2025 Summary Report

for the

Town of Minto

MINTO PINES SUBDIVISION DRINKING WATER SYSTEM

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Date: March 5, 2026

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MINTO PINES DRINKING WATER SYSTEM

1.0 INTRODUCTION

1.1 Background

In December 2002, the Safe Drinking Water Act (SDWA) was enacted. Subsequently, on June 1, 2003, under the SDWA, a new *'Drinking-Water Systems Regulation'*, Ontario Regulation 170/03 (O. Reg. 170/03), was enacted. In addition, several supporting regulations and procedures were also enacted to assist with the administration of O. Reg 170/03. The list of relevant drinking-water legislation is presented in Appendix A.

The SDWA identifies the responsibilities of owners and operating authorities of municipal drinking water systems (SDWA, Sections 11 and 19). Their duties include ensuring that:

- All water provided by the drinking-water system meets prescribed drinking-water quality standards;
- The drinking-water system is operated in accordance with the Act and regulations and is kept in a good state of repair;
- All facilities are appropriately staffed and supervised;
- All sampling, testing and monitoring requirements are complied with;
- All reporting requirements are complied with; and
- Only persons holding valid operator's certificates operate the drinking-water-system.

O. Reg. 170/03 establishes the standard for protection of drinking water. It includes sets of schedules, specific to municipal residential systems that define requirements for:

- Minimum treatment levels;
- Operational checks;
- Chemical and microbiological sampling and testing;
- Adverse results reporting;
- Corrective procedures; and
- Report documentation and retention.

The system's Municipal Drinking Water Licence (MDWL), Drinking Water Works Permit (DWWP) and Permit To Take Water (PTTW) imposes system specific rules and conditions applicable to the standards set out in O. Reg. 170/03.

1.2 Objective

This Summary Report for the Minto Pines Drinking Water System is being prepared in fulfillment of Schedule 22 of O. Reg. 170/03 and will be given to members of the Municipal Council. This report covers the period from January 1, 2025 to December 31, 2025.

This Summary Report lists any requirements of the Act, the regulations, the PTTW, the MDWL, the DWWP and any order that the system failed to meet, during the period of this report. For any such failure, the measures that were taken to correct the failure are detailed. The report also includes relevant information that will assist the Town of Minto to assess the water work's capability to meet existing and future planned uses of the system.

1.3 Description of Drinking Water System

Minto Pines is a subdivision located within the Town of Minto in the northwest corner of Wellington County. The subdivision consists of 34 single-family estate residence lots. It was a private subdivision until December 2003, when the Town of Minto took it over.

There is one new groundwater production well (Well 1A), that is located approximately 10 m to the north of the decommissioned Well 1 which is located within the Minto Pines pumphouse. Well 1A is the only production well to service the subdivision and is a bedrock well and is 200 mm in diameter. Production well 1A is equipped with a submersible pump. The well pump discharges to a 50 mm diameter steel pipe that connects to a magnetic flow meter. The well pump is controlled by a pressure switch on the header pipe. In the event of a power outage, the pumphouse is equipped with automatic stand-by power supply.

Treatment consists of disinfection with a 12% sodium hypochlorite (chlorine) solution. The chlorinated water is discharged into an underground chlorine contact pipe and is discharged into the distribution system after adequate contact time is achieved.

The well is controlled (start/stop) automatically based on pressures in the distribution system. The pumphouse is equipped with alarms for free chlorine low and high residuals, low-pressure level and intrusion. Corresponding lock out of well pump for high and low residuals was disabled with an onsite audible alarm installed on August 26, 2020 per MECP recommendations with Directors Notification. The pumphouse has continuous monitoring analyzers for chlorine disinfection.

A SCADA System provides continuous monitoring for the Minto Pines Drinking Water System.

The Minto Pines Drinking Water System operates under MDWL 106-104 Issue 3, DWWP 106-204 Issue 3 and PTTW #4038-CWGJEH.

2.0 SUMMARY OF UPGRADES

2.1 Upgrades Completed in 2025

The disinfection treatment system in the Minto Pines Drinking Water System meets all of the standards imposed by O. Reg. 170/03 and the MECP's "*Procedures for Disinfection of Drinking Water in Ontario*".

Typically, maintaining the system includes repairs and/or replacement of individual components as necessary. In 2025 no capital projects were necessary.
The following purchases were made to be shared between all of Minto's water systems. $13,605 on water meters, $490 on tablet replacements, $3,770 on the SCADA system and $12,730 on the Rate Study and Financial Plan.

Preventative maintenance measures are being followed to ensure proper operation of the Drinking Water System.

All routine maintenance throughout the year and planned maintenance during the monthly scheduled maintenance programs was completed by Minto Operations Staff.

2.2 Upgrades Scheduled to be Completed in 2026

In 2026 there are no capital projects planned for Minto Pines.
The following will also be purchased to be shared within the water department. $28,500 for the Studies and Data Loggers. $110,000 on the SCADA monitoring system, $20,000 for water meters, $15,000 on pumps and or valves and $10,000 for chloring dosing boards.

3.0 OPERATION OF THE DRINKING WATER SYSTEM

3.1 Summary of the Quantities and Flow Rates of Water Supplied

O. Reg. 170/03 stipulates that a summary of the quantities and flow rates of the water supplied from the Minto Pines Well must be included in the Summary Report. Table 3.1 provides a summary of quantities and flow rates supplied during 2025, on a monthly basis.

Table 3.1
Minto Pines Drinking Water System
Treated Water Flow, Turbidity, and Disinfectant Residual
January 1, 2025 – December 31, 2025

	Raw Water Flow (Max Flow Rate = 3.8 L/s)			Chlorine	Monthly Averages				Distribution System Disinfectant
					Treated Water Turbidity		Treated Water Disinfectant Point of Entry		
Month	Operator Observed Peak Flow (L/s)	Maximum Day Flow (m^3/day)	Monthly Total (m^3)	Monthly Total (L)	No. of Samples Collected	Monthly Average Turbidity (NTU)	No. of Treated Samples Collected	Monthly Average Residual (mg/L)	No. of Samples Collected
January	3.2	21.99	506	13.75	3	0.37	31	1.27	21
February	3.2	31.13	479	0	5	0.38	28	1.37	19
March	3.2	19.76	498	5.5	5	0.33	31	1.27	21
April	3.2	38.16	562	11.75	5	0.40	30	1.23	20
May	3.2	25.45	566	7.5	4	0.47	31	1.34	21
June	3.2	37.46	653	6.75	5	0.40	30	1.22	21
July	3.2	27.11	619	11	4	0.43	31	1.23	22
August	3.2	38.53	608	4.25	4	0.36	31	1.19	20
September	3.2	24.01	547	7.25	5	0.46	30	1.22	21
October	3.2	31.32	556	4.75	5	0.42	31	1.19	22
November	3.2	45.81	557	8.375	4	0.50	30	1.34	19
December	3.2	25.88	566	6.75	5	0.31	31	1.31	21
Total			6,718	87.625	54		365		248
Average	3.2		560			0.40		1.27	
Maximum		45.81							

* monitored continuously

Disinfectant Compound Used: **12% Sodium Hypochlorite**
Form of Residual Displayed: **Free**
Quantity of Disinfectant Used During 2025: **87.625 L**
Distribution System Minimum Target Residual: **0.2 mg/L**

3.2 Comparison of Actual Rates and Maximum Allowable Rates

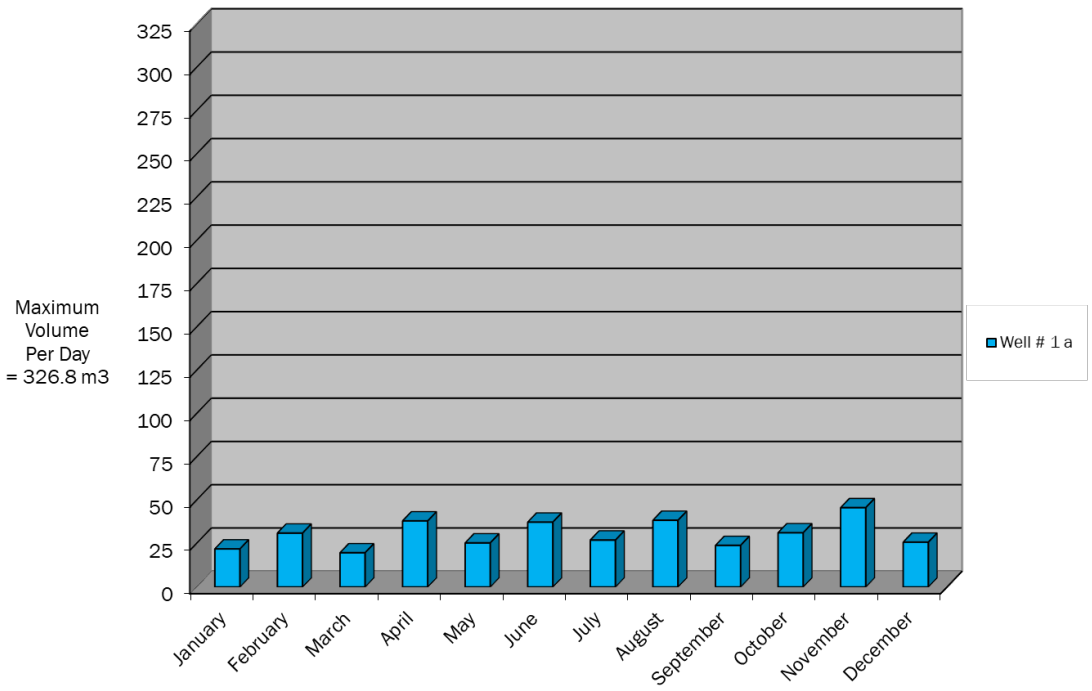
O. Reg. 170/03 stipulates that a summary of the quantities and flow rates of the water supplied from the Minto Pines well be included in the Summary Report and compared against the rated capacity and flow rate for the system.
The SCADA system continuously monitors the flow rate of the water being pumped. As such, a comparison of the instantaneous peak flow to the PTTW's rated capacity is included and a comparison of the maximum daily flow to the MDWL's rated capacity is included in Table 3.2.

Table 3.2
Comparison of Flow Rates and Flow Capacities
TO
Rated Flow Rate (PTTW) and Rated Capacity (MDWL)

Well Supply	PTTW Max. Flow Rate	Operator Observed Peak Flow	Percent of Maximum Allowable	MDWL Schedule C Maximum Daily Quantity	Maximum Daily Flow	Percent of Maximum Allowable
	L/s	L/s	%	m^3/day	m^3/day	%
Well #1A	3.8	3.2	85	326.8	46	14

The MDWL stipulates, "*The maximum daily volume of treated water that flows from the treatment subsystem to the distribution system shall not exceed the value identified as the rated capacity in Schedule C Table 1.*"

Table 3.3
Maximum Water Usage Per Day by Month



Short-term peaks, in excess of permitted values, may occur at pump start up, while doing specific maintenance procedures or during emergency demand situations.
The time and duration of any flow exceedance is recorded for each event along with the reason for the occurrence. There were no extended exceedances or exceedances over the daily permitted rate in the Minto Pines Drinking Water System.

3.3 Raw Water Quality and Required Treatment

The Minto Pines Drinking Water System has no naturally occurring chemical parameters that exceed MAC (maximum acceptable concentration) or IMAC (interim maximum acceptable concentration).

The Minto Pines wellhouse utilizes continuous monitoring analyzers for free chlorine residual. The chlorine analyzer is equipped with an alarm to a call centre who contacts the Town of Minto. The average monthly turbidity and free chlorine residual measurement for treated water are presented in Table 3.1.

There were no turbidity readings exceeding 1.0 NTU in 2025. The minimum, maximum and average turbidity readings for raw water are presented in Table 3.4.

12% Sodium Hypochlorite is the disinfectant used. The free chlorine residual in the distribution system ranged between 0.89 mg/L and 1.71 mg/L.

O. Reg. 170/03, Schedule 1-2 stipulates that the free chlorine residual can never be less than 0.05 mg/L. In addition, O. Reg. 170/03, Schedule 1-4 stipulates that the water treatment equipment must be "…*capable of achieving, at all locations with the distribution system, a free chlorine residual of 0.2 mg/L* …". The Minto Pines Drinking Water System meets both of these requirements.

Table 3.4
2025 Annual Summary of
Raw Water Turbidity and Free Chlorine Residual
For Minto Pines Drinking Water System

Location	Range	Raw Water Turbidity	Free Chlorine Residual at POE
		NTU	mg/L
Well #1A	Minimum	0.09	0.89
	Maximum	0.69	1.71
	Average	0.24	1.27

3.4 Summary of Treatment Chemicals Used

The disinfectant chemical used in the Minto Pines Drinking Water System is 12% Sodium Hypochlorite. Measurements of free chlorine residuals are recorded on a continuous basis. In 2025, a total of 87.625 L of Sodium Hypochlorite was used; the average dosage rate was 1.57 mg/L.

Table 3.5
2025 Annual Summary of
Treatment Chemical Used
for Minto Pines Drinking Water System

Treatment Chemical	Well	Volume Used	Mass Used	Annual Flow	Dosage Rate
		L	kg	m^3	mg/L
12 % Sodium Hypochlorite	Minto Pines	87.625	10.5	6,718	1.57

4.0 COMPLIANCE

4.1 Assessment of Compliance

The objective of the Summary Report is to list any requirements of the Act, the regulations, the PTTW, the MDWL, the DWWP and any MOECP order that the system failed to meet from January 1, 2025 to December 31, 2025, and the corresponding corrective measure(s) taken. Compliance was assessed as follows:

- MECP Completed Inspection of the Minto Pines drinking water system on August 6, 2025. Final inspection rating score 92.64%
- There was two Regulatory Non-compliance issues noted for Minto Pines due to UPS Failures resulting in 58 minutes of missing data and 24 minutes of missing data on April 14, 2025, both issues due to no power being supplied to the SCADA Pack (PLC). The Town reported both incidents to the MECP. As a corrective measure, the Town purchased a new Smart UPS unit, which now sends email notifications to the on-call operator, the ORO, and the QMS Coordinator. The issues were resolved with no further action required per MECP.
- There was a Regulatory Non-compliance issue noted for Clifford, Harriston, Palmerston and Minto Pines due to a sampling issue where the required samples were collected outside the 120 day window for sample collection of quarterly samples. The samples were collected on March 19th 2025 once the sampling issue had been discovered. The issue was resolved by operator training and calendar reminders for all water staff.
- There were **No MECP Orders** issued to the Minto Pines Drinking Water System in 2025.

- The MDWL imposes the specific rules and conditions governing the standards set out in O. Reg. 170/03. It is an important instrument in defining the requirements of compliance of a Drinking Water System.
- O. Reg. 170/03 establishes the standard for protection of drinking water; specifically, through 12 schedules that municipal residential drinking systems must follow to meet the requirements of the regulation.
- The SDWA clearly identifies the responsibilities of owners and operating authorities of municipal drinking water systems. It places a recommended statutory standard of care on those who have oversight of municipal drinking-water systems. In essence, the standard of care has two themes: be informed and exercise diligent oversight.
- Adverse Test Results reported under the Safe Drinking Water Act, 18(1) or O Reg.170/03, Schedule 16-4
  a) Adverse Water Quality Incidents (AWQI) refer to any unusual test results that do not meet provincial water quality standard or situation where the disinfection of the drinking water may be compromised.

Table 4.1
Adverse Water Quality Incidents

AWQI #	Date	Parameter	Result	Corrective Action

4.2 Summary of Compliance

The Town of Minto works diligently to maintain compliance with all the requirements of the SDWA, O. Reg. 170/03, as well as the Minto Pines Water Work's MDWL 106-104 Issue 3, DWWP 106-204 Issue 3 and PTTW #4038-CWGJEH.

Table 4.2 identifies any non-compliances related to the following: SDWA, O. Reg. 170/03, and the MDWL, the DWWP and the PTTW.

Table 4.2
Minto Pines Drinking Water System
Requirements the System Failed to Meet

Compliance With	Description of Item the System Failed to Meet	Correction of This Situation How/When
MDWL # 106-104	*Minto Pines Drinking Water System is in compliance with all of the requirements of the MDWL*	
DWWP # 106-204	*Minto Pines Drinking Water System is in compliance with all of the requirements of the DWWP*	

Compliance With	Description of Item the System Failed to Meet	Correction of This Situation How/When
O. Reg. 170/03	*Minto Pines Drinking Water System was in non-compliance with the 1st Quarter Sampling requirements and 2 separate dates with missing SCADA data points, both due to a UPS unit failure. Both issues were resolved with no further action required.* *The Minto Pines DWS was in compliance with all other requirements of O. Reg. 170/03.*	
SDWA	*Minto Pines Drinking Water System is in compliance with all of the requirements of the SDWA.*	
PTTW #4038-CWGJEH	*Minto Pines Drinking Water System is in compliance with all of the requirements of the PTTW*	

Dated this 5th day of March 2026

Todd Rogers
Water Services Manager