/2023	194.5000	194500.0000
22/07/2023	251.7000	251699.9969
23/07/2023	197.3000	197300.0031
24/07/2023	249.7000	249699.9969
25/07/2023	243.7000	243699.9969
26/07/2023	216.0000	216000.0000
27/07/2023	225.4000	225399.9939
28/07/2023	229.0000	229000.0000
29/07/2023	248.8000	248800.0031
30/07/2023	204.2000	204199.9969
31/07/2023	202.1000	202100.0061
01/08/2023	187.6000	187600.0061
02/08/2023	358.1000	358100.0061
03/08/2023	214.8000	214800.0031
04/08/2023	259.8000	259799.9878
05/08/2023	224.4000	224399.9939
06/08/2023	189.3000	189300.0031
07/08/2023	239.2000	239199.9969
08/08/2023	225.2000	225199.9969
09/08/2023	199.6000	199600.0061
10/08/2023	291.0000	291000.0000
11/08/2023	246.0000	246000.0000
12/08/2023	166.3000	166300.0031
13/08/2023	247.0000	247000.0000

14/08/2023	227.0000	227000.0000
15/08/2023	227.3000	227300.0031
16/08/2023	163.1000	163100.0061
17/08/2023	127.7000	127699.9969
18/08/2023	279.2000	279200.0122
19/08/2023	206.3000	206300.0031
20/08/2023	165.6000	165600.0061
21/08/2023	179.3000	179300.0031
22/08/2023	233.9000	233899.9939
23/08/2023	225.5000	225500.0000
24/08/2023	165.2000	165199.9969
25/08/2023	164.8000	164800.0031
26/08/2023	182.3000	182300.0031
27/08/2023	321.3000	321299.9878
28/08/2023	125.5000	125500.0000
29/08/2023	263.1000	263100.0061
30/08/2023	171.3000	171300.0031
31/08/2023	224.1000	224100.0061
01/09/2023	228.7000	228699.9969
02/09/2023	229.3000	229300.0031
03/09/2023	217.8000	217800.0031
04/09/2023	226.3000	226300.0031
05/09/2023	105.8000	105800.0031
06/09/2023	198.2000	198199.9969
07/09/2023	197.7000	197699.9969
08/09/2023	252.5000	252500.0000
09/09/2023	229.9000	229899.9939
10/09/2023	225.9000	225899.9939
11/09/2023	171.0000	171000.0000
12/09/2023	200.9000	200899.9939
13/09/2023	234.2000	234199.9969
14/09/2023	118.0000	118000.0000
15/09/2023	192.9000	192899.9939
16/09/2023	257.6000	257600.0061
17/09/2023	229.6000	229600.0061
18/09/2023	200.6000	200600.0061
19/09/2023	235.4000	235399.9939
20/09/2023	115.8000	115800.0031
21/09/2023	228.1000	228100.0061
22/09/2023	220.1000	220100.0061
23/09/2023	237.5000	237500.0000
24/09/2023	220.8000	220800.0031
25/09/2023	156.9000	156899.9939
26/09/2023	224.1000	224100.0061
27/09/2023	202.8000	202800.0031
28/09/2023	193.1000	193100.0061
29/09/2023	214.0000	214000.0000
30/09/2023	218.1000	218100.0061
01/10/2023	191.2000	191199.9969
02/10/2023	148.9000	148899.9939
03/10/2023	235.4000	235399.9939
04/10/2023	131.1000	131100.0061
05/10/2023	247.8000	247800.0031
06/10/2023	331.2000	331200.0122
07/10/2023	193.0000	193000.0000
08/10/2023	218.7000	218699.9969
09/10/2023	124.5000	124500.0000
10/10/2023	239.0000	239000.0000
11/10/2023	215.7000	215699.9969
12/10/2023	118.0000	118000.0000
13/10/2023	279.4000	279399.9939

14/10/2023	227.4000	227399.9939
15/10/2023	173.9000	173899.9939
16/10/2023	225.0000	225000.0000
17/10/2023	239.3000	239300.0031
18/10/2023	169.8000	169800.0031
19/10/2023	195.8000	195800.0031
20/10/2023	240.1000	240100.0061
21/10/2023	221.0000	221000.0000
22/10/2023	213.9000	213899.9939
23/10/2023	151.9000	151899.9939
24/10/2023	210.1000	210100.0061
25/10/2023	174.8000	174800.0031
26/10/2023	190.5000	190500.0000
27/10/2023	217.9000	217899.9939
28/10/2023	258.6000	258600.0061
29/10/2023	205.1000	205100.0061
30/10/2023	186.5000	186500.0000
31/10/2023	172.7000	172699.9969
01/11/2023	211.0000	211000.0000
02/11/2023	202.3000	202300.0031
03/11/2023	190.4000	190399.9939
04/11/2023	234.8000	234800.0031
05/11/2023	239.1000	239100.0061
06/11/2023	176.9000	176899.9939
07/11/2023	166.6000	166600.0061
08/11/2023	191.7000	191699.9969
09/11/2023	145.1000	145100.0061
10/11/2023	240.0000	240000.0000
11/11/2023	229.3000	229300.0031
12/11/2023	236.7000	236699.9969
13/11/2023	219.6000	219600.0061
14/11/2023	79.4000	79400.0015
15/11/2023	217.3000	217300.0031
16/11/2023	167.4000	167399.9939
17/11/2023	189.6000	189600.0061
18/11/2023	241.9000	241899.9939
19/11/2023	183.8000	183800.0031
20/11/2023	214.6000	214600.0061
21/11/2023	229.0000	229000.0000
22/11/2023	175.5000	175500.0000
23/11/2023	179.7000	179699.9969
24/11/2023	211.6000	211600.0061
25/11/2023	230.9000	230899.9939
26/11/2023	245.2000	245199.9969
27/11/2023	173.6000	173600.0061
28/11/2023	204.4000	204399.9939
29/11/2023	215.3000	215300.0031
30/11/2023	211.4000	211399.9939
01/12/2023	218.6000	218600.0061
02/12/2023	186.6000	186600.0061
03/12/2023	234.1000	234100.0061
04/12/2023	222.9000	222899.9939
05/12/2023	208.9000	208899.9939
06/12/2023	229.6000	229600.0061
07/12/2023	223.9000	223899.9939
08/12/2023	159.2000	159199.9969
09/12/2023	251.8000	251800.0031
10/12/2023	240.8000	240800.0031
11/12/2023	171.4000	171399.9939
12/12/2023	208.7000	208699.9969
13/12/2023	228.9000	228899.9939

14/12/2023	212.9000	212899.9939
15/12/2023	193.6000	193600.0061
16/12/2023	247.9000	247899.9939
17/12/2023	269.6000	269600.0061
18/12/2023	187.6000	187600.0061
19/12/2023	223.4000	223399.9939
20/12/2023	228.5000	228500.0000
21/12/2023	262.1000	262100.0061
22/12/2023	274.2000	274200.0122
23/12/2023	292.1000	292100.0061
24/12/2023	256.2000	256200.0122
25/12/2023	211.1000	211100.0061
26/12/2023	228.5000	228500.0000
27/12/2023	159.6000	159600.0061
28/12/2023	224.7000	224699.9969
29/12/2023	306.4000	306399.9939
30/12/2023	328.6000	328600.0061
31/12/2023	270.0000	270000.0000