

## SUMMARY REPORTS FOR MUNICIPALITIES

### Report

This report is a summary of water quality information for the Minden DWS, published in accordance with Schedule 22 of Ontario’s Drinking-Water Systems Regulation for the reporting period of January 1 - December 31, 2017. The Minden DWS is categorized as a Large Municipal Residential Drinking Water System.

This report was prepared by The Ontario Clean Water Agency on behalf of the Township of Minden Hills

### Who gets a copy of the Report:

- in the case of a drinking-water system owned by a municipality, the members of the municipal council;
- in the case of a drinking-water system owned by a municipal service board established under section 195 of the *Municipal Act, 2001*, the members of the municipal service board; or
- in the case of a drinking-water system owned by a corporation, the board of directors of the corporation.

### What must the Report contain?

The report must,

- (a) list the requirements of the Act, the regulations, the system’s approval and any order that the system **failed to meet** at any time during the period covered by the report and specify the duration of the failure; and
- (b) for each failure referred to in clause (a), describe the measures that were taken to correct the failure.

The following table lists the requirements that the system failed to meet and the measures taken to correct the failure:

Drinking Water Legislation	List the requirement(s) the system failed to meet	Specify the duration of the failure (i.e. date(s))	Describe the measures taken to correct the failure	Status (complete or outstanding)
Safe Drinking Water Act	No failures to report			
Ontario Regulations (eg. O.Reg 170/03, O.Reg	No failures to report			

<b>Drinking Water Legislation</b>	<b>List the requirement(s) the system failed to meet</b>	<b>Specify the duration of the failure (i.e. date(s))</b>	<b>Describe the measures taken to correct the failure</b>	<b>Status (complete or outstanding)</b>
128/04, O.Reg 903)				
MDWL # 246-101	No failures to report			
DWWP # 246-201	No failures to report			
Permit to Take Water # 5308-972L6Q	No failures to report			
Provincial Officer's Order	No failures to report			

The 2017-18 MOECC compliance inspection did not identify any issues.

### **What else must the Report contain?**

The report must also include the following information for the purpose of enabling the owner of the system to assess the capability of the system to meet existing and planned uses of the system:

1. A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows and daily instantaneous peak flow rates.
2. A comparison of the summary referred to in paragraph 1 to the rated capacity and flow rates approved in the system's approval.

Attached please find the 2017 Performance Assessment Report, Facility Flow Summary Reports and a summary of Raw Water Flow Rates for the Minden DWS. These summaries contain all required flow information.

The maximum daily volume the Minden DWS is permitted to supply, under the system's Municipal Drinking Water Licence, is 1,953m<sup>3</sup>/day. The maximum volume per day in 2017 was 958.21m<sup>3</sup> and the average volume per day was 398.04m<sup>3</sup>.

The maximum flow rate that Well 1 is permitted to supply is 22.8L/sec (permit specifies 1,368L/min). The maximum flow rate for 2017 for Well 1 was 30.2L/s and the average was 4.59L/s.

The maximum flow rate that Well 2 is permitted to supply is 7.6L/s (permit specifies 456L/min). The maximum flow rate for Well 2 in 2017 was 30.00L/s with an average of 0.02L/s.

Exceedances for Wells 1 and 2 occurred during flow meter calibrations or on well start up and were not sustained for any period of time.

The Ontario Clean Water Agency aims to strictly adhere to operational and compliance limits, however certain operational circumstances may cause results to be temporarily outside of the limits. Limits that are momentarily surpassed as a result of pump start-ups, power outages/generator tests, pump rotation, calibrations, alarm verification, etc are a normal part of operations and do not indicate a true exceedance. A true exceedance will be noted and documented within the report.

### **When Does the Report Get Submitted?**

If a report is prepared for a system that supplies water to a municipality under the terms of a contract, the owner of the system shall give a copy of the report to the municipality by March 31.

Attachments

Ontario Clean Water Agency  
Performance Assessment Report Water

From: 01/01/2017 to 31/12/2017

Facility: [5838] MINDEN DRINKING WATER SYSTEM  
Works: [21000194]

	01/2017	02/2017	03/2017	04/2017	05/2017	06/2017	07/2017	08/2017	09/2017	10/2017	11/2017	12/2017	<--Total-->	<--Avg-->	<--Max-->	<--Min-->	<--Criteria-->
<b>Flows:</b>																	
Raw Flow: Monthly Total - Well1 (m³)	11419.00	9788.00	10545.00	10526.00	19045.83	13461.00	13306.00	12872.00	11379.00	11572.80	10245.00	10891.00	145050.63				
Raw Flow: Monthly Total - Well2 (m³)	73.06	33.46	37.61	31.38	46.69	32.26	39.01	32.30	26.72	42.23	26.59	20.95	442.26				
Raw Flow: Monthly Avg - Well1 (m³/d)	368.35	349.57	340.16	350.87	614.38	448.70	429.23	415.23	379.30	373.32	341.50	351.32		396.83			
Raw Flow: Monthly Avg - Well2 (m³/d)	2.36	1.20	1.21	1.05	1.51	1.08	1.26	1.04	0.89	1.36	0.89	0.68		1.21			
Raw Flow: Monthly Max - Well1 (m³/d)	462.00	442.00	433.00	422.00	958.00	559.00	507.00	518.00	438.00	466.00	492.00	623.00			958.00		1970.00
Raw Flow: Monthly Max - Well2 (m³/d)	33.88	10.04	12.73	7.85	11.73	7.33	9.18	8.73	8.49	10.00	7.78	8.00			33.88		657.00
Raw Flow: Monthly Total - RW total of all sources (m³)	11492.06	9821.46	10582.61	10557.38	19092.52	13493.26	13345.01	12904.30	11405.72	11615.03	10271.59	10911.95	145492.89				
Raw Flow: Monthly Avg - RW total of all sources (m³/d)	370.71	350.77	341.37	351.91	615.89	449.78	430.48	416.27	380.19	374.68	342.39	352.00		398.04			
Raw Flow: Monthly Max - RW total of all sources (m³/d)	462.00	442.18	433.20	422.17	958.21	559.19	507.18	518.18	438.18	466.23	492.23	623.17			958.21		
<b>Turbidity:</b>																	
Raw: Max Turbidity - Well1 (NTU)	0.19	0.17	0.17	0.19	0.2	0.18	0.19	0.15	0.19	0.22	0.18	0.19			0.22		
Raw: Max Turbidity - Well2 (NTU)	0.26	0.25	0.27	0.28	0.27	0.26	0.25	0.29	0.27	0.27	0.26	0.25			0.29		
<b>Chemical Parameters:</b>																	
Treated: Max Nitrite - TW (mg/L)	< 0.003			< 0.003			< 0.003			< 0.003					< 0.003		1
Treated: Max Nitrate - TW (mg/L)	< 0.006			< 0.006			< 0.006			< 0.006					< 0.006		10
Distribution: Max THM - DW (µg/l)	7.1			5.6			28			15				13.9	28		100
<b>Chlorine Residuals:</b>																	
Treated: Min Free Cl2 Resid - TW (mg/L)	0.03	0.00	1.06	1.02	0.88	1.25	1.06	0.25	0.68	0.33	0.18	0.11				0.00	0.26
Treated: Max Free Cl2 Resid - TW (mg/L)	5.01	5.00	3.46	3.21	3.67	3.69	4.32	3.85	3.52	5.01	3.97	4.56			5.01		
Dist: Min Free Cl2 Resid - DW (mg/L)	0.83	0.95	0.97	0.85	0.95	0.63	0.88	0.76	1.00	0.82	1.06	0.89				0.63	0.05
Dist: Max Free Cl2 Resid - DW (mg/L)	2.11	1.74	2.10	1.95	2.09	2.14	2.09	1.92	2.01	2.11	2.12	1.97			2.14		
<b>Bacti Samples Collected:</b>																	
Raw Bacti: # of samples - Well1	5	4	4	4	5	4	5	4	4	4	4	4	52				
Raw Bacti: # of samples - Well2	6	4	4	4	5	4	5	4	4	4	4	4	53				
Treated Bacti: # of samples - TW	5	4	5	4	5	4	5	4	4	4	4	4	53				
Dist Bacti: # of samples - DW	15	12	12	12	16	12	15	12	12	12	12	12	157				
Treated Bacti: # of TC exceedances - TW	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Treated Bacti: # of EC exceedances - TW	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Dist Bacti: # of TC exceedances - DW	0	0	0	0	0	0	0	0	0	0	0	0	0				0
Dist Bacti: # of EC exceedances - DW	0	0	0	0	0	0	0	0	0	0	0	0	0				0

## Facility Flow Summary

Drinking-Water System Number: 210000194  
 Drinking-Water System Name: MINDEN DRINKING WATER SYSTEM  
 Drinking-Water System Owner: Title Holder: Municipality  
 Drinking-Water System Category: Large Municipal Residential  
 Municipal Drinking Water License: 246-101  
 Period being reported: 01/2017 12/2017

<b>Raw Water</b>				
<b>Raw Water (Source Name)</b>		Well 1		
<b>Source Type:</b>		Drilled		
<b>Drinking Water Permit to Take Water No:</b>		5308-972L6Q		
<b>Month</b>	<b>Monthly Flow Total (m3/month)</b>	<b>Daily Flow Average (m3/day)</b>	<b>Daily Flow Maximum (m3/day)</b>	<b>Daily Flow Peak Flow Rate (L/sec)</b>
Jan	11,419.00	368.35	462.00	27.04
Feb	9,788.00	349.57	442.00	26.72
Mar	10,545.00	340.16	433.00	18.08
Apr	10,526.00	350.87	422.00	25.82
May	19,045.83	614.38	958.00	25.26
Jun	13,461.00	448.70	559.00	30.20
Jul	13,306.00	429.23	507.00	27.05
Aug	12,872.00	415.23	518.00	19.52
Sep	11,379.00	379.30	438.00	26.48
Oct	11,572.80	373.32	466.00	26.53
Nov	10,245.00	341.50	492.00	24.14
Dec	10,891.00	351.32	623.00	29.92
<b>Total</b>	145,050.63			
<b>Avg</b>	12,087.55			
<b>Max</b>	19,045.83		958.00	30.20
<b>Criteria</b>			1,970.00	22.80

## Facility Flow Summary

Drinking-Water System Number: 210000194  
 Drinking-Water System Name: MINDEN DRINKING WATER SYSTEM  
 Drinking-Water System Owner: Title Holder: Municipality  
 Drinking-Water System Category: Large Municipal Residential  
 Municipal Drinking Water License: 246-101  
 Period being reported: 01/2017 12/2017

<b>Raw Water</b>				
<b>Raw Water (Source Name)</b>		Well 2		
<b>Source Type:</b>		Drilled		
<b>Drinking Water Permit to Take Water No:</b>		5308-972L6Q		
<b>Month</b>	<b>Monthly Flow Total (m3/month)</b>	<b>Daily Flow Average (m3/day)</b>	<b>Daily Flow Maximum (m3/day)</b>	<b>Daily Flow Peak Flow Rate (L/sec)</b>
Jan	73.06	2.36	33.88	9.31
Feb	33.46	1.20	10.04	8.28
Mar	37.61	1.21	12.73	7.79
Apr	31.38	1.05	7.85	7.88
May	46.69	1.51	11.73	7.76
Jun	32.26	1.08	7.33	30.00
Jul	39.01	1.26	9.18	7.71
Aug	32.30	1.04	8.73	7.80
Sep	26.72	0.89	8.49	7.89
Oct	42.23	1.36	10.00	7.88
Nov	26.59	0.89	7.78	8.04
Dec	20.95	0.68	8.00	8.27
<b>Total</b>	442.26			
<b>Avg</b>	36.86			
<b>Max</b>	73.06		33.88	30.00
<b>Criteria</b>			657.00	7.60

**Ontario Clean Water Agency  
Wells 1 and 2 Monthly Flow Rates**

From: 01/01/2017 to 31/12/2017

Facility Org Number: 5838  
 Facility Works Number: 210000194  
 Facility Name: MINDEN DRINKING WATER SYSTEM  
 Facility Owner: Municipality: Township of Minden Hills

	Well1 / Flow Rate - l/s	Well1 / Flow Rate - l/s	Well2 / Flow Rate - l/s	Well2 / Flow Rate - l/s
	Month Max	Month Mean	Month Max	Month Mean
01/2017	27.04	4.36	9.31	0.01
02/2017	26.72	4.04	8.28	0.01
03/2017	18.08	3.98	7.79	0.01
04/2017	25.82	4.03	7.88	0.01
05/2017	25.26	7.08	7.76	0.08
06/2017	30.20	5.20	30.00	0.01
07/2017	27.05	4.96	7.71	0.01
08/2017	19.52	4.82	7.80	0.01
09/2017	26.48	4.39	7.89	0.01
10/2017	26.53	4.20	7.88	0.01
11/2017	24.14	3.98	8.04	0.01
12/2017	29.92	4.07	8.27	0.01
Avg		4.59		0.02
Max	30.20		30.00	