

2023 SCHEDULE 22 SUMMARY REPORT

DRAYTON
DRINKING WATER
SYSTEM



For the period of
January 1st, 2023 to December 31st, 2023

Prepared for the Corporation of the Township of Mapleton 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:	220004064
Drinking-Water System Name:	Drayton Drinking Water System
Drinking-Water System Owner:	The Corporation of the Township of Mapleton
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	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 June 29, 2023 for the period covering June 15, 2022 to June 29, 2023. On August 23, 2023 the Inspection Report was issued and an Inspection Summary Rating Record (IRR) of 97.98% 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	Required Actions & Corrective Actions
<p>Monitoring conditions of Municipal Drinking Water Licence (MDWL) #105-101 were not met.</p> <p>During the inspection period, the well 2 flow meter failed on December 5, 2022 at approximately 08:22 am and this was not fully repaired until June 27, 2023.</p>	<p>December 5, 2022 to June 27, 2023</p>	<ul style="list-style-type: none"> OCWA attempted to correct this matter quickly but ran into purchasing and supply issues, as the meter is made in the US and is of older technology. Documentation was provided verifying difficulties in getting replacement equipment and discussions with suppliers. During this period, well 2 was primarily offline as demand had not required it to be online. The well was turned on only for weekly microbiological sampling and for refilling activities when commissioning the new water tower. A number of extended periods also occurred in which Well 2 was operating and not just for short sampling periods. OCWA did not contact the MECP to advise of this extended flow meter loss and request regulatory relief over this extended period. OCWA provided Well 2 flow volume data for the periods when Well 2 was in use (without a flow meter), since the well pump has a fixed flow rate (both raw

Non-Compliance(s)	Duration	Required Actions & Corrective Actions
		water well pumps are not equipped with variable frequency drives or 'VFDs') and each well has a pump run time meter. <ul style="list-style-type: none"> • No further actions required
Alterations to the Drayton DWS subsystem has occurred (new water tower was installed and commissioned) since the issuance of the existing subsystem certificate of classification. The owner had not applied or provide confirmation for the re-determination of the type and class of the subsystem or had not determined that the alteration(s) was not sufficient to trigger an application.	N/A	<ul style="list-style-type: none"> • By August 31, 2023 the owner shall apply for a re-determination of the subsystem or provide confirmation to the undersigned inspector confirming the alterations made to the distribution subsystem are not sufficient to trigger an application. • An application was completed and sent to OWWCO for re-determination/re-classification of the subsystem on October 18, 2023 and the Owner at the time this report was prepared was still waiting for a response/re-classification from OWWCO.

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.

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 Drayton Drinking Water System Annual Report (Section 11).

2. Assessment of Flowrates and Quantity of Water Supplied

The following tables (Table 3 to 8) 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):	105-101 (Issue Number: 3)
Allowable Rated Capacity:	3,928 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 2023

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	517.33	13.17%	1796.22	45.73%	16037.28
February	476.66	12.13%	1399.77	35.64%	13346.41
March	401.03	10.21%	558.42	14.22%	12431.95
April	398.07	10.13%	652.38	16.61%	11941.99
May	475.46	12.10%	746.24	19.00%	14739.36
June	567.53	14.45%	980.78	24.97%	16458.47
July	476.04	12.12%	867.26	22.08%	14757.18
August	444.76	11.32%	925.95	23.57%	13342.69
September	475.20	12.10%	843.30	21.47%	13305.60
October	429.42	10.93%	632.81	16.11%	13312.14
November	442.28	11.26%	752.69	19.16%	13268.53
December	452.55	11.52%	661.47	16.84%	14029.13
2023	463.03	11.79%	1796.22	45.73%	166970.73

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.

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.

Table 4. Treated Water Annual and Monthly Average and Maximum Flowrates for 2023

Treated Water Flowrate		
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)
January	23.50	52.80
February	17.70	38.40
March	23.10	34.40
April	21.96	28.80
May	22.50	22.80
June	20.01	22.10
July	19.48	23.30
August	18.55	21.70
September	15.69	26.60
October	19.84	22.30
November	19.97	22.40
December	19.75	20.00
2023	20.23	52.80

2.2 Raw Water

Permit to Take Water Number (PTTW):	0758-98MLKT (Jan 1- May 31, 2023) 6777-CRVL6Y (May 31 – Dec 31, 2023)
Allowable Maximum Raw Water Volume - Well #1:	1,964.16 m ³ /day
Allowable Maximum Raw Water Flowrate - Well #1:	1,364 L/min (22.73 L/sec)
Allowable Maximum Volume of Raw Water - Well #2:	1,964.16 m ³ /day
Allowable Maximum Raw Water Flowrate – Well #2:	1,364 L/min (22.73 L/sec)

From January 1, 2023 to May 31, 2023 Drayton DWS operated under PTTW #0758-98MLKT. For the remainder of the year the system operated under PTTW#6777-CRVL67. The authorized sources, allowable flowrates and allowable water taking amounts remained the same for the system.

As per both PTTW, water shall only be taken from the specified source(s) and at the rates and amounts taken as specified in the permit.

Table 5. Raw Water (Well #1) Monthly Average, Maximum Flow and Total Volume for 2023

Raw Water Flow – Well #1					
Timeframe	Average Flow (m ³ /day)	Percent of Allowable Volume	Maximum Flow (m ³ /day)	Percent of Allowable Volume	Total Volume (m ³)
January	487.01	24.80%	1451.03	73.88%	15097.45
February	459.24	23.38%	1345.48	68.50%	12858.72
March	395.24	20.12%	555.87	28.30%	12252.29
April	388.83	19.80%	645.94	32.89%	11664.78
May	451.32	22.98%	724.30	36.88%	13990.93
June	562.73	28.65%	975.24	49.65%	16319.04
July	418.67	21.32%	860.53	43.81%	10885.43
August	76.10	3.87%	502.28	25.57%	532.69
September	14.04	0.71%	21.00	1.07%	70.18
October	25.82	1.31%	92.86	4.73%	180.73
November	123.50	6.29%	417.12	21.24%	864.47
December	431.97	21.99%	648.10	33.00%	11231.22
2023	319.54	16.27%	1451.03	73.88%	105947.93

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.

Table 6. Raw Water (Well #1) Annual and Monthly Average and Maximum Flowrates for 2023

Raw Water Flowrate – Well #1		
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)
January	21.19	21.30
February	21.24	21.50
March	21.09	21.40
April	21.04	21.30
May	20.95	21.30
June	20.93	21.20
July	20.83	21.10
August	19.18	22.67
September	22.18	21.90
October	17.57	22.30
November	19.43	22.10
December	19.02	19.50
2023	20.68	22.67

A review of flow information for the reporting period indicates that the system operated within the PTTW's maximum allowable raw water flowrate for Well #1 except for:

- One instance during well #1 weekly sampling on September 5, 2023. The maximum flowrate documented was 23.61 L/sec for the duration of approximately 12 minutes. The well was turned on for sampling and turned off after sampling was completed. Outside of this instance the September 2023 maximum flowrate was 21.9 L/sec.

Table 7. Raw Water (Well #2) Monthly Average, Maximum Flow and Total Volume for 2023

Raw Water Flow – Well #2					
Timeframe	Average Flow (m ³ /day)	Percent of Allowable Volume	Maximum Flow (m ³ /day)	Percent of Allowable Volume	Total Volume (m ³)
January	185.86	9.46%	379.36	19.31%	1858.58
February	82.22	4.19%	187.59	9.55%	493.30
March	25.29	1.29%	83.38	4.24%	126.45
April	46.00	2.34%	191.07	9.73%	229.98
May	58.99	3.00%	337.67	17.19%	589.88
June	10.48	0.53%	11.81	0.60%	41.91
July	385.98	19.65%	796.95	40.57%	3859.76
August	432.09	22.00%	957.77	48.76%	13394.79
September	505.92	25.76%	896.08	45.62%	14165.82
October	456.80	23.26%	696.98	35.48%	14160.90
November	462.52	23.55%	792.41	40.34%	13413.11
December	344.23	17.53%	544.43	27.72%	3098.03
2023	249.70	12.71%	957.77	48.76%	65432.51

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.

Table 8. Raw Water (Well #2) Annual and Monthly Average and Maximum Flowrates for 2023

Raw Water Flowrate – Well #2		
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)
January	19.30	19.30
February	19.30	19.30
March	19.30	19.30
April	19.30	19.30
May	19.30	19.30
June	19.40	19.40
July	19.42	19.60

Raw Water Flowrate – Well #2		
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)
August	20.00	21.70
September	20.49	20.60
October	20.65	20.90
November	20.80	20.90
December	20.41	20.80
2023	20.31	21.70

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 #2.