

# Spanish Water Treatment

Large 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 Spanish



**Ontario Clean Water Agency**  
**Agence Ontarienne Des Eaux**



*Drinking-Water System Number:* 220007025  
*Drinking-Water System Name:* Spanish Drinking Water System  
*Drinking-Water System Owner:* The Corporation of the Town of Spanish  
*Drinking-Water System Category:* Large Municipal Residential

## **SECTION 1: INTRODUCTION**

This document is prepared in accordance with Section 11 and Schedule 22 of O.Reg.170/03 under the Safe Drinking Water Act and with Section 9 of O.Reg.387/04 under the Ontario Water Resources Act. The reports are prepared by the Ontario Clean Water Agency. Acronyms and definitions can be found at the end of the report.

A copy of the Summary Report must be provided to the members of the municipal council by March 31, 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. The report 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 *Noranda* Well**

In accordance with the Municipal Drinking Water License (MDWL), the Spanish WTP shall not be operated to exceed a maximum flow of 388.8 m<sup>3</sup>/d to the distribution system.

The daily treated water maximum flow was 354 m<sup>3</sup> occurring in June and represents 91% of capacity.

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

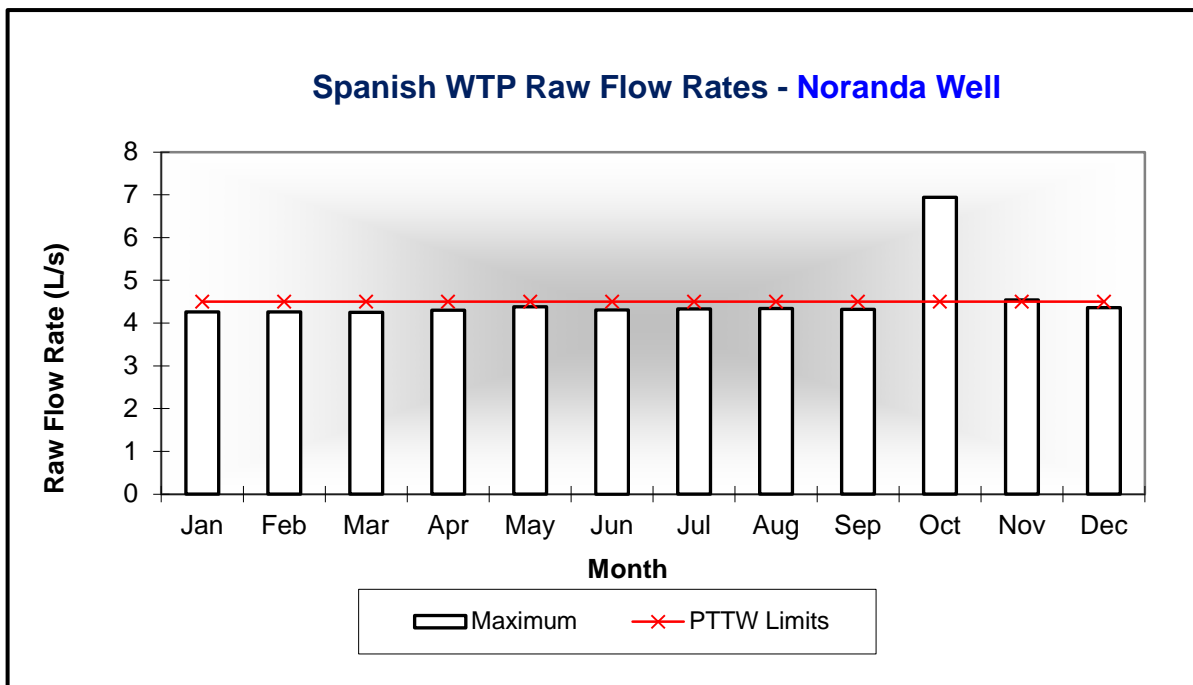
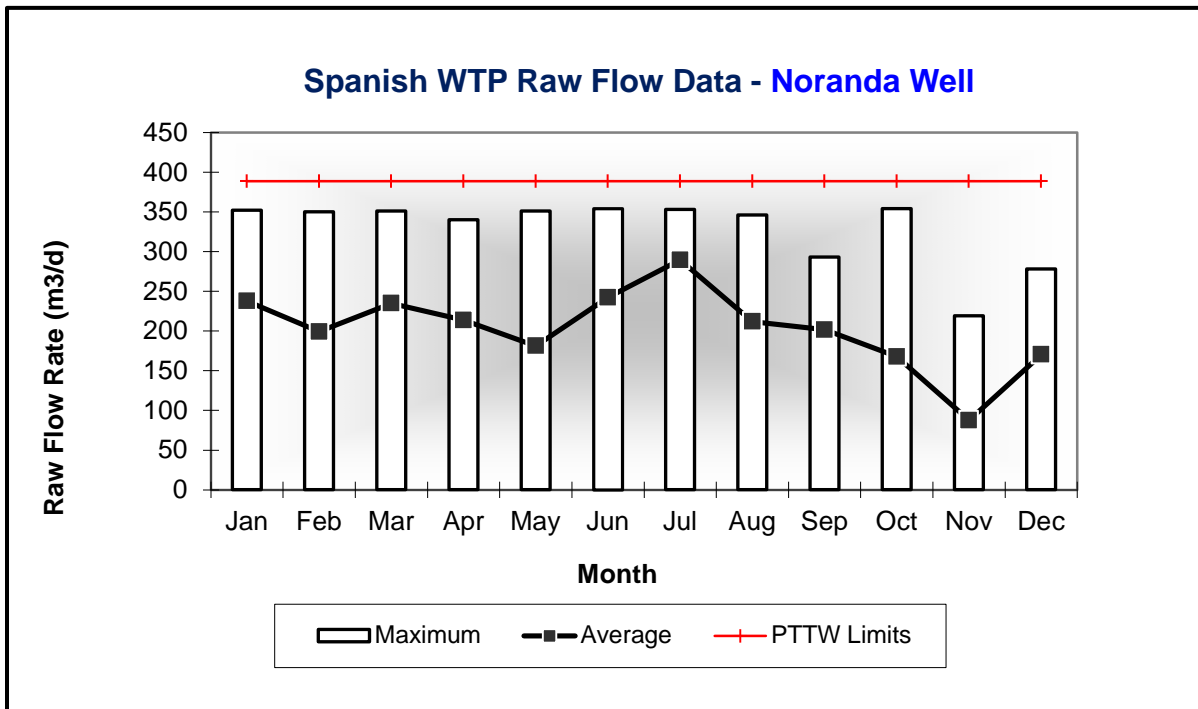
### **Flows – Raw *Noranda* Well**

Daily raw maximum instantaneous flow is stated in the PTTW at a maximum rate of flow of 4.5 L/s and a maximum daily volume of 388.8 m<sup>3</sup>/d.

The average monthly raw water flow for this reporting period was 216.47 m<sup>3</sup>/d. The maximum daily flow was 354 m<sup>3</sup>/d representing 91% of water taking limits.

The quantity of raw water taken **did not** exceed any limits stipulated within the PTTW. Flow rates were observed on two occasions to be above the limits. These values are attributed to backwashes occurring and flowing through the raw flow meter and not from raw water takings.

<i>RAW WATER FLOW DATA – Noranda Well</i>						
Month	Total Monthly Flow (m <sup>3</sup> )	Average Flow (m <sup>3</sup> /d)	Maximum Flow (m <sup>3</sup> /d)	Maximum Flow Rate (L/s)	Limits	
					L/s (PTTW)	m <sup>3</sup> /d (PTTW)
January	7,372.77	237.83	352	4.26	4.5	388.8
February	5,581	199.32	350	4.26	4.5	388.8
March	7,281	234.87	351	4.25	4.5	388.8
April	6,416	213.87	340	4.30	4.5	388.8
May	5,611	181.35	351	4.38	4.5	388.8
June	7,272	242.4	354	4.31	4.5	388.8
July	8,978	289.61	353	4.33	4.5	388.8
August	6,572	212	346	4.34	4.5	388.8
September	6,048	201.6	293	4.32	4.5	388.8
October	5,203	167.84	354	6.94	4.5	388.8
November	2,629.75	87.66	219	4.54	4.5	388.8
December	5,284	170.45	278	4.36	4.5	388.8
<b>Total</b>	74,259.52					
<b>Average</b>		203.45				
<b>Maximum</b>			354	6.94	4.5	388.8



### Annual Raw Water Review – Noranda Well

Raw Water Taking	Total Taking m3/d	Average Day m3/d	Max Day m3/d	Max Day % of PTTW allowable 388.8 m3/d
2017	74,259.52	203.45	354	91%
2016	79,229.26	216.47	371	95%
2015	78,346	220	445	114%
2014	75,090	206	400	102%
2013	93,616	259	385	99.0%



## Flows - Treated **Goderich Well**

In accordance with the Municipal Drinking Water License (MDWL), the Spanish WTP shall not be operated to exceed a maximum flow of 371.52 m<sup>3</sup>/d to the distribution system.

The daily treated water maximum flow was 336 m<sup>3</sup> in August and represents 90.4% of capacity.

The quantity of treated water supplied during the reporting period **did** exceed the rated maximum capacity. Information on exceedances can be found in the conclusion section of the report.

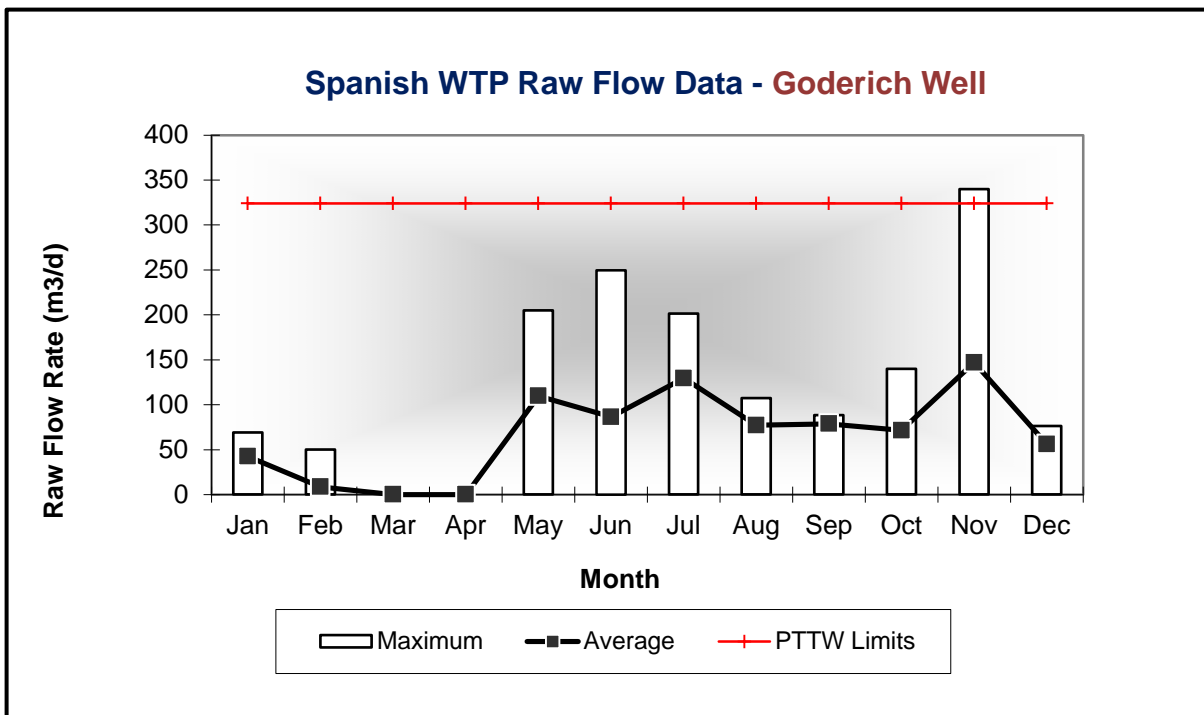
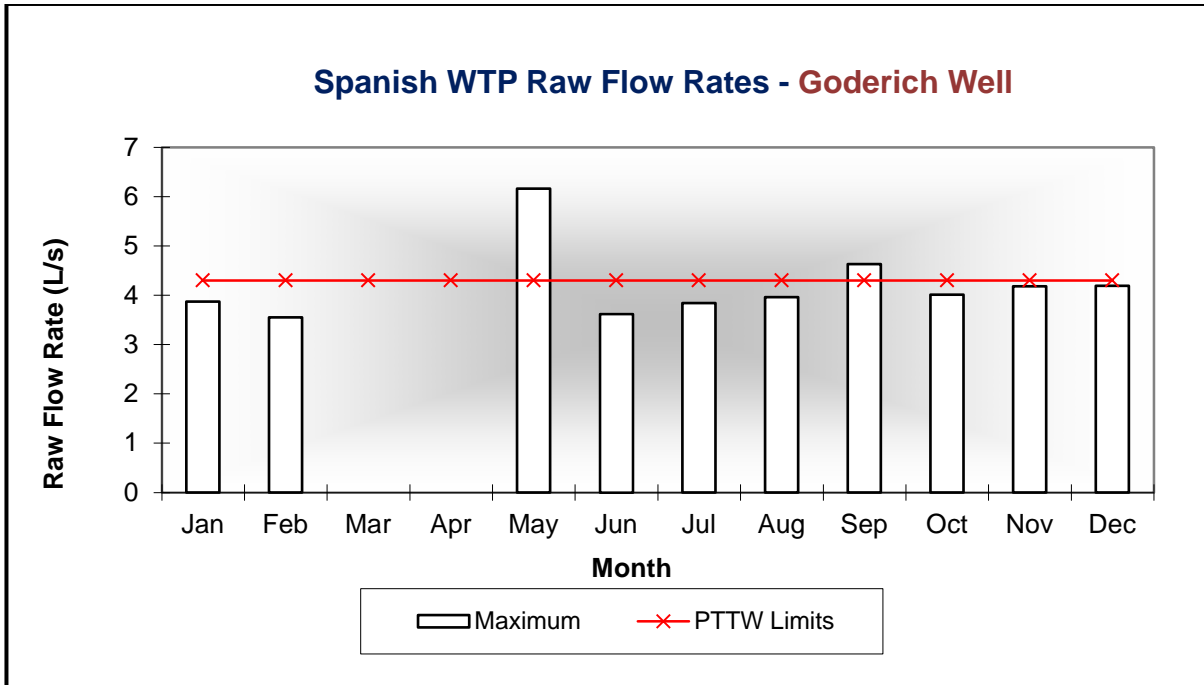
## Flows - Raw **Goderich Well**

Daily raw maximum instantaneous flow is stated in the PTTW at a maximum rate of flow of 4.3 L/s and a maximum daily volume of 324 m<sup>3</sup>/d. The permit also limits the time allowed to take water to 18 hours a day.

The average monthly raw water flow for this reporting period was 80.52 m<sup>3</sup>/d. The maximum daily flow was 339.7 m<sup>3</sup>/d representing 105% of water taking limits.

The quantity of raw water taken **did** exceed limits stipulated within the PTTW. Information on exceedances can be found in the conclusion section of the report.

<b>RAW WATER FLOW DATA – <i>Goderich Well</i></b>						
<b>Month</b>	<b>Total Monthly Flow (m<sup>3</sup>)</b>	<b>Average Flow (m<sup>3</sup>/d)</b>	<b>Maximum Flow (m<sup>3</sup>/d)</b>	<b>Maximum Flow Rate (L/s)</b>	<b>Limits</b>	
					<b>L/s (PTTW)</b>	<b>m<sup>3</sup>/d (PTTW)</b>
January	1,317.43	42.5	68.9	3.87	4.3	324
February	239.2	8.54	49.9	3.55	4.3	324
March	n/a	n/a	n/a	n/a	4.3	324
April	n/a	n/a	n/a	n/a	4.3	324
May	2,632.41	109.68	204.75	6.16	4.3	324
June	2,591.87	86.4	249.6	3.62	4.3	324
July	4,013.76	129.48	201.2	3.84	4.3	324
August	2,392.02	77.16	107.15	3.96	4.3	324
September	2,284.92	78.79	88.2	4.63	4.3	324
October	2,213.3	71.4	139.7	4.01	4.3	324
November	4,409.86	147	339.7	4.18	4.3	324
December	1,738.56	56.08	76.1	4.19	4.3	324
<b>Total</b>	23,833.32					
<b>Average</b>		80.52				
<b>Maximum</b>			339.7	6.16	4.3	324



### Annual Raw Water Review – Goderich Well

Raw Water Taking	Total Taking m3/d	Average Day m3/d	Max Day m3/d	Max Day % of PTTW allowable 324 m3/d
2017	23,833.32	80.52	339.7	105%
2016	26,876.45	74	369	113.4%
2015	24,797	69	335	102.0%
2014	31,911	112	336	103.7%
2013	22,088	106	354	109.3%
2012	50,610	147	351	108.3%



## System Failures and Corrective Actions

The latest inspection of the drinking water facility took place on [May 24, 2017](#). The facility scored [14/508](#) providing a rating of [97.24%](#)

### **The operations and maintenance manuals did not meet the requirements of the Drinking Water Works Permit and Municipal Drinking Water Licence issued under Part V of the SDWA.**

At the time of the current inspection, the validated operating conditions for the UV disinfection equipment, including a copy of the validation certificate was not included in the operations and maintenance manual, in an SOP or available for review from the town or the operating authority.

#### **Action(s) Required:**

Compliance with all Conditions as outlined in the Municipal Drinking Water Licence and the Drinking Water Works Permit is required by subsection 31(1) of the Safe Drinking Water Act (SDWA).

Condition 16.2 of Schedule B of the DWWP outlines the minimum requirements for an operations and maintenance manual. Included as a minimum requirement in subsection 16.2.3 (b) are the validated operating conditions for the UV disinfection equipment, including a copy of the validation certificate. This information was to be included in the manual by November 30, 2016 (as per Condition 16.4).

By November 3, 2017 please provide the undersigned Provincial Officer with written confirmation that the required validation information for the UV equipment is available and included in a format accessible to all operators.

#### **Action(s) Taken:**

A UV validation document was not found and the company would not provide one for the system installed. Only NSF documentation was available. The MOE discussed the issue with approvals and accepted the NSF document. The document was added to the operations manual and the action was closed.

On June 13, 2017, a contractor unplugged the Outpost box. This caused a loss of data from 6:18pm on June 13 until 7:30am on June 14. No alarming was able to be called out during this time since alarming is through the Outpost. However, the operator was able to review the alarm history on the analyzer. The history showed that no alarms occurred during this period. The operator also collected 4/3s chlorine residuals in distribution.

The operator, Todd Lampron, reviewed trends as follows: Noranda at 0847 on June 14th, Goderich at 0835 on June 14th, and the Tower at 0854 on June 14th. He did not perform reviews again until June 17th as follows: Noranda at 2009, Goderich at 2000 and the Tower at 2017. Noranda reviews were performed 11hr and 22min late, Goderich reviews were performed 11hrs and 25min late, and the Tower reviews were performed 11hrs and 23min late. There were no issues found in trends for any parameter and all alarming equipment was functioning properly.

Noranda well was out of service due to the well pump failing. Until the pump was replaced, Goderich Well was required to run over the PTTW in order to meet demand. The following are the exceedances:

11/18/2017 – Well ran 23.97hrs ( 5.97hrs over) and had a total flow of 336.0m3 (12m3 over PTTW)

11/19/2017 – Well ran 20.51hrs (2.51hrs over) and was within total volume taken

11/20/2017 – Well ran 19.01hrs (1.01hrs over) – and was within total volume taken

11/21/2017 – Well ran 19.29 hrs(1.29hrs over) – and was within total volume taken

The well was manually operated from November 22nd until Noranda was put back online on November 28th. The well was started at 1500 and stopped the next day at 0900 as to not run over the allotted 18hrs specified on the PTTW.

The operator, Todd Lampron, reported that there was an issue with the Spanish Tower outpost antenna which caused a loss of communication. On December 19th, data was lost from 0045 to 0344, 0355 to 0659 and 0934 to 1457. It was determined that strong winds on the hill caused the antenna to misalign. The antenna was adjusted and communication was restored. The alarm history on the analyzer showed that no alarms occurred during this period.



AWQIs reported to the Ministry

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
07-Jul-17	Pressure	0	Psi	Once normal pressure was regained, 15 hydrants were flushed throughout the distribution system and disinfection/cl2 residuals were taken at each hydrant. Four bacti samples were collected in the distribution system on 7/7/2017 and delivered to the lab. Four more bacti samples were collected 24 hours later and delivered to the lab	10-Jul-17

**SECTION 4: SECTION 11 REPORT**

**Information to be provided**

Population Served	<b>696</b> (Stats Canada 2011)
Does your Drinking-Water System serve more than 10,000 people?	<b>No</b>
Is your annual report available to the public at no charge on a web site on the Internet?	<b>Yes</b>
Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.	<b>The Corporation of the Town of Spanish 8 Trunk Road PO Box 70 Spanish, ON P0P 2A0</b>
Number of Designated Facilities served:	<b>0</b>
Did you provide a copy of your annual report to all Designated Facilities you serve?	<b>NA</b>
Number of Interested Authorities you report to:	<b>0</b>
Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?	<b>No</b>
List all Drinking-Water Systems (if any), and their DWS Number which receive all of their drinking water from your system:	<b>N/A</b>
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?	<b>Yes</b>
Indicate how you notified system users that your annual report is available, and is free of charge.	<b>Public access/notice via the web</b>
Indicate if you notified system users that your annual report is available and is free of charge using an alternate method	<b>YES</b>





## Facility Description

A ground water supply system consisting of two wells serving the town of Spanish. Noranda Well No.1 consists of a drilled well equipped with a submersible pump, a 2 cartridge filter system (5 and 1 micron), a 6 unit UV System and sodium hypochlorite injection system. Goderich Well No.2 consists of a drilled well, equipped with a submersible pump and a sodium hypochlorite dosing system. The pumping stations each have flow monitoring and alarm capabilities. The distribution system is supplied by a tower having a storage volume of 955 cubic meters.

## Chemicals Used

Sodium Hypochlorite 12%	Disinfection
-------------------------	--------------

## Significant Expenses

Significant expenses incurred to

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

Work Order	Completion Date	Comment
242832		<i>Ordered parts for UV system</i>
243720	07-Jun-17	<i>Noranda UV#4 Controller failed after two months. Replaced with a new controller and shipped out faulty controller for a warranty evaluation</i>
266006	27-Feb-17	<i>Chlorine Pumps Ordered two spare pump elements</i>
288601	27-Apr-17	<i>Well Motor Ordered spare well motor for Noranda</i>
314750	13-Jun-17	<i>Noranda Piping Replacement New stainless steel piping was purchased and installed between the filters to replace the copper piping</i>
345132	15-Aug-17	<i>Water Tower PLC NorTech adjusted PLC controls for duty stop/start. Added 2 min delay timers to start functions for pressure fluctuations</i>
375568	17-Nov-17	<i>Tower Rehabilitation Costs for third party to perform sand blasting, primer coat and final inspection</i>
439215		<i>Water Tower Repair parts were purchased for the rebuild of the tower flow direction check valves</i>
507493	29-Nov-17	<i>Noranda Heater Repair The thermostat on the heater was not functioning properly. A remote thermostat was purchased and installed</i>
543117	11-Dec-17	<i>Noranda Well Pump Well pump motor failed and was replaced with a new motor</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
07-Jul-17	Pressure	0	Psi	Once normal pressure was regained, 15 hydrants were flushed throughout the distribution system and disinfection/cl2 residuals were taken at each hydrant. Four bacti samples were collected in the distribution system on 7/7/2017 and delivered to the lab. Four more bacti samples were collected 24 hours later and delivered to the lab	10-Jul-17

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

	No. of Samples	Range of E.Coli		Range of Total Coliform Results		Number of HPC Samples	Range of HPC Results	
	Collected	Min #	Max #	Min #	Max #		Min #	Max #
Noranda Raw Well	51	0	0	0	2	N/A	N/A	N/A
Goderich Raw Well	39	0	0	0	0	N/A	N/A	N/A
Noranda Treated Water	51	0	0	0	0	51	0	46
Goderich Treated Water	39	0	0	0	0	39	0	1
Distribution	105	0	0	0	0	105	0	15

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

Noranda	No. of Samples	Range of Results		Units of Measure
	Collected	Minimum	Maximum	
Turbidity, On-Line - Filter 1	8760	0.00	0.996	(NTU)
Free Chlorine Residual - Treated	8760	0.462	2.562	(mg/L)

Goderich	No. of Samples Collected	Range of Results		Units of Measure
		Minimum	Maximum	
Turbidity, Raw Grabs	59	0.139	1.061	NTU
Free Chlorine Residual - Treated	8760	0.069	1.999	(mg/L)



Distribution	No. of Samples Collected	Range of Results		Units of Measure
		Minimum	Maximum	
Free Chlorine Residual, Distribution	8760	0	4.999	(mg/L)
Free Chlorine Residual, Distribution Location 1	112	0.60	1.69	(mg/L)
Free Chlorine Residual, Distribution Location 2	12	0.52	1.36	(mg/L)
Free Chlorine Residual, Distribution Location 3	12	0.79	1.30	(mg/L)
Free Chlorine Residual, Distribution Location 4	7	0.59	1.12	(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	Noranda Result	Goderich Result	Unit of Measure	
Sampling is taking place due to failed sodium samples in the treated water	Sodium	Jan	26	55.1	9.93	mg/L	
		Feb				mg/L	
	20mg/L for sodium restricted diets	Mar					mg/L
		Apr	25	55.7			mg/L
	200 mg/L for aesthetic limits	May	09			27	mg/L
		Jun					mg/L
		Jul	26	53	10.1		mg/L
		Aug					mg/L
		Sep					mg/L
		Oct	26			13.5	mg/L
		Oct	30	45.3			
		Nov					mg/L
Dec					mg/L		

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

Noranda TREATED WATER	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
				MAC	1/2 MAC
Antimony: Sb (ug/L) - TW	2017/01/26	0.03	6.0	No	No
Arsenic: As (ug/L) - TW	2017/01/26	<MDL0.2	25.0	No	No
Barium: Ba (ug/L) - TW	2017/01/26	27.3	1000.0	No	No
Boron: B (ug/L) - TW	2017/01/26	18.0	5000.0	No	No
Cadmium: Cd (ug/L) - TW	2017/01/26	0.012	5.0	No	No
Chromium: Cr (ug/L) - TW	2017/01/26	0.75	50.0	No	No
Mercury: Hg (ug/L) - TW	2017/01/26	<MDL0.01	1.0	No	No
Selenium: Se (ug/L) - TW	2017/01/26	0.45	10.0	No	No
Uranium: U (ug/L) - TW	2017/01/26	3.36	20.0	No	No



<b>Goderich</b> <b>TREATED WATER</b>	<b>Sample Date</b> <b>(yyyy/mm/dd)</b>	<b>Sample</b> <b>Result</b>	<b>MAC</b>	<b>No. of Exceedances</b>	
				<b>MAC</b>	<b>1/2 MAC</b>
Antimony: Sb (ug/L) - TW	2015/01/21	0.06	6.0	No	No
Arsenic: As (ug/L) - TW	2015/01/21	0.2	25.0	No	No
Barium: Ba (ug/L) - TW	2015/01/21	25.4	1000.0	No	No
Boron: B (ug/L) - TW	2015/01/21	18.1	5000.0	No	No
Cadmium: Cd (ug/L) - TW	2015/01/21	0.014	5.0	No	No
Chromium: Cr (ug/L) - TW	2015/01/21	0.17	50.0	No	No
Mercury: Hg (ug/L) - TW	2015/01/21	0.03	1.0	No	No
Selenium: Se (ug/L) - TW	2015/01/21	<MDL 1.0	10.0	No	No
Uranium: U (ug/L) - TW	2015/01/21	2.29	20.0	No	No

<b>Noranda</b> <b>TREATED WATER</b>	<b>Sample Date</b> <b>(yyyy/mm/dd)</b>	<b>Sample</b> <b>Result</b>	<b>MAC</b>	<b>No. of Exceedances</b>	
				<b>MAC</b>	<b>1/2 MAC</b>
Fluoride (mg/L) - TW	2013/01/24	0.09	1.5	No	No
Nitrite (mg/L) - TW	2017/01/26	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2017/04/25	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2017/07/26	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2017/10/26	<MDL 0.003	1.0	No	No
Nitrate (mg/L) - TW	2017/01/26	0.484	10.0	No	No
Nitrate (mg/L) - TW	2017/04/25	0.664	10.0	No	No
Nitrate (mg/L) - TW	2017/07/26	0.639	10.0	No	No
Nitrate (mg/L) - TW	2017/10/26	0.767	10.0	No	No

<b>Goderich</b> <b>TREATED WATER</b>	<b>Sample Date</b> <b>(mm/dd/yyyy)</b>	<b>Sample</b> <b>Result</b>	<b>MAC</b>	<b>No. of Exceedances</b>	
				<b>MAC</b>	<b>1/2 MAC</b>
Fluoride (mg/L) - TW	2013/01/24	0.09	1.5	No	No
Nitrite (mg/L) - TW	2017/01/26	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2017/05/09	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2017/07/26	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2017/10/26	<MDL 0.003	1.0	No	No
Nitrate (mg/L) - TW	2017/01/26	0.021	10.0	No	No
Nitrate (mg/L) - TW	2017/05/09	0.207	10.0	No	No
Nitrate (mg/L) - TW	2017/07/26	0.062	10.0	No	No
Nitrate (mg/L) - TW	2017/10/26	0.171	10.0	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)	4	0.02	0.37	10	N/A
Distribution - Alkalinity (mg/L)	4	93	105	N/A	N/A
Distribution - pH In-House	4	6.40	6.56	N/A	N/A

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

NORANDA TREATED WATER	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Alachlor (ug/L) - TW	2017/01/26	<MDL 0.02	5.00	No	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	2017/01/26	<MDL 0.01	5.00	No	No
Azinphos-methyl (ug/L) - TW	2017/01/26	<MDL 0.05	20.00	No	No
Benzene (ug/L) - TW	2017/01/26	<MDL 0.32	5.00	No	No
Benzo(a)pyrene (ug/L) - TW	2017/01/26	<MDL 0.004	0.01	No	No
Bromoxynil (ug/L) - TW	2017/01/26	<MDL 0.33	5.00	No	No
Carbaryl (ug/L) - TW	2017/01/26	<MDL 0.05	90.00	No	No
Carbofuran (ug/L) - TW	2017/01/26	<MDL 0.01	90.00	No	No
Carbon Tetrachloride (ug/L) - TW	2017/01/26	<MDL 0.16	5.00	No	No
Chlorpyrifos (ug/L) - TW	2017/01/26	<MDL 0.02	90.00	No	No
Diazinon (ug/L) - TW	2017/01/26	<MDL 0.02	20.00	No	No
Dicamba (ug/L) - TW	2017/01/26	<MDL 0.2	120.00	No	No
1,2-Dichlorobenzene (ug/L) - TW	2017/01/26	<MDL 0.41	200.00	No	No
1,4-Dichlorobenzene (ug/L) - TW	2017/01/26	<MDL 0.36	5.00	No	No
1,2-Dichloroethane (ug/L) - TW	2017/01/26	<MDL 0.35	5.00	No	No
1,1-Dichloroethylene (ug/L) - TW	2017/01/26	<MDL 0.33	14.00	No	No
Dichloromethane (Methylene Chloride) (ug/L) - TW	2017/01/26	<MDL 0.35	50.00	No	No
2,4-Dichlorophenol (ug/L) - TW	2017/01/26	<MDL 0.15	900.00	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	2017/01/26	<MDL 0.19	100.00	No	No
Diclofop-methyl (ug/L) - TW	2017/01/26	<MDL 0.4	9.00	No	No
Dimethoate (ug/L) - TW	2017/01/26	<MDL 0.03	20.00	No	No
Diquat (ug/L) - TW	2017/01/26	<MDL 1.0	70.00	No	No
Diuron (ug/L) - TW	2017/01/26	<MDL 0.03	150.00	No	No
Glyphosate (ug/L) - TW	2017/01/26	<MDL 1.0	280.00	No	No
Malathion (ug/L) - TW	2017/01/26	<MDL 0.02	190.00	No	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (mg/L) - TW	2017/01/26	<MDL 0.12	N/A	N/A	N/A
Metolachlor (ug/L) - TW	2017/01/26	<MDL 0.01	50.00	No	No
Metribuzin (ug/L) - TW	2017/01/26	<MDL 0.02	80.00	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW	2017/01/26	<MDL 0.3	80.00	No	No
Paraquat (ug/L) - TW	2017/01/26	<MDL 1.0	10.00	No	No
PCB (ug/L) - TW	2017/01/26	<MDL 0.04	3.00	No	No
Pentachlorophenol (ug/L) - TW	2017/01/26	<MDL 0.15	60.00	No	No



Phorate (ug/L) - TW	2017/01/26	<MDL 0.01	2.00	No	No
Picloram (ug/L) - TW	2017/01/26	<MDL 1.0	190.00	No	No
Prometryne (ug/L) - TW	2017/01/26	<MDL 0.03	1.00	No	No
Simazine (ug/L) - TW	2017/01/26	<MDL 0.01	10.00	No	No
Terbufos (ug/L) - TW	2017/01/26	<MDL 0.01	1.00	No	No
Tetrachloroethylene (ug/L) - TW	2017/01/26	<MDL 0.35	30.00	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	2017/01/26	<MDL 0.2	100.00	No	No
Triallate (ug/L) - TW	2017/01/26	<MDL 0.01	230.00	No	No
Trichloroethylene (ug/L) - TW	2017/01/26	<MDL 0.44	50.00	No	No
2,4,6-Trichlorophenol (ug/L) - TW	2017/01/26	<MDL 0.25	5.00	No	No
Trifluralin (ug/L) - TW	2017/01/26	<MDL 0.02	45.00	No	No
Vinyl Chloride (ug/L) - TW	2017/01/26	<MDL 0.17	2.00	No	No

GODERICH TREATED WATER	Sample Date	Sample		Number of Exceedances	
	(yyyy/mm/dd)	Result	MAC	MAC	1/2 MAC
Alachlor (ug/L) - TW	2015/01/21	<MDL 0.02	5.00	No	No
Aldicarb (ug/L) - TW	2015/01/21	<MDL 0.01	9.00	No	No
Aldrin+Dieldrin (ug/L) - TW	2015/01/21	<MDL 0.01	0.70	No	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	2015/01/21	<MDL 0.01	5.00	No	No
Azinphos-methyl (ug/L) - TW	2015/01/21	<MDL 0.02	20.00	No	No
Bendiocarb (ug/L) - TW	2015/01/21	<MDL 0.01	40.00	No	No
Benzene (ug/L) - TW	2015/01/21	<MDL 0.32	5.00	No	No
Benzo(a)pyrene (ug/L) - TW	2015/01/21	<MDL 0.004	0.01	No	No
Bromoxynil (ug/L) - TW	2015/01/21	<MDL 0.33	5.00	No	No
Carbaryl (ug/L) - TW	2015/01/21	<MDL 0.01	90.00	No	No
Carbofuran (ug/L) - TW	2015/01/21	<MDL 0.01	90.00	No	No
Carbon Tetrachloride (ug/L) - TW	2015/01/21	<MDL 0.16	5.00	No	No
Chlordane: Total (ug/L) - TW	2015/01/21	<MDL 0.01	7.00	No	No
Chlorpyrifos (ug/L) - TW	2015/01/21	<MDL 0.02	90.00	No	No
Cyanazine (ug/L) - TW	2015/01/21	<MDL 0.03	10.00	No	No
Diazinon (ug/L) - TW	2015/01/21	<MDL 0.02	20.00	No	No
Dicamba (ug/L) - TW	2015/01/21	<MDL 0.2	120.00	No	No
1,2-Dichlorobenzene (ug/L) - TW	2015/01/21	<MDL 0.41	200.00	No	No
1,4-Dichlorobenzene (ug/L) - TW	2015/01/21	<MDL 0.36	5.00	No	No
DDT + metabolites (ug/L) - TW	2015/01/21	<MDL 0.01	30.00	No	No
1,2-Dichloroethane (ug/L) - TW	2015/01/21	<MDL 0.35	5.00	No	No
1,1-Dichloroethylene (ug/L) - TW	2015/01/21	<MDL 0.33	14.00	No	No
Dichloromethane (Methylene Chloride) (ug/L) - TW	2015/01/21	<MDL 0.35	50.00	No	No
2,4-Dichlorophenol (ug/L) - TW	2015/01/21	<MDL 0.15	900.00	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	2015/01/21	<MDL 0.19	100.00	No	No
Diclofop-methyl (ug/L) - TW	2015/01/21	<MDL 0.4	9.00	No	No
Dimethoate (ug/L) - TW	2015/01/21	<MDL 0.03	20.00	No	No
Dinoseb (ug/L) - TW	2015/01/21	<MDL 0.36	10.00	No	No
Diquat (ug/L) - TW	2015/01/21	<MDL 1.0	70.00	No	No



Diuron (ug/L) - TW	2015/01/21	<MDL 0.03	150.00	No	No
Glyphosate (ug/L) - TW	2015/01/21	<MDL 1.0	280.00	No	No
Heptachlor+hepachlor epoxide (ug/L) - TW	2015/01/21	<MDL 0.01	3.00	No	No
Lindane (ug/L) - TW	2015/01/21	<MDL 0.01	4.00	No	No
Malathion (ug/L) - TW	2015/01/21	<MDL 0.02	190.00	No	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (mg/L) - TW	2015/01/21		N/A	N/A	N/A
Methoxychlor (ug/L) - TW	2015/01/21	<MDL 0.01	900.00	No	No
Metolachlor (ug/L) - TW	2015/01/21	<MDL 0.01	50.00	No	No
Metribuzin (ug/L) - TW	2015/01/21	<MDL 0.02	80.00	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW	2015/01/21	<MDL 0.3	80.00	No	No
Paraquat (ug/L) - TW	2015/01/21	<MDL 1.0	10.00	No	No
Parathion (ug/L) - TW	2015/01/21	<MDL 0.02	50.00	No	No
PCB (ug/L) - TW	2015/01/21	<MDL 0.04	3.00	No	No
Pentachlorophenol (ug/L) - TW	2015/01/21	<MDL 0.15	60.00	No	No
Phorate (ug/L) - TW	2015/01/21	<MDL 0.01	2.00	No	No
Picloram (ug/L) - TW	2015/01/21	<MDL 1.0	190.00	No	No
Prometryne (ug/L) - TW	2015/01/21	<MDL 0.03	1.00	No	No
Simazine (ug/L) - TW	2015/01/21	<MDL 0.01	10.00	No	No
Temephos (ug/L) - TW	2015/01/21	<MDL 0.01	280.00	No	No
Terbufos (ug/L) - TW	2015/01/21	<MDL 0.01	1.00	No	No
Tetrachloroethylene (ug/L) - TW	2015/01/21	<MDL 0.35	30.00	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	2015/01/21	<MDL 0.2	100.00	No	No
Triallate (ug/L) - TW	2015/01/21	<MDL 0.01	230.00	No	No
Trichloroethylene (ug/L) - TW	2015/01/21	<MDL 0.44	50.00	No	No
2,4,6-Trichlorophenol (ug/L) - TW	2015/01/21	<MDL 0.25	5.00	No	No
2,4,5-T (ug/L) - TW	2015/01/21	<MDL 0.22	280.00	No	No
Trifluralin (ug/L) - TW	2015/01/21	<MDL 0.02	45.00	No	No
Vinyl Chloride (ug/L) - TW	2015/01/21	<MDL 0.17	2.00	No	No

DISTRIBUTION WATER					
Trihalomethane: Total (ug/L) Annual Average - DW	2017/12/31	24.5	100.00	No	No
HAA Total (ug/☉ Annual Average – DW	2017/12/31	10.375		N/A	N/A



## **SECTION 5: RAW WATER SUBMISSIONS**

Raw water flows were submitted to the Ministry on [January 30, 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: 2328-83MMZY  
Permit Holder: THE CORPORATION OF THE TOWN OF SPANISH.  
Received on: Jan 30, 2018 3:31 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](#)

THE CORPORATION OF THE TOWN OF SPANISH | 2018/01/30  
version: v4.5.0.8 (build#: 18)  
Last modified: 2018/01/11

 This site maintained by  
the Government of Ontario

©2018 [Queen's Printer for Ontario](#)

## **SECTION 6: CONCLUSION**

The Spanish 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, exceedances occurred at both wells for total daily volumes and peak flow rate limits listed in the PTTW. The Noranda well trended flow rate exceedances on two occasions throughout the year although exceedances are related to backwashes occurring and not due to raw water takings.

The Goderich well exceeded flow rates on two separate occasions. Both flow rate exceedances were due to backwashing after a low chlorine shut down and not due to raw water takings. Total daily flows also exceeded in November by surpassing the allowable 18 hours per day water taking limit. While the Noranda well was out of service, the Goderich well was relied upon to provide water to the entire system.





## 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 <sup>3</sup> /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 01/01/2017 To 12/31/2017

Facility: SPANISH DRINKING WATER SYSTEM-1150  
 Tag: Raw Flow: Sum (m3/d)  
 Tag Group: Noranda Raw - GUDI

Permit#: 2328-83MMZY  
 Source Name: Noranda Well  
 Source: Well  
 Type: Drilled  
 Purpose: Municipal

Coordinate Zone: 17  
 Easting: 397392  
 Northing: 5116753  
 Method deter: Metered

Date Measured	Value (m³/d)	Value (Litres)
01/01/2017	308.0000	308000.0000
02/01/2017	193.0000	193000.0000
03/01/2017	337.0000	337000.0000
04/01/2017	204.0000	204000.0000
05/01/2017	268.0000	268000.0000
06/01/2017	352.0000	352000.0000
07/01/2017	206.0000	206000.0000
08/01/2017	284.0000	284000.0000
09/01/2017	264.0000	264000.0000
10/01/2017	247.0000	247000.0000
11/01/2017	319.0000	319000.0000
12/01/2017	142.0000	142000.0000
13/01/2017	314.0000	314000.0000
14/01/2017	350.0000	350000.0000
15/01/2017	250.0000	250000.0000
16/01/2017	349.0000	349000.0000
17/01/2017	168.0000	168000.0000
18/01/2017	349.0000	349000.0000
19/01/2017	111.0000	111000.0000
20/01/2017	103.0000	103000.0000
21/01/2017	191.0000	191000.0000
22/01/2017	315.0000	315000.0000
23/01/2017	183.0000	183000.0000
24/01/2017	227.0000	227000.0000
25/01/2017	292.0000	292000.0000
26/01/2017	58.0000	58000.0000
27/01/2017	315.0000	315000.0000
28/01/2017	170.0000	170000.0000
29/01/2017	237.4000	237400.0000
30/01/2017	156.2000	156200.0000
31/01/2017	110.1650	110165.0000
01/02/2017	232.0000	232000.0000
02/02/2017	283.0000	283000.0000
03/02/2017	180.0000	180000.0000
04/02/2017	215.0000	215000.0000
05/02/2017	348.0000	348000.0000
06/02/2017	81.0000	81000.0000
07/02/2017	223.0000	223000.0000
08/02/2017	172.0000	172000.0000
09/02/2017	138.0000	138000.0000
10/02/2017	337.0000	337000.0000
11/02/2017	82.0000	82000.0000

12/02/2017	90.0000	90000.0000
13/02/2017	115.0000	115000.0000
14/02/2017	222.0000	222000.0000
15/02/2017	207.0000	207000.0000
16/02/2017	204.0000	204000.0000
17/02/2017	216.0000	216000.0000
18/02/2017	261.0000	261000.0000
19/02/2017	94.0000	94000.0000
20/02/2017	350.0000	350000.0000
21/02/2017	122.0000	122000.0000
22/02/2017	154.0000	154000.0000
23/02/2017	207.0000	207000.0000
24/02/2017	227.0000	227000.0000
25/02/2017	216.0000	216000.0000
26/02/2017	197.0000	197000.0000
27/02/2017	338.0000	338000.0000
28/02/2017	70.0000	70000.0000
01/03/2017	180.0000	180000.0000
02/03/2017	91.0000	91000.0000
03/03/2017	270.0000	270000.0000
04/03/2017	215.0000	215000.0000
05/03/2017	206.0000	206000.0000
06/03/2017	251.0000	251000.0000
07/03/2017	246.0000	246000.0000
08/03/2017	100.0000	100000.0000
09/03/2017	350.0000	350000.0000
10/03/2017	163.0000	163000.0000
11/03/2017	216.0000	216000.0000
12/03/2017	268.0000	268000.0000
13/03/2017	351.0000	351000.0000
14/03/2017	109.0000	109000.0000
15/03/2017	276.0000	276000.0000
16/03/2017	216.0000	216000.0000
17/03/2017	206.0000	206000.0000
18/03/2017	268.0000	268000.0000
19/03/2017	350.0000	350000.0000
20/03/2017	349.0000	349000.0000
21/03/2017	349.0000	349000.0000
22/03/2017	252.0000	252000.0000
23/03/2017	216.0000	216000.0000
24/03/2017	338.0000	338000.0000
25/03/2017	69.0000	69000.0000
26/03/2017	338.0000	338000.0000
27/03/2017	59.0000	59000.0000
28/03/2017	248.0000	248000.0000
29/03/2017	207.0000	207000.0000
30/03/2017	174.0000	174000.0000
31/03/2017	350.0000	350000.0000
01/04/2017	174.0000	174000.0000
02/04/2017	58.0000	58000.0000
03/04/2017	234.0000	234000.0000
04/04/2017	332.0000	332000.0000
05/04/2017	338.0000	338000.0000
06/04/2017	203.0000	203000.0000
07/04/2017	233.0000	233000.0000
08/04/2017	211.0000	211000.0000
09/04/2017	212.0000	212000.0000
10/04/2017	175.0000	175000.0000
11/04/2017	189.0000	189000.0000
12/04/2017	201.0000	201000.0000
13/04/2017	217.0000	217000.0000

14/04/2017	234.0000	234000.0000
15/04/2017	205.0000	205000.0000
16/04/2017	228.0000	228000.0000
17/04/2017	227.0000	227000.0000
18/04/2017	205.0000	205000.0000
19/04/2017	217.0000	217000.0000
20/04/2017	178.0000	178000.0000
21/04/2017	219.0000	219000.0000
22/04/2017	229.0000	229000.0000
23/04/2017	176.0000	176000.0000
24/04/2017	250.0000	250000.0000
25/04/2017	184.0000	184000.0000
26/04/2017	163.0000	163000.0000
27/04/2017	295.0000	295000.0000
28/04/2017	55.0000	55000.0000
29/04/2017	234.0000	234000.0000
30/04/2017	340.0000	340000.0000
01/05/2017	180.0000	180000.0000
02/05/2017	219.0000	219000.0000
03/05/2017	219.0000	219000.0000
04/05/2017	230.0000	230000.0000
05/05/2017	348.0000	348000.0000
06/05/2017	351.0000	351000.0000
07/05/2017	196.0000	196000.0000
08/05/2017	350.0000	350000.0000
09/05/2017	261.0000	261000.0000
10/05/2017	125.0000	125000.0000
11/05/2017	163.0000	163000.0000
12/05/2017	144.0000	144000.0000
13/05/2017	169.0000	169000.0000
14/05/2017	172.0000	172000.0000
15/05/2017	65.0000	65000.0000
16/05/2017	156.0000	156000.0000
17/05/2017	213.0000	213000.0000
18/05/2017	165.0000	165000.0000
19/05/2017	93.0000	93000.0000
20/05/2017	152.0000	152000.0000
21/05/2017	192.0000	192000.0000
22/05/2017	147.0000	147000.0000
23/05/2017	88.0000	88000.0000
24/05/2017	144.0000	144000.0000
25/05/2017	195.0000	195000.0000
26/05/2017	52.0000	52000.0000
27/05/2017	151.0000	151000.0000
28/05/2017	222.0000	222000.0000
29/05/2017	79.0000	79000.0000
30/05/2017	324.0000	324000.0000
31/05/2017	57.0000	57000.0000
01/06/2017	239.0000	239000.0000
02/06/2017	105.0000	105000.0000
03/06/2017	180.0000	180000.0000
04/06/2017	155.0000	155000.0000
05/06/2017	187.0000	187000.0000
06/06/2017	119.0000	119000.0000
07/06/2017	120.0000	120000.0000
08/06/2017	146.0000	146000.0000
09/06/2017	167.0000	167000.0000
10/06/2017	268.0000	268000.0000
11/06/2017	84.0000	84000.0000
12/06/2017	136.0000	136000.0000
13/06/2017	171.0000	171000.0000

14/06/2017	184.0000	184000.0000
15/06/2017	207.0000	207000.0000
16/06/2017	299.0000	299000.0000
17/06/2017	299.0000	299000.0000
18/06/2017	0.0000	0.0000
19/06/2017	345.0000	345000.0000
20/06/2017	354.0000	354000.0000
21/06/2017	352.0000	352000.0000
22/06/2017	352.0000	352000.0000
23/06/2017	351.0000	351000.0000
24/06/2017	351.0000	351000.0000
25/06/2017	351.0000	351000.0000
26/06/2017	350.0000	350000.0000
27/06/2017	350.0000	350000.0000
28/06/2017	350.0000	350000.0000
29/06/2017	350.0000	350000.0000
30/06/2017	350.0000	350000.0000
01/07/2017	351.0000	351000.0000
02/07/2017	350.0000	350000.0000
03/07/2017	350.0000	350000.0000
04/07/2017	351.0000	351000.0000
05/07/2017	350.0000	350000.0000
06/07/2017	350.0000	350000.0000
07/07/2017	185.0000	185000.0000
08/07/2017	353.0000	353000.0000
09/07/2017	350.0000	350000.0000
10/07/2017	351.0000	351000.0000
11/07/2017	350.0000	350000.0000
12/07/2017	351.0000	351000.0000
13/07/2017	350.0000	350000.0000
14/07/2017	349.0000	349000.0000
15/07/2017	350.0000	350000.0000
16/07/2017	349.0000	349000.0000
17/07/2017	349.0000	349000.0000
18/07/2017	242.0000	242000.0000
19/07/2017	209.0000	209000.0000
20/07/2017	351.0000	351000.0000
21/07/2017	163.0000	163000.0000
22/07/2017	299.0000	299000.0000
23/07/2017	195.0000	195000.0000
24/07/2017	202.0000	202000.0000
25/07/2017	278.0000	278000.0000
26/07/2017	181.0000	181000.0000
27/07/2017	129.0000	129000.0000
28/07/2017	185.0000	185000.0000
29/07/2017	222.0000	222000.0000
30/07/2017	236.0000	236000.0000
31/07/2017	297.0000	297000.0000
01/08/2017	232.0000	232000.0000
02/08/2017	208.0000	208000.0000
03/08/2017	282.0000	282000.0000
04/08/2017	136.0000	136000.0000
05/08/2017	167.0000	167000.0000
06/08/2017	218.0000	218000.0000
07/08/2017	202.0000	202000.0000
08/08/2017	200.0000	200000.0000
09/08/2017	217.0000	217000.0000
10/08/2017	208.0000	208000.0000
11/08/2017	254.0000	254000.0000
12/08/2017	138.0000	138000.0000
13/08/2017	282.0000	282000.0000

14/08/2017	106.0000	106000.0000
15/08/2017	217.0000	217000.0000
16/08/2017	346.0000	346000.0000
17/08/2017	179.0000	179000.0000
18/08/2017	212.0000	212000.0000
19/08/2017	213.0000	213000.0000
20/08/2017	186.0000	186000.0000
21/08/2017	225.0000	225000.0000
22/08/2017	216.0000	216000.0000
23/08/2017	200.0000	200000.0000
24/08/2017	227.0000	227000.0000
25/08/2017	237.0000	237000.0000
26/08/2017	219.0000	219000.0000
27/08/2017	219.0000	219000.0000
28/08/2017	217.0000	217000.0000
29/08/2017	187.0000	187000.0000
30/08/2017	211.0000	211000.0000
31/08/2017	211.0000	211000.0000
01/09/2017	260.0000	260000.0000
02/09/2017	243.0000	243000.0000
03/09/2017	230.0000	230000.0000
04/09/2017	199.0000	199000.0000
05/09/2017	219.0000	219000.0000
06/09/2017	224.0000	224000.0000
07/09/2017	214.0000	214000.0000
08/09/2017	232.0000	232000.0000
09/09/2017	256.0000	256000.0000
10/09/2017	195.0000	195000.0000
11/09/2017	210.0000	210000.0000
12/09/2017	214.0000	214000.0000
13/09/2017	225.0000	225000.0000
14/09/2017	220.0000	220000.0000
15/09/2017	267.0000	267000.0000
16/09/2017	233.0000	233000.0000
17/09/2017	293.0000	293000.0000
18/09/2017	183.0000	183000.0000
19/09/2017	152.0000	152000.0000
20/09/2017	148.0000	148000.0000
21/09/2017	142.0000	142000.0000
22/09/2017	151.0000	151000.0000
23/09/2017	190.0000	190000.0000
24/09/2017	192.0000	192000.0000
25/09/2017	163.0000	163000.0000
26/09/2017	156.0000	156000.0000
27/09/2017	175.0000	175000.0000
28/09/2017	163.0000	163000.0000
29/09/2017	138.0000	138000.0000
30/09/2017	161.0000	161000.0000
01/10/2017	153.0000	153000.0000
02/10/2017	135.0000	135000.0000
03/10/2017	130.0000	130000.0000
04/10/2017	141.0000	141000.0000
05/10/2017	150.0000	150000.0000
06/10/2017	159.0000	159000.0000
07/10/2017	138.0000	138000.0000
08/10/2017	177.0000	177000.0000
09/10/2017	169.0000	169000.0000
10/10/2017	128.0000	128000.0000
11/10/2017	204.0000	204000.0000
12/10/2017	302.0000	302000.0000
13/10/2017	354.0000	354000.0000

14/10/2017	140.0000	140000.0000
15/10/2017	131.0000	131000.0000
16/10/2017	157.0000	157000.0000
17/10/2017	143.0000	143000.0000
18/10/2017	152.0000	152000.0000
19/10/2017	138.0000	138000.0000
20/10/2017	136.0000	136000.0000
21/10/2017	146.0000	146000.0000
22/10/2017	139.0000	139000.0000
23/10/2017	146.0000	146000.0000
24/10/2017	167.0000	167000.0000
25/10/2017	135.0000	135000.0000
26/10/2017	197.0000	197000.0000
27/10/2017	173.0000	173000.0000
28/10/2017	177.0000	177000.0000
29/10/2017	280.0000	280000.0000
30/10/2017	140.0000	140000.0000
31/10/2017	166.0000	166000.0000
01/11/2017	63.0000	63000.0000
02/11/2017	125.0000	125000.0000
03/11/2017	123.0000	123000.0000
04/11/2017	138.0000	138000.0000
05/11/2017	160.0000	160000.0000
06/11/2017	137.0000	137000.0000
07/11/2017	186.7500	186750.0000
08/11/2017	219.0000	219000.0000
09/11/2017	168.0000	168000.0000
10/11/2017	111.0000	111000.0000
11/11/2017	137.0000	137000.0000
12/11/2017	148.0000	148000.0000
13/11/2017	146.0000	146000.0000
14/11/2017	133.0000	133000.0000
15/11/2017	126.0000	126000.0000
16/11/2017	149.0000	149000.0000
17/11/2017	4.0000	4000.0000
18/11/2017	0.0000	0.0000
19/11/2017	0.0000	0.0000
20/11/2017	0.0000	0.0000
21/11/2017	0.0000	0.0000
22/11/2017	0.0000	0.0000
23/11/2017	0.0000	0.0000
24/11/2017	0.0000	0.0000
25/11/2017	0.0000	0.0000
26/11/2017	0.0000	0.0000
27/11/2017	0.0000	0.0000
28/11/2017	129.0000	129000.0000
29/11/2017	110.0000	110000.0000
30/11/2017	117.0000	117000.0000
01/12/2017	169.0000	169000.0000
02/12/2017	42.0000	42000.0000
03/12/2017	138.0000	138000.0000
04/12/2017	180.0000	180000.0000
05/12/2017	66.0000	66000.0000
06/12/2017	93.0000	93000.0000
07/12/2017	152.0000	152000.0000
08/12/2017	126.0000	126000.0000
09/12/2017	118.0000	118000.0000
10/12/2017	125.0000	125000.0000
11/12/2017	120.0000	120000.0000
12/12/2017	206.0000	206000.0000
13/12/2017	190.0000	190000.0000



14/12/2017	151.0000	151000.0000
15/12/2017	146.0000	146000.0000
16/12/2017	178.0000	178000.0000
17/12/2017	130.0000	130000.0000
18/12/2017	92.0000	92000.0000
19/12/2017	278.0000	278000.0000
20/12/2017	197.0000	197000.0000
21/12/2017	238.0000	238000.0000
22/12/2017	215.0000	215000.0000
23/12/2017	154.0000	154000.0000
24/12/2017	221.0000	221000.0000
25/12/2017	244.0000	244000.0000
26/12/2017	215.0000	215000.0000
27/12/2017	230.0000	230000.0000
28/12/2017	230.0000	230000.0000
29/12/2017	226.0000	226000.0000
30/12/2017	196.0000	196000.0000
31/12/2017	218.0000	218000.0000

**Ontario Clean Water Agency**  
**Annual Water Taking and Transfer Report**  
 From 01/01/2017 To 12/31/2017

Facility: SPANISH DRINKING WATER SYSTEM-1150  
 Tag: Raw Flow: Sum (m3/d)  
 Tag Group: Goderich Raw - Well

Permit#: 2328-83MMZY  
 Source Name: Goderich Well  
 Source: Well  
 Type: Drilled  
 Purpose: Municipal

Coordinate Zone: 17  
 Easting: 396295  
 Northing: 5116551  
 Method deter: Metered

Date Measured	Value (m³/d)	Value (Litres)
01/01/2017	0.0000	0.0000
02/01/2017	0.0000	0.0000
03/01/2017	0.0000	0.0000
04/01/2017	0.3000	300.0000
05/01/2017	33.3000	33300.0000
06/01/2017	38.6000	38600.0000
07/01/2017	38.6000	38600.0000
08/01/2017	38.6000	38600.0000
09/01/2017	53.6000	53600.0000
10/01/2017	52.0000	52000.0000
11/01/2017	52.0000	52000.0000
12/01/2017	51.7000	51700.0000
13/01/2017	51.7000	51700.0000
14/01/2017	51.8000	51800.0000
15/01/2017	52.8000	52800.0000
16/01/2017	52.8000	52800.0000
17/01/2017	52.7300	52730.0000
18/01/2017	52.7300	52730.0000
19/01/2017	52.7300	52730.0000
20/01/2017	52.6000	52600.0000
21/01/2017	52.7600	52760.0000
22/01/2017	52.7600	52760.0000
23/01/2017	41.7600	41760.0000
24/01/2017	53.7600	53760.0000
25/01/2017	52.7600	52760.0000
26/01/2017	53.7600	53760.0000
27/01/2017	54.8000	54800.0000
28/01/2017	52.8600	52860.0000
29/01/2017	0.8600	860.0000
30/01/2017	53.8600	53860.0000
31/01/2017	68.9000	68900.0000
01/02/2017	49.9000	49900.0000
02/02/2017	44.8000	44800.0000
03/02/2017	29.8000	29800.0000
04/02/2017	0.0000	0.0000
05/02/2017	0.0000	0.0000
06/02/2017	35.7000	35700.0000
07/02/2017	44.0000	44000.0000
08/02/2017	35.0000	35000.0000
09/02/2017	0.0000	0.0000
10/02/2017	0.0000	0.0000
11/02/2017	0.0000	0.0000

12/02/2017	0.0000	0.0000
13/02/2017	0.0000	0.0000
14/02/2017	0.0000	0.0000
15/02/2017	0.0000	0.0000
16/02/2017	0.0000	0.0000
17/02/2017	0.0000	0.0000
18/02/2017	0.0000	0.0000
19/02/2017	0.0000	0.0000
20/02/2017	0.0000	0.0000
21/02/2017	0.0000	0.0000
22/02/2017	0.0000	0.0000
23/02/2017	0.0000	0.0000
24/02/2017	0.0000	0.0000
25/02/2017	0.0000	0.0000
26/02/2017	0.0000	0.0000
27/02/2017	0.0000	0.0000
28/02/2017	0.0000	0.0000
01/03/2017		
02/03/2017		
03/03/2017		
04/03/2017		
05/03/2017		
06/03/2017		
07/03/2017		
08/03/2017		
09/03/2017		
10/03/2017		
11/03/2017		
12/03/2017		
13/03/2017		
14/03/2017		
15/03/2017		
16/03/2017		
17/03/2017		
18/03/2017		
19/03/2017		
20/03/2017		
21/03/2017		
22/03/2017		
23/03/2017		
24/03/2017		
25/03/2017		
26/03/2017		
27/03/2017		
28/03/2017		
29/03/2017		
30/03/2017		
31/03/2017		
01/04/2017		
02/04/2017		
03/04/2017		
04/04/2017		
05/04/2017		
06/04/2017		
07/04/2017		
08/04/2017		
09/04/2017		
10/04/2017		
11/04/2017		
12/04/2017		
13/04/2017		

14/04/2017		
15/04/2017		
16/04/2017		
17/04/2017		
18/04/2017		
19/04/2017		
20/04/2017		
21/04/2017		
22/04/2017		
23/04/2017		
24/04/2017		
25/04/2017		
26/04/2017		
27/04/2017		
28/04/2017		
29/04/2017		
30/04/2017		
01/05/2017		
02/05/2017		
03/05/2017		
04/05/2017		
05/05/2017		
06/05/2017		
07/05/2017		
08/05/2017	24.8000	24800.0000
09/05/2017	38.7000	38700.0000
10/05/2017	61.6000	61600.0000
11/05/2017	132.1000	132100.0000
12/05/2017	115.9000	115900.0000
13/05/2017	139.8600	139860.0000
14/05/2017	127.8600	127860.0000
15/05/2017	52.8600	52860.0000
16/05/2017	133.4000	133400.0000
17/05/2017	185.4000	185400.0000
18/05/2017	124.7500	124750.0000
19/05/2017	86.7500	86750.0000
20/05/2017	131.2200	131220.0000
21/05/2017	187.2200	187220.0000
22/05/2017	133.2200	133220.0000
23/05/2017	72.2200	72220.0000
24/05/2017	127.2000	127200.0000
25/05/2017	168.8000	168800.0000
26/05/2017	69.8000	69800.0000
27/05/2017	133.7500	133750.0000
28/05/2017	204.7500	204750.0000
29/05/2017	38.7500	38750.0000
30/05/2017	115.7500	115750.0000
31/05/2017	25.7500	25750.0000
01/06/2017	122.9000	122900.0000
02/06/2017	89.0000	89000.0000
03/06/2017	162.3300	162330.0000
04/06/2017	142.3300	142330.0000
05/06/2017	178.3300	178330.0000
06/06/2017	115.1500	115150.0000
07/06/2017	106.1500	106150.0000
08/06/2017	137.1500	137150.0000
09/06/2017	155.1500	155150.0000
10/06/2017	249.6000	249600.0000
11/06/2017	124.6000	124600.0000
12/06/2017	101.6000	101600.0000
13/06/2017	137.0500	137050.0000

14/06/2017	150.0500	150050.0000
15/06/2017	32.4200	32420.0000
16/06/2017	41.4200	41420.0000
17/06/2017	33.4200	33420.0000
18/06/2017	10.4200	10420.0000
19/06/2017	45.4200	45420.0000
20/06/2017	37.8000	37800.0000
21/06/2017	44.8000	44800.0000
22/06/2017	44.7500	44750.0000
23/06/2017	45.7500	45750.0000
24/06/2017	46.6600	46660.0000
25/06/2017	44.6600	44660.0000
26/06/2017	43.6600	43660.0000
27/06/2017	42.6500	42650.0000
28/06/2017	43.6500	43650.0000
29/06/2017	30.5000	30500.0000
30/06/2017	32.5000	32500.0000
01/07/2017	124.8750	124875.0000
02/07/2017	32.8750	32875.0000
03/07/2017	32.8750	32875.0000
04/07/2017	100.8750	100875.0000
05/07/2017	136.1670	136167.0000
06/07/2017	136.1670	136167.0000
07/07/2017	162.1670	162167.0000
08/07/2017	187.3300	187330.0000
09/07/2017	189.3300	189330.0000
10/07/2017	190.3300	190330.0000
11/07/2017	192.5000	192500.0000
12/07/2017	192.5000	192500.0000
13/07/2017	191.7000	191700.0000
14/07/2017	190.7000	190700.0000
15/07/2017	194.6000	194600.0000
16/07/2017	196.6000	196600.0000
17/07/2017	196.6000	196600.0000
18/07/2017	159.6000	159600.0000
19/07/2017	172.2000	172200.0000
20/07/2017	201.2000	201200.0000
21/07/2017	77.2000	77200.0000
22/07/2017	76.8600	76860.0000
23/07/2017	75.8600	75860.0000
24/07/2017	74.8600	74860.0000
25/07/2017	76.0000	76000.0000
26/07/2017	78.2000	78200.0000
27/07/2017	73.9500	73950.0000
28/07/2017	73.9500	73950.0000
29/07/2017	74.2300	74230.0000
30/07/2017	75.2300	75230.0000
31/07/2017	76.2300	76230.0000
01/08/2017	76.0000	76000.0000
02/08/2017	75.0000	75000.0000
03/08/2017	74.0000	74000.0000
04/08/2017	75.4000	75400.0000
05/08/2017	74.0500	74050.0000
06/08/2017	72.0500	72050.0000
07/08/2017	73.0500	73050.0000
08/08/2017	74.0500	74050.0000
09/08/2017	73.9000	73900.0000
10/08/2017	73.9000	73900.0000
11/08/2017	73.9000	73900.0000
12/08/2017	76.4000	76400.0000
13/08/2017	75.4000	75400.0000

14/08/2017	78.4000	78400.0000
15/08/2017	78.1500	78150.0000
16/08/2017	107.1500	107150.0000
17/08/2017	77.5000	77500.0000
18/08/2017	79.4500	79450.0000
19/08/2017	79.1250	79125.0000
20/08/2017	78.1250	78125.0000
21/08/2017	78.1250	78125.0000
22/08/2017	80.1250	80125.0000
23/08/2017	76.1000	76100.0000
24/08/2017	75.1000	75100.0000
25/08/2017	74.1000	74100.0000
26/08/2017	74.1300	74130.0000
27/08/2017	75.1300	75130.0000
28/08/2017	79.1300	79130.0000
29/08/2017	79.0250	79025.0000
30/08/2017	79.0250	79025.0000
31/08/2017	77.0250	77025.0000
01/09/2017	73.0250	73025.0000
02/09/2017	73.2000	73200.0000
03/09/2017	77.2000	77200.0000
04/09/2017	79.2000	79200.0000
05/09/2017	88.2000	88200.0000
06/09/2017	77.9000	77900.0000
07/09/2017	70.9000	70900.0000
08/09/2017	64.9000	64900.0000
09/09/2017	79.2000	79200.0000
10/09/2017	79.2000	79200.0000
11/09/2017	79.2000	79200.0000
12/09/2017	80.2500	80250.0000
13/09/2017	75.2500	75250.0000
14/09/2017	83.1000	83100.0000
15/09/2017	83.1000	83100.0000
16/09/2017	84.1250	84125.0000
17/09/2017	82.1250	82125.0000
18/09/2017	82.1250	82125.0000
19/09/2017		
20/09/2017	81.1500	81150.0000
21/09/2017	83.1500	83150.0000
22/09/2017	82.1200	82120.0000
23/09/2017	83.1200	83120.0000
24/09/2017	83.1200	83120.0000
25/09/2017	83.1200	83120.0000
26/09/2017	83.1200	83120.0000
27/09/2017	81.2300	81230.0000
28/09/2017	80.2300	80230.0000
29/09/2017	66.2300	66230.0000
30/09/2017	66.1300	66130.0000
01/10/2017	66.1300	66130.0000
02/10/2017	67.1300	67130.0000
03/10/2017	67.1000	67100.0000
04/10/2017	68.1000	68100.0000
05/10/2017	67.1000	67100.0000
06/10/2017	67.1000	67100.0000
07/10/2017	67.2000	67200.0000
08/10/2017	68.1300	68130.0000
09/10/2017	68.1300	68130.0000
10/10/2017	69.1300	69130.0000
11/10/2017	83.7000	83700.0000
12/10/2017	123.7000	123700.0000
13/10/2017	139.7000	139700.0000

14/10/2017	68.9660	68966.0000
15/10/2017	68.9660	68966.0000
16/10/2017	67.9660	67966.0000
17/10/2017	68.1500	68150.0000
18/10/2017	68.1500	68150.0000
19/10/2017	68.1500	68150.0000
20/10/2017	67.1500	67150.0000
21/10/2017	68.1000	68100.0000
22/10/2017	68.1000	68100.0000
23/10/2017	69.1000	69100.0000
24/10/2017	27.9000	27900.0000
25/10/2017	68.9000	68900.0000
26/10/2017	67.9000	67900.0000
27/10/2017	69.1000	69100.0000
28/10/2017	69.1000	69100.0000
29/10/2017	68.1000	68100.0000
30/10/2017	69.1000	69100.0000
31/10/2017	68.0500	68050.0000
01/11/2017	69.0500	69050.0000
02/11/2017	69.0500	69050.0000
03/11/2017	69.0500	69050.0000
04/11/2017	69.1300	69130.0000
05/11/2017	69.1300	69130.0000
06/11/2017	42.1300	42130.0000
07/11/2017	71.4000	71400.0000
08/11/2017	63.0000	63000.0000
09/11/2017	68.2000	68200.0000
10/11/2017	41.2000	41200.0000
11/11/2017	67.9500	67950.0000
12/11/2017	67.9500	67950.0000
13/11/2017	68.9500	68950.0000
14/11/2017	68.9500	68950.0000
15/11/2017	69.3600	69360.0000
16/11/2017	69.3600	69360.0000
17/11/2017	237.3600	237360.0000
18/11/2017	339.7000	339700.0000
19/11/2017	290.7000	290700.0000
20/11/2017	270.7000	270700.0000
21/11/2017	274.0000	274000.0000
22/11/2017	233.0000	233000.0000
23/11/2017	259.8000	259800.0000
24/11/2017	269.8000	269800.0000
25/11/2017	269.9700	269970.0000
26/11/2017	268.9700	268970.0000
27/11/2017	257.9700	257970.0000
28/11/2017	246.6750	246675.0000
29/11/2017	73.6750	73675.0000
30/11/2017	73.6750	73675.0000
01/12/2017	73.6750	73675.0000
02/12/2017	73.0660	73066.0000
03/12/2017	73.0660	73066.0000
04/12/2017	74.0660	74066.0000
05/12/2017	73.0250	73025.0000
06/12/2017	73.0250	73025.0000
07/12/2017	73.0250	73025.0000
08/12/2017	73.0250	73025.0000
09/12/2017	73.0300	73030.0000
10/12/2017	73.0300	73030.0000
11/12/2017	73.0300	73030.0000
12/12/2017	76.1000	76100.0000
13/12/2017	72.1300	72130.0000

14/12/2017	72.1300	72130.0000
15/12/2017	72.1300	72130.0000
16/12/2017	71.5800	71580.0000
17/12/2017	71.5800	71580.0000
18/12/2017	43.5800	43580.0000
19/12/2017	0.5800	580.0000
20/12/2017	2.5800	2580.0000
21/12/2017	13.5300	13530.0000
22/12/2017	43.5300	43530.0000
23/12/2017	43.5300	43530.0000
24/12/2017	43.5300	43530.0000
25/12/2017	43.5300	43530.0000
26/12/2017	43.5300	43530.0000
27/12/2017	45.5300	45530.0000
28/12/2017	43.6000	43600.0000
29/12/2017	43.6000	43600.0000
30/12/2017	43.6000	43600.0000
31/12/2017	43.6000	43600.0000