



**2024  
SECTION 11  
ANNUAL REPORT**

**COLGAN  
DRINKING WATER  
SYSTEM**

For the period of  
**January 1<sup>st</sup>, 2024 to December 31<sup>st</sup>, 2024**

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



This report was prepared in accordance with the requirements of [O.Reg 170/03, Section 11, Annual reports](#) for the following system and reporting period:

<b>Drinking Water System Number:</b>	220009933
<b>Drinking Water System Name:</b>	Colgan Drinking Water System
<b>Drinking Water System Owner:</b>	The Corporation of the Township of Adjala-Tosorontio
<b>Drinking Water System Category:</b>	Small Municipal Residential <ul style="list-style-type: none"> <li>• January 1 to April 30, 2024</li> </ul> Large Municipal Residential <ul style="list-style-type: none"> <li>• May 1, 2024 to present</li> </ul>
<b>Reporting Period:</b>	January 1, 2024 to December 31, 2024

**Does the Drinking Water System serve more than 10,000 people?**

No

**Is the Annual Report available to the public at no charge on a website on the Internet?**

Yes

*Note: If a large municipal residential system serves more than 10,000 people, the owner of the system shall ensure that a copy of every report prepared under this section is available to the public at no charge on a website on the Internet. O. Reg. 170/03, Section 11. (10)*

**Location where Summary Report required under O. Reg 170/03, Schedule 22 will be available for inspection. (O. Reg 170/03, Section 11.(6)(f)):**

- Township of Adjala-Tosorontio Municipal Office, 7855 Side Road 30, Alliston, ON
- <https://www.aditos.ca/en/living-in-our-community/water-and-sewer.aspx>

*Note: This is required for large municipal residential systems or small municipal residential systems.*

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

Drinking Water System Name	Drinking Water System Number
N/A	N/A

**Is a copy of the annual report provided to all Drinking Water System owners that are connected to this system and to whom this system provides all of its drinking water?**

N/A

**How system users are notified that the annual report is available, and is free of charge. (O.Reg 170/03, Section 11.(7))**

<input checked="" type="checkbox"/>	Public access/notice via the web
<input checked="" type="checkbox"/>	Public access/notice via Government Office
<input type="checkbox"/>	Public access/notice via a newspaper
<input checked="" type="checkbox"/>	Public access/notice via Public Request
<input type="checkbox"/>	Public access/notice via a Public Library
<input type="checkbox"/>	Public access/notice via other method: _____

*Note: The owner of a drinking water system shall ensure that a copy of an annual report for the system is given, without charge, to every person who requests a copy. ((O.Reg 170/03, Section 11.(7)).*

**Description of Drinking Water System (O.Reg 170/03, Section 11.(6)(a)):**

The Colgan Drinking Water System (DWS) is classified as a Class I Water Treatment and Class II Water Distribution and Supply Subsystem, and was categorized as a Small Municipal Residential DWS from January 1 to April 30, 2024. As of May 1, 2024 Colgan DWS has been considered a Large Municipal Residential Drinking Water System under O.Reg 170/03, servicing an approximate population in 2024 of 600 persons through 200 service connections, including one public (primary) school in the Village of Colgan, Township of Adjala-Tosorontio. Water is supplied via three (3) municipal wells, one pumphouse, and one pumping station with an above ground storage tank.

The source water for the Colgan Well Supply System, is classified as groundwater under direct influence (GUDI), with effective in situ filtration and is supplied by three wells (CW1, CW2 and CW3). Each well is equipped with submersible well pumps connected to the well pump header into the pumphouse. The water pumped from the wells is treated with sodium silicate (for iron sequestration) and a two stage primary disinfection system consisting of three ultraviolet (UV) units, one dedicated to each well, and a sodium hypochlorite chemical system. Chlorination is also used for secondary disinfection with contact time, provided by a dedicated chlorine contact main to the storage tank located at the pumping station. In the event of a power failure, there is a standby generator outside of the well-house to supply power.

In 2024, the Colgan Drinking Water System underwent upgrades, with full commissioning of a new pumping station in the spring of 2024. The upgrades include the addition of a new pumping station located at 1995 Concession 8, Adjala-Tosorontio in the Community of Colgan. The new pumping station has an above ground storage tank with recirculation system and a total volume of 2,300 m<sup>3</sup>, a rechlorination system if needed (for secondary disinfection) and a standby generator in the event of a power failure. The new pumping station and storage system replaced the old pumphouse and in-ground reservoir, in order to adequately supply the current residences and the planned development with potable drinking water.

**List of water treatment chemicals used by the system during the reporting period (O.Reg 170/03, Section 11.(6)(a)):**

- Sodium Hypochlorite 12% Solution
- Sodium Silicate

**Significant expenses were incurred to:**

<input checked="" type="checkbox"/>	Install required equipment
<input checked="" type="checkbox"/>	Repair required equipment
<input checked="" type="checkbox"/>	Replace required equipment
<input type="checkbox"/>	No significant expenses were incurred

**Description of major expenses during the reporting period to install, repair or replace required equipment (O.Reg 170/03, Section 11.(6)(e)):**

<ul style="list-style-type: none"> <li>• Distribution repairs</li> <li>• Water Box Repair</li> <li>• Chemical Pump Heads</li> <li>• Generator repair and load testing</li> <li>• UV inspection and servicing</li> <li>• Probes and Caps</li> <li>• PLC Replacement</li> <li>• Asset Validation</li> </ul>
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**Summary of any reports/notices submitted to the Ministry and/or Spills Action Centre in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg 170/03 during the reporting period, including a description of any corrective actions taken under Schedule 17 or 18 (O. Reg 170/03, Section 11.(6)(b),(d)):**

Incident Date (yyyy/mm/dd)	Parameter/ Notice of	Result & Unit	Reporting Summary, Corrective Actions & Resolution
N/A	N/A	N/A	N/A

**Table 1. Microbiological testing done under the Schedule 10, 11 or 12 (as applicable) of O.Reg 170/03 during this reporting period (O.Reg 170/03, Section 11.(6)(c)).**

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.
RW, Well CW1 <sup>1A</sup>	38	0	0	0	0	N/A	N/A	N/A
RW, Well CW2 <sup>1A</sup>	38	0	0	0	26	N/A	N/A	N/A
RW, Well CW3 <sup>1A</sup>	38	0	0	0	34	N/A	N/A	N/A
Treated Water <sup>1B</sup>	34	0	0	0	0	34	<10	110
Distribution <sup>1C</sup>	75	0	0	0	0	43	<10	30

Note: HPC = Heterotrophic Plate Count

Note: Units for E.Coli or Fecal Results are cfu/100 mL, units for Total Coliform Results are cfu/100 mL, units for HPC results are cfu/1mL

<sup>1A</sup>RW = Raw Water. 1AO.Reg 170/03, Schedule 11-3. (1)(3) requires for a small municipal residential system that is ground water that a water sample is taken at least once every month and O.Reg 170/03, Schedule 10-4. (1)(3) requires for a large municipal residential system that a water sample is taken at least once every week from the drinking water system’s raw water, before any treatment is applied to the water and tested for E.Coli and total coliforms. From January 1 to April 30, 2024 Colgan DWS was classified as a small municipal DWS and from May 1, 2024 to present, Colgan DWS is classified as a large municipal drinking water system, as such sampling for raw water for each well was switched from monthly to weekly beginning May, 2024.

<sup>1B</sup>Under O. Reg 170/03, treated water sampling is not required for a Small Municipal Drinking Water Systems. O Reg 170/03, Schedule 10-3 requires for a large municipal residential system that a treated water sample is taken at least once every week and tested for E.Coli, total coliforms and general bacteria population expressed as colony counts on a heterotrophic count (HPC). Treated water sampling at Colgan DWS started the week of May 1, 2024 when the system switched from a small to large municipal DWS.

<sup>1C</sup>O.Reg 170/03 Schedule 11-2.(1)(2) requires for a small municipal drinking water system that at least one distribution sample be taken every two weeks and be tested for E.Coli, Total Coliforms and HPC. .O.Reg. 170/03 Schedule 10-2.(1)(2)(3) requires that a system that serves 100,000 people or less, at least eight distribution samples, plus one additional sample for every 1,000 people served by the system to be taken every month, with at least one of the samples being taken in each week and be tested for E.Coli, Total Coliforms. At least 25 percent of the samples required must be tested for general bacteria population expressed as colony counts on heterotrophic plate count (HPC). The number of people served by the system is 600 (as confirmed with the Owner on April 4, 2024) and therefore requires at minimum eight (8) distribution samples per month as of May, 2024 when the system switched from a small to large municipal DWS.

**Table 2. Operational testing done under Schedule 7, 8 or 9 (as applicable) O. Reg 170/03 during the period covered by this Annual Report (O. Reg 170/03, Section 11.(6)(c)).**

Parameter & Location	Number of Samples	Range of Results	
		Min.	Max.
Turbidity, In-House (NTU) – RW, Well CW1 <sup>2A</sup>	12	0.11	0.98
Turbidity, In-House (NTU) – RW, Well CW2 <sup>2A</sup>	12	0.12	0.88
Turbidity, In-House (NTU) – RW, Well CW3 <sup>2A</sup>	12	0.23	0.96
Free Chlorine Residual, On-Line (mg/L) – TW <sup>2B</sup>	8760	0.00 <sup>2E</sup>	4.99 <sup>2E</sup>
Free Chlorine Residual, Distribution (mg/L) – DW <sup>2C</sup>	359	0.29	2.00

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

<sup>2A</sup>O.Reg 170/03, Schedule 7-3.(1)(1.1) requires a raw water sample to be taken at least once every month from each well that is supplying water to the system and tested for turbidity.

<sup>2B</sup>O.Reg 170/03 Schedule 7-2.(1) requires a drinking water system that provides chlorination for primary disinfection to sample and test for free chlorine residual with continuous monitoring equipment in the treatment process at or near a location where the intended contact time has just been completed.

<sup>2C</sup>O.Reg 170/03 Schedule 7-2.(5) requires a small municipal residential system that provides secondary disinfection to take at least two distribution samples each week and immediately tested for free chlorine residual, if the system provides chlorination and does not provide chloramination. O.Reg 170/03 Schedule 7-2.(3) requires a large municipal residential system that provides secondary disinfection to take at least

seven distribution samples each week and immediately tested for free chlorine residual, if the system provides chlorination and does not provide chloramination. From January 1, 2024 to April 1, 2024 Colgan DWS was classified as a small municipal DWS and from May 1, 2024 to present, Colgan DWS is classified as a large municipal drinking water system, as such sampling for distribution free chlorine residual for each well was switched from two to seven samples per week beginning the week of May 1, 2024.

<sup>2D</sup>August 12 & 13 and October 11 – minimum free chlorine of 0.00 mg/L occurred during a low chlorine alarm. Wells locked out upon low alarm, CT met. No adverse water was sent to the distribution system.

<sup>2E</sup>August 20, 2024 – A low chlorine alarm locked out the wells, operations staff responded, corrected the dosing problem and back flushed the contact main, during correction a high free chlorine residual of 4.99 mg/L occurred.

**Table 3. Summary of additional testing and sampling results carried out in accordance with the requirement of an approval, municipal drinking water licence or order (including OWRA) or other legal instrument during the reporting period. If tests required under this Regulation in respect of a parameter were not required during that period, summarize the most recent results of tests of that parameter (O. Reg 170/03, Section 11.(6)(c)):**

Legal Instrument & Issue Date (yyyy/mm/dd)	Sample Location & Parameter	Sampling Frequency	Allowable Result	Actual Result
N/A	N/A	N/A	N/A	N/A

**Table 4. Summary of Inorganic parameters tested during this reporting period or the most recent sample results (O.Reg 170/03, Section 11.(6)(c))**

Parameter & Location	Sample Date <sup>4A</sup> (yyyy/mm/dd)	Sample Result	Maximum Allowable Concentration (MAC)	Exceedance of MAC
Antimony: Sb (µg/L) - TW	2024/10/21	< MDL 0.6	6.0	No
Arsenic: As (µg/L) - TW	2024/10/21	0.4	10.0	No
Barium: Ba (µg/L) - TW	2024/10/21	92.6	1000.0	No
Boron: B (µg/L) - TW	2024/10/21	9	5000.0	No
Cadmium: Cd (µg/L) - TW	2024/10/21	< MDL 0.003	5.0	No
Chromium: Cr (µg/L) - TW	2024/10/21	0.11	50.0	No
Mercury: Hg (µg/L) - TW	2024/10/21	< MDL 0.01	1.0	No
Selenium: Se (µg/L) - TW	2024/10/21	< MDL 0.04	50.0	No
Uranium: U (µg/L) - TW	2024/10/21	0.453	20.0	No
Fluoride (mg/L) - TW	2024/10/21 <sup>4B</sup>	< MDL 0.06	1.5	No
Nitrite (mg/L) – TW	2024/01/15	< MDL 0.003	1.0	No
Nitrite (mg/L) – TW	2024/04/15	< MDL 0.003	1.0	No
Nitrite (mg/L) – TW	2024/07/22	< MDL 0.003	1.0	No
Nitrite (mg/L) – TW	2024/10/21	< MDL 0.003	1.0	No

Parameter & Location	Sample Date <sup>4A</sup> (yyyy/mm/dd)	Sample Result	Maximum Allowable Concentration (MAC)	Exceedance of MAC
Nitrate (mg/L) – TW	2024/01/15	< MDL 0.006	10.0	No
Nitrate (mg/L) – TW	2024/04/15	0.092	10.0	No
Nitrate (mg/L) – TW	2024/07/22	0.036	10.0	No
Nitrate (mg/L) - TW	2024/10/21	0.127	10.0	No

Parameter & Location	Sample Date (yyyy/mm/dd)	Sample Result	Aesthetic Objective (AO)	Exceedance	
				AO	> 20 mg/L
Sodium: Na (mg/L) - TW	2019/10/07 <sup>4C</sup>	11.3	200	No	No

Note: MDL = Minimum Detection Limit, TW = Treated Water

<sup>4A</sup>Inorganic Parameters (Schedule 23) are required to be tested every 12 months for a large municipal residential system, if the system obtains water from a raw water supply that is ground water under direct influence (GUDI) of surface water (O. Reg 170/03 Schedule 13-2). The last set of samples was collected and tested in 2024, the next set of samples is scheduled to be collected and tested in 2025.

<sup>4B</sup>Fluoride is reportable every 60 months. The most recent Fluoride samples were tested in 2024, the next set of samples is scheduled to be tested in 2029.

Note: There is no regulatory Maximum Allowable Concentration (MAC) Sodium. The aesthetic objective (AO) 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.

<sup>4C</sup>Sodium is reportable every 60 months. The most recent Sodium samples were tested in 2019 the next set of samples was scheduled to be tested in 2024 but was missed. A non-compliance for missed sodium sample was reported to the Ministry on January 31, 2025. A sample was collected on February 3, 2025, and results will be included in the 2025 Colgan DWS Annual Report. For more information on this non-compliance see the 2024 Colgan DWS Summary Report.

**Table 5: Summary of lead testing under Schedule 15.1 during this reporting period (O.Reg 170/03, Section 11.(6)(g))**

Location/Type & Parameter	Number of Samples <sup>5A</sup>	Range of Results		Number of Lead Exceedances
		Min.	Max.	MAC = 10 µ/L
<b>Period: January 1 to April 15</b>				
Plumbing – Lead (µg/L) <sup>5B</sup>	N/A	N/A	N/A	N/A
Distribution – Lead (µg/L) <sup>5C</sup>	1	0.22	0.22	0
Distribution – Alkalinity (mg/L as CaCO <sub>3</sub> )	1	213	213	N/A
Distribution – pH	1	8.29	8.29	N/A
<b>Period: June 15 to October 15</b>				
Plumbing – Lead (µg/L) <sup>5B</sup>	N/A	N/A	N/A	N/A
Distribution – Lead (µg/L) <sup>5C</sup>	1	0.07	0.07	0
Distribution – Alkalinity (mg/L as CaCO <sub>3</sub> )	1	217	217	N/A
Distribution – pH	1	6.5	6.5	N/A
<b>Period: December 15 to 31</b>				
Plumbing – Lead (µg/L) <sup>5B</sup>	N/A	N/A	N/A	N/A
Distribution – Lead (µg/L) <sup>5C</sup>	N/A	N/A	N/A	N/A
Distribution – Alkalinity (mg/L as CaCO <sub>3</sub> )	N/A	N/A	N/A	N/A
Distribution - pH	N/A	N/A	N/A	N/A

*Note: this is required for large municipal residential systems, small municipal residential systems or non-municipal year-round residential system. (O.Reg 170/03, Section 11.(6)(g))*

<sup>5A</sup>The number of sampling points for the system is based on the population served by the system. As of September 11, 2024, the number of people served by the system was increased from 225 to 600 persons. Therefore the requirement went from one to two distribution sampling points per sampling period.

<sup>5B</sup>Plumbing samples are not applicable as this system qualifies for the plumbing exemption per O. Reg 170/03 Schedule 15.1-5 (9) (10).

<sup>5C</sup>This system follows a reduced sampling schedule (O.Reg 170/03, Section 15.1.5). Distribution lead samples are collected every 36 months. The most recent set of distribution lead samples were collected within the winter period of December 15, 2023 to April 15, 2024 and summer period of June 15, 2024 to October 15, 2024. The next set of distribution lead samples is scheduled to be collected within the winter period of December 15, 2026 to April 15, 2027 and summer period of June 15, 2027 to October 15, 2027.



**Table 6: Summary of Organic parameters sampled during this reporting period or the most recent sample results (O.Reg 170/03, Section 11.(6)(c)).**

Parameter & Location	Sample Date <sup>6A</sup> (yyyy/mm/dd)	Sample Result	Maximum Allowable Concentration (MAC)	Exceedance of MAC
1,1-Dichloroethylene (ug/L)-TW	2024/10/21	< MDL 0.33	14	No
1,2-Dichlorobenzene (ug/L)-TW	2024/10/21	< MDL 0.41	200	No
1,2-Dichloroethane (ug/L)-TW	2024/10/21	< MDL 0.35	5	No
1,4-Dichlorobenzene (ug/L)-TW	2024/10/21	< MDL 0.36	5	No
2,3,4,6-Tetrachlorophenol (ug/L)-TW	2024/10/21	< MDL 0.2	100	No
2,4,6-Trichlorophenol (ug/L)-TW	2024/10/21	< MDL 0.25	5	No
2,4-Dichlorophenol (ug/L)-TW	2024/10/21	< MDL 0.15	900	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L)-TW	2024/10/21	< MDL 0.19	100	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (ug/L)-TW	2024/10/21	< MDL 0.12	100	No
Alachlor (ug/L) -TW	2024/10/21	< MDL 0.02	5	No
Atrazine + N-dealkylated metabolites (ug/L)-TW	2024/10/21	< MDL 0.01	5	No
Azinphos-methyl (ug/L)-TW	2024/10/21	< MDL 0.05	20	No
Benzene (ug/L)-TW	2024/10/21	< MDL 0.32	1	No
Benzo(a)pyrene (ug/L)-TW	2024/10/21	< MDL 0.004	0.01	No
Bromoxynil (ug/L)-TW	2024/10/21	< MDL 0.33	5	No
Carbaryl (ug/L)-TW	2024/10/21	< MDL 0.05	90	No
Carbofuran (ug/L) -TW	2024/10/21	< MDL 0.01	90	No
Carbon Tetrachloride (ug/L) -TW	2024/10/21	< MDL 0.17	2	No
Chlorpyrifos (ug/L) -TW	2024/10/21	< MDL 0.02	90	No
Diazinon (ug/L)-TW	2024/10/21	< MDL 0.02	20	No
Dicamba (ug/L)-TW	2024/10/21	< MDL 0.2	120	No
Dichloromethane (Methylene Chloride) (ug/L)-TW	2024/10/21	< MDL 0.35	50	No
Diclofop-methyl (ug/L)-TW	2024/10/21	< MDL 0.4	9	No
Dimethoate (ug/L)-TW	2024/10/21	< MDL 0.06	20	No
Diquat (ug/L)-TW	2024/10/21	< MDL 1	70	No
Diuron (ug/L)-TW	2024/10/21	< MDL 0.03	150	No
Glyphosate (ug/L)-TW	2024/10/21	< MDL 1	280	No
Malathion (ug/L)-TW	2024/10/21	< MDL 0.02	190	No
Metolachlor (ug/L)-TW	2024/10/21	< MDL 0.01	50	No

Parameter & Location	Sample Date <sup>6A</sup> (yyyy/mm/dd)	Sample Result	Maximum Allowable Concentration (MAC)	Exceedance of MAC
Metribuzin (ug/L)-TW	2024/10/21	< MDL 0.02	80	No
Monochlorobenzene (Chlorobenzene) (ug/L)-TW	2024/10/21	< MDL 0.3	80	No
Paraquat (ug/L)-TW	2024/10/21	< MDL 1	10	No
PCB (ug/L)-TW	2024/10/21	< MDL 0.04	3	No
Pentachlorophenol (ug/L)-TW	2024/10/21	< MDL 0.15	60	No
Phorate (ug/L)-TW	2024/10/21	< MDL 0.01	2	No
Picloram (ug/L)-TW	2024/10/21	< MDL 1	190	No
Prometryne (ug/L)-TW	2024/10/21	< MDL 0.03	1	No
Simazine (ug/L)-TW	2024/10/21	< MDL 0.01	10	No
Terbufos (ug/L)-TW	2024/10/21	< MDL 0.01	1	No
Tetrachloroethylene (ug/L)-TW	2024/10/21	< MDL 0.35	10	No
Triallate (ug/L) -TW	2024/10/21	< MDL 0.01	230	No
Trichloroethylene (ug/L)-TW	2024/10/21	< MDL 0.44	5	No
Trifluralin (ug/L)-TW	2024/10/21	< MDL 0.02	45	No
Vinyl Chloride (ug/L)-TW	2024/10/21	< MDL 0.17	1	No
HAA Total (ug/L) Annual Average-DW	2024 (Quarterly)	< MDL 5.3	80	No
Trihalomethane: Total (ug/L) Annual Average-DW	2024 (Quarterly)	15	100	No

Note: TW = Treated Water, DW = Distribution Water, MDL = Minimum Detection Limit, MAC = Maximum Allowable Concentration, HAA = Haloacetic Acids

<sup>6A</sup>Organic Parameters (Schedule 24) are required to be tested every 12 months for a large municipal residential system, if the system obtains water from a raw water supply that is ground water under the direct influence (GUDI) of surface water (O. Reg 170/03 Schedule 13-2). The last set of samples was collected and tested in 2024, the next set of samples is scheduled to be collected and tested in 2025.

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

Parameter & Location	Sample Date (yyyy/mm/dd)	Sample Result
N/A	N/A	N/A