

Espanola Hub 148 Fleming St, Suite 5 Espanola, ON P5E 1R8 Tel: 705 869 5578 Fax: 705-869-4374 www.ocwa.com

February 28, 2023

Anne Whalen, Clerk-Administrator The Corporation of the Township of Sables-Spanish Rivers 11 Birch Lake Road, Box 5, Site 1, RR#3 Massey, Ontario POP 1P0

Re: O. Reg. 170 Section 11 & Schedule 22 Annual Reporting under SDWA

O. Reg 387 Section 9 Annual Reporting under OWRA

For the Massey Water Treatment Plant

Waterworks No.: 220003500

Dear Anne Whalen;

Attached are the 2022 Annual and Summary Reports for the Massey 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

Massey 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 Township of Sables-Spanish Rivers





Drinking-Water System Number: 220003500

Drinking-Water System Name: MASSEY DRINKING WATER SYSTEM

Drinking-Water System Owner: The Corporation of the Township of Sables-Spanish Rivers

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 <u>failed to meet</u> 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 Massey WTP shall not be operated to exceed a maximum daily volume of 1500 m3/d to the distribution system.

The daily treated water maximum flow was 866.5 m3 in July and represents 57.8% of capacity. In 2022, the total volume of water sent to the distribution system was 155,762.7 m3

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

Flows - Raw

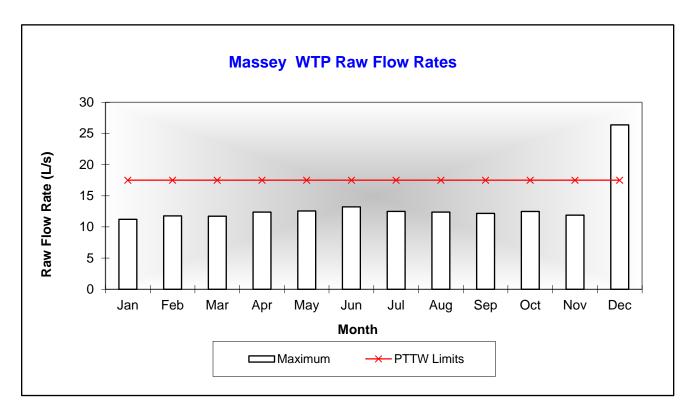
Daily raw maximum instantaneous flow is stated in the PTTW at a maximum rate of flow of 17.5 L/s and a maximum daily volume of 1500 m³/d.

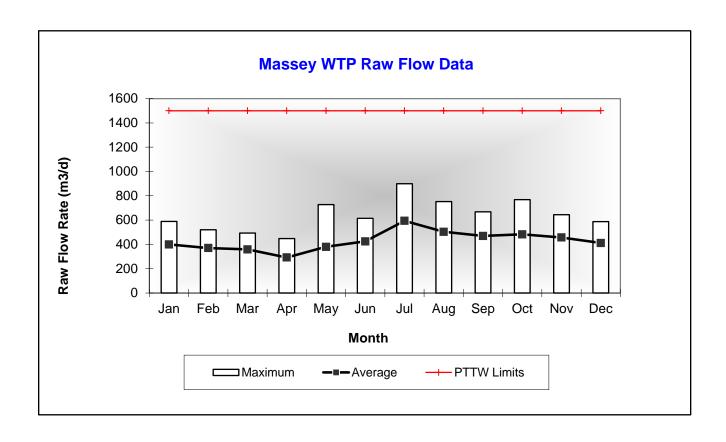
The average monthly raw water flow for this reporting period was $429.2 \text{ m}^3/\text{d}$. The maximum daily flow was $899.2 \text{ m}^3/\text{d}$ representing 60% of water taking limits. In 2022, the total volume of water taken from the environment was 156,673 m3

The quantity of raw water taken $\underline{\mathbf{did}}$ exceed the limits stipulated within the PTTW for maximum flow rate (L/s) in December. The incident was a result of a new raw water flow meter installation.

	RAW WATER FLOW DATA - TOTAL ALL SOURCES						
	Total	Average Flow	Maximum	Maximum	Lin	nits	
Month	Monthly Flow (m3)	(m3/d)	Flow (m3/d)	Flow Rate (L/s)	L/s (PTTW)	m ³ /d (PTTW)	
January	12,394.4	399.82	588.9	11.23	17.5	1500	
February	10,357.7	369.92	520.3	11.78	17.5	1500	
March	11,128.4	358.98	493.2	11.73	17.5	1500	
April	8,772.9	292.43	447.9	12.39	17.5	1500	
May	11,766.3	379.56	727.5	12.57	17.5	1500	
June	12,742.8	424.76	614.2	13.22	17.5	1500	
July	18,406.8	593.77	899.2	12.5	17.5	1500	
August	15,606.1	503.42	752.3	12.39	17.5	1500	
September	14,074.6	469.15	667.9	12.18	17.5	1500	
October	14,969.1	482.87	768.3	12.49	17.5	1500	
November	13,702.4	456.75	644.3	11.9	17.5	1500	
December	12,751.5	411.34	587.4	26.39	17.5	1500	
Total	156,673						
Average		429.2					
Maximum			899.2	26.39	17.5	1500	









Annual Raw Water Review

Raw Water Taking	Total Taking m3/d	Average Day m3/d	Max Day m3/d	Max Day % of PTTW allowable 1500 m3/d
2022	156,673	429.2	899.2	60%
2021	135,687.1	371.75	818.7	55%
2020	126,750.5	346.31	931.8	62%
2019	134,914.1	369.63	1,017.8	67.9%
2018	148,242.3	406.14	905.3	60.4%
2017	156,826.1	429.66	1,134.8	75.8%
2016	166,962.4	456	1120	74.7%
2015	138663.3	380	1011	67.4%

System Failures and Corrective Actions

The latest inspection of the drinking water facility took place December 15, 2022; however, the inspector is currently in the process of completing the inspection and associated report. An inspection also took place on February 3, 2021. The facility scored 0/572 providing a rating of 100%.

The following sampling error occurred during 2022:

The April, the monthly backwash total suspended solids sample was not collected. This sampling error was a result of a staffing change for the facility. The Operator notified PCTs of the error and requested the sampling plan be changed to schedule backwash samples at the beginning of the month. No additional samples were missed.

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	~900
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.	Massey Municipal Office 11 Birch Lake Road Massey, Ontario



	Massey Water Treatin
	P0P 1P0
Number of Designated Facilities served:	
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:	
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.	NA
Indicate if you notified system users that your annual report is available and is free of charge using an alternate method	Public access/notice via the web - Public access/notice via a Public Library

Facility Description

A proprietary high rate sedimentation treatment unit, rated at 1500 m3/d and housed in the water treatment building, consisting of coagulation, ballasted sand flocculation and sedimentation in a high rate (31 m3/m2/h) plate sedimentation tank, two cell dual media filter, micro sand injection and recirculation systems, hydro cyclones for sludge/sand separation and backwash pumps and air blowers. There are five chemical dosing systems: pH adjustment, alkali adjustment, polymer addition, sodium hypochlorite addition and poly aluminum chloride addition. There are two vertical turbine high lift pumps each rated at 17.4 L/s and two vertical turbine backwash pumps each rated at 49.1 m3/min. Sludge is handled with a waste holding tank, sludge thickening tank and two sludge pumps each rated at 7.0 L/s. The thickened sludge is hauled away for disposal, while the supernatant returns to the Aux Sables River.

Chemicals Used

Poly Aluminum Chloride (PAC)	Coagulation
Magnafloc LT27 AG	Coagulation aide
Sodium Hydroxide (50%)	Alkalinity and pH control
Sodium Hypochlorite (12%)	Disinfection

Significant Expenses

Significant expenses incurred to

[] Install required equipment

[X] Repair required equipment

[X] Replace required equipment



Work Order	Completion Date	Comment			
	14-Mar-22	Various minor equipment repairs – \$3,220.36			
2818840	17-Jun-22	Tile Sump pump repair – \$774.99			
	13-Oct-22	Sump pump replacement – \$720.66			
	29-Dec-22	Raw water flow meter replacement – \$6,000			

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	Range o	f E.Coli	Col	of Total iform sults	Number of HPC	Range o Resu	
	Collected	Min#	Max #	Min#	Max #		Collected	Min#
Raw Water	52	0	80	0	620			
Treated Water	52	0	0	0	0	52	0	7
Distribution	104	0	0	0	0	52	0	4

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

	No. of Samples	Range o	of Results	Units of
	Collected	Minimum	Maximum	Measure
Turbidity, On-Line - Filter 1	8760	0.03	1.83	(NTU)
Turbidity, On-Line - Filter 2	8760	0.02	2	(NTU)
Free Chlorine Residual, Treated	8760	0.81	2.20	(mg/L)
Free Chlorine Residual, Distribution Location 1	104	0.62	1.56	(mg/L)
Free Chlorine Residual, Distribution Location 2	104	0.48	1.49	(mg/L)
Free Chlorine Residual, Distribution Location 3	104	0.70	1.78	(mg/L)
Free Chlorine Residual, Distribution Location 4	52	0.70	1.53	(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
MDWL 215-101	Backwash (BW) Total	Jan	31	6	mg/L
	Suspended Solids (TSS)	Feb	25	5	mg/L
Y D 140		Mar	30	9	mg/L
Issue Date: March 18, 2021	25	Apr	n/a	n/a	mg/L
2021	25 mg/L annual average	May	02	124	mg/L





Expiry Date: March 18, 2026

			<u> </u>
Jun	06	6	mg/L
Jul	04	14	mg/L
Aug	09	9	mg/L
Sep	09	2	mg/L
Oct	03	14	mg/L
Nov	03	15	mg/L
Dec	05	40	mg/L
Annual	Average	20.3	mg/L

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

	Sample Date	Sample		No. of Ex	ceedances
TREATED WATER	(yyyy/mm/dd)	Result	MAC	MAC	1/2 MAC
Antimony: Sb (ug/L) - TW	2022/01/20	<mdl 0.6<="" td=""><td>6.0</td><td>No</td><td>No</td></mdl>	6.0	No	No
Arsenic: As (ug/L) - TW	2022/01/20	<mdl 0.2<="" td=""><td>25.0</td><td>No</td><td>No</td></mdl>	25.0	No	No
Barium: Ba (ug/L) - TW	2022/01/20	5.97	1000.0	No	No
Boron: B (ug/L) - TW	2022/01/20	5.0	5000.0	No	No
Cadmium: Cd (ug/L) - TW	2022/01/20	0.005	5.0	No	No
Chromium: Cr (ug/L) - TW	2022/01/20	0.18	50.0	No	No
Mercury: Hg (ug/L) - TW	2022/01/20	<mdl 0.01<="" td=""><td>1.0</td><td>No</td><td>No</td></mdl>	1.0	No	No
Selenium: Se (ug/L) - TW	2022/01/20	<mdl 0.04<="" td=""><td>50.0</td><td>No</td><td>No</td></mdl>	50.0	No	No
Uranium: U (ug/L) - TW	2022/01/20	0.009	20.0	No	No

	Sample Date	Sample		No. of Exceedances		
TREATED WATER	(yyyy/mm/dd)	Result	MAC	MAC	1/2 MAC	
Fluoride (mg/L) - TW	2021/01/11	<mdl 0.06<="" td=""><td>1.5</td><td>No</td><td>No</td></mdl>	1.5	No	No	
Nitrite (mg/L) - TW	2022/01/20	<mdl 0.003<="" td=""><td>1.0</td><td>No</td><td>No</td></mdl>	1.0	No	No	
Nitrite (mg/L) - TW	2022/04/27	<mdl 0.003<="" td=""><td>1.0</td><td>No</td><td>No</td></mdl>	1.0	No	No	
Nitrite (mg/L) - TW	2022/07/19	<mdl 0.003<="" td=""><td>1.0</td><td>No</td><td>No</td></mdl>	1.0	No	No	
Nitrite (mg/L) - TW	2022/10/19	<mdl 0.003<="" td=""><td>1.0</td><td>No</td><td>No</td></mdl>	1.0	No	No	
Nitrate (mg/L) - TW	2022/01/20	0.107	10.0	No	No	
Nitrate (mg/L) - TW	2022/04/27	0.09	10.0	No	No	
Nitrate (mg/L) - TW	2022/07/19	0.03	10.0	No	No	
Nitrate (mg/L) - TW	2022/10/19	0.049	10.0	No	No	
Sodium: Na (mg/L) - TW	2021/01/11	8.1	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	No.of	Range o	f Results	MAC	Number of
Location Type	Samples	Minimum	Maximum	(ug/L)	Exceedances
Distribution - Lead Results (ug/L)	n/a			10	0
Distribution - Alkalinity (mg/L)	4	7	9	n/a	n/a
Distribution - pH In-House	4	6.90	7.24	n/a	n/a



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

TREATED WATER	Sample Date	Sample		Number of Exceedances	
	(yyyy/mm/dd)	Result	MAC	MAC	1/2 MAC
Alachlor (ug/L) - TW	2022/01/20	<mdl 0.02<="" td=""><td>5.0</td><td>No</td><td>No</td></mdl>	5.0	No	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	2022/01/20	<mdl 0.01<="" td=""><td>5.0</td><td>No</td><td>No</td></mdl>	5.0	No	No
Azinphos-methyl (ug/L) - TW	2022/01/20	<mdl 0.05<="" td=""><td>20.0</td><td>No</td><td>No</td></mdl>	20.0	No	No
Benzene (ug/L) - TW	2022/01/20	<mdl 0.32<="" td=""><td>1.0</td><td>No</td><td>No</td></mdl>	1.0	No	No
Benzo(a)pyrene (ug/L) - TW	2022/01/20	<mdl 0.004<="" td=""><td>0.01</td><td>No</td><td>No</td></mdl>	0.01	No	No
Bromoxynil (ug/L) - TW	2022/01/20	<mdl 0.33<="" td=""><td>5.0</td><td>No</td><td>No</td></mdl>	5.0	No	No
Carbaryl (ug/L) - TW	2022/01/20	<mdl 0.05<="" td=""><td>90.0</td><td>No</td><td>No</td></mdl>	90.0	No	No
Carbofuran (ug/L) - TW	2022/01/20	<mdl 0.01<="" td=""><td>90.0</td><td>No</td><td>No</td></mdl>	90.0	No	No
Carbon Tetrachloride (ug/L) - TW	2022/01/20	<mdl 0.17<="" td=""><td>2.0</td><td>No</td><td>No</td></mdl>	2.0	No	No
Chlorpyrifos (ug/L) - TW	2022/01/20	<mdl 0.02<="" td=""><td>90.0</td><td>No</td><td>No</td></mdl>	90.0	No	No
Diazinon (ug/L) - TW	2022/01/20	<mdl 0.02<="" td=""><td>20.0</td><td>No</td><td>No</td></mdl>	20.0	No	No
Dicamba (ug/L) - TW	2022/01/20	<mdl 0.2<="" td=""><td>120.0</td><td>No</td><td>No</td></mdl>	120.0	No	No
1,2-Dichlorobenzene (ug/L) - TW	2022/01/20	<mdl 0.41<="" td=""><td>200.0</td><td>No</td><td>No</td></mdl>	200.0	No	No
1,4-Dichlorobenzene (ug/L) - TW	2022/01/20	<mdl 0.36<="" td=""><td>5.0</td><td>No</td><td>No</td></mdl>	5.0	No	No
1,2-Dichloroethane (ug/L) - TW	2022/01/20	<mdl 0.35<="" td=""><td>5.0</td><td>No</td><td>No</td></mdl>	5.0	No	No
1,1-Dichloroethylene (ug/L) - TW	2022/01/20	<mdl 0.33<="" td=""><td>14.0</td><td>No</td><td>No</td></mdl>	14.0	No	No
Dichloromethane (Methylene Chloride) (ug/L) - TW	2022/01/20	<mdl 0.35<="" td=""><td>50.0</td><td>No</td><td>No</td></mdl>	50.0	No	No
2,4-Dichlorophenol (ug/L) - TW	2022/01/20	<mdl 0.15<="" td=""><td>900.0</td><td>No</td><td>No</td></mdl>	900.0	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	2022/01/20	<mdl 0.19<="" td=""><td>100.0</td><td>No</td><td>No</td></mdl>	100.0	No	No
Diclofop-methyl (ug/L) - TW	2022/01/20	<mdl 0.4<="" td=""><td>9.0</td><td>No</td><td>No</td></mdl>	9.0	No	No
Dimethoate (ug/L) - TW	2022/01/20	<mdl 0.06<="" td=""><td>20.0</td><td>No</td><td>No</td></mdl>	20.0	No	No
Diquat (ug/L) - TW	2022/01/20	<mdl 1.0<="" td=""><td>70.0</td><td>No</td><td>No</td></mdl>	70.0	No	No
Diuron (ug/L) - TW	2022/01/20	<mdl 0.03<="" td=""><td>150.0</td><td>No</td><td>No</td></mdl>	150.0	No	No
Glyphosate (ug/L) - TW	2022/01/20	<mdl 1.0<="" td=""><td>280.0</td><td>No</td><td>No</td></mdl>	280.0	No	No
Malathion (ug/L) - TW	2022/01/20	<mdl 0.02<="" td=""><td>190.0</td><td>No</td><td>No</td></mdl>	190.0	No	No
Metolachlor (ug/L) - TW	2022/01/20	<mdl 0.01<="" td=""><td>50.0</td><td>No</td><td>No</td></mdl>	50.0	No	No
Metribuzin (ug/L) - TW	2022/01/20	<mdl 0.02<="" td=""><td>80.0</td><td>No</td><td>No</td></mdl>	80.0	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW	2022/01/20	<mdl 0.3<="" td=""><td>80.0</td><td>No</td><td>No</td></mdl>	80.0	No	No
Paraquat (ug/L) - TW	2022/01/20	<mdl 1.0<="" td=""><td>10.0</td><td>No</td><td>No</td></mdl>	10.0	No	No
PCB (ug/L) - TW	2022/01/20	<mdl 0.04<="" td=""><td>3.0</td><td>No</td><td>No</td></mdl>	3.0	No	No
Pentachlorophenol (ug/L) - TW	2022/01/20	<mdl 0.15<="" td=""><td>60.0</td><td>No</td><td>No</td></mdl>	60.0	No	No
Phorate (ug/L) - TW	2022/01/20	<mdl 0.01<="" td=""><td>2.0</td><td>No</td><td>No</td></mdl>	2.0	No	No
Picloram (ug/L) - TW	2022/01/20	<mdl 1.0<="" td=""><td>190.0</td><td>No</td><td>No</td></mdl>	190.0	No	No
Prometryne (ug/L) - TW	2022/01/20	<mdl 0.03<="" td=""><td>1.0</td><td>No</td><td>No</td></mdl>	1.0	No	No
Simazine (ug/L) - TW	2022/01/20	<mdl 0.01<="" td=""><td>10.0</td><td>No</td><td>No</td></mdl>	10.0	No	No
Terbufos (ug/L) - TW	2022/01/20	<mdl 0.01<="" td=""><td>1.0</td><td>No</td><td>No</td></mdl>	1.0	No	No
Tetrachloroethylene (ug/L) - TW	2022/01/20	<mdl 0.35<="" td=""><td>10.0</td><td>No</td><td>No</td></mdl>	10.0	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	2022/01/20	<mdl 0.2<="" td=""><td>100.0</td><td>No</td><td>No</td></mdl>	100.0	No	No
Triallate (ug/L) - TW	2022/01/20	<mdl 0.01<="" td=""><td>230.0</td><td>No</td><td>No</td></mdl>	230.0	No	No
Trichloroethylene (ug/L) - TW	2022/01/20	<mdl 0.44<="" td=""><td>5.0</td><td>No</td><td>No</td></mdl>	5.0	No	No

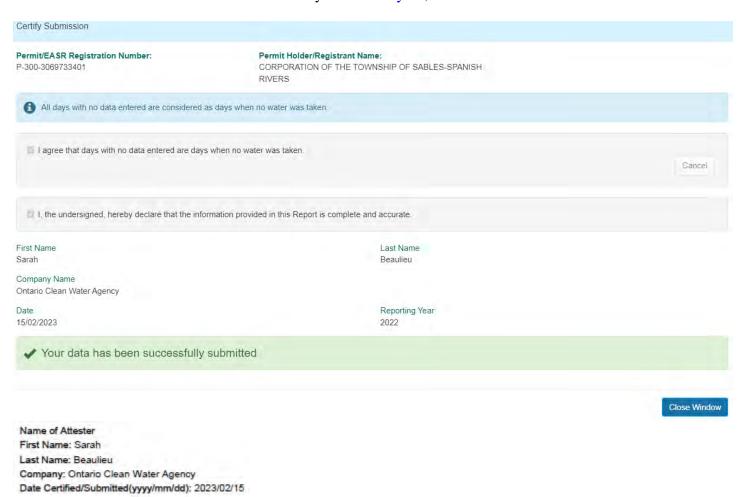




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2,4,6-Trichlorophenol (ug/L) - TW	2022/01/20	<mdl 0.25<="" td=""><td>5.0</td><td>No</td><td>No</td></mdl>	5.0	No	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (ug/L) - TW	2022/01/20	<mdl 0.12<="" td=""><td>100.0</td><td>No</td><td>No</td></mdl>	100.0	No	No
Trifluralin (ug/L) - TW	2022/01/20	<mdl 0.02<="" td=""><td>45.0</td><td>No</td><td>No</td></mdl>	45.0	No	No
Vinyl Chloride (ug/L) - TW	2022/01/20	<mdl 0.17<="" td=""><td>1.0</td><td>No</td><td>No</td></mdl>	1.0	No	No
DISTRIBUTION WATER					
Trihalomethane: Total (ug/L) Annual Average - DW	2022/12/31	39.25	100.00	No	No
HAA Total (ug/L) Annual Average – DW	2022/12/31	34.425	80.0	No	No

SECTION 5: RAW WATER SUBMISSIONS

Raw water flows were submitted to the Ministry on February 15, 2023.





SECTION 6: CONCLUSION

The Massey 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 Massey WTP was able to meet the demand of water use without exceeding the PTTW or the MDWL. However the PTTW L/s was exceeded in December; the incident was a result of a new raw water flow meter installation.



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	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	Municipal Drinking Water Licence - relates to the operation and performance
requirements	
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	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



Regulatory Self-Reporting System

Ministry of the Environment, Conservation and Parks

Inputted Water Taking Data

Business Service Type: PTTW Permit Number: P-300-3069733401 Permit Version: 1.0 Permit Holder's Name: CORPORATION OF THE TOWNSHIP OF SABLES-SPANISH RIVERS Reporting Year: 2022

Source Name: River aux Sables

Description: River Aux Sables Purpose Category: Utilities Specific Category: Municipal Supply Activity: Water Supply

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	332500.0	469600.0	442500.0	324000.0	259700.0	265300.0	614000.0	562000.0	330700.0	474300.0	562000.0	587400.0
2	344900.0	300900.0	272800.0	304300.0	368400.0	517700.0	547300.0	564500.0	515000.0	449200.0	477700.0	294000.0
3	512800.0	403300.0	416600.0	258900.0	222300.0	307200.0	517600.0	536500.0	443800.0	599500.0	417900.0	516900.0
4	387400.0	327800.0	267300.0	348400.0	336100.0	459900.0	534300.0	463100.0	401400.0	569400.0	448800.0	446300.0
5	329500.0	461500.0	472000.0	284500.0	212900.0	487300.0	237400.0	530100.0	596500.0	768300.0	552900.0	329900.0
6	317100.0	345400.0	321100.0	217300.0	278500.0	242300.0	536900.0	506600.0	529900.0	662600.0	403600.0	478100.0
7	551000.0	296100.0	421800.0	331200.0	385500.0	301200.0	460800.0	532800.0	391600.0	432000.0	481800.0	413200.0
8	334100.0	467100.0	304500.0	447900.0	338700.0	359100.0	664100.0	307500.0	447900.0	469100.0	388300.0	461000.0
9	353700.0	362600.0	435800.0	216700.0	460200.0	411400.0	537800.0	431200.0	538500.0	505400.0	478100.0	247900.0
10	588900.0	333700.0	276600.0	320900.0	503600.0	282700.0	658400.0	451100.0	663900.0	473900.0	474600.0	413000.0
11	354300.0	360100.0	409600.0	296700.0	727500.0	525400.0	659300.0	500300.0	371700.0	419400.0	471700.0	411200.0
12	408300.0	520300.0	311400.0	241400.0	319500.0	320300.0	480100.0	474100.0	611800.0	398700.0	474900.0	434100.0
13	457700.0	339600.0	331000.0	310800.0	331400.0	374000.0	675900.0	533400.0	238200.0	460600.0	439100.0	293500.0
14	376400.0	350900.0	404400.0	241500.0	502500.0	390300.0	603900.0	418700.0	381500.0	523300.0	522800.0	419900.0
15	356500.0	378900.0	256800.0	290000.0	451800.0	409600.0	623000.0	599300.0	667900.0	378300.0	307900.0	348900.0
16	450800.0	491300.0	448600.0	273700.0	415200.0	424900.0	652300.0	407100.0	366900.0	513700.0	516400.0	433300.0
17	329100.0	416900.0	342900.0	254900.0	406100.0	286600.0	698700.0	491700.0	500800.0	439400.0	412200.0	569400.0
18	403300.0	326300.0	468000.0	235300.0	429400.0	527900.0	899200.0	643200.0	375800.0	444200.0	545700.0	391700.0
19	477300.0	278400.0	326100.0	200500.0	333600.0	371400.0	888500.0	641800.0	663700.0	528900.0	390900.0	395100.0
20	327100.0	457400.0	429100.0	328900.0	334700.0	452000.0	332800.0	589400.0	517900.0	304600.0	190400.0	457800.0
21	384600.0	298800.0	493200.0	225300.0	294700.0	572500.0	612700.0	341700.0	578400.0	498200.0	644300.0	378200.0
22	474000.0	295500.0	277000.0	377400.0	347800.0	539700.0	518300.0	463500.0	444000.0	513300.0	529900.0	332500.0
23	356500.0	419900.0	394500.0	365200.0	359900.0	499300.0	738300.0	752300.0	401100.0	421100.0	488200.0	329800.0
24	335400.0	309700.0	418800.0	275600.0	416200.0	540000.0	621000.0	713500.0	532800.0	486400.0	478900.0	469900.0
25	517800.0	302200.0	339500.0	269300.0	295100.0	535800.0	552100.0	432600.0	439600.0	448800.0	358500.0	365500.0
26	300200.0	411100.0	290300.0	328300.0	344800.0	565600.0	721500.0	461000.0	456000.0	438900.0	530300.0	373600.0
27	446300.0	284400.0	297100.0	292100.0	447700.0	425300.0	673500.0	512300.0	434200.0	538900.0	464900.0	367900.0
28	427500.0	348000.0	364100.0	243000.0	314900.0	614200.0	572700.0	585300.0	322800.0	342800.0	411200.0	358500.0
29	325400.0		228700.0	399000.0	479400.0	366300.0	418900.0	252200.0	525800.0	582100.0	478300.0	408300.0
30	533200.0		416900.0	269900.0	399100.0	367600.0	698900.0	441400.0	384500.0	438000.0	360200.0	471100.0
31	300800.0		249400.0		449100.0		456600.0	465900.0		445800.0		553600.0