

COLGAN DRINKING WATER SYSTEM

For the period of January 1<sup>st</sup>, 2023 to December 31<sup>st</sup>, 2023

Colgan

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 <u>O.Reg 170/03, Schedule 22,</u> <u>Summary Reports for Municipalities</u> for the following system and reporting period:

Drinking-Water System Number: Drinking-Water System Name: Drinking-Water System Owner: Drinking-Water System Category: Period being reported:

220009933
Colgan Drinking Water System
The Corporation of the Township of Adjala-Tosorontio
Small Municipal Residential
January 1, 2023 – December 31, 2023

### 1. Issue(s) of Non-Compliance

A Ministry of Environment, Conservation and Parks (MECP) Drinking Water System Inspection was conducted on January 30, 2024 for the period covering December 22, 2022 to January 30, 2024. March 19, 2024, the Inspection Report was issued and an Inspection Summary Rating Record (IRR) of 100% was received.

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 2022/2023 MECP Inspection Report

Non-Compliance(s)	Duration	<b>Required Actions &amp; Corrective Actions</b>
None(0)	None(0)	None(0)

The following table (Table 2) is a summary of any incidents that the Operating Authority interpreted as a 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.

Incident	Duration	Corrective Actions
Non-compliance with O. Reg.170/03, Section 11-3- Raw water microbiological sampling.	N/A	• This non-compliance was self- reported by OCWA on June 13, 2023 to the MECP.
Section 6-1.1(3) requires the collection of a raw microbiological sample from each source well monthly and to be collected 20 to 40 days apart.		<ul> <li>OCWA modified the sampling plan to prevent future recurrences</li> <li>No further action was required by the MECP.</li> </ul>

While raw water samples were collected		
from the source wells (CW1, CW2 and CW3)		
monthly as required on May 1, 2023 and		
June 12, 2023, the difference between		
sampling days was 42 days.		

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 6) 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 m³/day
Allowable Flowrate into Treatment System:	Not listed in MDWL

Municipal Drinking Water License (MDWL):	097-106 (Issue Number: 5)
Allowable Rated Capacity- Pumphouse No. 2:	1,071 m³/day
Allowable Flowrate into Treatment System- UV	456 L/min (7.6 L/sec)
Disinfection- UV Units- Individual Units:	430 L/IIIII (7.0 L/SEC)

For the reporting period, Colgan DWS operated under two separate MDWLs for the maximum daily volume of treated water that flows from the treatment subsystem to the distribution system and maximum flow rates of water that flows into a treatment subsystem, for each treatment subsystem:

- From January 1, 2023 to March 30, 2023- Colgan DWS operated under MDWL number 097-106 (Issue Number 4).
- From March 31, 2023 and onwards- Colgan DWS operated/is currently operating under MDWL number 097-106 (Issue Number 5)

As per both MDWLs, 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, both MDWLs allows the 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.

Treated Water Flow					
Timeframe	Average Flow (m³/day)	Percent of Rated Capacity	Maximum Flow (m <sup>3</sup> /day)	Percent of Rated Capacity	Total Volume (m <sup>3</sup> )
January	25.81	9.81%	30.67	11.66%	800.08
February	34.14	12.98%	40.69	15.47%	955.89
March	67.77	19.80%	58.67	23.35%	2,100.96
April	44.12	4.12%	64.85	6.06%	1,323.74
May	56.38	5.26%	87.88	8.21%	1,747.66
June	59.45	5.55%	83.52	7.80%	1,783.47
July	43.64	4.07%	70.22	6.56%	1,352.99
August	36.86	3.44%	49.54	4.63%	1,142.62
September	43.21	4.03%	58.07	5.42%	7,051.34
October	37.46	3.50%	66.30	6.19%	1,161.40
November	36.54	3.41%	45.60	4.26%	1,096.10
December	44.80	4.18%	52.03	4.86%	1,388.81
2023	42.91	4.01%	87.88	23.35%	21,905.07

# Table 3. Treated Water Annual and Monthly Average and Maximum Flows with Comparison to Rated Capacity and Total Volume for 2023

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

- From January 1 to March 31, 2023: Colgan DWS operated within the MDWL maximum treated water volume of 263 m<sup>3</sup>/day
- From April 1 to December 31, 2023: Colgan DWS operated within the MDWL maximum treated water volume of 1,071 m<sup>3</sup>/day

MDWL 097-106 (Issue Number: 4) which was in effect from January 1 to March 31, 2023 did not list a maximum allowable flowrate into the treatment system. As per the MDWL 097-106 (Issue Number: 5) from March 31 to December 31, 2023 the maximum flow rate of water that flows into a treatment subsystem component shall not exceed the listed maximum flowrate. A summary of flowrates of water that flows into the treatment subsystem(s) can be found in Table 4, Table 5 and Table 6. Water that flows into the treatment system is based on the raw water flow rate of each well (CW1, CW2 and CW3) as it flows from the wells into each individual UV disinfection unit. Each well has its own assigned UV disinfection unit.

Treated Water Flowrate – UV Disinfection Unit #1 from CW1			
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)	
January	5.56	7.27	
February	4.86	7.58	
March	5.64	7.87 <sup>4A</sup>	
April	0.00	7.13	
May	0.00	6.85	
June	0.37	6.75	
July	0.00	6.51	
August	6.23	6.85	
September	0.00	0.00	
October	3.60	7.56	
November	5.69	7.47	
December	4.90	7.54	
2023	1.82	7.87 <sup>4A</sup>	

### Table 4. Treated Water Annual and Monthly Average and Maximum Flowrates for 2023- UV Disinfection Unit #1

*Note: Well #1 was offline in April, May, June, July and September.* 

A review of flow information for the reporting period indicates that the drinking water system operated within the allowable flowrate specified in the MDWL (7.6 L/s) for the flowrate of water into the treatment subsystem for UV disinfection Unit #1 with the exception of:

• <sup>4A</sup>Flowrate exceedances were a result of well pump start-ups

## Table 5. Treated Water Annual and Monthly Average and Maximum Flowrates for2023- UV Disinfection Unit #2

Treated Water Flowrate – UV Disinfection Unit #2 from CW2			
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)	
January	6.96	7.57	
February	7.21	9.23	
March	6.91	19.21	
April	6.48	8.91 <sup>5A</sup>	
May	6.80	8.62 <sup>5A</sup>	
June	6.76	8.50 <sup>5A</sup>	
July	0.00	8.83 <sup>5A</sup>	
August	5.76	7.61 <sup>5A</sup>	
September	5.52	7.71 <sup>5A</sup>	
October	2.93	23.35 <sup>5A</sup>	
November	0.00	0.00	
December	0.00	7.70 <sup>5A</sup>	

Treated Water Flowrate – UV Disinfection Unit #2 from CW2			
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)	
2023	3.81	<b>23.35</b> <sup>5A</sup>	

A review of flow information for the reporting period indicates that the drinking water system operated within the allowable flowrate specified in the MDWL (7.6 L/s) for the average flowrate of water that flows into the treatment subsystem for UV Disinfection Unit #2.

<sup>5A</sup>Flowrate exceedances were a result of well pump start-ups. Upon well start up, for the first 5 minutes well water is directed to waste prior to being directed to the UV unit. Singer valves are used to ensure that the flowrate to the UV unit is throttled to run between 5-6 L/sec.

# Table 6. Treated Water Annual and Monthly Average and Maximum Flowrates for2023- UV Disinfection Unit #3

Treated Water Flowrate – UV Disinfection Unit #3 from CW3			
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)	
January	6.96	7.57	
February	7.21	9.23 <sup>6A</sup>	
March	6.91	19.21 <sup>6A</sup>	
April	6.48	8.91 <sup>6A</sup>	
May	6.80	8.62 <sup>6A</sup>	
June	6.76	8.50 <sup>6A</sup>	
July	0.00	8.83 <sup>6A</sup>	
August	5.76	7.61 <sup>6A</sup>	
September	5.52	7.71 <sup>6A</sup>	
October	2.93	23.35 <sup>6A</sup>	
November	0.00	0.00	
December	0.00	7.70 <sup>6A</sup>	
2023	3.81	<b>23.35</b> <sup>6A</sup>	

A review of flow information for the reporting period indicates that the drinking water system operated within the allowable flowrate specified in the MDWL (7.6 L/s) for the average flowrate of water that flows into the treatment subsystem for UV Disinfection Unit #3.

 <sup>6A</sup>Flowrate exceedances were a result of well pump start-ups. Upon well start up, for the first 5 minutes well water is directed to waste prior to being directed to the UV unit. Singer valves are used to ensure that the flowrate to the UV unit is throttled to run between 5-6 L/sec.

#### 2.2 Raw Water

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

Permit to Take Water Number (PTTW):	4716-CMXNKC
Allowable Maximum Raw Water Volume - Well #1: CW1	1,071.36 m <sup>3</sup> /day
Allowable Maximum Raw Water Flowrate - Well #1: CW1	744 L/min (12.4 L/sec)
Allowable Maximum Raw Water Volume - Well #2: CW2	1071.36 m <sup>3</sup> /day
Allowable Maximum Raw Water Flowrate - Well #2: CW2	744 L/min (12.4 L/sec)
Allowable Maximum Raw Water Volume - Well #2: CW3	1071.360 m <sup>3</sup> /day
Allowable Maximum Raw Water Flowrate - Well #2: CW3	744 L/min (12.4 L/sec)
Allowable Maximum Raw Water Volume – Combined (CW1, CW2 and CW3)	1071.36 m³/day
Allowable Maximum Raw Water Flowrate – Combined (CW1, CW2 and CW3)	744 L/min (12.4 L/sec)
Average Allowable Daily Water Taking- Combined Wellfield- 90- Day Rolling Average (CW1, CW2 and CW3)	800 m <sup>3</sup> /day

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 #4716-CMXNKC Section 3(3), notwithstanding the above listed allowable rates, that Source 1 (CW1), Source 2 (CW2) and Source 3 (CW3) may be pumped simultaneously provided the combined water taking rate from the wellfield does not exceed 744 L/min (12.4 L/sec) and 1,071,360 litres per day (1,071.36 m<sup>3</sup>/day) and that the average daily water taking (assessed based on a 90-day rolling average) from the wellfield - Source 1 (CW1), Source 2 (CW2) and Source 3 (CW3) shall not exceed 800,000 L/day (800 m<sup>3</sup>/day).

For the reported period, Colgan DWS operated under two separate PTTWs:

- From January 1, 2023 to January 26, 2023- Colgan DWS operated under PTTW #4352-AYULX7
- From January 27, 2023 and onwards- Colgan DWS is currently operating under PTTW #4716 CMXNKC

Raw Water Flow – Well #1 (CW1)					
Timeframe	Average Flow (m³/day)	Percent of Allowable Volume	Maximum Flow (m <sup>3</sup> /day)	Percent of Allowable Volume	Total Volume (m <sup>3</sup> )
January	3.71	1.41%	22.17	8.43%	115.14
February	15.84	1.48%	32.42	3.03%	443.54
March	36.55	3.41%	233.90	21.83%	1,132.99
April	0.27	0.03%	7.68	0.72%	8.14
May	0.04	0.00%	1.24	0.12%	1.24
June	0.18	0.02%	4.89	0.46%	5.37
July	0.30	0.03%	8.52	0.80%	9.19
August	14.55	1.36%	250.79	23.41%	450.95
September	0.00	0.00%	0.00	0.00%	0.00
October	48.67	4.54%	257.21	24.01%	1,508.78
November	162.76	15.19%	444.88	41.52%	4,882.70
December	202.29	18.88%	442.73	41.32%	6,270.98
2023	40.43	3.77%	444.82	41.52%	14,829.02

Table 7. Raw Water (Well #1-CW1) Monthly Average, Maximum Flow a	and Total
Volume for 2023	

Note: in April, May, June, July and September- Colgan Well #1 (CW1) was offline. Flow data is representative of sampling and was flushed to waste.

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) for 2023:

- From January 1 to January 26, 2023: the system operated within the maximum allowable daily raw water volume for Well #1 (CW1) under PTTW #4352-AYULX7 (262.9 m<sup>3</sup>/day)
- From January 27 to December 31, 2023- the system operated within the maximum allowable daily raw water volume for Well #1 (CW1) under PTTW #4716-CMXNKC (1,071.36 m<sup>3</sup>/day)

## Table 8. Raw Water (Well #1-CW1) Annual and Monthly Average and Maximum Flowrates for 2023

Raw Water Flowrate – Well #1 (CW1)					
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)			
January	5.56	7.27			
February	4.86	7.58			
March	5.64	7.87			
April	0.00	7.13			
Мау	0.00	6.85			
June	0.37	6.75			

Raw Water Flowrate – Well #1 (CW1)				
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)		
July	0.00	6.51		
August	6.23	6.85		
September	0.00	0.00		
October	3.60	7.56		
November	5.69	7.47		
December	4.90	7.54		
2023	1.82	7.87		

Note: in April, May, June, July and September- Colgan Well #1 (CW1) was offline. Flow data is representative of sampling and was flushed to waste.

A review of flow information for the reporting period indicates that Colgan Well 1 operated within the allowable flowrate in the PTTW maximum allowable raw water flowrate for Well #1 (CW1) for 2023:

- From January 1 to January 26, 2023: the system operated within the maximum allowable raw water flowrate for Well #1 (CW1) under PTTW #4352-AYULX7 (7.6 L/sec)
- From January 27 to December 31, 2023- the system operated within the maximum allowable raw water flowrate for Well #1 (CW1) under PTTW #4716-CMXNKC (12.4 L/sec).

Table 9. Raw Water (Well #2- CW2) Monthly Average, Maximum Flow and T	「otal
Volume for 2023	

Raw Water Flow – Well #2 (CW2)					
Timeframe	Average Flow (m³/day)	Percent of Allowable Volume <sup>7A</sup>	Maximum Flow (m <sup>3</sup> /day)	Percent of Allowable Volume <sup>7A</sup>	Total Volume (m <sup>3</sup> )
January	24.66	9.38	104.52	39.76	764.46
February	35.70	3.33	125.29	11.69	999.52
March	81.93	7.65	292.99	27.35	2,539.71
April	111.49	10.41	719.00	67.11	3,344.81
May	129.26	12.07	576.00	53.76	4,007.15
June	78.53	36.07	110.04	10.27	2,356.02
July	52.79	4.93	88.62	8.27	1,636.64
August	75.59	7.06	265.86	24.82	2,343.20
September	72.31	6.75	127.92	11.94	2,169.35
October	33.31	3.11	112.74	10.52	1,032.56
November	0.00	0.00	0.00	0.00	0.00
December	0.81	0.08	11.63	1.09	25.22
2023	58.03	5.42	719.00	67.11	21,218.64

Note: Colgan Well #2 (CW2) was offline in November and December 2023. Flow data in December is representative of sampling and was flushed to waste.

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) for 2023:

- From January 1 to January 26, 2023: the system operated within the maximum allowable daily raw water volume for Well #2 (CW2) under PTTW #4352-AYULX7 (262.9 m<sup>3</sup>/day)
- From January 27 to December 31, 2023- the system operated within the maximum allowable daily raw water volume for Well #2 (CW2) under PTTW #4716-CMXNKC (1,071.36 m<sup>3</sup>/day)

## Table 10. Raw Water (Well #2-CW2) Annual and Monthly Average and Maximum Flowrates for 2023

Raw Water Flowrate – Well #2 (CW2)					
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)			
January	6.96	7.57			
February	7.21	9.23			
March	6.91	19.21			
April	6.48	8.91			
May	6.80	8.62			
June	6.76	8.50			
July	0.00	8.83			
August	5.76	7.61			
September	5.52	7.71			
October	2.93	23.35			
November	0.00	0.00			
December	0.00	7.70			
2023	3.81	23.35			

Note: Colgan Well #2 (CW2) was offline in November and December 2023. Flowrate data in December is representative of sampling and was flushed to waste.

A review of flow information for the reporting period indicates that Colgan Well 2 operated within the allowable flowrate in the PTTW maximum allowable raw water flowrate for Well #2 (CW2) for 2023:

- From January 1 to January 26, 2023: the system operated within the maximum allowable raw water flowrate for Well #1 (CW1) under PTTW #4352-AYULX7 (7.6 L/sec)
- From January 27 to December 31, 2023- the system operated within the maximum allowable raw water flowrate for Well #2 (CW2) under PTTW #4716-CMXNKC (12.4 L/sec) with the exception of March and October 2023 where flowrate exceedances were a result of well pump startups. Upon well start up, for the first 5 minutes well water is directed to waste prior to being directed to the treatment system. Singer valves are used to ensure

that the flowrate to the treatment system is throttled to run between 5-6 L/sec. All daily flow rate averages were below the flow rate limit.

	Raw Water Flow – Well #3 (CW3)				
Timeframe	Average Flow (m <sup>3</sup> /day)	Percent of Allowable Volume <sup>94</sup>	Maximum Flow (m <sup>3</sup> /day)	Percent of Allowable Volume	Total Volume (m <sup>3</sup> )
January	32.88	12.51%	224.71	85.47%	1,019.30
February	18.57	1.73%	56.05	5.23%	520.00
March	18.60	1.74%	39.35	3.67%	576.48
April	0.23	0.02%	6.36	0.59%	6.91
May	0.03	0.00%	1.08	0.10%	1.08
June	0.15	0.01%	3.98	0.37%	4.38
July	0.08	0.75%	1.24	0.12%	2.47
August	18.10	1.69%	309.84	28.92%	561.13
September	0.00	0.00%	0.00	0.00%	0.00
October	0.00	0.00%	0.00	0.00%	0.00
November	0.00	0.00%	0.00	0.00%	0.00
December	154.14	14.39%	390.74	36.47%	4,778.41
2023	20.23	1.89%	390.74	36.47%	7,470.16

Table 11. Raw Water (Well #3- CW3) Monthly Average, Maximum Flow and	d Total
Volume for 2023	

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) for 2023:

- From January 1 to January 26, 2023: the system operated within the maximum allowable daily raw water volume for Well #3 (CW3) under PTTW #4352-AYULX7 (262.9 m<sup>3</sup>/day)
- From January 27 to December 31, 2023- the system operated within the maximum allowable daily raw water volume for Well #3 (CW3) under PTTW #4716-CMXNKC (1,071.36 m<sup>3</sup>/day)

# Table 10. Raw Water (Well #3-CW3) Annual and Monthly Average and Maximum Flowrates for 2023

Raw Water Flowrate – Well #3 (CW3)					
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)			
January	5.06	8.89			
February	4.89	7.11			
March	4.31	16.88			
April	0.00	6.94			
May	0.00	7.01			
June	6.90	6.47			

Note: Well #3 (CW3) was offline in September, November and October, 2023

Raw Water Flowrate – Well #3 (CW3)			
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)	
July	6.62	5.99	
August	6.76	6.81	
September	0.00	0.00	
October	0.00	0.00	
November	0.00	0.00	
December	3.58	14.53	
2023	3.21	16.88	

Note: Well #3 (CW3) was offline in September, November and October, 2023

A review of flow information for the reporting period indicates that Colgan Well 3 operated within the allowable flowrate in the PTTW maximum allowable raw water flowrate for Well #3 (CW3) for 2023:

- From January 1 to January 26, 2023: the system operated within the maximum allowable raw water flowrate for Well #3 (CW3) under PTTW #4352-AYULX7 (7.6 L/sec)
- From January 27 to December 31, 2023- the system operated within the maximum allowable raw water flowrate for Well #3 (CW3) under PTTW #4716-CMXNKC (12.4 L/sec) with the exception of January, March and December 2023 where flowrate exceedances were a result of well pump startups. Upon well start up, for the first 5 minutes well water is directed to waste prior to being directed to the treatment system. Singer valves are used to ensure that the flowrate to the treatment system is throttled to run between 5-6 L/sec. All daily flowrate averages were below the flow rate limit.

Date	Average Combined	Percent of Allowable	Maximum Combined	Percent of Allowable
		<b>Volume</b> (1,071.36 m <sup>3</sup> /day)	<b>Taking</b> (m³/day)	<b>Volume</b> (1,071.36 m³/day)
	(m³/day)	(1,071.36 m 70ay)	(m²/uay)	(1,071.30 III /uay)
January	61.26	5.72%	241.06	22.50%
February	70.11	6.54%	150.00	14.00%
March	137.07	12.79%	500.08	46.68%
April	112.00	10.45%	719.00	67.11%
May	129.34	12.07%	576.00	53.76%
June	78.86	7.36%	110.04	10.27%
July	53.17	4.96%	88.62	8.27%
August	108.24	10.10%	763.55	71.27%
September	72.31	6.75%	127.92	11.94%
October	81.98	7.65%	257.21	24.01%
November	162.76	15.19%	444.88	41.52%
December	357.24	33.34%	750.62	70.06%

Table 11. Combined (CW1, CW2 and CW3) Raw Water Average and Maximum Flow
Volume with Comparison to Rated Capacity in 2023

Date	Average	Percent of	Maximum	Percent of
	Combined	Allowable	Combined	Allowable
	Taking	Volume	Taking	Volume
	(m <sup>3</sup> /day)	(1,071.36 m <sup>3</sup> /day)	(m <sup>3</sup> /day)	(1,071.36 m <sup>3</sup> /day)
2023	119.23	11.13%	763.55	71.27%

A review of flow information for the reporting period indicates that the system operated within the PTTW's maximum allowable maximum raw combined (CW1, CW2, and CW3) allowable taking volume for 2023 (1,071.36 m<sup>3</sup>/day).

As per PTTW #4716-CMXNKC an average daily water taking is shall be assessed based on a 90day rolling average from the wellfield - Source 1 (CW1), Source 2 (CW2) and Source 3 (CW3) and the 90-day rolling average shall not exceed 800,000 L/day (800 m3/day). Table 11 provides the average daily water taking as update on a daily basis, where flow data is averaged out each day inclusive of the current date and the 89 days preceding before it.

Date	90- Day Rolling Average
(DD-MM-YYYY)	(m³/day)
01/01/2023	63.549
01/02/2023	63.567
01/03/2023	63.653
01/04/2023	63.675
01/05/2023	63.752
01/06/2023	63.755
01/07/2023	63.761
01/08/2023	63.858
01/09/2023	63.890
01/10/2023	63.960
01/11/2023	64.049
01/12/2023	64.117
01/13/2023	64.199
01/14/2023	64.286
01/15/2023	64.303
01/16/2023	64.451
01/17/2023	64.569
01/18/2023	64.739
01/19/2023	64.842
01/20/2023	64.926
01/21/2023	65.100

#### Table 11. Wellfield Combined (CW1, CW2 and CW3) Average Daily Water Taking-90-Day Rolling Average for 2023

Date	90- Day Rolling Average
(DD-MM-YYYY)	(m³/day)
01/22/2023	65.217
01/23/2023	66.266
01/24/2023	66.267
01/25/2023	66.319
01/26/2023	66.181
01/27/2023	66.326
01/28/2023	66.385
01/29/2023	66.603
01/30/2023	68.516
01/31/2023	70.692
02/01/2023	71.933
02/02/2023	73.032
02/03/2023	73.410
02/04/2023	73.665
02/05/2023	73.967
02/06/2023	74.158
02/07/2023	74.306
02/08/2023	74.475
02/09/2023	74.640
02/10/2023	74.875
02/11/2023	75.057
02/12/2023	75.210
02/13/2023	75.462
02/14/2023	75.671
02/15/2023	75.850
02/16/2023	75.624
02/17/2023	76.199
02/18/2023	76.418
02/19/2023	76.727
02/20/2023	77.152
02/21/2023	77.493
02/22/2023	77.851
02/23/2023	78.024
02/24/2023	78.420
02/25/2023	78.718
02/26/2023	78.979
02/27/2023	79.246
02/28/2023	79.535
03/01/2023	79.549
03/02/2023	79.673

Date	90- Day Rolling Average
(DD-MM-YYYY)	(m³/day)
03/03/2023	79.901
03/04/2023	80.093
03/05/2023	78.673
03/06/2023	77.360
03/07/2023	75.568
03/08/2023	75.547
03/09/2023	75.969
03/10/2023	76.160
03/11/2023	76.369
03/12/2023	76.537
03/13/2023	74.654
03/14/2023	72.330
03/15/2023	72.538
03/16/2023	72.755
03/17/2023	73.551
03/18/2023	73.730
03/19/2023	72.792
03/20/2023	70.972
03/21/2023	72.691
03/22/2023	72.826
03/23/2023	74.080
03/24/2023	76.191
03/25/2023	76.596
03/26/2023	76.937
03/27/2023	78.307
03/28/2023	81.244
03/29/2023	86.057
03/30/2023	90.210
03/31/2023	90.124
04/01/2023	90.460
04/02/2023	90.948
04/03/2023	92.368
04/04/2023	96.176
04/05/2023	96.469
04/06/2023	96.768
04/07/2023	97.173
04/08/2023	97.472
04/09/2023	97.659
04/10/2023	97.907
04/11/2023	98.219

Date	90- Day Rolling Average
(DD-MM-YYYY)	(m³/day)
04/12/2023	98.512
04/13/2023	98.812
04/14/2023	98.863
04/15/2023	99.140
04/16/2023	99.396
04/17/2023	99.597
04/18/2023	99.821
04/19/2023	100.047
04/20/2023	100.408
04/21/2023	100.788
04/22/2023	101.005
04/23/2023	107.534
04/24/2023	107.807
04/25/2023	108.611
04/26/2023	108.994
04/27/2023	110.168
04/28/2023	110.298
04/29/2023	110.489
04/30/2023	109.035
05/01/2023	107.183
05/02/2023	106.407
05/03/2023	108.569
05/04/2023	111.212
05/05/2023	113.329
05/06/2023	119.009
05/07/2023	121.454
05/08/2023	121.677
05/09/2023	121.888
05/10/2023	122.378
05/11/2023	121.753
05/12/2023	122.333
05/13/2023	122.448
05/14/2023	122.631
05/15/2023	124.271
05/16/2023	126.754
05/17/2023	127.281
05/18/2023	126.959
05/19/2023	126.954
05/20/2023	126.739
05/21/2023	126.490

Date	90- Day Rolling Average
(DD-MM-YYYY)	(m³/day)
05/22/2023	126.490
05/23/2023	126.099
05/24/2023	126.348
05/25/2023	125.970
05/26/2023	126.190
05/27/2023	126.374
05/28/2023	126.590
05/29/2023	126.830
05/30/2023	125.998
05/31/2023	124.526
06/01/2023	124.984
06/02/2023	125.439
06/03/2023	125.470
06/04/2023	125.613
06/05/2023	125.878
06/06/2023	126.221
06/07/2023	126.133
06/08/2023	126.131
06/09/2023	126.343
06/10/2023	126.448
06/11/2023	126.362
06/12/2023	126.305
06/13/2023	124.669
06/14/2023	123.024
06/15/2023	122.595
06/16/2023	122.666
06/17/2023	122.844
06/18/2023	123.197
06/19/2023	122.038
06/20/2023	122.318
06/21/2023	121.608
06/22/2023	119.748
06/23/2023	119.682
06/24/2023	119.955
06/25/2023	118.978
06/26/2023	116.045
06/27/2023	111.529
06/28/2023	107.300
06/29/2023	107.511
06/30/2023	107.320

Date	90- Day Rolling Average
(DD-MM-YYYY)	(m³/day)
07/01/2023	107.018
07/02/2023	105.791
07/03/2023	102.251
07/04/2023	102.127
07/05/2023	102.040
07/06/2023	101.790
07/07/2023	101.562
07/08/2023	101.353
07/09/2023	101.074
07/10/2023	100.863
07/11/2023	100.649
07/12/2023	100.346
07/13/2023	100.263
07/14/2023	100.025
07/15/2023	99.876
07/16/2023	99.604
07/17/2023	99.271
07/18/2023	99.044
07/19/2023	98.091
07/20/2023	98.081
07/21/2023	97.710
07/22/2023	90.175
07/23/2023	89.983
07/24/2023	88.918
07/25/2023	88.708
07/26/2023	87.478
07/27/2023	87.540
07/28/2023	87.745
07/29/2023	87.780
07/30/2023	87.830
07/31/2023	87.434
08/01/2023	84.280
08/02/2023	81.243
08/03/2023	78.808
08/04/2023	72.983
08/05/2023	70.363
08/06/2023	70.167
08/07/2023	69.905
08/08/2023	69.602
08/09/2023	70.206

Date	90- Day Rolling Average
(DD-MM-YYYY)	(m³/day)
08/10/2023	70.916
08/11/2023	70.679
08/12/2023	70.467
08/13/2023	68.861
08/14/2023	66.291
08/15/2023	66.282
08/16/2023	66.250
08/17/2023	66.296
08/18/2023	66.330
08/19/2023	66.330
08/20/2023	66.343
08/21/2023	66.679
08/22/2023	66.618
08/23/2023	66.904
08/24/2023	66.418
08/25/2023	68.446
08/26/2023	75.962
08/27/2023	80.952
08/28/2023	81.087
08/29/2023	80.465
08/30/2023	79.868
08/31/2023	79.519
09/01/2023	79.511
09/02/2023	79.588
09/03/2023	79.273
09/04/2023	78.862
09/05/2023	79.005
09/06/2023	78.895
09/07/2023	78.772
09/08/2023	79.401
09/09/2023	79.445
09/10/2023	79.572
09/11/2023	79.685
09/12/2023	79.690
09/13/2023	79.672
09/14/2023	79.761
09/15/2023	79.434
09/16/2023	79.231
09/17/2023	78.770
09/18/2023	78.644

Date	90- Day Rolling Average
(DD-MM-YYYY)	(m³/day)
09/19/2023	78.388
09/20/2023	78.402
09/21/2023	78.566
09/22/2023	78.399
09/23/2023	78.427
09/24/2023	78.553
09/25/2023	78.225
09/26/2023	78.485
09/27/2023	78.405
09/28/2023	78.289
09/29/2023	78.388
09/30/2023	78.388
10/01/2023	78.421
10/02/2023	78.624
10/03/2023	78.844
10/04/2023	78.871
10/05/2023	78.988
10/06/2023	79.278
10/07/2023	79.631
10/08/2023	80.119
10/09/2023	80.806
10/10/2023	81.359
10/11/2023	81.413
10/12/2023	81.431
10/13/2023	81.588
10/14/2023	81.789
10/15/2023	81.987
10/16/2023	82.212
10/17/2023	82.905
10/18/2023	82.551
10/19/2023	82.898
10/20/2023	83.016
10/21/2023	83.041
10/22/2023	83.554
10/23/2023	83.599
10/24/2023	83.680
10/25/2023	83.642
10/26/2023	83.453
10/27/2023	84.048
10/28/2023	83.820

Date (DD-MM-YYYY)	90- Day Rolling Average (m <sup>3</sup> /day)
10/30/2023	86.262
10/31/2023	88.721
11/01/2023	90.007
11/02/2023	91.997
11/03/2023	93.911
11/04/2023	96.418
11/05/2023	96.729
11/06/2023	96.548
11/07/2023	96.715
11/08/2023	95.480
11/09/2023	95.634
11/10/2023	95.768
11/11/2023	95.975
11/12/2023	95.986
11/13/2023	96.072
11/14/2023	96.117
11/15/2023	95.977
11/16/2023	97.661
11/17/2023	99.972
11/18/2023	100.262
11/19/2023	100.567
11/20/2023	101.080
11/21/2023	102.008
11/22/2023	102.827
11/23/2023	102.658
11/24/2023	99.077
11/25/2023	98.049
11/26/2023	101.793
11/27/2023	103.754
11/28/2023	104.657
11/29/2023	105.429
11/30/2023	105.764
12/01/2023	107.600
12/02/2023	112.165
12/03/2023	115.961
12/04/2023	119.904
12/05/2023	121.747
12/06/2023	125.754
12/07/2023	129.131

Date	90- Day Rolling Average
(DD-MM-YYYY)	(m³/day)
12/08/2023	131.353
12/09/2023	133.940
12/10/2023	134.725
12/11/2023	135.843
12/12/2023	138.792
12/13/2023	142.306
12/14/2023	144.883
12/15/2023	150.554
12/16/2023	154.486
12/17/2023	155.250
12/18/2023	158.296
12/19/2023	161.404
12/20/2023	164.307
12/21/2023	166.779
12/22/2023	167.472
12/23/2023	168.853
12/24/2023	170.848
12/25/2023	173.084
12/26/2023	179.998
12/27/2023	187.455
12/28/2023	195.079
12/29/2023	200.508
12/30/2023	203.727
12/31/2023	203.932

A review of the above information indicates that at no point in 2023 did the system exceed the PTTW's 90-day average daily water taking limit ( $800 \text{ m}^3/\text{day}$ ) from the wellfield- Source 1 (CW1), Source 2 (CW2) and Source 3 (CW3).