

Espanola Water Treatment

Large 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 Espanola



Ontario Clean Water Agency
Agence Ontarienne Des Eaux



Drinking-Water System Number: 210000746
Drinking-Water System Name: ESPANOLA DRINKING WATER SYSTEM
Drinking-Water System Owner: The Corporation of the Town of Espanola
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, 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 Espanola WTP shall not be operated to exceed a maximum flow of 10,500 m³/d to the distribution system.

The daily treated water maximum flow was 5,407 m³ in June and represents 51.5% of capacity.

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

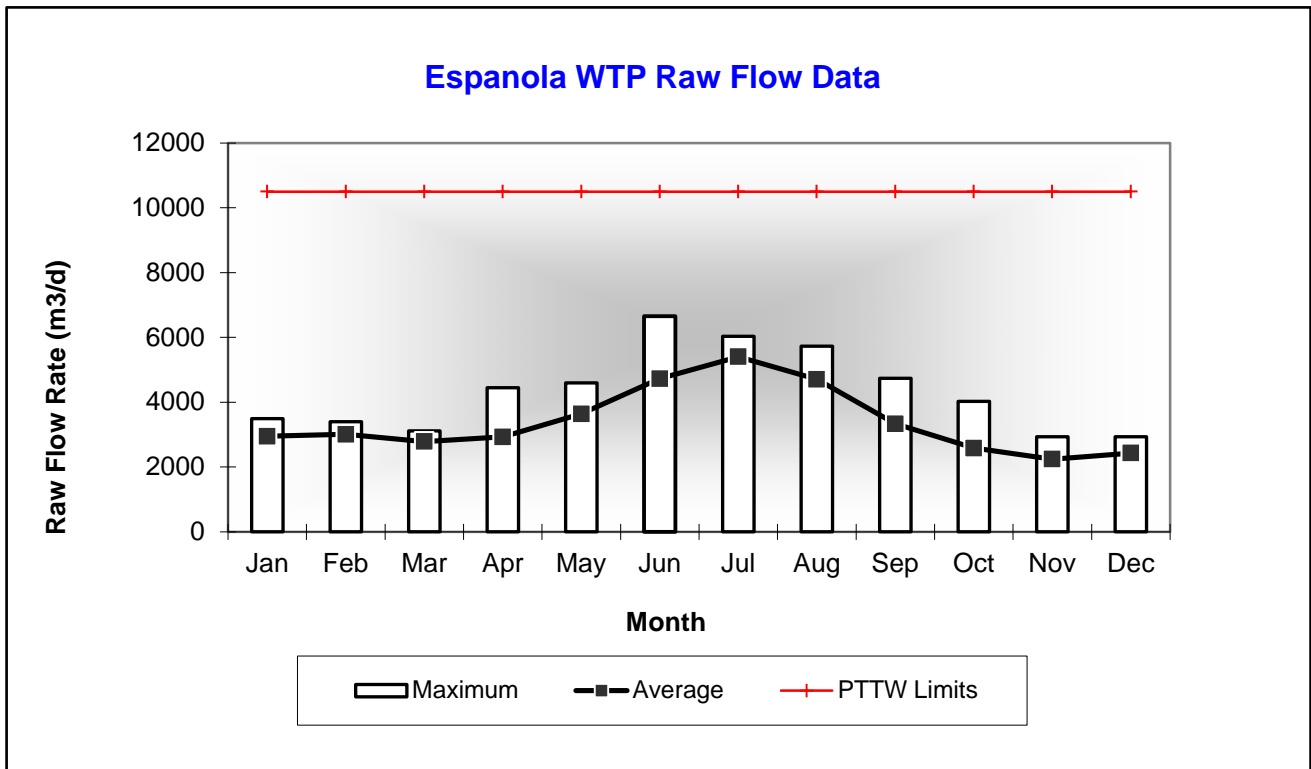
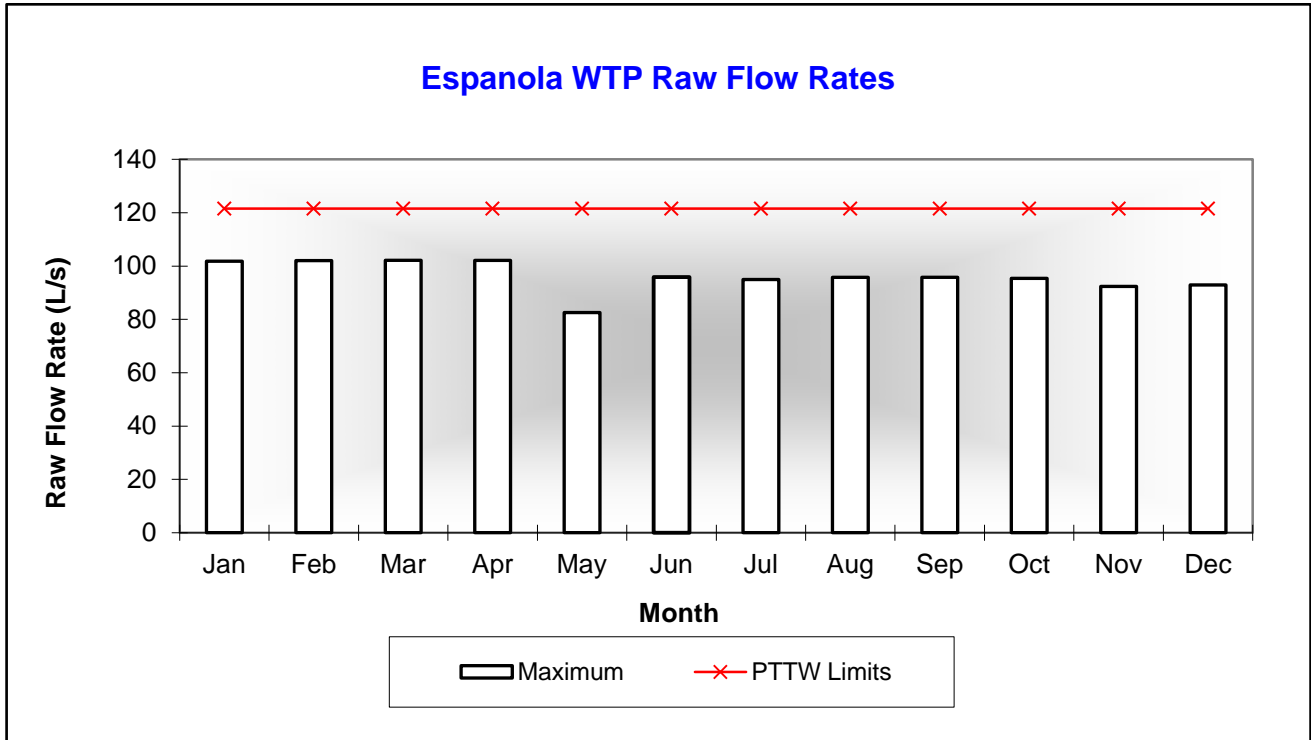
Flows - Raw

Daily raw maximum instantaneous flow is stated in the PTTW at a maximum rate of flow of 121.53 L/s and a maximum daily volume of 10,500.0 m³/d.

The average monthly raw water flow for this reporting period was 3,397.4 m³/d. The maximum daily flow was 6,650 m³/d representing 63.3% of water taking limits.

The quantity of raw water taken **did not** exceed any limits stipulated within the PTTW

<i>RAW WATER FLOW DATA – Apsey Lake</i>						
Month	Total Monthly Flow (m ³)	Average Flow (m ³ /d)	Maximum Flow (m ³ /d)	Maximum Flow Rate (L/s)	Limits	
					L/s (PTTW)	m ³ /d (PTTW)
January	91,431	2,949.39	3,492	101.78	121.53	10,500.0
February	84,146	3,005.21	3,3997	102.01	121.53	10,500.0
March	86,302.6	2,783.95	3,114	102.12	121.53	10,500.0
April	87,791	2,926.37	4,446	102.09	121.53	10,500.0
May	112,810	3,639.03	4,595	82.53	121.53	10,500.0
June	141,774	4,725.8	6,650	95.84	121.53	10,500.0
July	167,478	5,402.52	6,033	94.92	121.53	10,500.0
August	145,864	4,725.26	5,728	95.74	121.53	10,500.0
September	99,931	3,331.03	4,737	95.75	121.53	10,500.0
October	79,975	2,579.84	4,025	95.35	121.53	10,500.0
November	67,248	2,241.6	2,933	92.33	121.53	10,500.0
December	75,272	2,428.13	2,933	92.88	121.53	10,500.0
Total	1,240,053					
Average		3,397.4				
Maximum			6,650	102.12	121.53	10,500.0





Annual Raw Water Review

Raw Water Taking	Total Taking (m3/d)	Average Day (m3/d)	Max Day (m3/d)	Max Day % of PTTW allowable 10,500 (m3/d)
2018	1,240,053	3,397.4	6,650	63.3%
2017	1,092,559	2,993.31	5,150	49%
2016	1,214,480	3,318.3	6,784	64.9%
2015	1,251,029	3,427.5	7,187	68.4%
2014	1,154,739	3,198.7	7,111	67.7%

System Failures and Corrective Actions

The latest inspection of the drinking water facility took place on [January 24, 2019](#). Another inspection took place on [January 4, 2018](#). The facility scored [0/460](#) providing a rating of [100%](#)

AWQIs reported to the Ministry

Incident Date	Parameter	Result	Unit of Measure	Corrective Action/Comment	Corrective Action Date
n/a	n/a	n/a	n/a	n/a	n/a

SECTION 4: SECTION 11 REPORT

Information

Population Served 4,996 (Stats Canada 2016)	
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 Espanola, Municipal Office 100 Tudhope Street, Suite 2 Espanola, Ontario P5E 1S6
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?	NA



Indicate how you notified system users that your annual report is available, and is free of charge.	Public access/notice via a Public Library
Indicate if you notified system users that your annual report is available and is free of charge using an alternate method	Yes

Facility Description

The source of raw water for the Espanola Drinking Water System is Lake Apsey where the intake is located 135 m from shore at a depth of 12m.

The facility includes two solids contact clarifiers, three dual media filters, a clearwell, a pumping station with low lift pumps, three high lift pumps, two backwash pumps, backwash water holding tank with pumps discharging to the sanitary sewer system.

As raw water enters the facility, potassium permanganate is added to improve oxidation of iron and manganese. Alkalinity is boosted and pH is adjusted prior to coagulation and flocculation. After the water is through the reactivator clarifiers and 3 dual media filters, sodium hypochlorite is added for disinfection and hydrofluosilicic acid (fluoride) is added to the water. The water is then pushed through into the facility's reservoir. PH levels are again adjusted and then fed to the 2 clearwells. Prior to entering the distribution, polyphosphates (corrosion control) and sodium hypochlorite is added. The system is equipped with a 275KW diesel generator on site for emergency power.

The distribution includes an elevated storage tank, 5 bleeders with backflow prevention (air gap), a continuous chlorine analyzer and approximately 150 hydrants.

Chemicals Used

Poly Aluminum Chloride (PAC)	Coagulation
Magnafloc LT 27 AG (Polymer)	Coagulation aide
Sodium Hypochlorite 12%	Disinfection
Hydrofluorosilicic Acid (25% HFS)	Fluoride
Soda Ash	Alkalinity and pH control
Poly Ortho Phosphate	Corrosion control
Carbon Dioxide	Alkalinity and pH control
Potassium Permanganate	Oxidizing Agent
Sodium Hydroxide	Alkalinity and pH control

Significant Expenses

Significant expenses incurred to

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



Work Order	Completion Date	Comment
626089	17-Jan-18	Clarifier Repair Faulty drive motor was brought to Seimens in Sudbury for assessment. Motor could not be repaired, a new motor was purchased and installed
626796 & 1018553	07-Feb-18	Soda Ash New tubing purchased and installed for the soda ash system
626800 627523 & 663632	07-Feb-18 16-Feb-18 & 28-Feb-18	Fluoride System Spare pump tubes, fluoride probe and a fluoride reference probe were purchased. Bothe the fluoride probe and the fluoride reference probes were installed
662181	08-Feb-18	Post Chlorine New pump element was purchased and installed
701462	04-Apr-18	Generator Battery Replacement
742001	27-Jun-18	Filter 3 The effluent valve actuator motor burned out and was replaced
742024	23-May-18	Chlorine Analyzer 401 Purchased and installed a pH probe and a membrane cap
780055	25-May-18	Chlorine Analyzer 601 Purchased and installed a pH probe and a membrane cap
821192	26-Jun-18	Pump Analog Issues The trim chlorine and the polymer feed systems kept giving an analog fault error. NorTech came onsite and fixed the issues
823057	17-Aug-18	Filter Valve Filter #3 valve actuator program battery was replaced
860126 & 982098	26-Jul-18 & 07-Dec-18	Trim Chlorine System A pump rebuild kit and two fittings were purchased and installed
9831616		VFD Replacement Low lift pump1 VFD failed and was replaced.
1018553		Soda Ash New tubing installed for the soda ash system

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/Comment	Corrective Action Date
06-Sep-18	TC	1	CFU	AWQI#142565 for 1 TC in the TW sample. Operator took 2 sets of bactis (at the location, upstream and downstream) 24hrs apart.	10-Sep-18



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

	No. of Samples Collected	Range of E.Coli		Range of Total Coliform Results		Number of HPC Samples	Range of HPC Results	
		Min #	Max #	Min #	Max #		Min #	Max #
Raw Water	52	0	1	0	41	N/A	N/A	N/A
Treated Water	56	0	0	0	1	52	0	1
Distribution	210	0	0	0	0	52	0	169

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

Parameter	No. of Samples Collected*	Range of Results		Units of Measure
		Minimum	Maximum	
Turbidity - Filt1	8760	0.02	0.018	NTU
Turbidity - Filt2	8760	0	0.41	NTU
Turbidity - Filt3	8760	0	0.36	NTU
Free Chlorine Residual - TW	8760	0.60	3.29	mg/L
Fluoride Residual - TW	8760	0	1.37	mg/L
Fluoride Residual - TW	80	0	0.73	mg/L
Free Chlorine Residual – DW	8760	0.195	1.86	mg/L
Free Chlorine Residual – DW 1	92	0.62	1.52	mg/L
Free Chlorine Residual – DW 2	101	0.36	1.14	mg/L
Free Chlorine Residual – DW 3	100	0.68	1.47	mg/L
Free Chlorine Residual – DW 4	55	0.45	1.44	mg/L

*8760 is used as number of samples for online data.

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

Date of legal instrument issued	Parameter and limits	Month Sampled	Day Sampled	Result	Unit of Measure
N/A	N/A	N/A	N/A	N/A	N/A
		Annual Average			mg/L

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

TREATED WATER	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
				MAC	1/2 MAC
Antimony: Sb (ug/L) - TW	2018/01/16	<MDL 0.02	6.0	No	No
Arsenic: As (ug/L) - TW	2018/01/16	<MDL 0.2	25.0	No	No
Barium: Ba (ug/L) - TW	2018/01/16	4.47	1000.0	No	No
Boron: B (ug/L) - TW	2018/01/16	10.0	5000.0	No	No
Cadmium: Cd (ug/L) - TW	2018/01/16	<MDL 0.003	5.0	No	No
Chromium: Cr (ug/L) - TW	2018/01/16	0.13	50.0	No	No



Mercury: Hg (ug/L) - TW	2018/01/16	<MDL 0.01	1.0	No	No
Selenium: Se (ug/L) - TW	2018/01/16	0.05	10.0	No	No
Uranium: U (ug/L) - TW	2018/01/16	0.067	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	2017/02/15	0.37	1.5	No	No
Nitrite (mg/L) - TW	2018/01/16	<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	2018/07/03	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2018/10/09	<MDL 0.003	1.0	No	No
Nitrate (mg/L) - TW	2018/01/16	0.136	10.0	No	No
Nitrate (mg/L) - TW	2018/04/09	0.136	10.0	No	No
Nitrate (mg/L) - TW	2018/07/03	0.084	10.0	No	No
Nitrate (mg/L) - TW	2018/10/09	0.1	10.0	No	No
Sodium: Na (mg/L) - TW	2017/02/15	19.6	20*	No	Yes

*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)	6	0.02	0.14	N/A	N/A
Distribution - Alkalinity (mg/L)	6	30	46	N/A	N/A
Distribution - pH In-House	6	7.20	7.38	N/A	N/A

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

TREATED WATER	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Alachlor (ug/L) - TW	2018/01/16	<MDL 0.02	5.00	No	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	2018/01/16	<MDL 0.01	5.00	No	No
Azinphos-methyl (ug/L) - TW	2018/01/16	<MDL 0.05	20.00	No	No
Benzene (ug/L) - TW	2018/01/16	<MDL 0.32	5.00	No	No
Benzo(a)pyrene (ug/L) - TW	2018/01/16	<MDL 0.004	0.01	No	No
Bromoxynil (ug/L) - TW	2018/01/16	<MDL 0.33	5.00	No	No
Carbaryl (ug/L) - TW	2018/01/16	<MDL 0.05	90.00	No	No
Carbofuran (ug/L) - TW	2018/01/16	<MDL 0.01	90.00	No	No
Carbon Tetrachloride (ug/L) - TW	2018/01/16	<MDL 0.16	5.00	No	No
Chlorpyrifos (ug/L) - TW	2018/01/16	<MDL 0.02	90.00	No	No
Diazinon (ug/L) - TW	2018/01/16	<MDL 0.02	20.00	No	No
Dicamba (ug/L) - TW	2018/01/16	<MDL 0.2	120.00	No	No



1,2-Dichlorobenzene (ug/L) - TW	2018/01/16	<MDL 0.41	200.00	No	No
1,4-Dichlorobenzene (ug/L) - TW	2018/01/16	<MDL 0.36	5.00	No	No
1,2-Dichloroethane (ug/L) - TW	2018/01/16	<MDL 0.35	5.00	No	No
1,1-Dichloroethylene (ug/L) - TW	2018/01/16	<MDL 0.33	14.00	No	No
Dichloromethane (Methylene Chloride) (ug/L) - TW	2018/01/16	<MDL 0.35	50.00	No	No
2,4-Dichlorophenol (ug/L) - TW	2018/01/16	<MDL 0.15	900.00	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	2018/01/16	<MDL 0.19	100.00	No	No
Diclofop-methyl (ug/L) - TW	2018/01/16	<MDL 0.4	9.00	No	No
Dimethoate (ug/L) - TW	2018/01/16	<MDL 0.03	20.00	No	No
Diquat (ug/L) - TW	2018/01/16	<MDL 1.0	70.00	No	No
Diuron (ug/L) - TW	2018/01/16	<MDL 0.03	150.00	No	No
Glyphosate (ug/L) - TW	2018/01/16	<MDL 1.0	280.00	No	No
Malathion (ug/L) - TW	2018/01/16	<MDL 0.02	190.00	No	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (mg/L) - TW	2018/01/16	<MDL 0.01	N/A	N/A	N/A
Metolachlor (ug/L) - TW	2018/01/16	<MDL 0.02	50.00	No	No
Metribuzin (ug/L) - TW	2018/01/16	<MDL 0.3	80.00	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW	2018/01/16	<MDL 1.0	80.00	No	No
Paraquat (ug/L) - TW	2018/01/16	<MDL 0.04	10.00	No	No
PCB (ug/L) - TW	2018/01/16	<MDL 0.15	3.00	No	No
Pentachlorophenol (ug/L) - TW	2018/01/16	<MDL 0.01	60.00	No	No
Phorate (ug/L) - TW	2018/01/16	<MDL 1.0	2.00	No	No
Picloram (ug/L) - TW	2018/01/16	<MDL 0.03	190.00	No	No
Prometryne (ug/L) - TW	2018/01/16	<MDL 0.01	1.00	No	No
Simazine (ug/L) - TW	2018/01/16	<MDL 0.01	10.00	No	No
Terbufos (ug/L) - TW	2018/01/16	<MDL 0.35	1.00	No	No
Tetrachloroethylene (ug/L) - TW	2018/01/16	<MDL 0.2	30.00	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	2018/01/16	<MDL 0.01	100.00	No	No
Triallate (ug/L) - TW	2018/01/16	<MDL 0.44	230.00	No	No
Trichloroethylene (ug/L) - TW	2018/01/16	<MDL 0.25	50.00	No	No
2,4,6-Trichlorophenol (ug/L) - TW	2018/01/16	<MDL 0.12	5.00	No	No
Trifluralin (ug/L) - TW	2018/01/16	<MDL 0.02	45.00	No	No
Vinyl Chloride (ug/L) - TW	2018/01/16	<MDL 0.17	2.00	No	No
DISTRIBUTION WATER					
Trihalomethane: Total (ug/L) Annual Average - DW	2018/12/31	33.67	100.00	No	No
HAA Total (ug/L) Annual Average – DW	2018/12/31	32.7		N/A	N/A



SECTION 5: RAW WATER SUBMISSIONS

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

The screenshot shows a web page with the Ontario logo at the top left. Below the logo, the text reads "Location: WTRS / WT DATA / Input WT Record" and "WTRS-WT-008". A green-bordered box contains the message "Water Taking Data submitted successfully." Below this, a "Confirmation:" section contains the following text: "Thank you for submitting your water taking data online.", "Permit Number: 8723-AVXQ59", "Permit Holder: THE CORPORATION OF THE MUNICIPALITY OF ESPANOLA.", "Received on: Feb 13, 2019 2:11 PM", and "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 button labeled "Return to Main Page" is located at the bottom of the confirmation box. In the bottom right corner of the page, the text reads "TOWN2 ESPANOLA2 | 2019/02/13", "version: v4.5.0.21 (build#: 22)", and "Last modified: 2018/09/18". At the bottom left, the Ontario logo is followed by "This site maintained by the Government of Ontario". At the bottom right, the text reads "©2019 Queen's Printer for Ontario".

SECTION 6: CONCLUSION

The Espanola 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 Espanola 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	Milligrams 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 02/28/2018

Facility: ESPANOLA DRINKING WATER SYSTEM-5758
 Tag: Raw Flow: Sum (m3/d)
 Tag Group: Raw Water

Permit#: 3154-7E7N9V
 Source Name: Lake Apesy
 Source: Lake
 Type:
 Purpose: Municipal

Coordinate Zone: 17
 Easting: 439966
 Northing: 5119623
 Method deter: Metered

<u>Date Measured</u>	<u>Value (m³/d)</u>	<u>Value (Litres)</u>
01/01/2018	2828.0000	2828000.0000
02/01/2018	2537.0000	2537000.0000
03/01/2018	3364.0000	3364000.0000
04/01/2018	2614.0000	2614000.0000
05/01/2018	3415.0000	3415000.0000
06/01/2018	2712.0000	2712000.0000
07/01/2018	2791.0000	2791000.0000
08/01/2018	3156.0000	3156000.0000
09/01/2018	2753.0000	2753000.0000
10/01/2018	2849.0000	2849000.0000
11/01/2018	2647.0000	2647000.0000
12/01/2018	2953.0000	2953000.0000
13/01/2018	3215.0000	3215000.0000
14/01/2018	3054.0000	3054000.0000
15/01/2018	2844.0000	2844000.0000
16/01/2018	2933.0000	2933000.0000
17/01/2018	3492.0000	3492000.0000
18/01/2018	2733.0000	2733000.0000
19/01/2018	3297.0000	3297000.0000
20/01/2018	2903.0000	2903000.0000
21/01/2018	2898.0000	2898000.0000
22/01/2018	2627.0000	2627000.0000
23/01/2018	3022.0000	3022000.0000
24/01/2018	2982.0000	2982000.0000
25/01/2018	3215.0000	3215000.0000
26/01/2018	2689.0000	2689000.0000
27/01/2018	3330.0000	3330000.0000
28/01/2018	2993.0000	2993000.0000
29/01/2018	2899.0000	2899000.0000
30/01/2018	3189.0000	3189000.0000
31/01/2018	2497.0000	2497000.0000
01/02/2018	3370.0000	3370000.0000
02/02/2018	2797.0000	2797000.0000
03/02/2018	3215.0000	3215000.0000
04/02/2018	2744.0000	2744000.0000
05/02/2018	3196.0000	3196000.0000
06/02/2018	3143.0000	3143000.0000
07/02/2018	2783.0000	2783000.0000
08/02/2018	3239.0000	3239000.0000
09/02/2018	2655.0000	2655000.0000
10/02/2018	3333.0000	3333000.0000
11/02/2018	2907.0000	2907000.0000

12/02/2018	3008.0000	3008000.0000
13/02/2018	2936.0000	2936000.0000
14/02/2018	3111.0000	3111000.0000
15/02/2018	2943.0000	2943000.0000
16/02/2018	3234.0000	3234000.0000
17/02/2018	2847.0000	2847000.0000
18/02/2018	3065.0000	3065000.0000
19/02/2018	2621.0000	2621000.0000
20/02/2018	3397.0000	3397000.0000
21/02/2018	3029.0000	3029000.0000
22/02/2018	2917.0000	2917000.0000
23/02/2018	2946.0000	2946000.0000
24/02/2018	3024.0000	3024000.0000
25/02/2018	2922.0000	2922000.0000
26/02/2018	2911.0000	2911000.0000
27/02/2018	2954.0000	2954000.0000
28/02/2018	2899.0000	2899000.0000

Ontario Clean Water Agency
Annual Water Taking and Transfer Report
 From 03/01/2018 To 12/31/2018

Facility: ESPANOLA DRINKING WATER SYSTEM-5758
 Tag: Raw Flow: Sum (m3/d)
 Tag Group: Raw Water

Permit#: 8723-AVXQ59
 Source Name: Lake Apsey
 Source: Lake
 Type:
 Purpose: Municipal

Coordinate Zone: 17
 Easting: 439966
 Northing: 5119623
 Method deter: Metered

Date Measured	Value (m³/d)	Value (Litres)
01/03/2018	2794.0000	2794000.0000
02/03/2018	2819.0000	2819000.0000
03/03/2018	2680.0000	2680000.0000
04/03/2018	2972.0000	2972000.0000
05/03/2018	2717.0000	2717000.0000
06/03/2018	2952.0000	2952000.0000
07/03/2018	2773.0000	2773000.0000
08/03/2018	2382.0000	2382000.0000
09/03/2018	2936.0000	2936000.0000
10/03/2018	2993.0000	2993000.0000
11/03/2018	2365.6000	2365600.0000
12/03/2018	3114.0000	3114000.0000
13/03/2018	2907.0000	2907000.0000
14/03/2018	2707.0000	2707000.0000
15/03/2018	2374.0000	2374000.0000
16/03/2018	3105.0000	3105000.0000
17/03/2018	2990.0000	2990000.0000
18/03/2018	2655.0000	2655000.0000
19/03/2018	2724.0000	2724000.0000
20/03/2018	2551.0000	2551000.0000
21/03/2018	3107.0000	3107000.0000
22/03/2018	2564.0000	2564000.0000
23/03/2018	2997.0000	2997000.0000
24/03/2018	2626.0000	2626000.0000
25/03/2018	2928.0000	2928000.0000
26/03/2018	2528.0000	2528000.0000
27/03/2018	3020.0000	3020000.0000
28/03/2018	2599.0000	2599000.0000
29/03/2018	2934.0000	2934000.0000
30/03/2018	2681.0000	2681000.0000
31/03/2018	2808.0000	2808000.0000
01/04/2018	2398.0000	2398000.0000
02/04/2018	3048.0000	3048000.0000
03/04/2018	2310.0000	2310000.0000
04/04/2018	3047.0000	3047000.0000
05/04/2018	2480.0000	2480000.0000
06/04/2018	2388.0000	2388000.0000
07/04/2018	3086.0000	3086000.0000
08/04/2018	2645.0000	2645000.0000
09/04/2018	2832.0000	2832000.0000
10/04/2018	2521.0000	2521000.0000
11/04/2018	3024.0000	3024000.0000

12/04/2018	2372.0000	2372000.0000
13/04/2018	2851.0000	2851000.0000
14/04/2018	2750.0000	2750000.0000
15/04/2018	2636.0000	2636000.0000
16/04/2018	2904.0000	2904000.0000
17/04/2018	2989.0000	2989000.0000
18/04/2018	3008.0000	3008000.0000
19/04/2018	2238.0000	2238000.0000
20/04/2018	3177.0000	3177000.0000
21/04/2018	3171.0000	3171000.0000
22/04/2018	2412.0000	2412000.0000
23/04/2018	2981.0000	2981000.0000
24/04/2018	4446.0000	4446000.0000
25/04/2018	4203.0000	4203000.0000
26/04/2018	2961.0000	2961000.0000
27/04/2018	3570.0000	3570000.0000
28/04/2018	2870.0000	2870000.0000
29/04/2018	3023.0000	3023000.0000
30/04/2018	3450.0000	3450000.0000
01/05/2018	3510.0000	3510000.0000
02/05/2018	3096.0000	3096000.0000
03/05/2018	2770.0000	2770000.0000
04/05/2018	3202.0000	3202000.0000
05/05/2018	3143.0000	3143000.0000
06/05/2018	2636.0000	2636000.0000
07/05/2018	3538.0000	3538000.0000
08/05/2018	3377.0000	3377000.0000
09/05/2018	3495.0000	3495000.0000
10/05/2018	2509.0000	2509000.0000
11/05/2018	3519.0000	3519000.0000
12/05/2018	3123.0000	3123000.0000
13/05/2018	3423.0000	3423000.0000
14/05/2018	4125.0000	4125000.0000
15/05/2018	3434.0000	3434000.0000
16/05/2018	3437.0000	3437000.0000
17/05/2018	4096.0000	4096000.0000
18/05/2018	4007.0000	4007000.0000
19/05/2018	2903.0000	2903000.0000
20/05/2018	3396.0000	3396000.0000
21/05/2018	4338.0000	4338000.0000
22/05/2018	4269.0000	4269000.0000
23/05/2018	4230.0000	4230000.0000
24/05/2018	4514.0000	4514000.0000
25/05/2018	3982.0000	3982000.0000
26/05/2018	3449.0000	3449000.0000
27/05/2018	4054.0000	4054000.0000
28/05/2018	4595.0000	4595000.0000
29/05/2018	4277.0000	4277000.0000
30/05/2018	4443.0000	4443000.0000
31/05/2018	3920.0000	3920000.0000
01/06/2018	3240.0000	3240000.0000
02/06/2018	3919.0000	3919000.0000
03/06/2018	3015.0000	3015000.0000
04/06/2018	3437.0000	3437000.0000
05/06/2018	3505.0000	3505000.0000
06/06/2018	4026.0000	4026000.0000
07/06/2018	4347.0000	4347000.0000
08/06/2018	4059.0000	4059000.0000
09/06/2018	5088.0000	5088000.0000
10/06/2018	4600.0000	4600000.0000
11/06/2018	5220.0000	5220000.0000

12/06/2018	4941.0000	4941000.0000
13/06/2018	4681.0000	4681000.0000
14/06/2018	4311.0000	4311000.0000
15/06/2018	4925.0000	4925000.0000
16/06/2018	4253.0000	4253000.0000
17/06/2018	4965.0000	4965000.0000
18/06/2018	4601.0000	4601000.0000
19/06/2018	4949.0000	4949000.0000
20/06/2018	5004.0000	5004000.0000
21/06/2018	4785.0000	4785000.0000
22/06/2018	5650.0000	5650000.0000
23/06/2018	5351.0000	5351000.0000
24/06/2018	4662.0000	4662000.0000
25/06/2018	5027.0000	5027000.0000
26/06/2018	5908.0000	5908000.0000
27/06/2018	6650.0000	6650000.0000
28/06/2018	6448.0000	6448000.0000
29/06/2018	5769.0000	5769000.0000
30/06/2018	4438.0000	4438000.0000
01/07/2018	4089.0000	4089000.0000
02/07/2018	5055.0000	5055000.0000
03/07/2018	5667.0000	5667000.0000
04/07/2018	5960.0000	5960000.0000
05/07/2018	6029.0000	6029000.0000
06/07/2018	6010.0000	6010000.0000
07/07/2018	5658.0000	5658000.0000
08/07/2018	5487.0000	5487000.0000
09/07/2018	6016.0000	6016000.0000
10/07/2018	5700.0000	5700000.0000
11/07/2018	5799.0000	5799000.0000
12/07/2018	5373.0000	5373000.0000
13/07/2018	4410.0000	4410000.0000
14/07/2018	4871.0000	4871000.0000
15/07/2018	5576.0000	5576000.0000
16/07/2018	6003.0000	6003000.0000
17/07/2018	5889.0000	5889000.0000
18/07/2018	5165.0000	5165000.0000
19/07/2018	5502.0000	5502000.0000
20/07/2018	6033.0000	6033000.0000
21/07/2018	5257.0000	5257000.0000
22/07/2018	5666.0000	5666000.0000
23/07/2018	5069.0000	5069000.0000
24/07/2018	4936.0000	4936000.0000
25/07/2018	4648.0000	4648000.0000
26/07/2018	5001.0000	5001000.0000
27/07/2018	4676.0000	4676000.0000
28/07/2018	5599.0000	5599000.0000
29/07/2018	4953.0000	4953000.0000
30/07/2018	5612.0000	5612000.0000
31/07/2018	5769.0000	5769000.0000
01/08/2018	5578.0000	5578000.0000
02/08/2018	5563.0000	5563000.0000
03/08/2018	5282.0000	5282000.0000
04/08/2018	5465.0000	5465000.0000
05/08/2018	4178.0000	4178000.0000
06/08/2018	5050.0000	5050000.0000
07/08/2018	3801.0000	3801000.0000
08/08/2018	3730.0000	3730000.0000
09/08/2018	4592.0000	4592000.0000
10/08/2018	5501.0000	5501000.0000
11/08/2018	4399.0000	4399000.0000

12/08/2018	4439.0000	4439000.0000
13/08/2018	5702.0000	5702000.0000
14/08/2018	5347.0000	5347000.0000
15/08/2018	5370.0000	5370000.0000
16/08/2018	5244.0000	5244000.0000
17/08/2018	5728.0000	5728000.0000
18/08/2018	5709.0000	5709000.0000
19/08/2018	5716.0000	5716000.0000
20/08/2018	4871.0000	4871000.0000
21/08/2018	4873.0000	4873000.0000
22/08/2018	4165.0000	4165000.0000
23/08/2018	4066.0000	4066000.0000
24/08/2018	4460.0000	4460000.0000
25/08/2018	4138.0000	4138000.0000
26/08/2018	4011.0000	4011000.0000
27/08/2018	4052.0000	4052000.0000
28/08/2018	4004.0000	4004000.0000
29/08/2018	3933.0000	3933000.0000
30/08/2018	3725.0000	3725000.0000
31/08/2018	3202.0000	3202000.0000
01/09/2018	3017.0000	3017000.0000
02/09/2018	3314.0000	3314000.0000
03/09/2018	3462.0000	3462000.0000
04/09/2018	3802.0000	3802000.0000
05/09/2018	3595.0000	3595000.0000
06/09/2018	3100.0000	3100000.0000
07/09/2018	3556.0000	3556000.0000
08/09/2018	3403.0000	3403000.0000
09/09/2018	2988.0000	2988000.0000
10/09/2018	3539.0000	3539000.0000
11/09/2018	3290.0000	3290000.0000
12/09/2018	3378.0000	3378000.0000
13/09/2018	3554.0000	3554000.0000
14/09/2018	3510.0000	3510000.0000
15/09/2018	3505.0000	3505000.0000
16/09/2018	4004.0000	4004000.0000
17/09/2018	3509.0000	3509000.0000
18/09/2018	4315.0000	4315000.0000
19/09/2018	3251.0000	3251000.0000
20/09/2018	3029.0000	3029000.0000
21/09/2018	3532.0000	3532000.0000
22/09/2018	2658.0000	2658000.0000
23/09/2018	2660.0000	2660000.0000
24/09/2018	2278.0000	2278000.0000
25/09/2018	4737.0000	4737000.0000
26/09/2018	3185.0000	3185000.0000
27/09/2018	3268.0000	3268000.0000
28/09/2018	3527.0000	3527000.0000
29/09/2018	2297.0000	2297000.0000
30/09/2018	2668.0000	2668000.0000
01/10/2018	4025.0000	4025000.0000
02/10/2018	2100.0000	2100000.0000
03/10/2018	3163.0000	3163000.0000
04/10/2018	2558.0000	2558000.0000
05/10/2018	3251.0000	3251000.0000
06/10/2018	2065.0000	2065000.0000
07/10/2018	2094.0000	2094000.0000
08/10/2018	2523.0000	2523000.0000
09/10/2018	3283.0000	3283000.0000
10/10/2018	2617.0000	2617000.0000
11/10/2018	2608.0000	2608000.0000

12/10/2018	2832.0000	2832000.0000
13/10/2018	1879.0000	1879000.0000
14/10/2018	2812.0000	2812000.0000
15/10/2018	2920.0000	2920000.0000
16/10/2018	2106.0000	2106000.0000
17/10/2018	2955.0000	2955000.0000
18/10/2018	2373.0000	2373000.0000
19/10/2018	2977.0000	2977000.0000
20/10/2018	1962.0000	1962000.0000
21/10/2018	2906.0000	2906000.0000
22/10/2018	2472.0000	2472000.0000
23/10/2018	2815.0000	2815000.0000
24/10/2018	2478.0000	2478000.0000
25/10/2018	2442.0000	2442000.0000
26/10/2018	2305.0000	2305000.0000
27/10/2018	1771.0000	1771000.0000
28/10/2018	2458.0000	2458000.0000
29/10/2018	2069.0000	2069000.0000
30/10/2018	2826.0000	2826000.0000
31/10/2018	2330.0000	2330000.0000
01/11/2018	2280.0000	2280000.0000
02/11/2018	2727.0000	2727000.0000
03/11/2018	1024.0000	1024000.0000
04/11/2018	1672.0000	1672000.0000
05/11/2018	2216.0000	2216000.0000
06/11/2018	2527.0000	2527000.0000
07/11/2018	2589.0000	2589000.0000
08/11/2018	2346.0000	2346000.0000
09/11/2018	2164.0000	2164000.0000
10/11/2018	1365.0000	1365000.0000
11/11/2018	2090.0000	2090000.0000
12/11/2018	2436.0000	2436000.0000
13/11/2018	1917.0000	1917000.0000
14/11/2018	2933.0000	2933000.0000
15/11/2018	1789.0000	1789000.0000
16/11/2018	2608.0000	2608000.0000
17/11/2018	2601.0000	2601000.0000
18/11/2018	2165.0000	2165000.0000
19/11/2018	2602.0000	2602000.0000
20/11/2018	1764.0000	1764000.0000
21/11/2018	2661.0000	2661000.0000
22/11/2018	1936.0000	1936000.0000
23/11/2018	2557.0000	2557000.0000
24/11/2018	2207.0000	2207000.0000
25/11/2018	2445.0000	2445000.0000
26/11/2018	2353.0000	2353000.0000
27/11/2018	2304.0000	2304000.0000
28/11/2018	2482.0000	2482000.0000
29/11/2018	2140.0000	2140000.0000
30/11/2018	2348.0000	2348000.0000
01/12/2018	2561.0000	2561000.0000
02/12/2018	1937.0000	1937000.0000
03/12/2018	2785.0000	2785000.0000
04/12/2018	1431.0000	1431000.0000
05/12/2018	1954.0000	1954000.0000
06/12/2018	2346.0000	2346000.0000
07/12/2018	2741.0000	2741000.0000
08/12/2018	2507.0000	2507000.0000
09/12/2018	2451.0000	2451000.0000
10/12/2018	2283.0000	2283000.0000
11/12/2018	2419.0000	2419000.0000

12/12/2018	2303.0000	2303000.0000
13/12/2018	2363.0000	2363000.0000
14/12/2018	2518.0000	2518000.0000
15/12/2018	2285.0000	2285000.0000
16/12/2018	2827.0000	2827000.0000
17/12/2018	2286.0000	2286000.0000
18/12/2018	2904.0000	2904000.0000
19/12/2018	2164.0000	2164000.0000
20/12/2018	2324.0000	2324000.0000
21/12/2018	2539.0000	2539000.0000
22/12/2018	2870.0000	2870000.0000
23/12/2018	2717.0000	2717000.0000
24/12/2018	2384.0000	2384000.0000
25/12/2018	2789.0000	2789000.0000
26/12/2018	1904.0000	1904000.0000
27/12/2018	2804.0000	2804000.0000
28/12/2018	2142.0000	2142000.0000
29/12/2018	2933.0000	2933000.0000
30/12/2018	2195.0000	2195000.0000
31/12/2018	2606.0000	2606000.0000