

Summary Report 2024

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



Prepared by:

Tim Thompson, Eng. Tech.
Compliance Officer (Water)
Infrastructure Services

Submitted by:

Tim Kocialek, P. Eng.
General Manager
Infrastructure Services

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1. Introduction

This is the Summary Report for the Orangeville drinking water system, as required by Schedule 22 of Ontario Regulation 170/03 (Reg. 170/03), as amended, Summary Reports for Municipalities. For purposes of the regulation, the Orangeville drinking water system is considered a large municipal residential system.

The reporting period is January 1 to December 31, 2024.

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

1. MDWL No. 108-101 (Issue No. 3), dated December 1, 2020, and expiring on November 29, 2025.
2. DWWP No. 108-201 (Issue No. 4), dated May 5, 2023.
3. Schedule C to DWWP No. 108-201 (Issue No. 4), dated June 30, 2023.
4. Schedule C to DWWP No. 108-201 (Issue No. 4), dated September 25, 2024.

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. 3858-CPSNU5, issued March 13, 2023, and expiring on December 31, 2032.

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; and
5. A comparison of the data summarized above to the rated capacities and flow rates in the system's MDWL.

2. Failure to Meet Regulatory Requirements

This section provides a summary of regulatory non-compliance issues that occurred during the reporting period.

2.1. Non-compliance with Schedule 6-5 (1) 3 of Reg. 170/03

2.1.1. Background

Schedule 6-5 (1) 3 of Reg. 170/03 requires that when a drinking water system uses continuous monitoring equipment for sampling and testing, such as automatic online chlorine analyzers, the testing results from the devices must be reviewed by a certified drinking Water Operator within 72 hours after the tests are conducted.

Orangeville compliance staff developed Standard Operating Procedure (SOP) #015A-01 “Operator Review of Daily SCADA Compliance and Trending Reports” in 2021 to ensure compliance with Schedule 6-5 (1) 3 and to provide guidance to Operators when conducting reviews of testing results from continuous monitoring devices.

The SOP requires that certified Drinking Water Operators must review daily compliance reports and associated trending graphs generated by the Town’s Supervisory Control and Data Acquisition (SCADA) system. Notes must be included to document any unusual or abnormal conditions and the steps taken to correct them. Upon completing a review, Operators are required to sign off on the compliance report indicating it was reviewed as required.

2.1.2. Description

The Ministry of Environment, Conservation, and Parks (MECP) Inspector began an annual inspection of the Orangeville Drinking Water System on November 6, 2024. A draft version of the inspection report has been received and is currently under review by Town staff.

During the Inspector’s review of continuous monitoring data, the Inspector noted a data gap existed for the Wells 6 and 11 treatment plants. Subsequent investigations by compliance staff found that a network communication failure had occurred on April 28, 2024; resulting in a 37-minute permanent data gap in the continuous monitoring data.

Regulatory data from April 28, 2024 was reviewed by a certified Drinking Water Operator on April 29, 2024, as required by Reg. 170/03 and the SOP. Following a detailed investigation, it was determined that although the Operator signed off on the daily compliance report, no review of the trending graphs was completed. If the trending graphs had been reviewed, the data gap could have been flagged, and the issue could have been resolved.

Additional investigation revealed the same Operator was assigned to complete the daily compliance reviews for the week of April 28, 2024. The compliance reports were signed

by the Operator as if they had been reviewed, but it now appears the reviews were not completed as required by the regulation and the SOP.

2.1.3. Resolution

The Operator who signed the daily compliance reports the week of April 28, 2024 was immediately suspended pending further investigation by the Town. Following completion of the investigation, the Operator's employment with the Town of Orangeville was terminated on February 27, 2025.

The incident was reported to the MECP Inspector and is documented in the draft 2024 MECP inspection report. SOP #015A-01 will be updated to strengthen the compliance review process as required and a refresher training session will be held with Water Works Operators once the SOP is updated.

2.2. Non-compliance with Schedule 6-5 (1) 1 of Reg. 170/03

2.2.1. Background

Schedule 6-5 (1) 1 of Reg. 170/03 states that continuous water quality monitoring equipment must test and record at the minimum frequencies specified in the table included in Schedule 6-5 of the regulation.

2.2.2. Description

Due to the network communication failure noted in Item 2.1.2 above, a data gap exists in the records for the continuous monitoring equipment located at the Wells 6 and 11 treatment plants. The continuous monitoring equipment is therefore deemed to have not recorded test results at the minimum frequencies required by Reg. 170/03.

2.2.3. Resolution

No further corrective actions can be taken at this time. The data is permanently lost and cannot be retrieved. Refer to Item 2.1.3 above for additional corrective actions undertaken regarding this non-compliance event.

2.3. Non-compliance with Schedule C, Section 2.0 of MDWL No. 108-101

2.3.1. Background

Schedule C, Section 2.0 of the MDWL requires that flow rates and daily volumes of water at each treatment plant be recorded when water is being discharged to the distribution system.

2.3.2. Description

Due to the network communication failure noted in Item 2.1.2 above, flow rates and daily volumes into the treatment systems at Wells 6 and 11 and from the treatment systems to the distribution system were not recorded as required by Schedule C, Section 2.0 of the MDWL.

2.3.3. Resolution

No further corrective actions can be taken at this time. The data is permanently lost and cannot be retrieved. Refer to Item 2.1.3 for additional corrective actions undertaken regarding this non-compliance event.

2.4. Non-compliance with Schedule 10-3 of Reg. 170/03

2.4.1. Background

Schedule 10-3 of Reg. 170/03 requires that samples be collected from each treated water point of entry and are tested for microbiological parameters once every week, whenever water is being discharged to the distribution system. Section 1 (1) of Reg. 170/03 defines a week as a period of seven (7) days that begins each Sunday and ends on the following Saturday.

2.4.2. Description

During the 2024 annual MECP inspection of the Orangeville Drinking Water System, the Inspector noted that a treated water sample was not collected from the Well 8 water treatment plant during the week of October 8, 2023. The weekly sample was missing due to maintenance being performed on the treatment system that week.

2.4.3. Resolution

SOP #013-04 "Regulatory Water Quality Sampling and Testing" provides guidance to water works staff to ensure compliance with Schedule 10-3 of Reg. 170/03. The SOP was originally issued in May 2021 and was most recently updated in January 2024. The update included additional direction to strengthen the process for returning water treatment plants back to service following maintenance or prolonged shutdowns. It also included directions to ensure that all water quality testing is completed in accordance with Schedule 10-3 of Reg. 170/03.

2.5. Non-Conformance with Element 19 of the Orangeville Drinking Water Quality Management System Operational Plan

2.5.1. Background

Element 19 of the Drinking Water Quality Management Standard (DWQMS) requires that an internal audit be conducted on the Town's Drinking Water Quality Management System (QMS) at least once per calendar year.

Additionally, to maintain DWQMS accreditation, the Town must successfully undergo an annual external audit conducted by a third-party auditor on behalf of the province.

2.5.2. Description

The 2023 internal audit of the Town's QMS was conducted by a qualified DWQMS auditing consultant in November 2023. The audit was completed, and a report was issued on December 7, 2023, as per the requirements of the Operational Plan.

The Town underwent an external DWQMS audit in June 2024. The external auditor found a minor non-conformance regarding Element 19 in the QMS Operational Plan. The external auditor indicated that the internal audit conducted in November 2023 did not explicitly demonstrate that all 21 elements of the DWQMS were reviewed for implementation and conformance.

2.5.3. Resolution

Compliance staff completed a Corrective Action Report for the non-conformance as required by the DWQMS. The Town will no longer be using the internal auditor involved in this non-conformance event. Potential future internal auditing contractors will be carefully reviewed to ensure they are sufficiently qualified and capable of performing a detailed audit that complies with all requirements of the DWQMS.

3. 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 MDWL. None of the facilities exceeded their approved rated capacities in 2024.
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 MDWL.
5. Footnotes that deal specifically with the Well 2A water treatment facility.
6. Note: Wells 8B, 8C, and 10 did not operate in 2024 due to ongoing maintenance, repair, and upgrades work.

TABLE 1

**Town of Orangeville Drinking Water System
 Water Treatment Facilities
 2024 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.)	Maximum Daily Flow (m3/day)	Max. Daily Flow as % of Approved Rated Capacity in MDWL	
2A	15,448	522	752	57%	1,309
5/5A	111,099	3,847	5,540	92%	6,000
6	39,261	1,101	1,585	44%	3,600
7	24,186	686	988	75%	1,310
9A/9B	14,671	506	728	83%	878
11	20,892	644	928	71%	1,309
12	24,861	778	1,121	86%	1,309
All Wells:	243,658	-	9,831	55%	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. 3858-CPSNU5.
- (3) The Well 2A maximum daily volume allowed in PTTW No. 3858-CPSNU5 is only 878.4 m3/day. The maximum daily flow of 752 m3/day is **86%** of the PTTW rate.

4. Conclusion

This report will be presented to Orangeville Council at its March 24, 2025 meeting, satisfying the requirements of Schedule 22-2 (1) (a) of Reg. 170/03. Additionally, the report will be available to the public at no cost, and it will be posted on the Town’s website at www.orangeville.ca.