

2025

**SUMMARY REPORT
FOR MUNICIPALITIES**

Millbrook Municipal Well House

PERIOD: JANUARY 1, 2025 – DECEMBER 31, 2025



Municipal Drinking Water Licence: 136-101, Issue No. 7

Municipal Waterworks No: 220000781

February 6th, 2026

Executive Summary

The Ontario Ministry of Environment Conservation and Parks (MECP) regulates and enforces the production and delivery of safe potable water to consumers under the *Safe Drinking Water Act, (SDWA) 2002* and associated regulations. Most notably is the *Ontario Drinking Water System Regulation (O. Reg.) 170/03* which outlines treatment and testing parameters.

Each year it is a requirement under *O. Reg. 170/03 – Schedule 22* that the owner of a Drinking Water Subsystem produce a summary report. The purpose of this summary report is to keep Municipal Council (the Owner) and the public informed regarding the quality of their drinking water.

This report is submitted annually for the previous calendar year and is required to contain the following information:

- Council must receive the report no later than March 31st for the previous calendar year.
- List the requirements of the SDWA, the regulations, and the system's approval.
- Any order(s) from the MECP that the system failed to meet at any time during the period covered by the report, specify the duration of the failure and describe the measures that were taken to correct the failure.
- Summary of quantities and flow rates of the water supplied during the period covered including monthly averages, maximum daily flows and daily instantaneous peak flow rates.
- A comparison of the summary of quantities and flow rates to the system's approved Permit to Take Water and Municipal Drinking Water Licence.
- Any additional data or other information that may be useful for Council.

1.0 Introduction

This summary report is a requirement of the Drinking Water Systems Regulation; O. Reg. 170/03 specifically Schedule 22. This report must be submitted no later than March 31st to members of the Municipal Council. The contents must list the requirements of the Safe Drinking Water Act, 2002, the regulations, the system's approval, drinking water works permit, municipal drinking water Licence and any orders that the system failed to meet at any time during the reporting period covered along with specifying the duration of the failure and the correct measures taken to correct the failure.

The report will include a summary of the quantities and the flow rates of the water supplied during the reporting period, including monthly averages, maximum daily flows and daily instantaneous peak flows. The summary shall be compared to the rated capacity and flows provided in the system's Permit To Take Water (PTTW) and Municipal Drinking Water Licence (MDWL).

This summary report is for the period from January 1st to December 31st, 2025. This report is available to the public free of charge. It is available on the Township of Cavan Monaghan web site (<https://www.cavanmonaghan.net>). A copy can also be obtained from the Cavan Monaghan Municipal Office upon request.

1.1 Plant Description and Treatment Process

The Millbrook Drinking Water System consists of three (3) wells, a pumphouse with treatment and control facilities, chlorine contact pipe, water storage tank, booster pumping station and approximately 9.554 kilometers of distribution watermains with diameters of 150mm, 200mm and 250mm.

1.2 Source Water (Raw Water)

The raw water source for the Millbrook Drinking Water System consists of three (3) drilled wells (30m deep). These wells are non-GUDI wells, meaning the raw well water quality is not influenced by surface waters.

1.3 Raw Water Intake Facilities

Raw water is drawn from the three wells via submersible vertical turbine pump (one per well) rated at 1,500 Litres per minute. The three pumps discharge into a common discharge header and the pumping rate of each pump is controlled by a variable frequency drive.

1.4 Disinfection

Primary Disinfection – Pre-contact pipe

At the common discharge header sodium hypochlorite is added prior to the oversized chlorine contact pipe. Sodium Hypochlorite is added to ensure that any potential harmful organisms (pathogens) are destroyed prior to distribution.

The contact pipe ensures sufficient contact time to achieve the pathogen destruction. Free Available Chlorine (FAC) residual is continuously measured after the contact pipe to ensure that the required residual is being discharged to the distribution system.

Secondary Disinfection – Distribution System and Standpipe

Secondary disinfection is accomplished by adding sufficient sodium hypochlorite at the pumphouse to maintain an appropriate chlorine residual in the distribution system and storage tank. This residual is intended to control microbiological re-contamination, bacterial regrowth, biofilm formation and serve as an indicator of system integrity. FAC residual is routinely measured at the storage tank inlet and outlet to ensure that the required residual is being maintained and applied to the distribution system. There are also four sampling stations throughout the distribution system that are routinely checked for adequate FAC residual.

1.5 Standpipe and Booster Pumping Station

A 2,600 m³ glass-fused-to-steel standpipe located at 988 County Road 10 (behind the Township Municipal Office) provides storage and maintains pressure in the distribution network. The site contains a bulk water loading station for truck filling, and a booster pumping station that provides water to a separate pressure zone in Millbrook (north of Brookside Street and west of County Road 10). The Booster station serviced by three (3) vertical in-line centrifugal booster pumps each with a capacity of 11 Litres per second and two (2) vertical in-line centrifugal high flow pumps each with a capacity of 120 litres per second.

1.6 Sample Analysis

Provincial regulations and the current Municipal Drinking Water Licence (MDWL), dictate the sampling and monitoring requirements for the system. Water quality is tested throughout the treatment process from four dedicated sampling locations throughout the distribution system. Distribution system samples are collected once per week from each location. Where required by regulation, samples are submitted to an accredited laboratory for analyses.

2.0 Compliance

The Ministry conducted the annual Drinking Water System Inspection (Event Number 1-1425296401) on January 22, 2026, which covered the period from July 2024 to January 2026. At the time this report was created, Township staff had not yet received the final inspection report from the MECP.

3.0 Summary of Flows and Quantities

In 2025 the DWS was operated under Permit to Take Water (PTTW - Number 1150-CZXQTQ) with an effective date of March 22, 2024, and an expiration date of March 22, 2034.

The permit allows for a maximum water taking of 3,000 m³/day and a peak flow rate of 1,500 L/minute. The volume of water delivered in 2025 was within the limits stipulated in the Municipal Drinking Water Licence and the PTTW.

In May June and July, due to a combination of flow and pressure testing of hydrants and other maintenance activities, the peak flow rate exceeded the PTTW limit. However, paragraph 3.4 of the PTTW (Number: 1150-CZXQTQ) allows for the temporary exceedance of the peak flow rate when necessary for maintenance activities. Additionally, the peak flow rate exceeded the PTTW limit in March and September. The exceedance in March occurred as a result of the emergency response to the Ice-Storm while Operations were still under contract with the City of Peterborough. While the exceedance in September was attributed to the Dufferin St. watermain break.

Note that the maximum daily water taking in March (2863.02 m³/day) was substantially greater than the maximum daily water taking in other months. When reviewing the trends, power anomalies were noted as a result of the ice storm. When cross referencing the data with physical logbooks, a discrepancy was noted, which suggested the power anomalies may have influenced the value reported for maximum daily flow. Based on this, the true value for maximum daily flow in March is believed to be 1468 m³/day.

Table 1 provides a summary of the volume of water delivered to the Millbrook Drinking Water System in 2025.

Table 1 – Volume of Water Delivered

Month	Average Daily (m ³ /day)	Maximum Daily (m ³ /day)	Peak Flows (L/min)
January	694.90	853.53	1258.80
February	763.54	868.91	1259.40
March	796.58	2863.02**	1828.20*
April	748.57	1033.48	1303.80
May	779.25	1000.45	1525.20*
June	910.33	1165.86	2169.00*

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July	998.51	1321.86	1941.00*
August	937.59	1471.08	1334.40
September	893.24	1628.62	2851.20*
October	768.67	931.25	1175.40
November	750.66	886.69	1159.80
December	767.23	1088.42	1170.00

Table 2 – Licence and Permit Limits

	Maximum Daily (m ³ /day)	Peak Flows (L/min)
Municipal Drinking Water Licence: Number: 136-101 Expires June 24, 2026	3,000 m ³ /day	----
Permit to Take Water Number: 1150-CZXQTQ Expires March 22, 2034	3,000 m ³ /day	1,500 L/min

4.0 Annual Report

Raw and Finished water are sampled and tested for chemical, physical and microbiological parameters in accordance with the requirements of O. Reg. 170/03. This annual report must be completed for the previous year by February 28th and made available to the public free of charge. The annual report will be posted to the Township website by February 17th, 2026, along with a public notice indicating where the report can be located.

5.0 Drinking Water Quality Management Standard

This section provides an up-date on the Drinking Water Quality Management Standard (DWQMS).

Licence and Permit

The current Municipal Drinking Water Licence (MDWL) and Drinking Water Works Permit (DWWP) were issued on June 25th, 2021, and are valid until June 24th, 2026. The renewal application for the MDWL and DWWP was submitted on December 15th, 2025. The current Permit to Take Water (PTTW) was issued March 22, 2024 and is valid until March 22, 2034.

Accreditation 3rd Party –Certification Audit:

The objective of the certification audit is to determine whether the Drinking Water Quality Management System (QMS) is conforming to the requirements of the MECP DWQMS. The audit of the Millbrook Drinking Water System Operational Plan was conducted by an NSF auditor on October 17th, 2025. This audit found that there was a major non-conformance in relation to the calibration of measurement equipment. Specifically, calibration records for the handheld colourimeters and on-line chlorine analyzers did not meet the requirements of the

Operational Plan. To rectify this, a new calibration and verification SOP was created, along with new calibration logs. Operators were then supplied with equipment, and training to ensure that measurement equipment was calibrated in accordance with the requirements of the Operational Plan.

Risk Assessment (Element 7) and Risk Assessment Outcomes (Element 8):

The Township conducted their initial risk assessment on June 25, 2025. The team met to discuss the risks involved with operating the Millbrook Drinking Water System and created the associated risk assessment table.

Internal Audit (Element 19):

An internal audit was conducted October 7 and 8, 2025 for the period of July 10, 2024, to October 7, 2025. There were four (4) non-conformities, and four (4) opportunities for improvement noted which were addressed by revision 1.2 of the Operational Plan.

Management Review (Element 20):

A Management Review was conducted on July 16, 2025, for the period of April 1 to July 16, 2025, with top management, which included the Water & Wastewater Compliance Coordinator, the Director of Public Works, the Director of Finance, and the CAO of the Township of Cavan Monaghan.

Appendix A – Legislative Requirements and Applicable Legislation

A.0 Legislated Requirements

A.1 Acts and Regulations

Systems regulated in Ontario must meet the requirements of the *Safe Drinking Water Act, 2002* and its regulations. Most notably, the *Drinking Water Systems Regulation* which sets out the treatment and testing requirements for all categories of regulated water systems.

In Part Two of the Walkerton Inquiry Report, Justice Dennis O'Connor recommended that the Ontario government enact a *Safe Drinking Water Act, 2002* to deal with matters related to treatment and distribution of drinking water. As expressed by Justice O'Connor, the purpose of the *Safe Drinking Water Act, 2002* is to gather in one place all legislation and regulations relating to the treatment and distribution of drinking water.

As recommended by Justice O'Connor, the government passed the *Safe Drinking Water Act, 2002* which expands on existing policy and practice and introduces new features to protect drinking water in Ontario. The act's purpose is to protect human health through the control and regulation of drinking water systems and drinking water testing. The act also provides legislative authority to implement 50 of the 93 recommendations made in Justice O'Connor's Part Two Report.

A.2 Safe Drinking Water Act, 2002

The SDWA states that the people of Ontario are entitled to expect their drinking water to be safe. It provides for the protection of human health and prevents drinking water health hazards through the control and regulation of drinking water systems and drinking water testing.

The SDWA along with its associated regulations specifies the requirements for drinking water systems, testing services, and certification of system operators. It also sets out quality standards and mechanisms for compliance and enforcement.

The two sections of the SDWA that are important for Municipal Councilors and Top Managers/Directors are Section 11: Duties of Owners and Operating Authorities and Section 19: Statutory Standard of Care, Municipal Drinking Water Systems.

A.3 Safe Drinking Water Act, 2002 Section 11 Duties of Owners and Operating Authorities

Section 11 of the Act describes the legal responsibilities of the owners and operating authorities of regulated drinking water systems.

Owners and operating authorities are responsible for ensuring their drinking water system:

1. Provides water that meets all the prescribed drinking water quality standards.
2. Operate in accordance with the Act, regulations and are kept in a fit state of repair.
3. Appropriately staffed and supervised by qualified persons.
4. Comply with all sampling, testing, and monitoring requirements.
5. Meet all reporting requirements.

A.4 Safe Drinking Water Act, 2002 Section 19 Statutory Standard of Care

Section 19 of the Act, requires that anyone in a position of oversight to the municipal water system applies a statutory standard of care to their oversight activities. This section extends the legal responsibilities to those who are in the position to oversee the municipal drinking water systems. Specifically, the people with decision making authority over the drinking water system. This section requires they exercise the level of care, diligence, and skill with regard to a municipal drinking water system that a reasonably sensible person would be expected to exercise in a similar situation and that they exercise this due diligence honestly, competently and with integrity.

Section 19 Standard of Care applies to the owner of the system, where the drinking water system is owned by a municipality this includes:

- Every person who oversees the accredited operating authority (Millbrook Drinking Water System) for the system.
- Every person who exercises decision making authority over the system.

This does not require that everyone involved in the oversight be an expert, but they must exercise a level of care, diligence and skill in respect of the drinking water system. Part of this diligence would include engaging persons who would have the expertise to operate a drinking water system.

Failure to comply with the SDWA, Section 19 of the Act or its regulations is an offense and has serious consequences for non-compliance which could result in the prosecution of an individual, corporation, or both.

A conviction under Section 19 could result in financial penalties worth \$20,000 per each day or part day the offence occurred, imprisonment or both. If the breach of section 19 is severe enough a fine as much as \$4,000,000 for each day or part day the offence occurred, or imprisonment or both could occur.

To better meet the responsibilities of the Standard of Care everyone in a position of oversight should become and stay informed. Staying informed is best done by:

- Becoming acquainted with drinking water legislation and regulations,

- Understanding the roles and responsibilities of councillors, senior management and other officials who exercise decision making authority,
- Becoming familiar with your drinking water system,
- Hire competent senior management,
- Reading and asking questions about any reports or information,
- Being satisfied that appropriate steps are taken to address any issues and hiring industry experts when required.

A.5 Summary of Provincial Drinking Water Legislation

ACT	REGULATIONS
<p><i>Water Opportunities Act, 2010</i></p> <ul style="list-style-type: none"> • Water Technology Acceleration Project 	<p>O. Reg. 40/11</p>
<p><i>Clean Water Act, 2006</i></p> <ul style="list-style-type: none"> • Source Protection Areas and Regions • Source Protection Committee • General • Service of Documents 	<p>O. Reg. 284/07 O. Reg. 288/07 O. Reg. 287/07 O. Reg. 231/07</p>
<p><i>Safe Drinking Water Act, 2002</i></p> <ul style="list-style-type: none"> • Municipal Residential Drinking Water Systems in Source Protection Areas • Financial Plans • Schools, private schools and day nurseries • Service of Documents • Licensing of Municipal Drinking Water Systems • Compliance and Enforcement • Certification of Drinking Water System Operators and Water Quality Analysts • Drinking Water Testing Services • Definitions of Deficiency and Municipal Drinking Water Systems • Definitions of Words and Expressions Used in the Act • Drinking Water Systems • Ontario Drinking Water Quality Standards 	<p>O. Reg. 205/18 O. Reg. 453/07 O. Reg. 243/07 O. Reg. 229/07 O. Reg. 188/07 O. Reg. 242/05 O. Reg. 128/04 O. Reg. 248/03 O. Reg. 172/03 O. Reg. 171/03 O. Reg. 170/03 O. Reg. 169/03</p>
<p><i>Ontario Water Resources Act, 1990</i></p> <ul style="list-style-type: none"> • Charges For Taking Ground Water to Produce Bottled Water • Taking Ground Water to Produce Bottled Water • Experimental Lakes Area (Water Resources) 	<p>O. Reg. 176/17 O. Reg. 463/16 O. Reg. 61/14</p>

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<ul style="list-style-type: none"> • Charges for Industrial and Commercial Water Users • Service of Documents • Environmental Penalties • Water Taking and Transfer • Secured Creditors, Receivers, Trustees in Bankruptcy • Approval Exemptions • Transitional Provisions Relating to the Repeal of Part VIII of the Environmental Protection Act • Additional Charges • Wells 	<p>O. Reg. 450/07</p> <p>O. Reg. 226/07</p> <p>O. Reg. 223/07</p> <p>O. Reg. 387/04</p> <p>O. Reg. 299/02</p> <p>O. Reg. 525/98</p> <p>O. Reg. 155/98</p> <p>O. Reg. 157/93</p> <p>R.R.O. 1990, Reg. 903</p>
<p><i>Environmental Protection Act, 1990</i></p> <p><i>Along with 81 supporting regulations</i></p> <ul style="list-style-type: none"> • Applications for Environmental Compliance Approvals • Environmental Compliance Approvals – Exemptions from Section 9 of the Act 	<p>O. Reg. 255/11</p> <p>O. Reg. 524/98</p>

Appendix B – Acronyms and Definitions

List of Acronyms

AQWI	Adverse Water Quality Incidents
DWWP	Drinking Water Works Permit
FAC	Free Available Chlorine
GUDI	Ground Water Under Direct Influence of Surface Water
MDWL	Municipal Drinking Water Licence
MECP	Ministry of the Environment Conservation and Parks
MOH	Medical Officer of Health
PTTW	Permit To Take Water
R.R.O	Revised Regulations Ontario (1990)
RWW	Raw Water Well
SDWA	Safe Drinking Water Act
WDS	Water Distribution System
WTP	Water Treatment Plant

List of Definitions

“Director” - reference to the director appointed under the Safe Drinking Water Act, 2002

“Owner” - Municipal drinking water system is often the municipality as a corporate entity. Members of municipal councils and municipal officials who provide oversight to this corporate entity also provide oversight or exercise decision making authority in respect of the drinking water systems it owns. They are responsible for having policies, management tools and processes in place so that the municipality meets all its legislative and regulatory requirements under the SDWA.

“Operator or Operating Authority” – The Operating Authority is the person or entity that is given responsibility by the owner for the day-to-day operations of the drinking water system, its management, maintenance or alternation. A municipality may take on this operational role through its own staff or it may choose to contract it out to a third party.