

SUMMARY REPORT

ONTARIO REGULATION 170/03
SCHEDULE 22

SHELBURNE DRINKING WATER SYSTEM

FOR THE PERIOD:
JANUARY 1, 2020 – DECEMBER 31, 2020

*Prepared for the Town of Shelburne
by the Ontario Clean Water Agency*



A People Place, A Change of Pace
SHELBURNE
ONTARIO, CANADA



ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

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DRINKING-WATER SYSTEMS REGULATION O. Reg. 170/03, Schedule 22

DRINKING-WATER SYSTEM NAME:	SHELBURNE DRINKING WATER SYSTEM
DRINKING-WATER SYSTEM NUMBER:	220004695
DRINKING-WATER SYSTEM CATEGORY:	LARGE MUNICIPAL RESIDENTIAL
DRINKING-WATER WORKS PERMIT #:	109-201, Issue #7 – Issued: October 1, 2020
MUNICIPAL DRINKING WATER LICENCE #:	109-101, Issue #5 - Issued: October 1, 2020 Expiry: September 30, 2025
PERMIT TO TAKE WATER #:	1353-AZHJCQ - Issued: December 3, 2015 Expiry: May 31, 2020 P-300-1082818689 - Issued: December 10, 2020 Expiry: August 31, 2030

REPORT:

This report is a summary of water quality information for the Shelburne Water Supply, published in accordance with Schedule 22 of Ontario's Drinking-Water System Regulation 170/03 for the reporting period of **January 1, 2020 to December 31, 2020**.

This report was prepared by the Ontario Clean Water Agency on behalf of the Town of Shelburne.

Issues of Non-Compliance

The following outlines any instances when the DWS failed to meet the requirements of the Act, Regulations, System Approval(s) and any Order during this reporting period and the measures taken to correct each failure.

Non-Compliance Description	Date Non-Compliance Issued	Corrective Action	Date Corrective Action Implemented
<p>Non-Compliance issued from MECP Inspection Report dated September 15, 2020</p> <p>The owner was not in compliance with all conditions of the PTTW.</p>	11/24/2020	Town of Shelburne Engineer SBA has been advised of their requirement and will meet all the requirements under the license – Final well field capacity assessment report was submitted March 26, 2020 – Under the new PTTW the new requirement is stated to be March 31, 2021	n/a
<p>Non-Compliance issued from MECP Inspection Report dated September 15, 2020</p> <p>The owner/operating authority was not in compliance with the requirement to prepare Form 1 documents as required by their Drinking Water Works Permit during the inspection period.</p>	11/24/2020	Town developed a procedure for future watermain projects and provide MECP inspector with a copy of the procedure on December 18, 2020	12/18/2020
<p>Non-Compliance issued from MECP Inspection Report dated September 15, 2020</p> <p>The overall responsible operator had not been designated for each subsystem.</p>	11/24/2020	Incorrect designation was amended – There was an SOP G-49 was drafted on November 23, 2020 and has been distributed and updated in FEP binders	10/05/2020

*Refer to MECP Inspection Report for further details on non-compliance

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The Shelburne Drinking Water System was last inspected by the Ministry of the Environment, Conservation, and Parks on September 15, 2020.

Please refer to the Section 11 Annual Report for the Shelburne Drinking Water System for information regarding Adverse Water Quality Incident(s) which may have occurred during the reporting period.

SYSTEM PERFORMANCE:

The following tables list the quantities and flow rates of the water supplied during the reporting period covered by this report, including each raw water well and the treated water system. It includes the monthly average, maximum daily flows and a comparison to the rated capacity and flow rates specified in the system approval.

Table 1: Shelburne DWS – Maximum Allowable Volume and Flow Rate, and Rated Capacity						
Shelburne Well Supply	Well #1	Well #3	Well #5	Well #6	Well #7	Well #8
Design Capacity (m ³ /day)	1642.00	1309.00	1964.00	1964.00	1635.00	1635.00
Approved Maximum Flow Rate (L/s)	19.00	15.15	22.73	22.73	18.91	18.91
Average Day Flow (m ³ /day)	13.65	591.91	413.80	362.14	563.34	632.36
Maximum Day Flow (m ³ /day)	328.00	892.00	1329.00	1037.00	1572.00	1555.00
% Average Day Flow/Design Capacity	5.09%	45.22%	21.07%	18.44%	34.46%	38.68%
% Maximum Day Flow/Design Capacity	19.98%	68.14%	67.67%	52.80%	96.15%	95.11%
Average Peak Flow Rate (L/s)	8.56	13.61	14.96	13.23	19.12	18.91
Maximum Peak Flow Rate (L/s)	15.76	14.78	19.25	15.50	21.94	23.23
% Average Peak Flow Rate/Approved	45.05%	89.83%	65.82%	58.21%	101.11%	100%
% Maximum Peak Flow Rate/Approved	82.95%	97.56%	84.69%	68.19%	116.02%	122.85%

A review of flow information for the period of January 1, 2020 to December 31, 2020 indicates that:

- The maximum daily volume specified in the PTTW was not exceeded on any well.
- The drinking water system did not exceed the rated capacity for the maximum treated volume of treated water that flows from the treatment subsystem to the distribution system as specified in the MDWL.
- There were 3 instances where the maximum peak flow rate was exceeded for Well 7 within the drinking water system.
 - May 15, 2020 – exceedance occurred for 28 seconds on startup and was not reportable due to it being a brief spike.
 - July 24, 2020 – exceedance occurred for less than 5 minutes (true max SCADA data 18.23 L/s)
 - October 10, 2020 – exceedance occurred due to power blip at 12:58 (trended 19.23 L/s)
- There were 3 instances where the maximum peak flow rate was exceeded for Well 8 within the drinking water system.
 - February 12, 2020 – exceedance occurred for 9 seconds, both well 7 & 8 ran together, nearing pump shut off Well 8 jumped
 - May 16, 2020 – exceedance occurred for less than 5 minutes (true max SCADA data 18.12 L/s)

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- July 7, 2020 - exceedance occurred for less than 5 minutes (true max SCADA data 18.25 L/s)

The following tables outline the detailed flow summary for each Raw Water Well:

Table 2: Facility Flow Summary for Raw Water Source W1						
Well #1						
Month	Monthly Flow Total (m ³ /month)	Daily Flow Average (m ³ /day)	Daily Flow Maximum (m ³ /day)	Max Percent Water Taking Limits (%)	Daily Flow Peak Flow Rate (L/sec)	Number of Days of Water Taking
January	3.00	3.00	3.00	0.18	6.46	1
February	0.00	0.00	0.00	0.00	0.00	0
March	0.00	0.00	0.00	0.00	0.00	0
April	0.00	0.00	0.00	0.00	0.00	0
May	0.00	0.00	0.00	0.00	0.00	0
June	0.00	0.00	0.00	0.00	0.00	0
July	0.00	0.00	0.00	0.00	0.00	0
August	823.00	26.55	223.00	13.58	15.00	7
September	577.00	19.23	208.00	12.67	15.76	6
October	1026.00	33.10	328.00	19.98	14.14	6
November	0.00	0.00	0.00	0.00	0.00	0
December	0.00	0.00	0.00	0.00	0.00	0
Total	2429.00					20
Avg		13.65			8.56	
Max			328.00	19.98	15.76	

Table 3 : Facility Flow Summary for Raw Water Source W3						
Well #3						
Month	Monthly Flow Total (m ³ /month)	Daily Flow Average (m ³ /day)	Daily Flow Maximum (m ³ /day)	Max Percent Water Taking Limits (%)	Daily Flow Peak Flow Rate (L/sec)	Number of Days of Water Taking
January	16966.50	547.31	892.00	68.14	13.30	31
February	18825.00	649.14	880.00	67.23	14.78	29
March	19691	635.19	814.00	62.18	13.26	31
April	1608.00	536.00	763.00	58.29	13.08	3
May	0.00	0.00	0.00	0.00	0.00	0
June	0.00	0.00	0.00	0.00	0.00	0
July	0.00	0.00	0.00	0.00	0.00	0
August	0.00	0.00	0.00	0.00	0.00	0

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September	0.00	0.00	0.00	0.00	0.00	0
October	0.00	0.00	0.00	0.00	0.00	0
November	0.00	0.00	0.00	0.00	0.00	0
December	0.00	0.00	0.00	0.00	0.00	0
Total	57090.50					94
Avg		591.91			13.61	
Max			892.00	68.14	14.78	

Table 4: Facility Flow Summary for Raw Water Source W5

Well #5						
Month	Monthly Flow Total (m ³ /month)	Daily Flow Average (m ³ /day)	Daily Flow Maximum (m ³ /day)	Max Percent Water Taking Limits (%)	Daily Flow Peak Flow Rate (L/sec)	Number of Days of Water Taking
January	8516.00	283.87	726.00	36.97	14.28	30
February	7109.00	253.89	495.00	25.20	19.25	28
March	8375.00	288.79	711.00	36.20	14.28	29
April	8837.00	327.30	820.00	41.75	14.24	27
May	13443.20	463.56	1167.00	59.42	14.37	29
June	12940.00	517.60	1105.00	56.26	14.30	25
July	21718.00	723.93	1329.00	67.67	17.37	30
August	11293.00	364.29	1010.00	51.43	15.47	28
September	15750.00	525.00	1014.00	51.63	16.32	27
October	12609.00	406.74	866.00	44.09	14.36	28
November	12925.00	430.83	805.00	40.99	12.64	27
December	11773.00	379.77	826.00	42.06	12.63	28
Total	145288.20					336
Avg		413.80			14.96	
Max			1329.00	67.67	19.25	

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Table 5: Facility Flow Summary for Raw Water Source W6						
Well #6						
Month	Monthly Flow Total (m ³ /month)	Daily Flow Average (m ³ /day)	Daily Flow Maximum (m ³ /day)	Max Percent Water Taking Limits (%)	Daily Flow Peak Flow Rate (L/sec)	Number of Days of Water Taking
January	7689.60	248.05	617.00	31.42	13.49	31
February	7342.03	253.17	507.00	25.81	12.46	29
March	7767.00	267.83	614.00	31.26	13.88	29
April	14441.00	497.97	784.00	39.92	12.47	29
May	13830.00	493.93	1013.00	51.58	12.65	28
June	15207.00	524.38	1037.00	52.80	13.08	29
July	8180.00	389.52	887.00	45.16	15.50	21
August	13778.00	444.45	1000.00	50.92	15.02	29
September	8538.00	284.60	845.00	43.02	13.50	25
October	9544.00	307.87	777.00	39.56	12.50	26
November	8756.00	291.87	761.00	38.75	12.14	27
December	10603.00	342.03	782.00	39.82	12.11	27
Total	125675.60					330
Avg		362.14			13.23	
Max			1037.00	52.80	15.50	

Table 6: Facility Flow Summary for Raw Water Source W7						
Well #7						
Month	Monthly Flow Total (m ³ /month)	Daily Flow Average (m ³ /day)	Daily Flow Maximum (m ³ /day)	Max Percent Water Taking Limits (%)	Daily Flow Peak Flow Rate (L/sec)	Number of Days of Water Taking
January	12122.00	404.07	969.00	59.27	18.41	30
February	10214.00	352.21	762.00	46.61	18.56	29
March	11767.00	405.76	922.00	56.39	18.36	29
April	14777.00	509.55	1115.00	68.20	18.50	29
May	13078.00	484.37	1409.00	86.18	21.94	27
June	16087.00	574.54	1474.00	90.15	18.57	28
July	24402.00	903.78	1564.00	95.66	20.23	27
August	20016.00	645.68	1503.00	91.93	18.80	25
September	21133.00	704.43	1572.00	96.15	18.84	27
October	21122.00	681.35	1398.00	85.50	21.31	31
November	18974.00	632.47	1281.00	78.35	18.29	28
December	14318.00	461.87	1234.00	75.47	17.68	24

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Total	198010.00					334
Avg		563.34			19.12	
Max			1572.00	96.15	21.94	

Table 7: Facility Flow Summary for Raw Water Source W8

Well #8						
Month	Monthly Flow Total (m ³ /month)	Daily Flow Average (m ³ /day)	Daily Flow Maximum (m ³ /day)	Max Percent Water Taking Limits (%)	Daily Flow Peak Flow Rate (L/sec)	Number of Days of Water Taking
January	11322.00	365.23	925.00	56.57	18.37	31
February	10653.00	367.34	682.00	41.71	19.21	29
March	11120.00	370.67	949.00	58.04	18.43	30
April	18737.00	646.10	1145.00	70.03	18.45	29
May	26084.00	841.42	1555.00	95.12	23.23	31
June	23982.00	826.97	1555.00	95.12	18.91	29
July	20607.00	895.96	1555.00	95.12	19.26	23
August	20104.00	648.52	1538.00	94.07	18.49	29
September	19767.00	658.90	1450.00	88.69	18.80	25
October	18218.00	587.68	1256.00	76.82	18.79	28
November	18151.00	605.03	1468.00	89.79	17.46	27
December	24009.00	774.48	1461.00	89.36	17.51	30
Total	222754.00					341
Avg		632.36			18.91	
Max			1555.00	95.12	23.23	