

Mindemoya Water Treatment

Large Municipal Residential Drinking Water System

January 1, 2019 – December 31, 2019

***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 Municipality of Central Manitoulin



Ontario Clean Water Agency
Agence Ontarienne Des Eaux



<i>Drinking-Water System Number:</i>	220008382
<i>Drinking-Water System Name:</i>	MINDEMOYA DRINKING WATER SYSTEM
<i>Drinking-Water System Owner:</i>	The Municipality of Central Manitoulin
<i>Drinking-Water System Category:</i>	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, [2020](#).

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 Mindemoya WTP shall not be operated to exceed a maximum daily volume of 1240 m³/d to the distribution system.

The daily treated water maximum flow was 450 m³ in July and represents 36 % of capacity. In 2019, the total volume of water sent to the distribution system was 84,340.53 m³

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

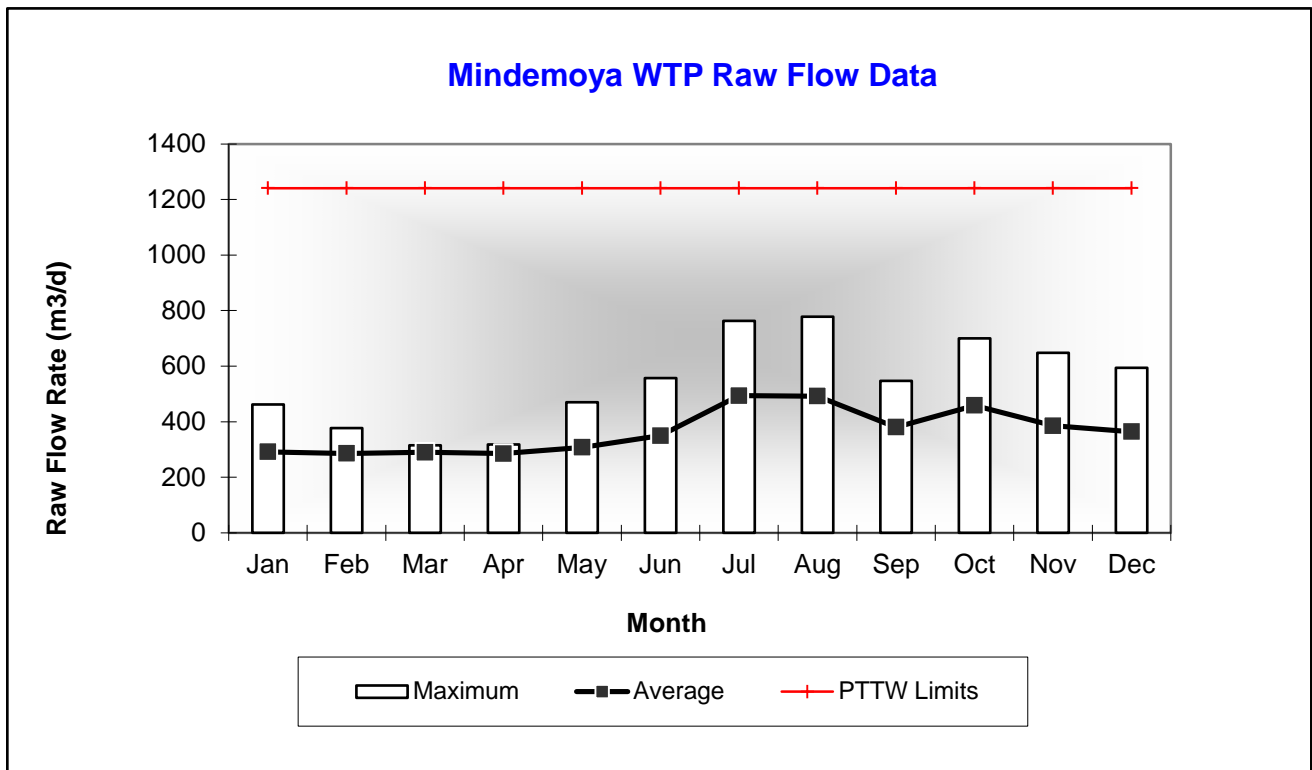
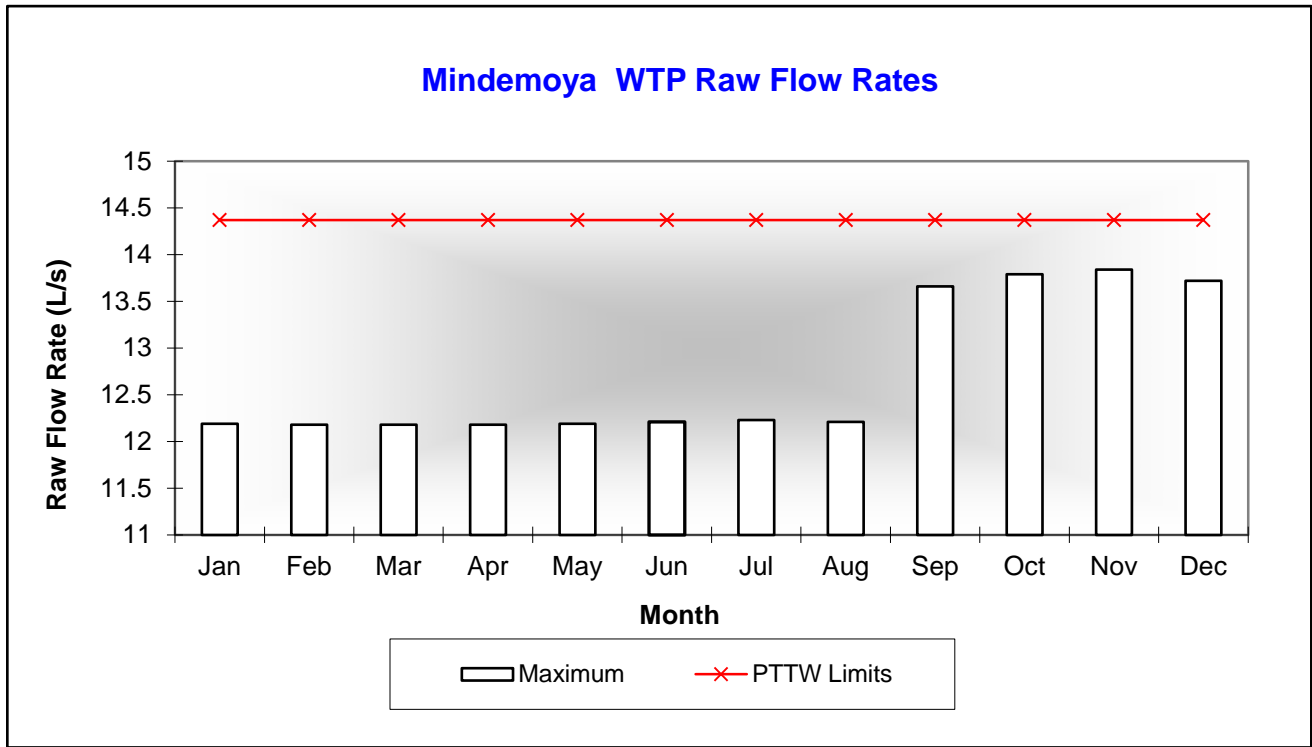
Flows - Raw

Daily raw maximum instantaneous flow is stated in the PTTW at a maximum rate of flow of 14.37 L/s and a maximum daily volume of 1241 m³/d.

The average monthly raw water flow for this reporting period was 365.81 m³/d. The maximum daily flow was 778 m³/d representing 62.7 % of water taking limits. In 2019, the total volume of water taken from the environment was 133,521.8 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 (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	9,034	291.42	462	12.19	14.37	1241
February	8,001	285.75	377	12.18	14.37	1241
March	8,896	289.97	315	12.18	14.37	1241
April	8,556	285.2	318	12.18	14.37	1241
May	9,528	307.35	470	12.19	14.37	1241
June	10,489	349.63	557	12.21	14.37	1241
July	15,300	493.55	763	12.23	14.37	1241
August	15,252	492	778	12.21	14.37	1241
September	11,404.83	380.16	547	13.66	14.37	1241
October	14,212	458.45	700	13.79	14.37	1241
November	11,565	385.5	648	13.84	14.37	1241
December	11,284	364	594	13.72	14.37	1241
Total	133,521.8					
Average		365.81				
Maximum			778	13.84	14.37	1241





Annual Raw Water Review

Raw Water Taking	Total Taking m3/d	Average Day m3/d	Max Day m3/d	Max Day % of PTTW allowable 1240 m3/d
2019	133,521.8	365.81	778	62.7%
2018	123,285.7	337.77	1042	84.0%
2017	117,888	324.38	1015.4	81.8%
2016	129,040	353	989	80.0 %
2015	107,629	299	691	55.7 %
2014	107,168	298	930	75.0%

System Failures and Corrective Actions

The latest inspection of the drinking water facility took place on **June 25, 2019**. The facility scored **0/481** providing a rating of **100%**.

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	486
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.	Central Manitoulin Municipal Office 6020 HWY 542 Mindemoya, Ontario POP 1S0
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 the web & 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 surface water treatment plant serving the community of Mindemoya, rated at a maximum daily flow of 1,240 m³/day consisting of the following: Intake facilities, low lift pumping system, package treatment system consisting of a duplex prefabricated water treatment system, chemical feed system consisting of a coagulant feed system, soda ash feed system and a sodium hypochlorite feed system, a clearwell, four high lift pumps, one fire pump and three hydro-pneumatic pressure tanks. Stand-by power is provided by a 250 kW diesel engine generator. Waste water is pumped to the sanitary sewage system utilizing a sump pump chamber equipped with two submersible sewage pumps.

Chemicals Used

Sodium Hypochlorite (12%)	Disinfection
Polyaluminum Chloride (PAX – XL54)	Coagulation

Significant Expenses

Significant expenses incurred to

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

Work Order	Completion Date	Comment
1137963 1137964 & 1137965	06-Mar-19	Replaced all inside components for three backflow valves
1419877	30-Aug-19	Underwater camera inspection of wet wells
1536165	16-Dec-19	Replaced filter backwash valve

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	52	0	12	0	109			
Treated Water	52	0	0	0	0	52	0	2
Distribution	106	0	0	0	0	53	0	12

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	0.606	(NTU)
Turbidity – Filter 2	8760	0	1.11	(NTU)
Free Chlorine Residual – TW	8760	0	4.21	(mg/L)
Free Chlorine Residual, Distribution Location 1	105	0.40	2.05	(mg/L)
Free Chlorine Residual, Distribution Location 2	105	0.40	2.10	(mg/L)
Free Chlorine Residual, Distribution Location 3	105	0.24	1.95	(mg/L)
Free Chlorine Residual, Distribution Location 4	53	0.41	1.76	(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
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

TREATED WATER	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
				MAC	1/2 MAC
Antimony: Sb (ug/L) - TW	2019/01/23	0.11	6.0	No	No
Arsenic: As (ug/L) - TW	2019/01/23	0.3	25.0	No	No
Barium: Ba (ug/L) - TW	2019/01/23	6.7	1000.0	No	No
Boron: B (ug/L) - TW	2019/01/23	17.0	5000.0	No	No
Cadmium: Cd (ug/L) - TW	2019/01/23	<MDL 0.003	5.0	No	No
Chromium: Cr (ug/L) - TW	2019/01/23	0.11	50.0	No	No
Mercury: Hg (ug/L) - TW	2019/01/23	<MDL 0.01	1.0	No	No
Selenium: Se (ug/L) - TW	2019/01/23	0.07	10.0	No	No
Uranium: U (ug/L) - TW	2019/01/23	0.008	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	2016/01/12	0.08	1.5	No	No
Nitrite (mg/L) - TW	2019/01/23	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2019/04/09	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2019/07/23	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2019/10/21	<MDL 0.003	1.0	No	No
Nitrate (mg/L) - TW	2019/01/23	0.027	10.0	No	No
Nitrate (mg/L) - TW	2019/04/09	0.123	10.0	No	No
Nitrate (mg/L) - TW	2019/07/23	0.036	10.0	No	No
Nitrate (mg/L) - TW	2019/10/21	0.03	10.0	No	No
Sodium: Na (mg/L) - TW	2016/01/12	5.76	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 Samples	Range of Results		MAC (ug/L)	Number of Exceedances
		Minimum	Maximum		
Distribution - Lead Results (ug/L)	N/A	N/A	N/A	10	0
Distribution - Alkalinity (mg/L)	2	130	134	N/A	N/A
Distribution - pH In-House	2	8.45	8.45	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	2019/01/23	<MDL 0.02	5.00	No	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	2019/01/23	0.01	5.00	No	No
Azinphos-methyl (ug/L) - TW	2019/01/23	<MDL 0.05	20.00	No	No
Benzene (ug/L) - TW	2019/01/23	<MDL 0.32	5.00	No	No
Benzo(a)pyrene (ug/L) - TW	2019/01/23	<MDL 0.004	0.01	No	No
Bromoxynil (ug/L) - TW	2019/01/23	<MDL 0.33	5.00	No	No
Carbaryl (ug/L) - TW	2019/01/23	<MDL 0.05	90.00	No	No
Carbofuran (ug/L) - TW	2019/01/23	<MDL 0.01	90.00	No	No
Carbon Tetrachloride (ug/L) - TW	2019/01/23	<MDL 0.16	5.00	No	No
Chlorpyrifos (ug/L) - TW	2019/01/23	<MDL 0.02	90.00	No	No
Diazinon (ug/L) - TW	2019/01/23	<MDL 0.02	20.00	No	No
Dicamba (ug/L) - TW	2019/01/23	<MDL 0.2	120.00	No	No
1,2-Dichlorobenzene (ug/L) - TW	2019/01/23	<MDL 0.41	200.00	No	No
1,4-Dichlorobenzene (ug/L) - TW	2019/01/23	<MDL 0.36	5.00	No	No
1,2-Dichloroethane (ug/L) - TW	2019/01/23	<MDL 0.35	5.00	No	No
1,1-Dichloroethylene (ug/L) - TW	2019/01/23	<MDL 0.33	14.00	No	No




2019 Annual Report
Mindemoya Water Treatment

Dichloromethane (Methylene Chloride) (ug/L) - TW	2019/01/23	<MDL 0.35	50.00	No	No
2,4-Dichlorophenol (ug/L) - TW	2019/01/23	<MDL 0.15	900.00	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	2019/01/23	<MDL 0.19	100.00	No	No
Diclofop-methyl (ug/L) - TW	2019/01/23	<MDL 0.4	9.00	No	No
Dimethoate (ug/L) - TW	2019/01/23	<MDL 0.06	20.00	No	No
Diquat (ug/L) - TW	2019/01/23	<MDL 1.0	70.00	No	No
Diuron (ug/L) - TW	2019/01/23	<MDL 0.03	150.00	No	No
Glyphosate (ug/L) - TW	2019/01/23	<MDL 1.0	280.00	No	No
Malathion (ug/L) - TW	2019/01/23	<MDL 0.02	190.00	No	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (mg/L) - TW	2019/01/23	<MDL 0.01	N/A	N/A	N/A
Metolachlor (ug/L) - TW	2019/01/23	<MDL 0.02	50.00	No	No
Metribuzin (ug/L) - TW	2019/01/23	<MDL 0.3	80.00	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW	2019/01/23	<MDL 1.0	80.00	No	No
Paraquat (ug/L) - TW	2019/01/23	<MDL 0.04	10.00	No	No
PCB (ug/L) - TW	2019/01/23	<MDL 0.15	3.00	No	No
Pentachlorophenol (ug/L) - TW	2019/01/23	<MDL 0.01	60.00	No	No
Phorate (ug/L) - TW	2019/01/23	<MDL 1.0	2.00	No	No
Picloram (ug/L) - TW	2019/01/23	<MDL 0.03	190.00	No	No
Prometryne (ug/L) - TW	2019/01/23	<MDL 0.01	1.00	No	No
Simazine (ug/L) - TW	2019/01/23	<MDL 0.01	10.00	No	No
Terbufos (ug/L) - TW	2019/01/23	<MDL 0.35	1.00	No	No
Tetrachloroethylene (ug/L) - TW	2019/01/23	<MDL 0.2	30.00	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	2019/01/23	<MDL 0.01	100.00	No	No
Triallate (ug/L) - TW	2019/01/23	<MDL 0.44	230.00	No	No
Trichloroethylene (ug/L) - TW	2019/01/23	<MDL 0.25	50.00	No	No
2,4,6-Trichlorophenol (ug/L) - TW	2019/01/23	<MDL 0.12	5.00	No	No
Trifluralin (ug/L) - TW	2019/01/23	<MDL 0.02	45.00	No	No
Vinyl Chloride (ug/L) - TW	2019/01/23	<MDL 0.17	2.00	No	No
DISTRIBUTION WATER					
Trihalomethane: Total (ug/L) Annual Average - DW	2019/12/31	51.75	100.00	No	Yes
HAA Total (ug/L) Annual Average – DW	2019/12/31	26.98	80.0	N/A	N.A



SECTION 5: RAW WATER SUBMISSIONS

Raw water flows were submitted to the Ministry on [January 27, 2020](#).

Ontario 

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: 0565-9Y8Q5P
Permit Holder: THE CORPORATION OF THE MUNICIPALITY OF CENTRAL MANITOULIN.
Received on: Jan 27, 2020 4:01 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](#)

CENTRAL2 MANITOULIN2 | 2020/01/27
version: v4.5.0.21 (build#: 22)
Last modified: 2018/09/18

SECTION 6: CONCLUSION

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

For the [2019](#) operating year, the Mindemoya 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 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 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 01/01/2019 To 12/31/2019

Facility: MINDEMOYA DRINKING WATER SYSTEM-5046
 Tag: Raw Flow: Sum (m3/d)
 Tag Group: Raw Water

Permit#: 0565-9Y8Q5P
 Source Name: Lake Mindemoya
 Source: Lake
 Type:
 Purpose: Municipal

Coordinate Zone: 17
 Easting: 409393
 Northing: 5066583
 Method deter: Metered

Date Measured	Value (m³/d)	Value (Litres)
01/01/2019	276.0000	276000.0000
02/01/2019	165.0000	165000.0000
03/01/2019	290.0000	290000.0000
04/01/2019	297.0000	297000.0000
05/01/2019	264.0000	264000.0000
06/01/2019	462.0000	462000.0000
07/01/2019	313.0000	313000.0000
08/01/2019	292.0000	292000.0000
09/01/2019	169.0000	169000.0000
10/01/2019	279.0000	279000.0000
11/01/2019	420.0000	420000.0000
12/01/2019	285.0000	285000.0000
13/01/2019	294.0000	294000.0000
14/01/2019	282.0000	282000.0000
15/01/2019	303.0000	303000.0000
16/01/2019	267.0000	267000.0000
17/01/2019	257.0000	257000.0000
18/01/2019	281.0000	281000.0000
19/01/2019	303.0000	303000.0000
20/01/2019	279.0000	279000.0000
21/01/2019	280.0000	280000.0000
22/01/2019	269.0000	269000.0000
23/01/2019	274.0000	274000.0000
24/01/2019	391.0000	391000.0000
25/01/2019	378.0000	378000.0000
26/01/2019	262.0000	262000.0000
27/01/2019	293.0000	293000.0000
28/01/2019	282.0000	282000.0000
29/01/2019	266.0000	266000.0000
30/01/2019	278.0000	278000.0000
31/01/2019	283.0000	283000.0000
01/02/2019	270.0000	270000.0000
02/02/2019	307.0000	307000.0000
03/02/2019	312.0000	312000.0000
04/02/2019	267.0000	267000.0000
05/02/2019	283.0000	283000.0000
06/02/2019	262.0000	262000.0000
07/02/2019	270.0000	270000.0000
08/02/2019	377.0000	377000.0000
09/02/2019	305.0000	305000.0000
10/02/2019	276.0000	276000.0000
11/02/2019	287.0000	287000.0000

12/02/2019	264.0000	264000.0000
13/02/2019	196.0000	196000.0000
14/02/2019	302.0000	302000.0000
15/02/2019	261.0000	261000.0000
16/02/2019	295.0000	295000.0000
17/02/2019	256.0000	256000.0000
18/02/2019	377.0000	377000.0000
19/02/2019	283.0000	283000.0000
20/02/2019	257.0000	257000.0000
21/02/2019	283.0000	283000.0000
22/02/2019	301.0000	301000.0000
23/02/2019	297.0000	297000.0000
24/02/2019	369.0000	369000.0000
25/02/2019	293.0000	293000.0000
26/02/2019	194.0000	194000.0000
27/02/2019	280.0000	280000.0000
28/02/2019	277.0000	277000.0000
01/03/2019	306.0000	306000.0000
02/03/2019	309.0000	309000.0000
03/03/2019	300.0000	300000.0000
04/03/2019	276.0000	276000.0000
05/03/2019	283.0000	283000.0000
06/03/2019	268.0000	268000.0000
07/03/2019	281.0000	281000.0000
08/03/2019	279.0000	279000.0000
09/03/2019	288.0000	288000.0000
10/03/2019	279.0000	279000.0000
11/03/2019	274.0000	274000.0000
12/03/2019	237.0000	237000.0000
13/03/2019	273.0000	273000.0000
14/03/2019	287.0000	287000.0000
15/03/2019	243.0000	243000.0000
16/03/2019	311.0000	311000.0000
17/03/2019	315.0000	315000.0000
18/03/2019	268.0000	268000.0000
19/03/2019	273.0000	273000.0000
20/03/2019	284.0000	284000.0000
21/03/2019	285.0000	285000.0000
22/03/2019	312.0000	312000.0000
23/03/2019	307.0000	307000.0000
24/03/2019	291.0000	291000.0000
25/03/2019	315.0000	315000.0000
26/03/2019	299.0000	299000.0000
27/03/2019	288.0000	288000.0000
28/03/2019	292.0000	292000.0000
29/03/2019	287.0000	287000.0000
30/03/2019	297.0000	297000.0000
31/03/2019	289.0000	289000.0000
01/04/2019	293.0000	293000.0000
02/04/2019	276.0000	276000.0000
03/04/2019	282.0000	282000.0000
04/04/2019	282.0000	282000.0000
05/04/2019	287.0000	287000.0000
06/04/2019	318.0000	318000.0000
07/04/2019	292.0000	292000.0000
08/04/2019	289.0000	289000.0000
09/04/2019	274.0000	274000.0000
10/04/2019	280.0000	280000.0000
11/04/2019	283.0000	283000.0000
12/04/2019	287.0000	287000.0000
13/04/2019	290.0000	290000.0000

14/04/2019	283.0000	283000.0000
15/04/2019	287.0000	287000.0000
16/04/2019	289.0000	289000.0000
17/04/2019	268.0000	268000.0000
18/04/2019	271.0000	271000.0000
19/04/2019	289.0000	289000.0000
20/04/2019	287.0000	287000.0000
21/04/2019	286.0000	286000.0000
22/04/2019	312.0000	312000.0000
23/04/2019	263.0000	263000.0000
24/04/2019	279.0000	279000.0000
25/04/2019	286.0000	286000.0000
26/04/2019	284.0000	284000.0000
27/04/2019	290.0000	290000.0000
28/04/2019	291.0000	291000.0000
29/04/2019	276.0000	276000.0000
30/04/2019	282.0000	282000.0000
01/05/2019	274.0000	274000.0000
02/05/2019	278.0000	278000.0000
03/05/2019	280.0000	280000.0000
04/05/2019	305.0000	305000.0000
05/05/2019	283.0000	283000.0000
06/05/2019	261.0000	261000.0000
07/05/2019	295.0000	295000.0000
08/05/2019	433.0000	433000.0000
09/05/2019	192.0000	192000.0000
10/05/2019	295.0000	295000.0000
11/05/2019	470.0000	470000.0000
12/05/2019	304.0000	304000.0000
13/05/2019	279.0000	279000.0000
14/05/2019	284.0000	284000.0000
15/05/2019	271.0000	271000.0000
16/05/2019	341.0000	341000.0000
17/05/2019	251.0000	251000.0000
18/05/2019	425.0000	425000.0000
19/05/2019	273.0000	273000.0000
20/05/2019	288.0000	288000.0000
21/05/2019	287.0000	287000.0000
22/05/2019	261.0000	261000.0000
23/05/2019	295.0000	295000.0000
24/05/2019	294.0000	294000.0000
25/05/2019	295.0000	295000.0000
26/05/2019	300.0000	300000.0000
27/05/2019	297.0000	297000.0000
28/05/2019	295.0000	295000.0000
29/05/2019	438.0000	438000.0000
30/05/2019	383.0000	383000.0000
31/05/2019	301.0000	301000.0000
01/06/2019	332.0000	332000.0000
02/06/2019	333.0000	333000.0000
03/06/2019	300.0000	300000.0000
04/06/2019	300.0000	300000.0000
05/06/2019	310.0000	310000.0000
06/06/2019	335.0000	335000.0000
07/06/2019	330.0000	330000.0000
08/06/2019	336.0000	336000.0000
09/06/2019	557.0000	557000.0000
10/06/2019	294.0000	294000.0000
11/06/2019	276.0000	276000.0000
12/06/2019	291.0000	291000.0000
13/06/2019	337.0000	337000.0000

14/06/2019	360.0000	360000.0000
15/06/2019	369.0000	369000.0000
16/06/2019	345.0000	345000.0000
17/06/2019	346.0000	346000.0000
18/06/2019	408.0000	408000.0000
19/06/2019	359.0000	359000.0000
20/06/2019	226.0000	226000.0000
21/06/2019	383.0000	383000.0000
22/06/2019	445.0000	445000.0000
23/06/2019	388.0000	388000.0000
24/06/2019	281.0000	281000.0000
25/06/2019	406.0000	406000.0000
26/06/2019	294.0000	294000.0000
27/06/2019	344.0000	344000.0000
28/06/2019	441.0000	441000.0000
29/06/2019	368.0000	368000.0000
30/06/2019	395.0000	395000.0000
01/07/2019	398.0000	398000.0000
02/07/2019	493.0000	493000.0000
03/07/2019	483.0000	483000.0000
04/07/2019	417.0000	417000.0000
05/07/2019	433.0000	433000.0000
06/07/2019	495.0000	495000.0000
07/07/2019	489.0000	489000.0000
08/07/2019	521.0000	521000.0000
09/07/2019	534.0000	534000.0000
10/07/2019	589.0000	589000.0000
11/07/2019	436.0000	436000.0000
12/07/2019	424.0000	424000.0000
13/07/2019	497.0000	497000.0000
14/07/2019	481.0000	481000.0000
15/07/2019	388.0000	388000.0000
16/07/2019	465.0000	465000.0000
17/07/2019	516.0000	516000.0000
18/07/2019	470.0000	470000.0000
19/07/2019	420.0000	420000.0000
20/07/2019	385.0000	385000.0000
21/07/2019	459.0000	459000.0000
22/07/2019	497.0000	497000.0000
23/07/2019	396.0000	396000.0000
24/07/2019	496.0000	496000.0000
25/07/2019	522.0000	522000.0000
26/07/2019	583.0000	583000.0000
27/07/2019	409.0000	409000.0000
28/07/2019	723.0000	723000.0000
29/07/2019	549.0000	549000.0000
30/07/2019	569.0000	569000.0000
31/07/2019	763.0000	763000.0000
01/08/2019	721.0000	721000.0000
02/08/2019	489.0000	489000.0000
03/08/2019	585.0000	585000.0000
04/08/2019	444.0000	444000.0000
05/08/2019	778.0000	778000.0000
06/08/2019	484.0000	484000.0000
07/08/2019	534.0000	534000.0000
08/08/2019	352.0000	352000.0000
09/08/2019	439.0000	439000.0000
10/08/2019	672.0000	672000.0000
11/08/2019	642.0000	642000.0000
12/08/2019	570.0000	570000.0000
13/08/2019	483.0000	483000.0000

14/08/2019	490.0000	490000.0000
15/08/2019	483.0000	483000.0000
16/08/2019	601.0000	601000.0000
17/08/2019	530.0000	530000.0000
18/08/2019	324.0000	324000.0000
19/08/2019	561.0000	561000.0000
20/08/2019	467.0000	467000.0000
21/08/2019	462.0000	462000.0000
22/08/2019	421.0000	421000.0000
23/08/2019	383.0000	383000.0000
24/08/2019	561.0000	561000.0000
25/08/2019	445.0000	445000.0000
26/08/2019	479.0000	479000.0000
27/08/2019	439.0000	439000.0000
28/08/2019	399.0000	399000.0000
29/08/2019	334.0000	334000.0000
30/08/2019	310.0000	310000.0000
31/08/2019	370.0000	370000.0000
01/09/2019	353.0000	353000.0000
02/09/2019	468.0000	468000.0000
03/09/2019	414.0000	414000.0000
04/09/2019	287.0000	287000.0000
05/09/2019	547.0000	547000.0000
06/09/2019	271.0000	271000.0000
07/09/2019	493.0000	493000.0000
08/09/2019	384.8300	384830.0000
09/09/2019	486.0000	486000.0000
10/09/2019	314.0000	314000.0000
11/09/2019	364.0000	364000.0000
12/09/2019	398.0000	398000.0000
13/09/2019	308.0000	308000.0000
14/09/2019	322.0000	322000.0000
15/09/2019	482.0000	482000.0000
16/09/2019	330.0000	330000.0000
17/09/2019	346.0000	346000.0000
18/09/2019	352.0000	352000.0000
19/09/2019	411.0000	411000.0000
20/09/2019	409.0000	409000.0000
21/09/2019	393.0000	393000.0000
22/09/2019	440.0000	440000.0000
23/09/2019	340.0000	340000.0000
24/09/2019	368.0000	368000.0000
25/09/2019	307.0000	307000.0000
26/09/2019	347.0000	347000.0000
27/09/2019	298.0000	298000.0000
28/09/2019	404.0000	404000.0000
29/09/2019	347.0000	347000.0000
30/09/2019	421.0000	421000.0000
01/10/2019	426.0000	426000.0000
02/10/2019	391.0000	391000.0000
03/10/2019	401.0000	401000.0000
04/10/2019	371.0000	371000.0000
05/10/2019	365.0000	365000.0000
06/10/2019	601.0000	601000.0000
07/10/2019	585.0000	585000.0000
08/10/2019	436.0000	436000.0000
09/10/2019	422.0000	422000.0000
10/10/2019	700.0000	700000.0000
11/10/2019	433.0000	433000.0000
12/10/2019	617.0000	617000.0000
13/10/2019	541.0000	541000.0000

14/10/2019	506.0000	506000.0000
15/10/2019	270.0000	270000.0000
16/10/2019	541.0000	541000.0000
17/10/2019	456.0000	456000.0000
18/10/2019	424.0000	424000.0000
19/10/2019	426.0000	426000.0000
20/10/2019	616.0000	616000.0000
21/10/2019	406.0000	406000.0000
22/10/2019	400.0000	400000.0000
23/10/2019	416.0000	416000.0000
24/10/2019	378.0000	378000.0000
25/10/2019	435.0000	435000.0000
26/10/2019	378.0000	378000.0000
27/10/2019	577.0000	577000.0000
28/10/2019	423.0000	423000.0000
29/10/2019	365.0000	365000.0000
30/10/2019	483.0000	483000.0000
31/10/2019	423.0000	423000.0000
01/11/2019	401.0000	401000.0000
02/11/2019	375.0000	375000.0000
03/11/2019	349.0000	349000.0000
04/11/2019	415.0000	415000.0000
05/11/2019	291.0000	291000.0000
06/11/2019	402.0000	402000.0000
07/11/2019	372.0000	372000.0000
08/11/2019	371.0000	371000.0000
09/11/2019	390.0000	390000.0000
10/11/2019	460.0000	460000.0000
11/11/2019	505.0000	505000.0000
12/11/2019	391.0000	391000.0000
13/11/2019	367.0000	367000.0000
14/11/2019	356.0000	356000.0000
15/11/2019	384.0000	384000.0000
16/11/2019	342.0000	342000.0000
17/11/2019	393.0000	393000.0000
18/11/2019	298.0000	298000.0000
19/11/2019	326.0000	326000.0000
20/11/2019	374.0000	374000.0000
21/11/2019	486.0000	486000.0000
22/11/2019	301.0000	301000.0000
23/11/2019	513.0000	513000.0000
24/11/2019	648.0000	648000.0000
25/11/2019	192.0000	192000.0000
26/11/2019	511.0000	511000.0000
27/11/2019	433.0000	433000.0000
28/11/2019	338.0000	338000.0000
29/11/2019	216.0000	216000.0000
30/11/2019	365.0000	365000.0000
01/12/2019	355.0000	355000.0000
02/12/2019	402.0000	402000.0000
03/12/2019	342.0000	342000.0000
04/12/2019	362.0000	362000.0000
05/12/2019	344.0000	344000.0000
06/12/2019	494.0000	494000.0000
07/12/2019	515.0000	515000.0000
08/12/2019	402.0000	402000.0000
09/12/2019	594.0000	594000.0000
10/12/2019	275.0000	275000.0000
11/12/2019	372.0000	372000.0000
12/12/2019	379.0000	379000.0000
13/12/2019	278.0000	278000.0000

14/12/2019	371.0000	371000.0000
15/12/2019	380.0000	380000.0000
16/12/2019	326.0000	326000.0000
17/12/2019	325.0000	325000.0000
18/12/2019	344.0000	344000.0000
19/12/2019	361.0000	361000.0000
20/12/2019	345.0000	345000.0000
21/12/2019	372.0000	372000.0000
22/12/2019	369.0000	369000.0000
23/12/2019	352.0000	352000.0000
24/12/2019	358.0000	358000.0000
25/12/2019	318.0000	318000.0000
26/12/2019	346.0000	346000.0000
27/12/2019	286.0000	286000.0000
28/12/2019	348.0000	348000.0000
29/12/2019	377.0000	377000.0000
30/12/2019	232.0000	232000.0000
31/12/2019	360.0000	360000.0000