

Summary Report 2019

Orangeville Drinking Water System

Town of Orangeville

Ministry of the Environment, Conservation & Parks

Municipal Drinking Water License No. 108-101

Drinking Water Works Permit No. 108-201

Water Works No. 220003252



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Section 1 – Description

This is the summary report for the Orangeville drinking water system, as required by Schedule 22 of O. Reg. 170/03, as amended, Summary Reports for Municipalities. For purposes of that regulation, the Orangeville drinking water system is considered a large municipal residential system.

Section 2 – Background

The reporting period is January 1 to December 31, 2019.

During the reporting period, the Orangeville drinking water system was operated pursuant to the Municipal Drinking Water License and Drinking Water Works Permit listed below.

1. Municipal Drinking Water License (MDWL) No. 108-101 (Issue No. 2), dated December 4, 2015 and expiring on December 3, 2020;
2. Drinking Water Works Permit (DWWP) No. 108-201 (Issue No. 2), dated December 4, 2015.

The DWWP and MDWL were issued in accordance with Sections 40 and 44, respectively, of the Safe Drinking Water Act (SDWA), 2002.

Water takings for the drinking water system were made under Permit to Take Water (PTTW) No. 7518-8XGL8T, issued December 14, 2012 and expiring on December 31, 2022.

The summary report is required to provide the following:

1. A list of any known instances when the system failed to meet the requirements of the SDWA, the regulations, the system's MDWL, DWWP, and any order;
2. Descriptions of the measures that were taken to correct the failure;
3. A summary of the quantities and flow rates of water supplied during the reporting period;
4. The monthly average and maximum daily instantaneous peak flow rates;
5. A comparison of the data summarized above to the rated capacities and flow rates in the system's MDWL.

Section 3 - Failure to Meet Regulatory Requirements

1. Non-compliance with Section 10.1(3) of O. Reg. 170/03

Background:

Section 10.1(3) of O. Reg. 170/03 requires the Owner of a drinking water system to ensure that any changes to the system's information previously uploaded to the Ministry of Environment, Conservation and Parks (MECP) Drinking Water Information System (DWIS) database are provided to the MECP within ten (10) days of the change. The name and contact information of the designated Overall Responsible Operator (ORO) for the system is included in the DWIS database.

Description:

The new ORO for the Orangeville drinking water system was designated on July 17, 2019. Due to an administrative oversight, the notification advising the MECP of the change was not submitted until October 25, 2019.

Resolution:

Water Works Staff developed a Standard Operating Procedure (SOP) to document the steps required when updating information on the MECP DWIS. The SOP includes instructions to ensure the updates are provided within ten (10) days of the change(s) taking effect. The final version of the SOP was issued on March 3, 2020.

2. Non-compliance with Section 22(a) of O. Reg. 128/04

Background:

Section 22(a) of O. Reg. 128/04 requires the Owner or Operating Authority of a drinking water subsystem to ensure that every Operator working in the subsystem holds the required certification applicable to the subsystem.

Description:

On September 27, 2019, the Operating Authority became aware that one of its Operators was working in the Orangeville drinking water system with an expired drinking water Operator Certificate. The Operating Authority immediately stopped the Operator from performing duties requiring valid certification. Following an investigation, it was determined the Operator had worked in the drinking water system from May 22 to September 27, 2019 with an expired Operator Certificate.

Resolution:

On January 20, 2020, Water Works Staff met to develop a draft Standard Operating Procedure to verify and document the required certification and mandatory training of the Town's drinking water Operators at the time of hiring and throughout their

employment with the Town of Orangeville. The draft SOP was reviewed and finalized in consultation with Infrastructure Services and Human Resources Staff on January 24, 2020. The final version of the SOP was issued on January 29, 2020.

Operator certification and training records have been added to a database using the Town's SharePoint system. On January 28, 2020, Water Works Staff met with a representative of the Town's Information Technology Department to develop and implement a system to automatically generate e-mail reminders about Operator certification and training expiry dates. Beginning six months prior to a mandatory expiry date, e-mails are now sent to the Operators, their respective Supervisors, and the Water Works Technologist each month to advise of the upcoming expiry date.

3. Non-compliance with Schedule 7-5(1) of O. Reg. 170/03

Background:

Schedule 7-5(1) of O. Reg. 170/03 requires the Owner of a drinking water system to ensure that every test required under Schedule 7 (Operational Checks) of O. Reg. 170/03 is conducted by a certified drinking water Operator.

Description:

On September 27, 2019, the Operating Authority became aware that one of its Operators was completing Schedule 7, O. Reg. 170/03 tests in the Orangeville drinking water system with an expired drinking water Operator Certificate. The Operating Authority immediately stopped the Operator from completing the tests requiring valid certification. Following an investigation, it was determined the Operator had worked in the drinking water system from May 22 to September 27, 2019 with an expired Operator Certificate.

Resolution:

Refer to non-compliance incident number 2 resolution above.

4. Non-compliance with Section 5 of the Procedure for Disinfection of Drinking Water in Ontario

Background:

Section 5 of the Procedure for Disinfection of Drinking Water in Ontario (PDDWO) requires the Owner or Operating Authority to ensure that drinking water system components taken out of service for inspection, repair or other activities, are disinfected in accordance with applicable American Water Works Association (AWWA) Standards or other equivalent procedures before being returned to service. This requirement applies to system components that are in contact with the drinking water and may be subject to potential contamination.

Description:

On September 18, 2019, a well contractor and Operating Authority Staff were on site at Orangeville Well 10 to reinstall repaired equipment and appurtenances inside the well casing. All components were sprayed with a chlorine mixture prior to reinstallation. The well was run to waste for approximately 10 minutes and water samples were collected for microbiological testing. Results of the testing indicated that coliforms and e. coli were not present in the samples.

Operating Authority Staff later noted that due to an operational oversight, the well had been returned to service prior to receipt of acceptable microbiological testing results, which was not in compliance with the requirements of AWWA Standard C654-13 (Disinfection of Wells), and therefore not in compliance with Section 5 of the PDDWO.

Resolution:

Operating Authority Staff will develop a Standard Operating Procedure (SOP) to provide Water Works Operations Staff with detailed instructions regarding the disinfection and testing of municipal production wells prior to returning them to service following rehabilitation and/or repair work. The SOP will reference AWWA Standard C654-13, Disinfection of Wells, as amended. The SOP will be provided to Water Works Staff and the Ministry of Environment, Conservation and Parks no later than April 30, 2020.

Section 4 - Summaries of Flow Rates and Water Supply Capacities

Table 1 summarizes the capacities of the system's water treatment facilities and the flow rates through the facilities during the reporting period. The table includes the following information.

1. The monthly average and maximum daily flow through each of the water treatment facilities, in cubic metres per month and cubic metres per day, respectively.
2. The daily instantaneous peak flow rate through each of the water treatment facilities, in litres per minute. The table includes a footnote explaining how the rates were calculated.
3. The approved rated capacity of each treatment facility, in cubic metres per day, as authorized in the Municipal Drinking Water License. None of the facilities exceeded their approved rated capacities in 2019.
4. The maximum daily flow through each treatment facility expressed as a percentage of the approved rated capacity for that facility, as authorized in the Municipal Drinking Water License.
5. Footnotes that deal specifically with the Well 2A treatment facility.

TABLE 1

**Town of Orangeville Drinking Water System
Water Treatment Facilities
2019 Capacity & Flow Summary**

Well Field	Volumes Through Treatment Facilities				Approved Rated Capacity in MDWL (m3/day)
	Monthly Average (m3/mo.)	Daily Instantaneous Peak Flow Rate (L/min.) (1)	Maximum Daily Flow (m3/day)	Max. Daily Flow as % of Approved Rated Capacity in MDWL	
2A	15,247 (2)	459	661	50% (3)	1,309 (3)
5/5A	85,970	3,771	5,430	91%	6,000
6	44,626	1,365	1,965	55%	3,600
7	28,131	766	1,103	84%	1,310
8B/8C	8,411	253	364	56%	654
9A/9B	19,140	563	811	92%	878
10	21,559	780	1,123	77%	1,453
11	22,033	624	899	69%	1,309
12	24,299	653	941	72%	1,309
All Wells:	261,791	-	10,967	62%	17,822

Footnotes:

- (1) Daily instantaneous peak flow rates are calculated by converting the maximum daily flow in m3/day to L/min. This calculation assumes the flow through the treatment facility has been continuous during the preceding 24-hour period.
- (2) The Well 2A monthly average is based on a 6 month operating period. Refer to PTTW No. 7518-8XGL8T.
- (3) The Well 2A maximum daily volume allowed in PTTW No. 7518-8XGL8T is only 878.4 m3/day. The maximum daily flow of 661 m3/day is **75%** of the PTTW rate.

Section 5 - Summary and Conclusion

This report will be presented to Orangeville Council at its March 23, 2020 meeting, satisfying the requirements of Schedule 22-2 (1) (a) of O. Reg. 170/03, as amended. Additionally, the report will be available to the public at no cost, and the Town will post the report on its website at www.orangeville.ca.