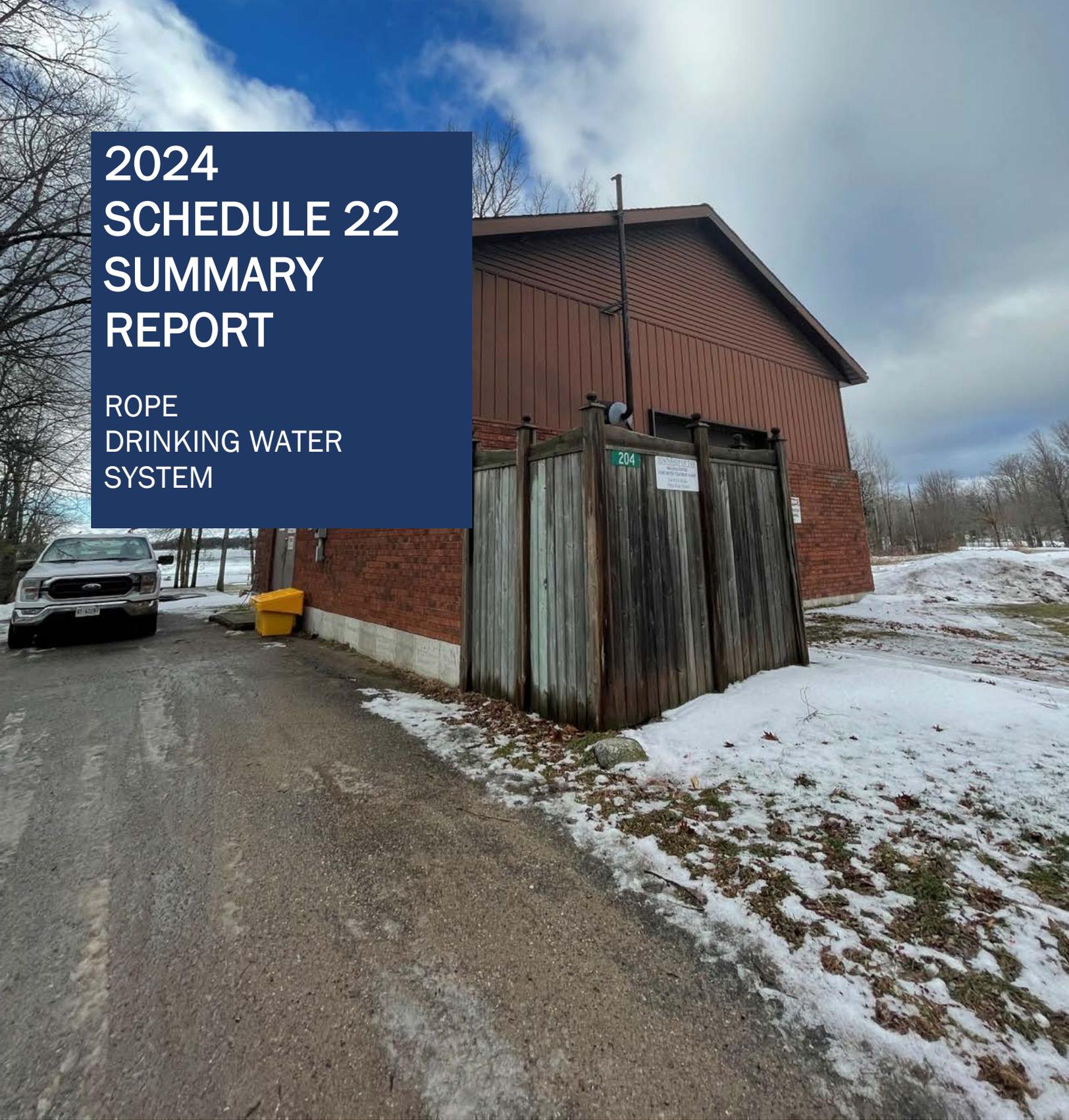


2024 SCHEDULE 22 SUMMARY REPORT

ROPE
DRINKING WATER
SYSTEM



For the period of
January 1st, 2024 to December 31st, 2024

Prepared for the Corporation of the Township of Tay 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:	220011323
Drinking-Water System Name:	Rope Drinking Water System
Drinking-Water System Owner:	The Corporation of the Township of Tay
Drinking-Water System Category:	Small Municipal Residential
Period being reported:	January 1, 2024 – December 31, 2024

1. Issue(s) of Non-Compliance

A Ministry of Environment, Conservation and Parks (MECP) Drinking Water System Inspection was conducted on October 23, 2024 for the period covering June 2023 to October 2024. On February 11, 2025 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 2023/2024 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
Total Suspended Solids Annual Average exceedance for 2024- Non-compliance with Municipal Drinking Water Licence – Licence No. 129-101, Issue No. 6, Schedule C, Residuals Management, Table 3. The annual average concentration for Total Suspended Solids (TSS) exceeded the MDWL allowable annual average TSS Concentration of	N/A	<ul style="list-style-type: none"> • Sampling frequency was increased for 2024 (from the required monthly to bi-weekly) to allow for sooner response to draining the wastewater holding tank. • Results typically range from 2 mg/L – 6 mg/L; one result in October 2024 of 370 mg/L skewed the annual average. • Hauling is completed regularly and was completed following the receipt of the high October sample results.

Incident	Duration	Corrective Actions
15 mg/L for 2024- Annual Average was 19.22 mg/L. Exceedance of 4.22 mg/L.		<ul style="list-style-type: none"> • Verbal and written notification of non-compliance provided to the MECP on January 17, 2025. No further actions advised.

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

2. Assessment of Flowrates and Quantity of Water Supplied

The following tables (Table 3 to 10) 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):	129-101 (Issue Number: 6)
Maximum Allowable Rated Capacity – Membrane Filtration System (each train):	216 m ³ /day
Maximum Allowable Rated Capacity – UV System (each unit):	274 m ³ /day
Maximum Allowable Flowrate into Treatment System – Membrane Filtration System (each train):	2.5 L/s
Allowable Flowrate into Treatment System – UV System (each unit):	3.2 L/s

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. Membrane Filter Train 1 Effluent - Annual and Monthly Average and Maximum Flows with Comparison to Rated Capacity of Membrane Filtration System for 2024

Membrane Filtration System Flow – Filter Train 1				
Timeframe	Average Flow (m³/day)	Percent of Rated Capacity (216 m³/day)	Maximum Flow (m³/day)	Percent of Rated Capacity (216 m³/day)
January	9.10	4.21%	25.47	11.79%
February	10.01	4.63%	18.44	8.54%
March	9.04	4.19%	15.69	7.26%
April	8.02	3.71%	13.80	6.39%
May	12.96	6.00%	21.95	10.16%
June	13.01	6.02%	22.60	10.46%
July	5.12	2.37%	21.07	9.75%
August	14.29	6.62%	24.45	11.32%
September	11.42	5.29%	14.90	6.90%
October	11.52	5.33%	28.56	13.22%
November	13.75	6.37%	27.67	12.81%
December	9.85	4.56%	13.09	6.06%
2024	10.67	4.95%	28.56	13.22%

A review of flow information for the reporting period indicates that the drinking water system operated within the rated capacity specified in the MDWL (216 m³/day) for the maximum treated water that flows from the membrane filtration treatment subsystem for Filter Train 1.

Table 4. Membrane Filter Train 2 Effluent - Annual and Monthly Average and Maximum Flows with Comparison to Rated Capacity of Membrane Filtration System for 2024

Membrane Filtration System Flow – Filter Train 2				
Timeframe	Average Flow (m³/day)	Percent of Rated Capacity (216 m³/day)	Maximum Flow (m³/day)	Percent of Rated Capacity (216 m³/day)
January	11.92	5.52%	20.65	9.56%
February	13.13	6.08%	19.49	9.02%
March	12.07	5.59%	16.06	7.44%
April	16.51	7.64%	28.83	13.35%
May	19.21	8.89%	30.88	14.30%
June	18.40	8.52%	28.10	13.01%
July	27.66	12.81%	54.59	25.27%
August	17.92	8.30%	28.46	13.18%
September	12.23	5.66%	22.95	10.63%
October	11.93	5.52%	28.89	13.38%

Membrane Filtration System Flow – Filter Train 2				
Timeframe	Average Flow (m³/day)	Percent of Rated Capacity (216 m³/day)	Maximum Flow (m³/day)	Percent of Rated Capacity (216 m³/day)
November	7.40	3.43%	23.59	10.92%
December	15.88	7.35%	24.01	11.12%
2024	15.35	7.11%	54.59	25.27%

A review of flow information for the reporting period indicates that the drinking water system operated within the rated capacity specified in the MDWL (216 m³/day) for the maximum treated water that flows from the membrane filtration treatment subsystem for Filter Train 2.

Table 5. Treated Water Annual and Monthly Average and Maximum Flows with Comparison to Rated Capacity of UV System for 2024

Treated Water Flow – UV System (1 & 2)				
Timeframe	Average Flow (m³/day)	Percent of Rated Capacity (274 m³/day)	Maximum Flow (m³/day)	Percent of Rated Capacity (274 m³/day)
January	28.24	10.31%	48.66	17.76%
February	30.89	11.27%	42.57	15.54%
March	28.13	10.27%	35.20	12.85%
April	30.95	11.30%	43.67	15.94%
May	41.44	15.12%	68.14	24.87%
June	41.08	14.99%	67.77	24.73%
July	38.82	14.17%	65.10	23.76%
August	41.67	15.21%	60.88	22.22%
September	30.48	11.12%	51.59	18.83%
October	31.17	11.38%	74.91	27.34%
November	29.25	10.68%	34.71	12.67%
December	30.02	10.96%	40.50	14.78%
2024	33.51	12.23%	74.91	27.34%

Note: Rope DWS consists of two UV systems (one duty, one standby). Only one UV System is in operation at a time.

Note: The treated water flow is representative of the flow directed into the UV system.

A review of flow information for the reporting period indicates that the drinking water system operated within the rated capacity specified in the MDWL (274 m³/day) for the maximum treated volume of treated water that flows from the UV treatment subsystem.

Table 6. Treated Water Annual and Monthly Total Flow Volume for 2024

Treated Water Total Flow – All Sources	
Timeframe	Total Volume (m³)
January	661.00
February	696.00
March	624.00
April	683.00
May	1,015.00
June	1,007.00
July	1,136.00
August	1,216.00
September	1,038.00
October	987.00
November	879.00
December	870.00
2024	10,812.00

The MDWL, did not list a rated capacity for the maximum daily volume of treated water that flows from the treatment subsystem to the distribution system.

As per the MDWL, 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 7, Table 8 and Table 9.

Table 7. Membrane Filter Train 1 Influent – Annual, Monthly Maximum Flowrates for 2024

Membrane Filtration Influent Flowrate (Filter Train 1)		
Timeframe	Maximum Flowrate (L/sec)	Percent of Maximum Flowrate
January	4.09 ^{7A}	163.60% ^{7A}
February	1.84	73.60%
March	1.04	41.60%
April	3.36 ^{7A}	134.40% ^{7A}
May	3.21 ^{7A}	128.40% ^{7A}
June	1.72	68.80%
July	1.30	52.00%
August	1.90	76.00%
September	3.98 ^{7A}	159.20% ^{7A}
October	0.88	35.20%
November	1.58	63.20%
December	0.56	22.40%
2024	4.09^{7A}	163.60%^{7A}

A review of flow information for the reporting period indicates that the drinking water system operated within the rated capacity specified in the MDWL (2.5 L/s) for the average flowrates of treated water that flows into the treatment subsystem for filter train 1 with the exception of:

- ^{7A}January, April, May, and September were due to filter train maintenance while the train was not in production. While in production, filter train 1 influent flowrates are manually set below the maximum allowable flowrate as to not exceed the MDWL allowable flowrate.

Table 8. Membrane Filter Train 2 Influent – Annual, Monthly Maximum Flowrates for 2024

Membrane Filtration Influent Flowrate (Filter Train 2)		
Timeframe	Maximum Flowrate (L/sec)	Percent of Maximum Flowrate
January	3.50 ^{8A}	140.00% ^{8A}
February	0.92	36.80%
March	2.06	82.40%
May	2.17	86.80%
April	2.67 ^{8A}	106.80% ^{8A}
June	4.73 ^{8A}	189.20% ^{8A}
July	1.38	55.20%
August	4.04 ^{8A}	161.60% ^{8A}
September	2.36	94.40%
October	0.97	38.80%
November	0.82	32.80%
December	1.14	45.60%
2024	4.04^{8A}	189.20%^{8A}

A review of flow information for the reporting period indicates that the drinking water system operated within the rated capacity specified in the MDWL (2.5 L/s) for the average flowrates of treated water that flows into the treatment subsystem for filter train 2 with the exception of:

- ^{8A}January, June, July, and September were due to filter train maintenance while the train was not in production. While in production, filter train 2 influent flowrates are manually set below the maximum allowable flowrate as to not exceed the MDWL allowable flowrate.

Table 9. UV System Influent – Annual, Monthly Maximum Flowrates for 2024

UV System Influent Flow Rate		
Timeframe	Maximum Flowrate (L/sec)	Percent of Maximum Flowrate
January	6.08 ^{9A}	190.00% ^{9A}
February	2.70	84.38%
March	3.10	96.88%
April	6.36 ^{9A}	198.75% ^{9A}

UV System Influent Flow Rate		
Timeframe	Maximum Flowrate (L/sec)	Percent of Maximum Flowrate
May	5.57 ^{9A}	174.06% ^{9A}
June	6.43 ^{9A}	200.94% ^{9A}
July	2.62	81.88%
August	5.46 ^{9A}	170.63% ^{9A}
September	5.86 ^{9A}	183.13% ^{9A}
October	1.87	58.44%
November	1.92	60.00%
December	1.38	43.13%
2024	6.43^{9A}	200.94%^{9A}

Note: Flowrate is measured after filtration, prior to entering the UV system. Rope DWS consists of two UV systems (one duty, one standby). Only one UV System is in operation at a time.

A review of flow information for the reporting period indicates that the drinking water system operated within the rated capacity specified in the MDWL (3.2 L/s) for the average flowrates of treated water that flows into UV system with the exception of:

- ^{9A}January, April, May, June, August, and September, 2024 were brief periods due to filter train maintenance while the train was not in production. While in production, filter train 2 influent flowrates are manually set below the maximum allowable flowrate as to not exceed the MDWL allowable flowrate.

Table 10. Treated Water Annual and Monthly Maximum Flowrates for 2024

Treated Water Flow Rate	
Timeframe	Maximum Flowrate (L/sec)
January	6.25
February	11.61
March	11.68
April	12.05
May	11.27
June	5.51
July	6.64
August	7.62
September	6.02
October	5.05
November	5.63
December	12.52
2024	12.52

The applicable MDWL for the reporting period did not list a maximum allowable limit for the flowrate of water that flows from the treatment system into the distribution system.

2.2 Raw Water

Permit to Take Water Number (PTTW):	1854-CDDHZN
Allowable Maximum Raw Water Volume – Georgian Bay	273.87 m ³ /day
Allowable Maximum Raw Water Flowrate – Georgian Bay	285 L/min (4.75 L/sec)

As per the PTTW, water shall only be taken from the specified source, during the periods and at the rates and amounts as specified in the permit.

Table 11. Raw Water Monthly Average, Maximum Flow and Total Volume for 2024

Raw Water Flow- Georgian Bay					
Timeframe	Average Flow (m ³ /day)	Percent of Allowable Volume	Maximum Flow (m ³ /day)	Percent of Allowable Volume	Total Volume (m ³)
January	30.66	11.20%	43.10	15.74%	950.40
February	28.04	10.24%	42.00	15.34%	813.12
March	30.42	11.11%	43.67	15.95%	943.00
April	41.59	15.19%	68.14	24.88%	1,247.55
May	40.40	14.75%	67.77	24.75%	1,252.49
June	37.34	13.63%	65.10	23.77%	1,120.07
July	42.62	15.56%	62.95	22.99%	1,321.30
August	32.49	11.86%	51.59	18.84%	1,007.07
September	29.45	10.75%	34.71	12.67%	883.40
October	30.03	10.96%	40.50	14.79%	931.00
November	29.15	10.64%	34.71	12.67%	874.39
December	30.02	10.96%	40.50	14.79%	930.47
2024	33.54	12.25%	68.14	24.88%	12,274.26

A review of flow information for the reporting period indicates that the system operated within the PTTW's maximum allowable daily raw water volume takings (273.87 m³/day).

Table 12. Raw Water Annual and Monthly Maximum Flowrates for 2024

Raw Water Flowrate	
Timeframe	Maximum Flowrate (L/sec)
January	6.08 ^{12A}
February	2.70
March	3.10
April	6.36 ^{12A}
May	5.57 ^{12A}
June	6.43 ^{12A}
July	2.62

Raw Water Flowrate	
Timeframe	Maximum Flowrate (L/sec)
August	5.46 ^{12A}
September	5.86 ^{12A}
October	1.87
November	1.92
December	1.38
2024	6.43^{12A}

A review of flow information for the reporting period indicates that the system operated within the PTTW's maximum allowable raw water flowrate (4.75 L/sec) with the exception of:

- ^{12A}January, April, May, June, August, and September, 2024 – maximum flowrate exceedances were for a short duration of time due to filter maintenance. It should be noted that raw water filter influent rates are set manually below the maximum allowable raw water flowrate.