

Sheguiandah Water Treatment

Small Municipal Residential Drinking Water System

January 1, 2018 – December 31, 2018

***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 Northeastern Manitoulin and the Islands



Ontario Clean Water Agency
Agence Ontarienne Des Eaux



Drinking-Water System Number: 220009112
Drinking-Water System Name: Sheguiandah Drinking Water System
Drinking-Water System Owner: The Corporation of the Town of Sheguiandah
Drinking-Water System Category: Small 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, 2019.

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 Sheguiandah WTP shall not be operated to exceed a maximum flow of 546 m³/d to the distribution system.

The daily treated water maximum flow was 135.3 m³ and represents 24.8% of capacity.

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

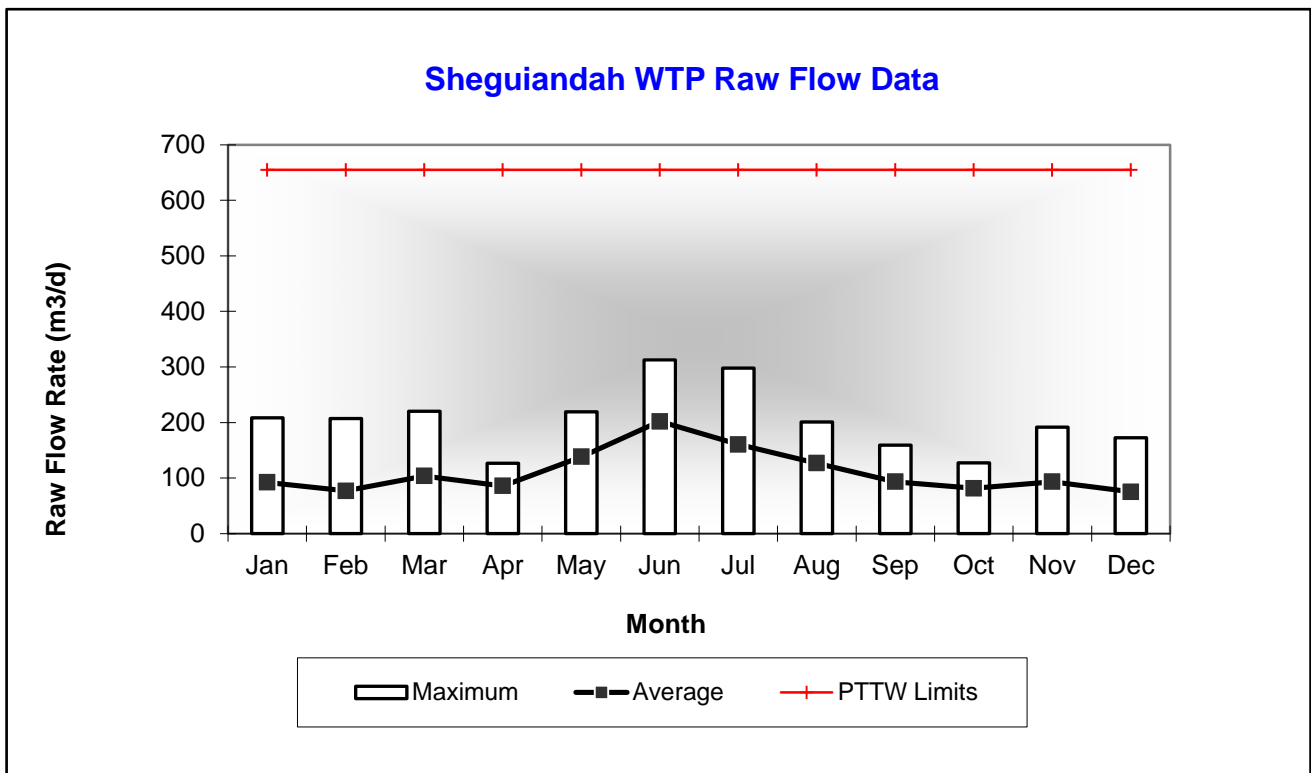
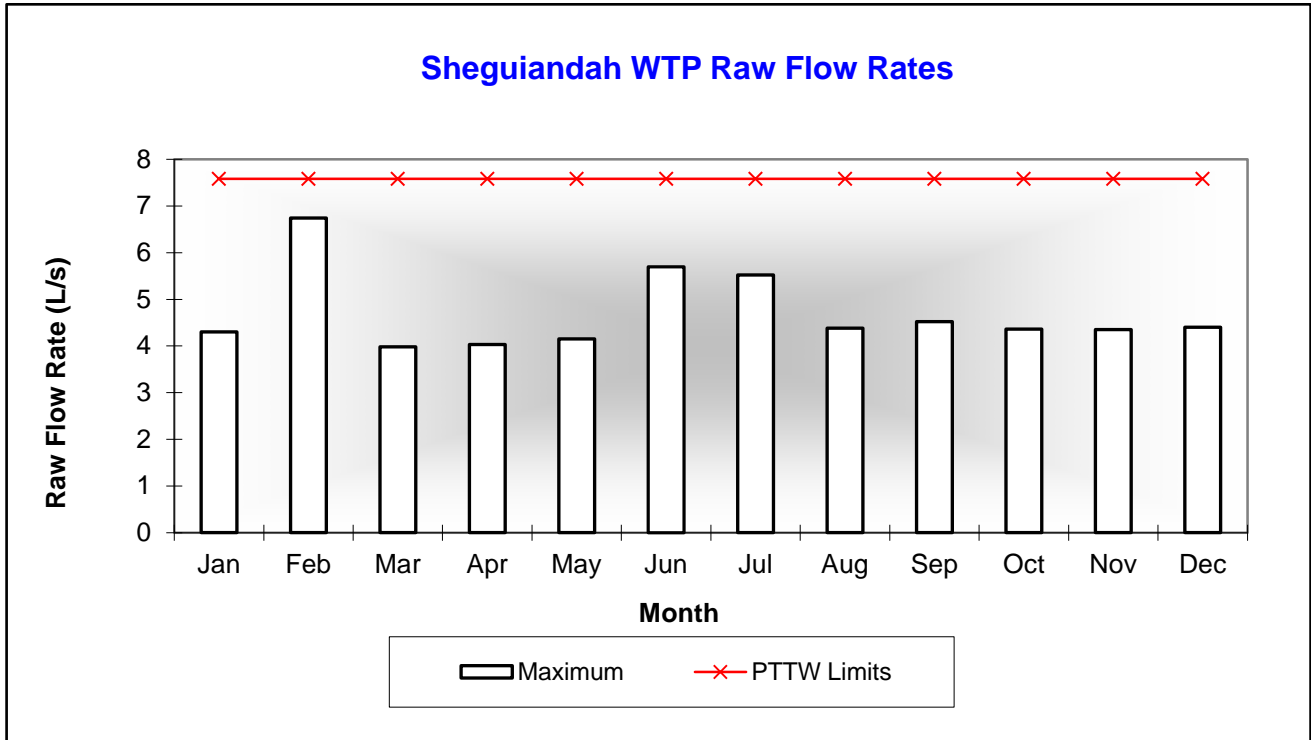
Flows – Raw

Daily raw maximum instantaneous flow is stated in the PTTW at a maximum rate of flow of 7.6 L/s and a maximum daily volume of 654.624 m³/d.

The average monthly raw water flow for this reporting period was 110.92 m³/d. The maximum daily flow was 312.6 m³/d representing 47.8% of water taking limits.

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

RAW WATER FLOW DATA - TOTAL ALL SOURCES						
Month	Total Monthly Flow (m³)	Average Flow (m³/d)	Maximum Flow (m³/d)	Maximum Flow Rate (L/s)	Limits	
					L/s (PTTW)	m³/d (PTTW)
January	2,853	92.03	208.4	4.3	7.58	654.6
February	2,155.4	76.98	207.1	6.74	7.58	654.6
March	3,215.6	103.73	220.2	3.98	7.58	654.6
April	2,571.2	85.71	126.6	4.03	7.58	654.6
May	4,281.9	138.13	219.2	4.15	7.58	654.6
June	6,052.7	201.76	312.6	5.7	7.58	654.6
July	4,970.1	160.33	297.9	5.52	7.58	654.6
August	3,926.1	126.65	200.9	4.38	7.58	654.6
September	2,799.2	93.31	159.2	4.52	7.58	654.6
October	2,526.3	81.49	127.3	4.36	7.58	654.6
November	2,803.4	93.45	191.6	4.35	7.58	654.6
December	2,332.4	75.24	172.5	4.4	7.58	654.6
Total	40,487.3					
Average		110.92				
Maximum			312.6	6.74	7.58	654.6





Annual Raw Water Review

Raw Water Taking	Total Taking m3/d	Average Day m3/d	Max Day m3/d	Max Day % of PTTW allowable 654.624 m3/d
2018	40,487.3	110.92	312.6	47.8%
2017	28,233.9	77.35	314	47.9%
2016	24,403.6	67	339	51.8%
2015	34,579.6	95	426	65.0%
2014	23,605.0	65	246	37.6%
2013	31,153.3	85	426	64.9%
2012	54,632.6	149	320	48.9%

System Failures and Corrective Actions

During a review of the sampling data, the PCT found the 3rd quarter sampling for THM, HAA and backwash TSS was conducted on June 26, 2018. Although the sample was taken at least 60 days but not more than 120 days after the last sample, it was not taken within the defied quarter as per Reg 170. Since the error was only found in October, the operator was unable to collect samples within the proper timeframe. The non-compliance was reported on October 24, 2018.

The latest inspection of the drinking water facility took place on **June 20, 2018**. The facility scored **0/522** 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 353	
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 Little Current, Municipal Office 15 Manitowaning Road Little Current, Ontario P0P 1K0	
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 & via Government Office
Indicate if you notified system users that your annual report is available and is free of charge using an alternate method YES

Facility Description

The Sheguiandah plant consists of a raw water pumping station equipped with a sodium hypochlorite injection system for the control of zebra mussels. The zebra mussel control system is operated seasonally from May to November inclusive when the raw temperature is above 8 Celsius. The building houses three low lift vertical turbine pumps.

The treatment consists of a direct filtration chemically assisted plant with a rated capacity of 6.3 L/s. There are two multimedia filters after the flocculator. Each filter contains anthracite, sand and gravel. There are two backwash pumps, to provide filter backwashing as required. The plant has two clearwells, with a capacity of 142 m³ and 176 m³, respectively. Following the clear well there is a high lift pump well with a volume of 119.7 m³. There are three vertical turbine high lift pumps, two located in clearwell two and one located in the high lift pump well. Each pump has a rated capacity of 9.9 L/s at a TDH of 86.75 m. Also included in the highlift well is a fire pump rated at 23L/sec which can be activated from the Sheguiandah Fire Hall. There are two hydro pneumatic tanks which provide system pressure when the high lift pumps are off.

Primary disinfection is achieved by ultraviolet disinfection and sodium hypochlorite. The process wastewater supernatant is returned back to Sheguiandah Bay. The settled solids are hauled from the plant for disposal in the municipal lagoon.

Chemicals Used

Sodium Hypochlorite 12%	- Disinfection
Aluminum Sulphate (Dry)	- Coagulant

Significant Expenses

Significant expenses incurred to

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

Work Order	Completion Date	Comment
743168 & 897810	30-Jan-18 & 08-Aug-18	<i>NorTech reprogrammed the raw flow meter and completed troubleshooting for filter faults</i>



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	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	0							
Treated Water	0					0		
Distribution	26	0	0	0	0	26	0	3

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, On-Line - Filter 1	8760	0	1.85	(NTU)
Turbidity, On-Line - Filter 2	8760	0	0.69	(NTU)
Free Chlorine Residual, Treated	8760	0.48	3.77	(mg/L)
Free Chlorine Residual, Distribution Location 1	104	0.79	2.74	(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 197-101 March 11, 2011 Renewed on March 8, 2016	Backwash (BW) Total Suspended Solids (TSS) Quarterly sampling 25 mg/L annual average	Jan	2	15	mg/L
		Feb			mg/L
		Mar			mg/L
		Apr	9	3	mg/L
		May			mg/L
		Jun	26	<2	mg/L
		Jul			mg/L
		Aug			mg/L
		Sep			mg/L
		Oct	1	3	mg/L
		Nov			mg/L
		Dec			mg/L
		Annual Average			



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

TREATED WATER	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
				MAC	1/2 MAC
Antimony: Sb (ug/L) - TW	2015/01/05	0.07	6.0	No	No
Arsenic: As (ug/L) - TW	2015/01/05	0.2	25.0	No	No
Barium: Ba (ug/L) - TW	2015/01/05	12.1	1000.0	No	No
Boron: B (ug/L) - TW	2015/01/05	13.6	5000.0	No	No
Cadmium: Cd (ug/L) - TW	2015/01/05	<MDL 0.003	5.0	No	No
Chromium: Cr (ug/L) - TW	2015/01/05	<MDL 0.03	50.0	No	No
Mercury: Hg (ug/L) - TW	2015/01/05	0.02	1.0	No	No
Selenium: Se (ug/L) - TW	2015/01/05	<MDL 1.0	10.0	No	No
Uranium: U (ug/L) - TW	2015/01/05	0.029	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	2017/01/26	0.07	1.5	No	No
Nitrite (mg/L) - TW	2018/01/02	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2018/04/09	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2018/06/26	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2018/10/01	<MDL 0.003	1.0	No	No
Nitrate (mg/L) - TW	2018/01/02	0.149	10.0	No	No
Nitrate (mg/L) - TW	2018/04/09	0.160	10.0	No	No
Nitrate (mg/L) - TW	2018/06/26	0.084	10.0	No	No
Nitrate (mg/L) - TW	2018/10/01	0.089	10.0	No	No
Sodium: Na (mg/L) - TW	2017/01/26	8.4	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)	2	0.01	2.55	10	0
Distribution - Alkalinity (mg/L)	2	67	77	n/a	n/a
Distribution - pH In-House	2	7.50	8.15	n/a	n/a

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

TREATED WATER	Sample Date (mm/dd/yyyy)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Alachlor (ug/L) - TW	1/05/2015	<MDL 0.02	5.00	No	No
Aldicarb (ug/L) - TW	1/05/2015	<MDL 0.01	9.00	No	No
Aldrin+Dieldrin (ug/L) - TW	1/05/2015	<MDL 0.01	0.70	No	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	1/05/2015	0.010	5.00	No	No
Azinphos-methyl (ug/L) - TW	1/05/2015	<MDL 0.02	20.00	No	No
Bendiocarb (ug/L) - TW	1/05/2015	<MDL 0.01	40.00	No	No
Benzene (ug/L) - TW	1/05/2015	<MDL 0.32	5.00	No	No



Benzo(a)pyrene (ug/L) - TW	1/05/2015	<MDL 0.004	0.01	No	No
Bromoxynil (ug/L) - TW	1/05/2015	<MDL 0.33	5.00	No	No
Carbaryl (ug/L) - TW	1/05/2015	<MDL 0.01	90.00	No	No
Carbofuran (ug/L) - TW	1/05/2015	<MDL 0.01	90.00	No	No
Carbon Tetrachloride (ug/L) - TW	1/05/2015	<MDL 0.16	5.00	No	No
Chlordane: Total (ug/L) - TW	1/05/2015	<MDL 0.01	7.00	No	No
Chlorpyrifos (ug/L) - TW	1/05/2015	<MDL 0.02	90.00	No	No
Cyanazine (ug/L) - TW	1/05/2015	<MDL 0.03	10.00	No	No
Diazinon (ug/L) - TW	1/05/2015	<MDL 0.02	20.00	No	No
Dicamba (ug/L) - TW	1/05/2015	<MDL 0.2	120.00	No	No
1,2-Dichlorobenzene (ug/L) - TW	1/05/2015	<MDL 0.41	200.00	No	No
1,4-Dichlorobenzene (ug/L) - TW	1/05/2015	<MDL 0.36	5.00	No	No
DDT + metabolites (ug/L) - TW	1/05/2015	<MDL 0.01	30.00	No	No
1,2-Dichloroethane (ug/L) - TW	1/05/2015	<MDL 0.35	5.00	No	No
1,1-Dichloroethylene (ug/L) - TW	1/05/2015	<MDL 0.33	14.00	No	No
Dichloromethane (Methylene Chloride) (ug/L) - TW	1/05/2015	<MDL 0.35	50.00	No	No
2,4-Dichlorophenol (ug/L) - TW	1/05/2015	<MDL 0.15	900.00	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	1/05/2015	<MDL 0.19	100.00	No	No
Diclofop-methyl (ug/L) - TW	1/05/2015	<MDL 0.4	9.00	No	No
Dimethoate (ug/L) - TW	1/05/2015	<MDL 0.03	20.00	No	No
Dinoseb (ug/L) - TW	1/05/2015	<MDL 0.36	10.00	No	No
Diquat (ug/L) - TW	1/05/2015	<MDL 1.0	70.00	No	No
Diuron (ug/L) - TW	1/05/2015	<MDL 0.03	150.00	No	No
Glyphosate (ug/L) - TW	1/05/2015	<MDL 1.0	280.00	No	No
Heptachlor+hepachlor epoxide (ug/L) - TW	1/05/2015	<MDL 0.01	3.00	No	No
Lindane (ug/L) - TW	1/05/2015	<MDL 0.01	4.00	No	No
Malathion (ug/L) - TW	1/05/2015	<MDL 0.02	190.00	No	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (mg/L) - TW	2016/01/07	<MDL0.00012	N/A	N/A	N/A
Methoxychlor (ug/L) - TW	1/05/2015	<MDL 0.01	900.00	No	No
Metolachlor (ug/L) - TW	1/05/2015	<MDL 0.01	50.00	No	No
Metribuzin (ug/L) - TW	1/05/2015	<MDL 0.02	80.00	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW	1/05/2015	<MDL 0.3	80.00	No	No
Paraquat (ug/L) - TW	1/05/2015	<MDL 1.0	10.00	No	No
Parathion (ug/L) - TW	1/05/2015	<MDL 0.02	50.00	No	No
PCB (ug/L) - TW	1/05/2015	<MDL 0.04	3.00	No	No
Pentachlorophenol (ug/L) - TW	1/05/2015	<MDL 0.15	60.00	No	No
Phorate (ug/L) - TW	1/05/2015	<MDL 0.01	2.00	No	No
Picloram (ug/L) - TW	1/05/2015	<MDL 1.0	190.00	No	No
Prometryne (ug/L) - TW	1/05/2015	<MDL 0.03	1.00	No	No
Simazine (ug/L) - TW	1/05/2015	<MDL 0.01	10.00	No	No
Temephos (ug/L) - TW	1/05/2015	<MDL 0.01	280.00	No	No
Terbufos (ug/L) - TW	1/05/2015	<MDL 0.01	1.00	No	No
Tetrachloroethylene (ug/L) - TW	1/05/2015	<MDL 0.35	30.00	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	1/05/2015	<MDL 0.14	100.00	No	No
Triallate (ug/L) - TW	1/05/2015	<MDL 0.01	230.00	No	No
Trichloroethylene (ug/L) - TW	1/05/2015	<MDL 0.44	50.00	No	No



2,4,6-Trichlorophenol (ug/L) - TW	1/05/2015	<MDL 0.25	5.00	No	No
2,4,5-T (ug/L) - TW	1/05/2015	<MDL 0.22	280.00	No	No
Trifluralin (ug/L) - TW	1/05/2015	<MDL 0.02	45.00	No	No
Vinyl Chloride (ug/L) - TW	1/05/2015	<MDL 0.17	2.00	No	No
DISTRIBUTION WATER					
Trihalomethane: Total (ug/L) Annual Average - DW	12/31/2017	54.25	100.00	No	Yes
HAA Total (ug/L) Annual Average – DW	12/31/2017	31.775		N/A	N/A

SECTION 5: RAW WATER SUBMISSIONS

Raw water flows were submitted to the MOECC on [February 13, 2019](#).

The screenshot shows the Ontario Water Taking Data submission confirmation page. At the top left is the Ontario logo. Below it, the location is identified as 'WTRS / WT DATA / Input WT Record' and the ID is 'WTRS-WT-006'. A green-bordered box contains the message: 'Water Taking Data submitted successfully.' Below this is a 'Confirmation:' section with the following text: 'Thank you for submitting your water taking data online. Permit Number: 0233-AJ8PD5. Permit Holder: THE CORPORATION OF THE TOWN OF NORTHEASTERN MANITOULIN AND THE ISLANDS. Received on: Feb 13, 2019 8:29 AM. 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.' A 'Return to Main Page' button is located at the bottom of the confirmation box. At the bottom right of the page, it says 'TOWNSHIP OF HOWLAND | 2019/02/13 version: v4.5.0.21 (build#: 22) Last modified: 2018/09/18'. At the bottom left, it says 'This site maintained by the Government of Ontario' and at the bottom right, '©2019 Queen's Printer for Ontario'.

SECTION 6: CONCLUSION

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

For the 2018 operating year, the Sheguiandah 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 01/01/2018 To 12/31/2018

Facility: SHEGUIANDAH DRINKING WATER SYSTEM-6279
 Tag: Raw Flow: Sum (m3/d)
 Tag Group: Raw Water

Permit#: 0233-AJ8PD5
 Source Name: Lake Huron
 Source: Lake
 Type:

Coordinate Zone: 17
 Easting: 428770
 Northing: 5082486
 Method deter: Metered

Purpose: Other - Water Supply

Date Measured	Value (m³/d)	Value (Litres)
01/01/2018	103.3000	103300.0000
02/01/2018	73.2000	73200.0000
03/01/2018	124.6000	124600.0000
04/01/2018	72.7000	72700.0000
05/01/2018	91.6000	91600.0000
06/01/2018	98.7000	98700.0000
07/01/2018	88.3000	88300.0000
08/01/2018	125.8000	125800.0000
09/01/2018	16.4000	16400.0000
10/01/2018	92.7000	92700.0000
11/01/2018	60.8000	60800.0000
12/01/2018	55.1000	55100.0000
13/01/2018	105.5000	105500.0000
14/01/2018	33.1000	33100.0000
15/01/2018	139.0000	139000.0000
16/01/2018	38.4000	38400.0000
17/01/2018	208.4000	208400.0000
18/01/2018	144.6000	144600.0000
19/01/2018	139.8000	139800.0000
20/01/2018	100.6000	100600.0000
21/01/2018	102.4000	102400.0000
22/01/2018	41.0000	41000.0000
23/01/2018	181.7000	181700.0000
24/01/2018	81.3000	81300.0000
25/01/2018	72.1000	72100.0000
26/01/2018	75.4000	75400.0000
27/01/2018	60.0000	60000.0000
28/01/2018	29.4000	29400.0000
29/01/2018	171.5000	171500.0000
30/01/2018	63.2000	63200.0000
31/01/2018	62.4000	62400.0000
01/02/2018	99.3000	99300.0000
02/02/2018	7.9000	7900.0000
03/02/2018	71.7000	71700.0000
04/02/2018	47.7000	47700.0000
05/02/2018	71.1000	71100.0000
06/02/2018	29.4000	29400.0000
07/02/2018	85.3000	85300.0000
08/02/2018	66.0000	66000.0000
09/02/2018	14.1000	14100.0000
10/02/2018	78.9000	78900.0000
11/02/2018	101.7000	101700.0000

12/02/2018	32.8000	32800.0000
13/02/2018	63.7000	63700.0000
14/02/2018	53.4000	53400.0000
15/02/2018	162.7000	162700.0000
16/02/2018	12.2000	12200.0000
17/02/2018	88.8000	88800.0000
18/02/2018	76.0000	76000.0000
19/02/2018	119.8000	119800.0000
20/02/2018	70.7000	70700.0000
21/02/2018	0.2000	200.0000
22/02/2018	113.0000	113000.0000
23/02/2018	89.5000	89500.0000
24/02/2018	90.9000	90900.0000
25/02/2018	119.1000	119100.0000
26/02/2018	94.7000	94700.0000
27/02/2018	87.7000	87700.0000
28/02/2018	207.1000	207100.0000
01/03/2018	64.6000	64600.0000
02/03/2018	107.0000	107000.0000
03/03/2018	110.4000	110400.0000
04/03/2018	137.3000	137300.0000
05/03/2018	108.6000	108600.0000
06/03/2018	198.8000	198800.0000
07/03/2018	56.3000	56300.0000
08/03/2018	184.3000	184300.0000
09/03/2018	209.5000	209500.0000
10/03/2018	65.7000	65700.0000
11/03/2018	201.2000	201200.0000
12/03/2018	41.2000	41200.0000
13/03/2018	50.6000	50600.0000
14/03/2018	212.6000	212600.0000
15/03/2018	220.2000	220200.0000
16/03/2018	58.8000	58800.0000
17/03/2018	78.1000	78100.0000
18/03/2018	66.3000	66300.0000
19/03/2018	89.7000	89700.0000
20/03/2018	89.7000	89700.0000
21/03/2018	61.6000	61600.0000
22/03/2018	72.0000	72000.0000
23/03/2018	62.6000	62600.0000
24/03/2018	97.4000	97400.0000
25/03/2018	107.7000	107700.0000
26/03/2018	89.0000	89000.0000
27/03/2018	92.8000	92800.0000
28/03/2018	38.4000	38400.0000
29/03/2018	48.6000	48600.0000
30/03/2018	93.6000	93600.0000
31/03/2018	101.0000	101000.0000
01/04/2018	81.2000	81200.0000
02/04/2018	91.9000	91900.0000
03/04/2018	37.3000	37300.0000
04/04/2018	53.0000	53000.0000
05/04/2018	81.4000	81400.0000
06/04/2018	92.2000	92200.0000
07/04/2018	79.4000	79400.0000
08/04/2018	79.0000	79000.0000
09/04/2018	96.1000	96100.0000
10/04/2018	103.4000	103400.0000
11/04/2018	76.2000	76200.0000
12/04/2018	14.1000	14100.0000
13/04/2018	83.3000	83300.0000

14/04/2018	91.3000	91300.0000
15/04/2018	57.3000	57300.0000
16/04/2018	79.4000	79400.0000
17/04/2018	77.0000	77000.0000
18/04/2018	78.8000	78800.0000
19/04/2018	71.7000	71700.0000
20/04/2018	79.7000	79700.0000
21/04/2018	117.2000	117200.0000
22/04/2018	126.6000	126600.0000
23/04/2018	108.3000	108300.0000
24/04/2018	118.9000	118900.0000
25/04/2018	122.6000	122600.0000
26/04/2018	109.1000	109100.0000
27/04/2018	79.6000	79600.0000
28/04/2018	40.0000	40000.0000
29/04/2018	122.6000	122600.0000
30/04/2018	122.6000	122600.0000
01/05/2018	94.6000	94600.0000
02/05/2018	60.6000	60600.0000
03/05/2018	96.9000	96900.0015
04/05/2018	106.4000	106400.0015
05/05/2018	170.7000	170699.9969
06/05/2018	180.9000	180899.9939
07/05/2018	98.3000	98300.0031
08/05/2018	98.4000	98400.0015
09/05/2018	148.7000	148699.9969
10/05/2018	155.3000	155300.0031
11/05/2018	132.4000	132399.9939
12/05/2018	142.7000	142699.9969
13/05/2018	116.1000	116099.9985
14/05/2018	123.7000	123699.9969
15/05/2018	100.7000	100699.9969
16/05/2018	109.8000	109800.0031
17/05/2018	109.8000	109800.0031
18/05/2018	116.6000	116599.9985
19/05/2018	112.2000	112199.9969
20/05/2018	119.3000	119300.0031
21/05/2018	174.5000	174500.0000
22/05/2018	182.7000	182699.9969
23/05/2018	210.5000	210500.0000
24/05/2018	219.2000	219199.9969
25/05/2018	141.3000	141300.0031
26/05/2018	141.6000	141600.0061
27/05/2018	127.1000	127099.9985
28/05/2018	189.7000	189699.9969
29/05/2018	190.9000	190899.9939
30/05/2018	125.8000	125800.0031
31/05/2018	184.5000	184500.0000
01/06/2018	184.5000	184500.0000
02/06/2018	143.0000	143000.0000
03/06/2018	250.9000	250899.9939
04/06/2018	250.9000	250899.9939
05/06/2018	208.0000	208000.0000
06/06/2018	215.2000	215199.9969
07/06/2018	148.7000	148699.9969
08/06/2018	148.7000	148699.9969
09/06/2018	164.0000	164000.0000
10/06/2018	165.5000	165500.0000
11/06/2018	180.0000	180000.0000
12/06/2018	180.0000	180000.0000
13/06/2018	104.7000	104699.9969

14/06/2018	136.9000	136899.9939
15/06/2018	146.1000	146100.0061
16/06/2018	158.0000	158000.0000
17/06/2018	231.5000	231500.0000
18/06/2018	238.4000	238399.9939
19/06/2018	133.9000	133899.9939
20/06/2018	162.7000	162699.9969
21/06/2018	172.2000	172199.9969
22/06/2018	157.1000	157100.0061
23/06/2018	249.5000	249500.0000
24/06/2018	254.5000	254500.0000
25/06/2018	303.1000	303100.0061
26/06/2018	312.6000	312600.0061
27/06/2018	206.5000	206500.0000
28/06/2018	279.1000	279100.0061
29/06/2018	288.7000	288700.0122
30/06/2018	277.8000	277799.9878
01/07/2018	82.3000	82300.0031
02/07/2018	269.5000	269500.0000
03/07/2018	281.1000	281100.0061
04/07/2018	207.1000	207100.0061
05/07/2018	193.2000	193199.9969
06/07/2018	174.3000	174300.0031
07/07/2018	175.6000	175600.0061
08/07/2018	270.0000	270000.0000
09/07/2018	103.1000	103099.9985
10/07/2018	297.9000	297899.9939
11/07/2018	136.5000	136500.0000
12/07/2018	125.5000	125500.0000
13/07/2018	140.0000	140000.0000
14/07/2018	169.9000	169899.9939
15/07/2018	167.3000	167300.0031
16/07/2018	155.1000	155100.0061
17/07/2018	187.0000	187000.0000
18/07/2018	210.9000	210899.9939
19/07/2018	177.6000	177600.0061
20/07/2018	112.6000	112599.9985
21/07/2018	155.4000	155399.9939
22/07/2018	87.1000	87099.9985
23/07/2018	125.1000	125099.9985
24/07/2018	85.8000	85800.0031
25/07/2018	128.4000	128399.9939
26/07/2018	58.8000	58799.9992
27/07/2018	182.8000	182800.0031
28/07/2018	145.0000	145000.0000
29/07/2018	105.8000	105800.0031
30/07/2018	150.5000	150500.0000
31/07/2018	108.9000	108900.0015
01/08/2018	119.3000	119300.0031
02/08/2018	171.3000	171300.0031
03/08/2018	152.0000	152000.0000
04/08/2018	144.0000	144000.0000
05/08/2018	112.8000	112800.0031
06/08/2018	122.9000	122900.0015
07/08/2018	140.4000	140399.9939
08/08/2018	138.7000	138699.9969
09/08/2018	200.9000	200899.9939
10/08/2018	102.5000	102500.0000
11/08/2018	112.2000	112199.9969
12/08/2018	165.1000	165100.0061
13/08/2018	63.8000	63799.9992

14/08/2018	121.6000	121599.9985
15/08/2018	161.9000	161899.9939
16/08/2018	115.6000	115599.9985
17/08/2018	111.1000	111099.9985
18/08/2018	143.7000	143699.9969
19/08/2018	125.3000	125300.0031
20/08/2018	127.9000	127900.0015
21/08/2018	116.0000	116000.0000
22/08/2018	164.0000	164000.0000
23/08/2018	99.9000	99900.0015
24/08/2018	170.4000	170399.9939
25/08/2018	97.6000	97599.9985
26/08/2018	181.5000	181500.0000
27/08/2018	84.5000	84500.0000
28/08/2018	74.8000	74800.0031
29/08/2018	80.7000	80699.9969
30/08/2018	121.6000	121599.9985
31/08/2018	82.1000	82099.9985
01/09/2018	125.4000	125400.0015
02/09/2018	110.2000	110199.9969
03/09/2018	144.9000	144899.9939
04/09/2018	76.1000	76099.9985
05/09/2018	84.7000	84699.9969
06/09/2018	119.6000	119599.9985
07/09/2018	3.8000	3800.0000
08/09/2018	159.2000	159199.9969
09/09/2018	60.0000	60000.0000
10/09/2018	119.0000	119000.0000
11/09/2018	8.5000	8500.0000
12/09/2018	155.6000	155600.0061
13/09/2018	20.8000	20799.9992
14/09/2018	119.0000	119000.0000
15/09/2018	155.2000	155199.9969
16/09/2018	100.4000	100400.0015
17/09/2018	40.3000	40299.9992
18/09/2018	144.0000	144000.0000
19/09/2018	86.1000	86099.9985
20/09/2018	115.2000	115199.9969
21/09/2018	48.8000	48799.9992
22/09/2018	93.3000	93300.0031
23/09/2018	96.9000	96900.0015
24/09/2018	49.6000	49599.9985
25/09/2018	158.6000	158600.0061
26/09/2018	78.4000	78400.0015
27/09/2018	29.3000	29299.9992
28/09/2018	94.9000	94900.0015
29/09/2018	119.7000	119699.9969
30/09/2018	81.7000	81699.9969
01/10/2018	112.1000	112099.9985
02/10/2018	43.1000	43099.9985
03/10/2018	103.8000	103800.0031
04/10/2018	56.2000	56200.0008
05/10/2018	103.9000	103900.0015
06/10/2018	88.2000	88199.9969
07/10/2018	3.8000	3800.0000
08/10/2018	106.1000	106099.9985
09/10/2018	113.6000	113599.9985
10/10/2018	76.6000	76599.9985
11/10/2018	117.8000	117800.0031
12/10/2018	74.7000	74699.9969
13/10/2018	122.5000	122500.0000

14/10/2018	121.0000	121000.0000
15/10/2018	109.7000	109699.9969
16/10/2018	86.2000	86199.9969
17/10/2018	21.2000	21200.0008
18/10/2018	87.0000	87000.0000
19/10/2018	74.7000	74699.9969
20/10/2018	86.2000	86199.9969
21/10/2018	127.3000	127300.0031
22/10/2018	81.1000	81099.9985
23/10/2018	83.8000	83800.0031
24/10/2018	72.3000	72300.0031
25/10/2018	83.6000	83599.9985
26/10/2018	63.9000	63900.0015
27/10/2018	80.7000	80699.9969
28/10/2018	69.4000	69400.0015
29/10/2018	0.1000	100.0000
30/10/2018	88.9000	88900.0015
31/10/2018	66.8000	66800.0031
01/11/2018	23.6000	23600.0004
02/11/2018	139.4000	139399.9939
03/11/2018	92.6000	92599.9985
04/11/2018	48.1000	48099.9985
05/11/2018	153.6000	153600.0061
06/11/2018	58.2000	58200.0008
07/11/2018	99.8000	99800.0031
08/11/2018	151.8000	151800.0031
09/11/2018	19.9000	19899.9996
10/11/2018	185.2000	185199.9969
11/11/2018	53.8000	53799.9992
12/11/2018	18.3000	18299.9992
13/11/2018	90.9000	90900.0015
14/11/2018	150.9000	150899.9939
15/11/2018	3.8000	3800.0000
16/11/2018	115.2000	115199.9969
17/11/2018	191.6000	191600.0061
18/11/2018	0.0000	0.0000
19/11/2018	167.6000	167600.0061
20/11/2018	79.2000	79199.9969
21/11/2018	92.1000	92099.9985
22/11/2018	116.6000	116599.9985
23/11/2018	145.5000	145500.0000
24/11/2018	0.0000	0.0000
25/11/2018	179.0000	179000.0000
26/11/2018	70.9000	70900.0015
27/11/2018	107.8000	107800.0031
28/11/2018	182.3000	182300.0031
29/11/2018	49.8000	49799.9992
30/11/2018	15.9000	15899.9996
01/12/2018	172.5000	172500.0000
02/12/2018	0.0000	0.0000
03/12/2018	172.1000	172100.0061
04/12/2018	15.5000	15500.0000
05/12/2018	116.8000	116800.0031
06/12/2018	126.3000	126300.0031
07/12/2018	46.5000	46500.0000
08/12/2018	145.3000	145300.0031
09/12/2018	60.0000	60000.0000
10/12/2018	66.1000	66099.9985
11/12/2018	41.1000	41099.9985
12/12/2018	29.4000	29399.9996
13/12/2018	119.5000	119500.0000

14/12/2018	57.3000	57299.9992
15/12/2018	65.5000	65500.0000
16/12/2018	80.1000	80099.9985
17/12/2018	39.7000	39700.0008
18/12/2018	81.8000	81800.0031
19/12/2018	77.7000	77699.9969
20/12/2018	54.0000	54000.0000
21/12/2018	94.5000	94500.0000
22/12/2018	52.7000	52700.0008
23/12/2018	58.5000	58500.0000
24/12/2018	71.2000	71199.9969
25/12/2018	62.7000	62700.0008
26/12/2018	66.9000	66900.0015
27/12/2018	111.8000	111800.0031
28/12/2018	49.6000	49599.9985
29/12/2018	52.6000	52599.9985
30/12/2018	56.4000	56400.0015
31/12/2018	88.3000	88300.0031