

2022 SCHEDULE 22 SUMMARY REPORT, Version 2

COLGAN
DRINKING WATER
SYSTEM



For the period of
January 1st, 2022 to December 31st, 2022

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, Schedule 22, Summary Reports for Municipalities](#) for the following system and reporting period:

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, 2022 – December 31, 2022

1. Issue(s) of Non-Compliance

A Ministry of Environment, Conservation and Parks (MECP) Drinking Water System Inspection was conducted on December 6, 2022 for the period covering September 16, 2021 to December 6, 2022. On February 14, 2023 the Inspection Report was issued and an Inspection Summary Rating Record (IRR) of 100% was received on March 3, 2023.

The following is a summary of non-compliances noted in the MECP Inspection Report, as well as the duration and the measures that were taken to correct the non-compliance. If any self-reported non-compliances were included in the inspection report, they will be noted in Table 1.

Table 1. Non-Compliances and Corrective Actions noted in the 2021/2022 MECP Inspection Report

Non-Compliance(s)	Duration	Required Actions & Corrective Actions
N/A	N/A	N/A

The following table (Table 2) is a summary of any incidents that the Operating Authority interpreted as instances where any requirements of the Act, the regulations, the system's approval, drinking water works permit (DWWP), municipal drinking water licence (MDWL), and any orders applicable were not met. The Operating Authority reported the following incidents to the MECP and confirmation of whether the incidents are considered non-compliances are noted in the MECP Inspection Report and included in Table 1.

Table 2. Self-Reported Incidents and Corrective Actions for the Reporting Period

Incident	Duration	Corrective Actions
N/A	N/A	N/A

For information on any Adverse Water Quality Incident(s) that may have occurred during the reporting period, please refer to the Colgan Drinking Water System Annual Report (Section 11).

2. Assessment of Flowrates and Quantity of Water Supplied

The following tables (Table 3 to 7) summarize the quantities and flowrates of water supplied during the reporting period, including monthly averages and maximum daily flows as well as a comparison to the rated capacity and flowrates approved in the system's approval, DWWP or MDWL.

As required by the MDWL, regulatory flow measuring devices are checked/verified and where necessary calibrated. These checks/verifications/calibrations are performed annually by a third party to ensure the flow measuring devices are within acceptable deviation limits.

2.1 Treated Water

Municipal Drinking Water License (MDWL):	097-106 (Issue Number: 4)
Allowable Rated Capacity:	263 m ³ /day
Allowable Flowrate into Treatment System:	Not listed in MDWL

As per the MDWL, the maximum daily volume of treated water that flows from the treatment subsystem to the distribution system shall not exceed the listed rated capacity. However, the MDWL allows a system to be operated temporarily at a maximum daily volume and/or a maximum flowrate above the values set out in the MDWL for the purposes of fighting a large fire or for the maintenance of the drinking water system.

Table 3. Treated Water Annual and Monthly Average and Maximum Flows with Comparison to Rated Capacity and Total Volume for 2022

Treated Water Flow					
Timeframe	Average Flow (m ³ /day)	Percent of Rated Capacity	Maximum Flow (m ³ /day)	Percent of Rated Capacity	Total Volume (m ³)
January	34.62	13.16%	42.79	16.27%	1073.22
February	22.52	8.56%	33.93	12.90%	630.53
March	20.35	7.74%	22.83	8.68%	630.75
April	20.05	7.62%	24.42	9.29%	601.52
May	23.27	8.85%	32.38	12.31%	721.41
June	25.32	9.63%	38.41	14.60%	759.62
July	26.57	10.10%	39.98	15.20%	823.64
August	22.47	8.54%	37.55	14.28%	696.48
September	21.60	8.21%	26.41	10.04%	647.97
October	21.48	8.17%	24.43	9.29%	665.83
November	22.48	8.55%	23.94	9.10%	674.27
December	24.84	9.45%	35.35	13.44%	770.13
2022	23.80	9.05%	42.79	16.27%	8,695.37

A review of flow information for the reporting period indicates that the drinking water system operated within the rated capacity specified in the MDWL, for the maximum treated volume of treated water that flows from the treatment subsystem to the distribution system.

A summary of flowrates of water that flows into the treatment system can be found in Table 5, Table 7 and Table 9. The applicable MDWL for the reporting period did not list a maximum allowable limit for the flowrate of water that flows into a treatment subsystem.

2.2 Raw Water

Permit to Take Water Number (PTTW):	4352-AYULX7
Allowable Maximum Raw Water Volume - Well #1: CW1	262.9 m ³ /day
Allowable Maximum Raw Water Flowrate - Well #1: CW1	7.6 L/sec
Allowable Maximum Raw Water Volume - Well #2: CW2	262.9 m ³ /day
Allowable Maximum Raw Water Flowrate - Well #2: CW2	7.6 L/sec
Allowable Maximum Raw Water Volume - Well #2: CW3	262.9 m ³ /day
Allowable Maximum Raw Water Flowrate - Well #2: CW3	7.6 L/sec

As per the PTTW, water shall only be taken from the specified source(s) and at the rates and amounts taken as specified in the permit. According to PTTW #4352-AYULX7 Section 3(3), notwithstanding the above listed allowable rates, the total taking from all sources combined shall not exceed 262,900 litres per day (262.9 m³/day). A review of the daily raw water combined volume for all wells (CW1, CW2 and CW3) shows that the system operated within the PTTW's maximum allowable daily raw water volume for all sources combined with the exception of February 10, 2022 and December 26, 2022. Further details are available in Table 4 to Table 9.

Table 4. Raw Water (Well #1-CW1) Monthly Average, Maximum Flow and Total Volume for 2022

Raw Water Flow – Well #1 (CW1)					
Timeframe	Average Flow (m ³ /day)	Percent of Allowable Volume	Maximum Flow (m ³ /day)	Percent of Allowable Volume	Total Volume (m ³)
January	15.81	6.01%	22.34	8.50%	458.47
February	31.15	11.85%	277.20 ^{4A}	105.43% ^{4A}	872.27
March	16.20	6.16%	29.17	11.09%	502.30
April	14.79	5.63%	22.53	8.57%	443.72
May	24.47	9.31%	48.82	18.57%	758.49
June	25.87	9.84%	42.97	16.34%	775.98
July	22.44	8.54%	39.97	15.20%	695.67
August	8.83	3.36%	21.86	8.31%	70.63
September	4.08	1.55%	16.31	6.20%	122.30
October	7.07	2.69%	15.78	6.00%	105.98
November	13.46	5.12%	22.34	8.50%	403.91

Raw Water Flow – Well #1 (CW1)					
Timeframe	Average Flow (m³/day)	Percent of Allowable Volume	Maximum Flow (m³/day)	Percent of Allowable Volume	Total Volume (m³)
December	13.95	5.31%	27.22	10.35%	83.69
2022	16.51	16.51%	277.20^{4A}	105.43%^{4A}	5293.41

A review of flow information for the reporting period indicates that the system operated within the PTTW’s maximum allowable daily raw water volume for Well #1 (CW1) with the exception of:

- ^{4A}February 10, 2022 - Flow exceedance due to equipment failure causing the automatic wasting valve failing to close and remaining open upon well start-up. Raw water was directed to waste instead of the distribution system.

Table 5. Raw Water (Well #1-CW1) Annual and Monthly Average and Maximum Flowrates for 2022

Raw Water Flowrate – Well #1 (CW1)		
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)
January	5.87	8.02 ^{5A}
February	5.85	9.92 ^{5A}
March	6.17	8.24 ^{5A}
April	5.99	8.26 ^{5A}
May	6.04	8.61 ^{5A}
June	5.95	8.15 ^{5A}
July	5.74	8.09 ^{5A}
August	5.59	14.54 ^{5A}
September	1.56	7.02
October	1.73	7.01
November	5.97	7.27
December	4.54	7.22
2022	5.08	14.54^{5A}

A review of flow information for the reporting period indicates that the system operated within the PTTW’s the maximum allowable raw water flowrate for Well #1 (CW1) for September to December. For the remaining months, there were instances where the system operated outside of the PTTW’s the maximum allowable raw water flowrate for very short durations of time due to:

- ^{5A}Flowrate exceedances were a result of well pump start-ups or flowmeter calibrations.

Table 6. Raw Water (Well #2- CW2) Monthly Average, Maximum Flow and Total Volume for 2022

Raw Water Flow – Well #2 (CW2)					
Timeframe	Average Flow (m ³ /day)	Percent of Allowable Volume	Maximum Flow (m ³ /day)	Percent of Allowable Volume	Total Volume (m ³)
January	16.41	6.24%	38.92	14.80%	443.09
February	14.22	5.41%	30.42	11.57%	398.28
March	15.70	5.97%	24.42	9.29%	439.61
April	15.34	5.83%	19.77	7.52%	460.20
May	23.26	8.85%	37.33	14.20%	721.13
June	27.24	10.36%	41.13	15.64%	817.11
July	21.39	8.14%	34.83	13.25%	598.92
August	22.91	8.71%	45.52	17.31%	710.08
September	20.51	7.80%	39.77	15.13%	594.73
October	19.11	7.27%	24.70	9.40%	592.56
November	15.33	5.83%	22.59	8.59%	459.91
December	63.07	23.99%	263.99 ^{6A}	100.41% ^{6A}	1,955.11
2022	22.87	8.70%	263.99^{6A}	100.41%^{6A}	8,190.73

A review of flow information for the reporting period indicates that the system operated within the PTTW's maximum allowable daily raw water volume for Well #2 (CW2) with the exception of:

- ^{6A}December 14, 2022 - During the fill of the new water storage tower for AWWA disinfection, water takings were slightly over the allowable amount for the day; overage of 1.07m³ for CW2 and 7.53 m³ for all wells combined.

Table 7. Raw Water (Well #2-CW2) Annual and Monthly Average and Maximum Flowrates for 2022

Raw Water Flowrate – Well #2 (CW2)		
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)
January	6.99	9.36 ^{7A}
February	7.22	14.17 ^{7A}
March	6.95	9.79 ^{7A}
April	7.05	9.29 ^{7A}
May	7.02	11.28 ^{7A}
June	7.01	14.61 ^{7A}
July	6.18	9.08 ^{7A}
August	6.95	8.82 ^{7A}
September	6.89	17.34 ^{7A}
October	6.86	13.18 ^{7A}
November	6.85	9.60 ^{7A}

Raw Water Flowrate – Well #2 (CW2)		
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)
December	6.78	19.75 ^{7A}
2022	6.89	19.72^{7A}

A review of flow information for the reporting period indicates that the system operated outside of the PTTW's the maximum allowable raw water flowrate for Well #2 (CW2). There were instances where the system operated outside of the PTTW's the maximum allowable raw water flowrate for very short durations of time due to:

- ^{7A}Flowrate exceedances were a result of well pump start-ups or flowmeter calibrations.

Table 8. Raw Water (Well #3- CW3) Monthly Average, Maximum Flow and Total Volume for 2022

Raw Water Flow – Well #3 (CW3)					
Timeframe	Average Flow (m³/day)	Percent of Allowable Volume	Maximum Flow (m³/day)	Percent of Allowable Volume	Total Volume (m³)
January	17.19	6.54%	37.33	14.20%	515.71
February	16.95	6.45%	37.98	14.45%	474.62
March	15.16	5.77%	24.35	9.26%	469.91
April	15.11	5.75%	18.97	7.22%	453.37
May	15.66	5.96%	23.64	8.99%	187.96
June	5.94	2.26%	15.95	6.07%	53.42
July	20.16	7.67%	44.40	16.89%	423.39
August	18.97	7.21%	37.23	14.16%	587.95
September	17.99	6.84%	42.25	16.07%	539.64
October	17.83	6.78%	22.95	8.73%	552.79
November	13.36	5.08%	28.01	10.65%	387.37
December	40.56	15.43%	214.13	81.45%	1,257.41
2022	17.91	6.81%	214.13	81.45%	5,903.54

A review of flow information for the reporting period indicates that the system operated within the PTTW's maximum allowable daily raw water volume for Well #3 (CW3).

Table 9. Raw Water (Well #3-CW3) Annual and Monthly Average and Maximum Flowrates for 2022

Raw Water Flowrate – Well #3 (CW3)		
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)
January	5.22	8.21 ^{9A}
February	5.08	13.74 ^{9A}
March	5.16	8.16 ^{9A}
April	4.96	8.08 ^{9A}
May	4.97	8.10 ^{9A}
June	4.97	13.61 ^{9A}
July	5.13	9.46 ^{9A}
August	5.19	7.20
September	4.80	17.67 ^{9A}
October	4.96	10.31 ^{9A}
November	4.79	7.17
December	4.90	17.57 ^{9A}
2022	5.01	17.67^{9A}

A review of flow information for the reporting period indicates that the system operated within the PTTW's the maximum allowable raw water flowrate for Well #3 (CW3) for August and November. For the remaining months, there were instances where the system operated outside of the PTTW's the maximum allowable raw water flowrate for very short durations of time due to:

- ^{9A}Flowrate exceedances were a result of well pump start-ups or flowmeter calibrations.