

ANNUAL REPORT

ONTARIO REGULATION 170/03
SECTION 11

COLGAN DRINKING WATER SYSTEM



FOR THE PERIOD:
JANUARY 1, 2018 – DECEMBER 31, 2018

*Prepared for the Corporation of the Township of Adjala-Tosorontio
by the Ontario Clean Water Agency*



Drinking-Water System Number:	220009933
Drinking-Water System Name:	Colgan Drinking Water System
Drinking-Water System Owner:	The Corporation of the Township of Adjala-Tosorontio
Drinking-Water System Category:	Small Municipal Residential
Period being reported:	January 1, 2018 to December 31, 2018

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.

Summary Report is available for inspection at the Township of Adjala-Tosorontio Municipal Office at 7855 Side Road 30, Alliston, ON or on the following website: <http://www.adjtos.ca>

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
Not applicable	Not applicable

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?

Not Applicable

Indicate how you notified system users that your annual report is available, and is free of charge.

- Public access/notice via the web**
- Public access/notice via Government Office**
- Public access/notice via a newspaper**
- Public access/notice via Public Request**
- Public access/notice via a Public Library**
- Public access/notice via other method**



Description of Drinking-Water System:

The Colgan water system is classified as a Small Municipal Residential water system with 72 services including the school in the community of Colgan. Water is supplied via three (3) municipal wells, two (2) pumphouses and an in-ground reservoir. Inspections and maintenance duties are conducted by Ontario Clean Water Agency staff on a regular basis to maintain compliance with Ontario Regulation 170/03 to ensure that Colgan’s water supply is safe to drink.

List of water treatment chemicals used during the reporting period:

- Ultraviolet Light, Disinfection
- Sodium Hypochlorite 12% Solution NSF, Primary Disinfection
- Sodium Silicate NSF, Iron Sequestering

Significant expenses incurred to:

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

Description of significant expenses incurred:

1. Drinking Water Quality Management Standard third-party certified audit of OCWA Quality & Environmental Management System.
2. Annual calibrations of handheld meters, backflow preventers, flow meters, etc.
3. Laboratory sample bottles and analysis.
4. Permit to Take Water renewal.
5. Purchased UV bulbs and sleeves.
6. Repaired chlorine dosing system.
7. Rebuilt sodium silicate pumps.
8. Repaired Singer flow control valves.
9. Repaired generators.
10. Repaired water service leak.
11. Replaced chlorine fill line.

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 (yyyy/mm/dd)	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date (yyyy/mm/dd)
Not Applicable					

Table 1: Microbiological testing done under the Schedule 11 of Regulation 170/03 during this reporting period.

Location	Number of Samples	Range of E. Coli or Fecal Results		Range of Total Coliform Results		Number of HPC Samples	Range of HPC Samples	
		Min	Max	Min	Max		Min	Max
Raw - RW1	12	0	0	0	0	N/A	N/A	N/A
Raw - RW2	12	0	0	0	0	N/A	N/A	N/A
Raw - RW3	12	0	0	0	0	N/A	N/A	N/A
Distribution - DW	27	0	0	0	0	27	0	4

Note:

- RW1 – Raw Water Well CW1
- RW2 – Raw Water Well CW2
- RW3 – Raw Water Well CW3

Table 2: Operational testing done under Schedule 7 of Regulation 170/03 during the period covered by this Annual Report.

Location & Test	Number of Samples	Range of Results	
		Minimum	Maximum
Turbidity, Raw CW1 (Grab) [NTU]	12	0.25	0.66
Turbidity, Raw CW2 (Grab) [NTU]	12	0.23	0.44
Turbidity, Raw CW3 (Grab) [NTU]	12	0.27	0.39
Free Chlorine Residual, Treated (Continuous) [mg/L]	8760	1.59	3.85
Free Chlorine Residual, Treated (Grab) [mg/L]	162	1.73	2.70
Total Chlorine Residual, Treated (Grab) [mg/L]	161	1.97	3.00
Free Chlorine Residual, Distribution (Grab) [mg/L]	29	1.59	2.09

Note: The number of samples used for continuous monitoring units is 8760.

Table 3: 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	Date Sampled	Result	Unit of Measure
Not Applicable				

Table 4: Summary of Inorganic parameters tested during this reporting period or the most recent sample results

Parameter	Sample Date (yyyy/mm/dd)	Sample Result	Maximum Allowable Concentration (MAC)	Number of Exceedances	
				MAC	½ MAC
Antimony: Sb (µg/L) - TW	2014/10/07	< 0.02	6.0	No	No
Arsenic: As (µg/L) - TW	2014/10/07	0.5	10.0	No	No
Barium: Ba (µg/L) - TW	2014/10/07	88.2	1000.0	No	No
Boron: B (µg/L) - TW	2014/10/07	6.9	5000.0	No	No
Cadmium: Cd (µg/L) - TW	2014/10/07	0.003	5.0	No	No
Chromium: Cr (µg/L) - TW	2014/10/07	0.23	50.0	No	No
Mercury: Hg (µg/L) - TW	2014/10/07	< 0.01	1.0	No	No
Selenium: Se (µg/L) - TW	2014/10/07	< 1.0	50.0	No	No
Uranium: U (µg/L) - TW	2014/10/07	0.185	20.0	No	No
Fluoride (mg/L) - TW	2014/10/07	0.08	1.5	No	No
Nitrite (mg/L) - TW	2018/01/17	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2018/04/24	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2018/07/17	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2018/10/22	<MDL 0.003	1.0	No	No
Nitrate (mg/L) - TW	2018/01/17	<MDL 0.006	10.0	No	No
Nitrate (mg/L) - TW	2018/04/24	<MDL 0.006	10.0	No	No

Parameter	Sample Date (yyyy/mm/dd)	Sample Result	Maximum Allowable Concentration (MAC)	Number of Exceedances	
				MAC	½ MAC
Nitrate (mg/L) - TW	2018/07/17	<MDL 0.006	10.0	No	No
Nitrate (mg/L) - TW	2018/10/22	<MDL 0.006	10.0	No	No
Sodium: Na (mg/L) - TW	2014/10/07	7.87	20*	No	No

Note: MDL = Minimum Detection Limit

*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.

Table 5: Summary of lead testing under Schedule 15.1 during this reporting period

Location Type	Number of Samples	Range of Lead Results		MAC	Number of Exceedances
		Minimum	Maximum		
Lead – Plumbing (µg/L)	Not Applicable - Relief from all Plumbing Requirements*				
Lead – Distribution** (µg/L)	2	0.03	0.14	10.0	No

Note: The Alkalinity results for 2018 were 194 and 206 mg/L as CaCO₃.

*This system qualifies for the plumbing exemption as per O. Regulation 170/03 Schedule 15.1-5 (9) (10).

**Distribution lead samples are taken every 36 months. The next set of distribution lead samples is scheduled for 2021.

Table 6: Summary of Organic parameters sampled during this reporting period or the most recent sample results

Parameter	Sample Date (yyyy/mm/dd)	Sample Result	Maximum Allowable Concentration (MAC)	Number of Exceedances	
				MAC	½ MAC
Alachlor (µg/L) - TW	2014/10/07	< 0.02	5.00	No	No
Atrazine + N-dealkylated metabolites (µg/L) - TW	2014/10/07	< 0.01	5.00	No	No
Azinphos-methyl (µg/L) - TW	2014/10/07	< 0.02	20.00	No	No
Benzene (µg/L) - TW	2014/10/07	< 0.32	1.00	No	No
Benzo(a)pyrene (µg/L) - TW	2014/10/07	< 0.004	0.01	No	No
Bromoxynil (µg/L) - TW	2014/10/07	< 0.33	5.00	No	No
Carbaryl (µg/L) - TW	2014/10/07	< 0.01	90.00	No	No
Carbofuran (µg/L) - TW	2014/10/07	< 0.01	90.00	No	No
Carbon Tetrachloride (µg/L) - TW	2014/10/07	< 0.16	2.00	No	No
Chlorpyrifos (µg/L) - TW	2014/10/07	< 0.02	90.00	No	No
Diazinon (µg/L) - TW	2014/10/07	< 0.02	20.00	No	No
Dicamba (µg/L) - TW	2014/10/07	< 0.2	120.00	No	No
1,2-Dichlorobenzene (µg/L) - TW	2014/10/07	< 0.41	200.00	No	No
1,4-Dichlorobenzene (µg/L) - TW	2014/10/07	< 0.36	5.00	No	No
1,2-Dichloroethane (µg/L) - TW	2014/10/07	< 0.35	5.00	No	No
1,1-Dichloroethylene (µg/L) - TW	2014/10/07	< 0.33	14.00	No	No
Dichloromethane (Methylene Chloride) (µg/L) - TW	2014/10/07	< 0.35	50.00	No	No
2,4-Dichlorophenol (µg/L) - TW	2014/10/07	< 0.15	900.00	No	No

Parameter	Sample Date (yyyy/mm/dd)	Sample Result	Maximum Allowable Concentration (MAC)	Number of Exceedances	
				MAC	½ MAC
2,4-Dichlorophenoxy acetic acid (2,4-D) (µg/L) - TW	2014/10/07	< 0.19	100.00	No	No
Diclofop-methyl (µg/L) - TW	2014/10/07	< 0.4	9.00	No	No
Dimethoate (µg/L) - TW	2014/10/07	< 0.03	20.00	No	No
Diquat (µg/L) - TW	2014/10/07	< 1.0	70.00	No	No
Diuron (µg/L) - TW	2014/10/07	< 0.03	150.00	No	No
Glyphosate (µg/L) - TW	2014/10/07	< 1.0	280.00	No	No
Malathion (µg/L) - TW	2014/10/07	< 0.02	190.00	No	No
Metolachlor (µg/L) - TW	2014/10/07	< 0.01	50.00	No	No
Metribuzin (µg/L) - TW	2014/10/07	< 0.02	80.00	No	No
Monochlorobenzene (Chlorobenzene) (µg/L) - TW	2014/10/07	< 0.3	80.00	No	No
Paraquat (µg/L) - TW	2014/10/07	< 1.0	10.00	No	No
PCB (µg/L) - TW	2014/10/07	< 0.04	3.00	No	No
Pentachlorophenol (µg/L) - TW	2014/10/07	< 0.15	60.00	No	No
Phorate (µg/L) - TW	2014/10/07	< 0.01	2.00	No	No
Picloram (µg/L) - TW	2014/10/07	< 1.0	190.00	No	No
Prometryne (µg/L) - TW	2014/10/07	< 0.03	1.00	No	No
Simazine (µg/L) - TW	2014/10/07	< 0.01	10.00	No	No
Terbufos (µg/L) - TW	2014/10/07	< 0.01	1.00	No	No
Tetrachloroethylene (µg/L) - TW	2014/10/07	< 0.35	10.00	No	No
2,3,4,6-Tetrachlorophenol (µg/L) - TW	2014/10/07	< 0.14	100.00	No	No
Triallate (µg/L) - TW	2014/10/07	< 0.01	230.00	No	No
Trichloroethylene (µg/L) - TW	2014/10/07	< 0.44	5.00	No	No
2,4,6-Trichlorophenol (µg/L) - TW	2014/10/07	< 0.25	5.00	No	No
Trifluralin (µg/L) - TW	2014/10/07	< 0.02	45.00	No	No
Vinyl Chloride (µg/L) - TW	2014/10/07	< 0.17	1.00	No	No
Trihalomethane: Total Annual Average (µg/L) - DW	4 Quarters of 2018	9.675	100.00	No	No
Haloacetic Acid: Total Annual Average (µg/L) - DW	4 Quarters of 2018	5.3	80.00	N/A*	N/A*

Note: MDL = Minimum Detection Limit

*The MAC for Haloacetic Acid does not come into effect until 2020.

Table 7: List of Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Parameter	Result Value	Unit of Measure	Date of Sample
Not Applicable			

Note: This table highlights the parameters with a "Yes" in the ½ MAC columns of Table 4 and Table 6.