

Sheguiandah Water Treatment

Small Municipal Residential Drinking Water System

January 1, 2017 – December 31, 2017

***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, 2018.

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 100.6 m³ and represents 18.2% of capacity.

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

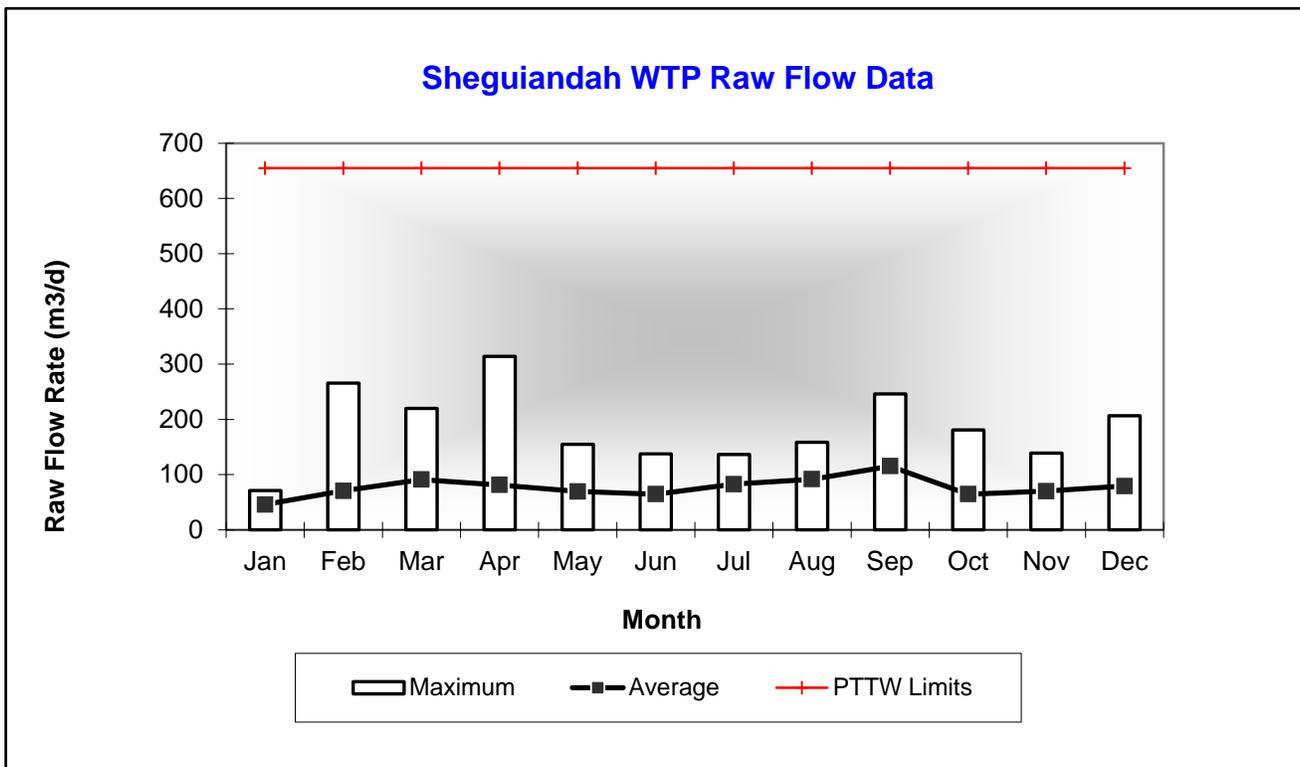
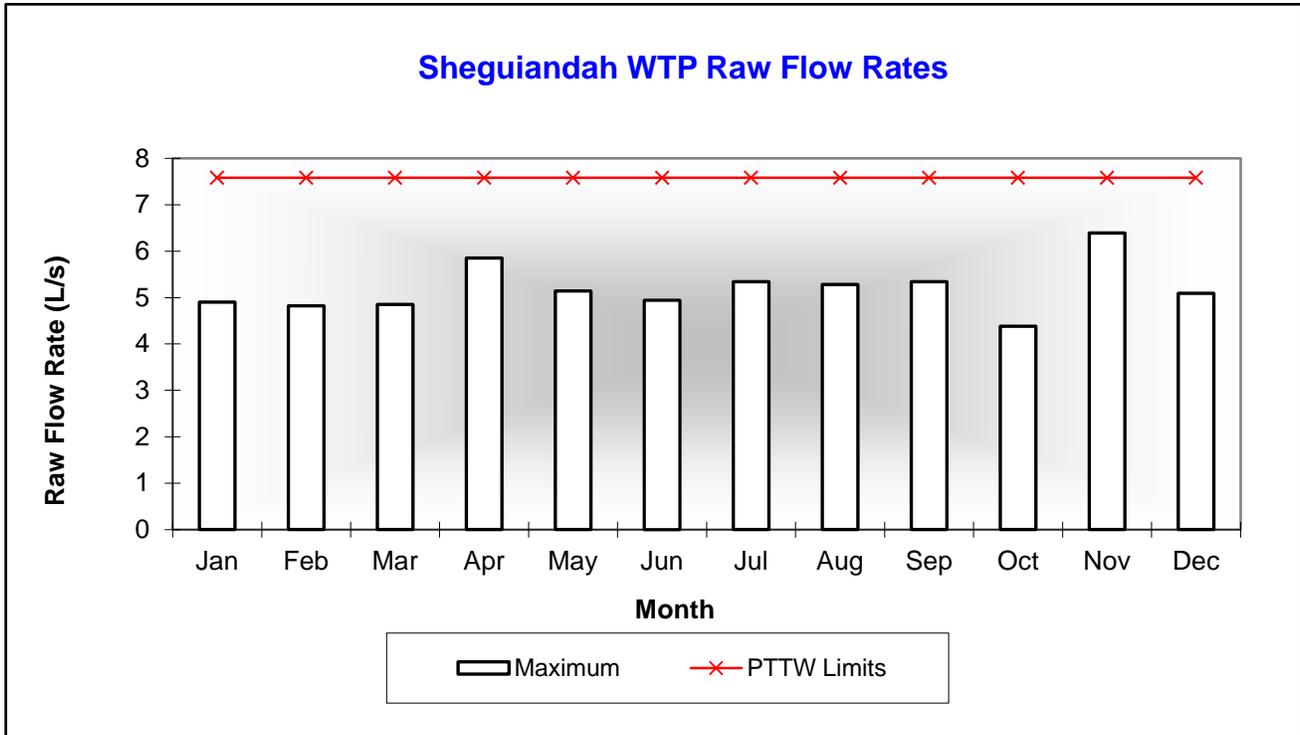
Flows – Raw

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 77.35 m³/d. The maximum daily flow was 314 m³/d representing 47.9% 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	1,415.5	45.66	71.1	4.9	7.58	654.6
February	1,972.5	70.45	265.6	4.82	7.58	654.6
March	2,818	90.9	219.8	4.85	7.58	654.6
April	2,432.6	81.09	314	5.85	7.58	654.6
May	2,147.9	69.29	154.8	5.14	7.58	654.6
June	1,936.8	64.56	137.3	4.94	7.58	654.6
July	2,565.5	82.76	136.4	5.34	7.58	654.6
August	2,841.7	91.67	158.5	5.28	7.58	654.6
September	3,549.8	118.33	246	5.34	7.58	654.6
October	1,995.4	64.37	180.8	4.38	7.58	654.6
November	2,099	69.97	138.9	6.39	7.58	654.6
December	2,459.2	79.33	206.5	5.09	7.58	654.6
Total	28,233.9					
Average		77.35				
Maximum			314	6.39	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
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%
2011	55,963.1	153	329	50.3%

System Failures and Corrective Actions

The latest inspection of the drinking water facility took place on **July 26, 2017**. The facility scored **26/469** providing a rating of **94.46%**.

There were three non-compliance listed within the inspection report.

There was not sufficient monitoring of flow as required by the Municipal Drinking Water Licence or Drinking Water Works Permit issued under Part V of the SDWA.

The raw water flow meter failed calibration testing on April 6, 2017. Though the operating authority indicates that the flow meter was subsequently cleaned and passed verification testing, no reports are available and no information can be found in the logbook.

Action(s) Required:

During the inspection the operating authority indicated that a retest has been scheduled for October 30, 2017. Thus in accordance with SDWA 31(1)(b), by November 30, 2017, the owner is required to provide to the undersigned a copy of the on site flow meter verification certificate.

Action(s) Taken:

The operating authority cleaned and completed another verification test on the raw flow meter. However, during the verification, the flow meter failed again. The operating authority presented this issue to the Municipality and recommended that they purchase a new flow meter. A new flow meter was ordered and installed in November 2017.

All water quality monitoring requirements imposed by the Municipal Drinking Water Licence and/or Drinking Water Works Permit were not being met

Table 3 and Table 7 of Schedule C, MDWL requires quarterly composite sampling of backwash water at point of discharge. On October 17, 2016, the operator sampled raw water for total suspended solids.

Action(s) Required:

No further action is required since the operator who made this error is no longer with the operating authority.

The following instance(s) of non-compliance were also noted during the inspection:

1. Changes required for Schedule E, MDWL.
2. Filter efficiency Reports programming requires accuracy.
3. Records regarding chlorine residual levels in the distribution system require accuracy.
4. UV Off Spec reports require accuracy.

Action(s) Required:

1. The undersigned inspector will notify MOECC Approvals Branch of the required changes. Information on this item will be forthcoming.



2. By November 30, 2017, in accordance with the SDWA 31(1)(b) the operating authority is required to provide written assurances to the undersigned that the program associated with calculating FER's will be assessed and modified as needed to help ensure accuracy.
3. By November 30, 2017, in accordance with Schedule 7, Regulation 170, the operating authority is required to provide written assurances to the undersigned that efforts will be made to help ensure accuracy of chlorine records.
4. By November 30, 2017, in accordance with the MOECC UV Bulletin of July 2010, the operating authority is required to will provide written assurances to the undersigned that monthly UV Off Spec reports will summarize all pertinent events as required.

Action(s) Taken:

1. The MOECC Approvals Branch has contacted the operating authority regarding the changes to the MDWL. The Approvals Branch is moving forward with the changes.
2. The operating authority has contacted the contractor (Bruce Dixon) who programs the FER program in SCADA. Modifications will be completed in the beginning of 2018 once capital budgets have been approved. Bruce has assured the operating authority that FER's are accurate; however, it is possible to see values of greater than 100% due to background calculations. Until which time that Bruce can modify the calculation, the operator will verify the accuracy of the FERs and will complete a manual calculation should there be any discrepancies.
3. The Operator (Jeff Tuerk) was provided with training on the importance of ensuring chlorine residuals entered in our PDM program match those that were recorded in the distribution logbook. The operator is aware and understands how to correctly enter these residuals into PDM as well as his responsibility to ensure the data is correct. As such, the operating authority assures the MOECC that future chlorine residuals will be accurate.
4. The MOECC Ultraviolet Disinfection Technical Bulletin and the MDWL requirements for UV Off Spec reports were reviewed with Jeff Tuerk on November 15, 2017. Specifically, training was provided to ensure Jeff understands why the UV Off Spec report is required, how to properly complete the report, and what events must be documented. Since the proper tools and training have been provided to Jeff, the operating authority assures that the UV Off Spec reports will summarize all required events.

AWQIs reported to the Ministry

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
09-Dec-17	Total Coliform & E.coli	TC:10 EC:1	CFU	The nearest hydrant was flushed to elevate the distribution system Cl2 residual. Chlorine residual of 1.42mg/L was confirmed at the hydrant and 1.47mg/L at the plant. A bleeder line was also verified to be running. Two sets of samples were collected at the site of the adverse as well as two more upstream as the adverse site was on a dead end. All results came back negative for TC and EC.	11-Dec-17



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 POP 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
26458	19-Dec-17	<i>Backwash valves</i> Ordered and replaced 4"backwash control valves
315349	17-Nov-17	<i>SCADA</i> Purchased a replacement computer tower and monitor
315351	17-Nov-17	<i>SCADA</i> Purchased Factory Talk View software for SCADA system
315355	11-Apr-17	<i>UPS Replacement</i> Replaced the UPS for the SCADA computer
316555	27-Apr-17	<i>Surge Tank Pump</i> Current pump float was not work correctly and the pump was in poor condition. Purchased and installed a new pump. Upgraded wiring to remove the connection from the damp location
472257	31-Oct-17	<i>Filter Solenoid</i> Ordered two new solenoid valves and two pressure regulator valves. Replaced and soldered in two new PRV valves for backwash control. Replaced both solenoid valves.
541609	22-Dec-17	<i>Heater</i> Replaced fan motor in heater located in the generator room
541757	19-Dec-17	<i>Raw Water Flow Meter</i> Purchased a new flow meter. Removed faulty flow meter and installed the new one

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
09-Dec-17	Total Coliform & E.coli	TC:10 EC:1	CFU	The nearest hydrant was flushed to elevate the distribution system Cl2 residual. Chlorine residual of 1.42mg/L was confirmed at the hydrant and 1.47mg/L at the plant. A bleeder line was also verified to be running. Two sets of samples were collected at the site of the adverse as well as two more upstream as the adverse site was on a deadend. All results came back negative for TC and EC.	11-Dec-17



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	33	0	1	0	10	27	0	820

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	0.42	(NTU)
Turbidity, On-Line - Filter 2	8760	0	2	(NTU)
Free Chlorine Residual, Treated	8760	0.37	3.61	(mg/L)
Free Chlorine Residual, Distribution Location 1	100	0.54	2.19	(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)	Jan	4	2	mg/L	
		Feb			mg/L	
	Quarterly sampling 25 mg/L annual average	Mar				mg/L
		Apr	19	2		mg/L
		May				mg/L
		Jun				mg/L
		Jul	4	2		mg/L
		Aug				mg/L
		Sep				mg/L
		Oct	2	2		mg/L
		Nov				mg/L
		Dec				mg/L
		Annual Average			2	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	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	2017/01/04	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2017/04/18	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2017/07/04	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2017/10/02	<MDL 0.003	1.0	No	No
Nitrate (mg/L) - TW	2017/01/04	0.178	10.0	No	No
Nitrate (mg/L) - TW	2017/04/18	0.153	10.0	No	No
Nitrate (mg/L) - TW	2017/07/04	0.111	10.0	No	No
Nitrate (mg/L) - TW	2017/10/02	0.04	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)	0	n/a	n/a	10	0
Distribution - Alkalinity (mg/L)	2	67	67	n/a	n/a
Distribution - pH In-House	2	7.81	8.2	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 21, 2018](#).



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: 2241-734NNL
Permit Holder: THE CORPORATION OF THE TOWN OF NORTHEASTERN MANITOULIN AND THE ISLANDS.
Received on:Feb 21, 2018 8:41 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.

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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: 0233-AJ8PD5
Permit Holder: THE CORPORATION OF THE TOWN OF NORTHEASTERN MANITOULIN AND THE ISLANDS.
Received on:Feb 21, 2018 10:28 AM

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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 2017 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 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
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 01/01/2017 To 02/05/2017

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

Permit#: 2241-734NNL
 Source Name: Lake Huron / Sheguiandah Bay
 Source: Lake
 Type:
 Purpose: Municipal

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

Date Measured	Value (m³/d)	Value (Litres)
01/01/2017	71.1000	71100.0000
02/01/2017	45.4000	45400.0000
03/01/2017	45.4000	45400.0000
04/01/2017	46.3000	46300.0000
05/01/2017	24.3000	24300.0000
06/01/2017	32.4000	32400.0000
07/01/2017	71.0000	71000.0000
08/01/2017	44.9000	44900.0000
09/01/2017	47.4000	47400.0000
10/01/2017	54.5000	54500.0000
11/01/2017	40.8000	40800.0000
12/01/2017	11.4000	11400.0000
13/01/2017	51.0000	51000.0000
14/01/2017	60.1000	60100.0000
15/01/2017	16.7000	16700.0000
16/01/2017	54.6000	54600.0000
17/01/2017	60.2000	60200.0000
18/01/2017	56.3000	56300.0000
19/01/2017	21.5000	21500.0000
20/01/2017	41.9000	41900.0000
21/01/2017	41.8000	41800.0000
22/01/2017	67.8000	67800.0000
23/01/2017	44.6000	44600.0000
24/01/2017	49.1000	49100.0000
25/01/2017	43.7000	43700.0000
26/01/2017	44.5000	44500.0000
27/01/2017	34.0000	34000.0000
28/01/2017	28.1000	28100.0000
29/01/2017	66.0000	66000.0000
30/01/2017	35.0000	35000.0000
31/01/2017	63.7000	63700.0000
01/02/2017	60.2000	60200.0000
02/02/2017	12.7000	12700.0000
03/02/2017	49.1000	49100.0000
04/02/2017	63.5000	63500.0000
05/02/2017	65.2000	65200.0000

Ontario Clean Water Agency Annual Water Taking and Transfer Report

From 02/06/2017 To 12/31/2017

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:
 Purpose: Other - Water Supply

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

Date Measured	Value (m³/d)	Value (Litres)
06/02/2017	67.1000	67100.0000
07/02/2017	31.8000	31800.0000
08/02/2017	60.4000	60400.0000
09/02/2017	95.2000	95200.0000
10/02/2017	265.1000	265100.0000
11/02/2017	265.6000	265600.0000
12/02/2017	45.5000	45500.0000
13/02/2017	68.7000	68700.0000
14/02/2017	60.2000	60200.0000
15/02/2017	65.0000	65000.0000
16/02/2017	62.7000	62700.0000
17/02/2017	58.5000	58500.0000
18/02/2017	20.0000	20000.0000
19/02/2017	46.5000	46500.0000
20/02/2017	81.5000	81500.0000
21/02/2017	67.2000	67200.0000
22/02/2017	3.5000	3500.0000
23/02/2017	75.5000	75500.0000
24/02/2017	63.2000	63200.0000
25/02/2017	83.6000	83600.0000
26/02/2017	68.0000	68000.0000
27/02/2017	66.7000	66700.0000
28/02/2017	0.3000	300.0000
01/03/2017	0.0000	0.0000
02/03/2017	162.4000	162400.0000
03/03/2017	41.1000	41100.0000
04/03/2017	84.6000	84600.0000
05/03/2017	55.7000	55700.0000
06/03/2017	21.1000	21100.0000
07/03/2017	71.3000	71300.0000
08/03/2017	70.2000	70200.0000
09/03/2017	37.3000	37300.0000
10/03/2017	61.3000	61300.0000
11/03/2017	10.1000	10100.0000
12/03/2017	73.5000	73500.0000
13/03/2017	61.5000	61500.0000
14/03/2017	4.6000	4600.0000
15/03/2017	57.9000	57900.0000
16/03/2017	75.5000	75500.0000
17/03/2017	55.8000	55800.0000
18/03/2017	121.1000	121100.0000
19/03/2017	80.0000	80000.0000

20/03/2017	173.5000	173500.0000
21/03/2017	66.1000	66100.0000
22/03/2017	209.4000	209400.0000
23/03/2017	154.4000	154400.0000
24/03/2017	81.8000	81800.0000
25/03/2017	129.3000	129300.0000
26/03/2017	125.0000	125000.0000
27/03/2017	205.3000	205300.0000
28/03/2017	61.7000	61700.0000
29/03/2017	219.8000	219800.0000
30/03/2017	163.8000	163800.0000
31/03/2017	82.9000	82900.0000
01/04/2017	296.2000	296200.0000
02/04/2017	210.3000	210300.0000
03/04/2017	314.0000	314000.0000
04/04/2017	176.9000	176900.0000
05/04/2017	66.0000	66000.0000
06/04/2017	37.2000	37200.0000
07/04/2017	149.7000	149700.0000
08/04/2017	21.8000	21800.0000
09/04/2017	84.2000	84200.0000
10/04/2017	45.2000	45200.0000
11/04/2017	47.6000	47600.0000
12/04/2017	58.0000	58000.0000
13/04/2017	30.6000	30600.0000
14/04/2017	67.5000	67500.0000
15/04/2017	73.4000	73400.0000
16/04/2017	23.7000	23700.0000
17/04/2017	43.8000	43800.0000
18/04/2017	67.2000	67200.0000
19/04/2017	36.3000	36300.0000
20/04/2017	48.8000	48800.0000
21/04/2017	73.4000	73400.0000
22/04/2017	56.8000	56800.0000
23/04/2017	65.2000	65200.0000
24/04/2017	31.0000	31000.0000
25/04/2017	72.0000	72000.0000
26/04/2017	0.1000	100.0000
27/04/2017	81.2000	81200.0000
28/04/2017	32.4000	32400.0000
29/04/2017	79.2000	79200.0000
30/04/2017	42.9000	42900.0000
01/05/2017	24.4000	24400.0000
02/05/2017	118.7000	118700.0000
03/05/2017	64.9000	64900.0000
04/05/2017	59.2000	59200.0000
05/05/2017	25.0000	25000.0000
06/05/2017	86.5000	86500.0000
07/05/2017	106.9000	106900.0000
08/05/2017	63.9000	63900.0000
09/05/2017	49.6000	49600.0000
10/05/2017	48.6000	48600.0000
11/05/2017	43.5000	43500.0000
12/05/2017	53.0000	53000.0000
13/05/2017	154.8000	154800.0000
14/05/2017	111.3000	111300.0000
15/05/2017	99.2000	99200.0000
16/05/2017	31.1000	31100.0000
17/05/2017	95.6000	95600.0000
18/05/2017	19.8000	19800.0000
19/05/2017	108.0000	108000.0000

20/05/2017	89.5000	89500.0000
21/05/2017	86.8000	86800.0000
22/05/2017	37.7000	37700.0000
23/05/2017	34.3000	34300.0000
24/05/2017	72.6000	72600.0000
25/05/2017	59.0000	59000.0000
26/05/2017	55.1000	55100.0000
27/05/2017	82.9000	82900.0000
28/05/2017	68.3000	68300.0000
29/05/2017	35.5000	35500.0000
30/05/2017	68.9000	68900.0000
31/05/2017	93.3000	93300.0000
01/06/2017	10.9000	10900.0000
02/06/2017	65.4000	65400.0000
03/06/2017	70.2000	70200.0000
04/06/2017	98.1000	98100.0000
05/06/2017	52.3000	52300.0000
06/06/2017	49.1000	49100.0000
07/06/2017	75.4000	75400.0000
08/06/2017	44.4000	44400.0000
09/06/2017	54.1000	54100.0000
10/06/2017	81.3000	81300.0000
11/06/2017	137.3000	137300.0000
12/06/2017	40.9000	40900.0000
13/06/2017	86.1000	86100.0000
14/06/2017	48.3000	48300.0000
15/06/2017	59.3000	59300.0000
16/06/2017	102.5000	102500.0000
17/06/2017	62.9000	62900.0000
18/06/2017	80.8000	80800.0000
19/06/2017	35.4000	35400.0000
20/06/2017	88.2000	88200.0000
21/06/2017	47.4000	47400.0000
22/06/2017	68.7000	68700.0000
23/06/2017	71.6000	71600.0000
24/06/2017	49.7000	49700.0000
25/06/2017	63.7000	63700.0000
26/06/2017	86.1000	86100.0000
27/06/2017	18.6000	18600.0000
28/06/2017	68.9000	68900.0000
29/06/2017	67.1000	67100.0000
30/06/2017	52.1000	52100.0000
01/07/2017	72.4000	72400.0000
02/07/2017	86.5000	86500.0000
03/07/2017	65.8000	65800.0000
04/07/2017	81.3000	81300.0000
05/07/2017	67.1000	67100.0000
06/07/2017	124.3000	124300.0000
07/07/2017	48.5000	48500.0000
08/07/2017	116.6000	116600.0000
09/07/2017	59.4000	59400.0000
10/07/2017	109.4000	109400.0000
11/07/2017	117.1000	117100.0000
12/07/2017	74.5000	74500.0000
13/07/2017	62.5000	62500.0000
14/07/2017	52.3000	52300.0000
15/07/2017	93.4000	93400.0000
16/07/2017	49.8000	49800.0000
17/07/2017	83.1000	83100.0000
18/07/2017	65.0000	65000.0000
19/07/2017	55.5000	55500.0000

20/07/2017	93.1000	93100.0000
21/07/2017	100.9000	100900.0000
22/07/2017	91.1000	91100.0000
23/07/2017	136.4000	136400.0000
24/07/2017	126.7000	126700.0000
25/07/2017	71.1000	71100.0000
26/07/2017	81.5000	81500.0000
27/07/2017	51.8000	51800.0000
28/07/2017	79.4000	79400.0000
29/07/2017	76.8000	76800.0000
30/07/2017	66.1000	66100.0000
31/07/2017	106.1000	106100.0000
01/08/2017	99.6000	99600.0000
02/08/2017	96.3000	96300.0000
03/08/2017	42.3000	42300.0000
04/08/2017	123.3000	123300.0000
05/08/2017	118.6000	118600.0000
06/08/2017	101.4000	101400.0000
07/08/2017	65.6000	65600.0000
08/08/2017	124.6000	124600.0000
09/08/2017	66.4000	66400.0000
10/08/2017	103.6000	103600.0000
11/08/2017	75.9000	75900.0000
12/08/2017	102.6000	102600.0000
13/08/2017	79.6000	79600.0000
14/08/2017	99.2000	99200.0000
15/08/2017	158.5000	158500.0000
16/08/2017	58.9000	58900.0000
17/08/2017	131.5000	131500.0000
18/08/2017	48.7000	48700.0000
19/08/2017	129.0000	129000.0000
20/08/2017	39.3000	39300.0000
21/08/2017	88.9000	88900.0000
22/08/2017	92.8000	92800.0000
23/08/2017	134.8000	134800.0000
24/08/2017	90.4000	90400.0000
25/08/2017	89.5000	89500.0000
26/08/2017	92.6000	92600.0000
27/08/2017	87.3000	87300.0000
28/08/2017	55.3000	55300.0000
29/08/2017	87.6000	87600.0000
30/08/2017	81.3000	81300.0000
31/08/2017	76.3000	76300.0000
01/09/2017	176.3000	176300.0000
02/09/2017	205.5000	205500.0000
03/09/2017	115.9000	115900.0000
04/09/2017	57.3000	57300.0000
05/09/2017	187.3000	187300.0000
06/09/2017	55.3000	55300.0000
07/09/2017	107.9000	107900.0000
08/09/2017	124.5000	124500.0000
09/09/2017	141.8000	141800.0000
10/09/2017	106.9000	106900.0000
11/09/2017	135.4000	135400.0000
12/09/2017	214.6000	214600.0000
13/09/2017	52.4000	52400.0000
14/09/2017	146.5000	146500.0000
15/09/2017	153.0000	153000.0000
16/09/2017	49.4000	49400.0000
17/09/2017	144.1000	144100.0000
18/09/2017	246.0000	246000.0000

19/09/2017	40.5000	40500.0000
20/09/2017	115.2000	115200.0000
21/09/2017	100.4000	100400.0000
22/09/2017	0.2000	200.0000
23/09/2017	82.1000	82100.0000
24/09/2017	79.4000	79400.0000
25/09/2017	84.4000	84400.0000
26/09/2017	154.0000	154000.0000
27/09/2017	175.4000	175400.0000
28/09/2017	57.4000	57400.0000
29/09/2017	146.4000	146400.0000
30/09/2017	94.3000	94300.0000
01/10/2017	58.9000	58900.0000
02/10/2017	37.5000	37500.0000
03/10/2017	58.8000	58800.0000
04/10/2017	129.5000	129500.0000
05/10/2017	0.2000	200.0000
06/10/2017	180.8000	180800.0000
07/10/2017	0.2000	200.0000
08/10/2017	166.4000	166400.0000
09/10/2017	33.9000	33900.0000
10/10/2017	55.6000	55600.0000
11/10/2017	158.7000	158700.0000
12/10/2017	35.7000	35700.0000
13/10/2017	129.6000	129600.0000
14/10/2017	17.2000	17200.0000
15/10/2017	119.7000	119700.0000
16/10/2017	77.5000	77500.0000
17/10/2017	0.1000	100.0000
18/10/2017	78.2000	78200.0000
19/10/2017	73.1000	73100.0000
20/10/2017	0.1000	100.0000
21/10/2017	69.0000	69000.0000
22/10/2017	96.9000	96900.0000
23/10/2017	0.2000	200.0000
24/10/2017	86.9000	86900.0000
25/10/2017	45.6000	45600.0000
26/10/2017	33.5000	33500.0000
27/10/2017	60.2000	60200.0000
28/10/2017	6.5000	6500.0000
29/10/2017	76.8000	76800.0000
30/10/2017	81.2000	81200.0000
31/10/2017	26.9000	26900.0000
01/11/2017	53.3000	53300.0000
02/11/2017	76.9000	76900.0000
03/11/2017	42.4000	42400.0000
04/11/2017	86.9000	86900.0000
05/11/2017	3.9000	3900.0000
06/11/2017	86.5000	86500.0000
07/11/2017	5.8000	5800.0000
08/11/2017	118.4000	118400.0000
09/11/2017	81.2000	81200.0000
10/11/2017	61.5000	61500.0000
11/11/2017	119.4000	119400.0000
12/11/2017	21.2000	21200.0000
13/11/2017	128.3000	128300.0000
14/11/2017	113.7000	113700.0000
15/11/2017	12.5000	12500.0000
16/11/2017	138.9000	138900.0000
17/11/2017	35.7000	35700.0000
18/11/2017	100.9000	100900.0000

19/11/2017	94.6000	94600.0000
20/11/2017	12.5000	12500.0000
21/11/2017	94.4000	94400.0000
22/11/2017	84.3000	84300.0000
23/11/2017	26.7000	26700.0000
24/11/2017	133.6000	133600.0000
25/11/2017	57.2000	57200.0000
26/11/2017	86.6000	86600.0000
27/11/2017	66.5000	66500.0000
28/11/2017	12.4000	12400.0000
29/11/2017	79.1000	79100.0000
30/11/2017	63.7000	63700.0000
01/12/2017	15.0000	15000.0000
02/12/2017	67.6000	67600.0000
03/12/2017	105.3000	105300.0000
04/12/2017	12.5000	12500.0000
05/12/2017	91.0000	91000.0000
06/12/2017	78.7000	78700.0000
07/12/2017	27.8000	27800.0000
08/12/2017	124.0000	124000.0000
09/12/2017	40.4000	40400.0000
10/12/2017	37.6000	37600.0000
11/12/2017	81.5000	81500.0000
12/12/2017	63.0000	63000.0000
13/12/2017	24.6000	24600.0000
14/12/2017	63.6000	63600.0000
15/12/2017	141.1000	141100.0000
16/12/2017	260.5000	260500.0000
17/12/2017	93.2000	93200.0000
18/12/2017	216.4000	216400.0000
19/12/2017	50.8000	50800.0000
20/12/2017	0.2000	200.0000
21/12/2017	196.8000	196800.0000
22/12/2017	69.9000	69900.0000
23/12/2017	56.5000	56500.0000
24/12/2017	99.5000	99500.0000
25/12/2017	58.8000	58800.0000
26/12/2017	67.1000	67100.0000
27/12/2017	61.3000	61300.0000
28/12/2017	64.6000	64600.0000
29/12/2017	58.6000	58600.0000
30/12/2017	73.9000	73900.0000
31/12/2017	57.4000	57400.0000