

**Municipality of North Perth**  
**2020 Summary Report**  
**For the**  
**Molesworth Drinking Water System**

DWS Name: Molesworth Drinking Water System

DWS #: 260034996

Category: Small Municipal Residential

Reporting Year January 1 – December 31, 2020

Date Prepared: January 27<sup>th</sup>, 2021

On June 1, 2003, the Safe Drinking Water Act and supporting regulations came into force in the Province of Ontario. As part of the requirements of Section 22-2 of O. Reg. 170/03, Drinking Water Systems Regulation of the *Safe Drinking Water Act, 2002*, a Summary Report must be given to members of the municipal council by March 31<sup>st</sup> of each year. According to the regulations, the Summary Report must:

*“(a) list the requirements of the Act, the regulations, the system’s approval, drinking water works permit, municipal drinking water licence, and any orders applicable to the system that were not met at any time during the period covered by the report; and*

*(b) for each requirement referred to in clause (a) that was not met, specify the duration of the failure and the measures that were taken to correct the failure.*

*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.*

*2. A comparison of the summary referred to in paragraph 1 to the rated capacity and flow rates approved in the system’s approval, drinking water works permit or municipal drinking water licence.”*

This report was prepared to meet the above requirements.

In operating water systems, the Municipality of North Perth makes every effort to ensure that it complies with all applicable laws, regulations, operating procedures and generally accepted industry practices. Best efforts have been made to comply with all of the terms and conditions of the Safe Drinking Water Act, its regulations, licences, and orders.

We have conducted a search and review of the records relating to the operation of the system and to the best of our knowledge, the following report truthfully and accurately reflects any and all matters of non-compliance regarding the ownership and operation of the Facility during the reporting period.

## **A. System Description**

In 2010, a new well was drilled for the Molesworth Drinking Water System due to the well casing failure of the original ground water well housed in a building located at Part Lot 61, Concession 1, Township of Wallace. The new well is located outside of the wellhouse building. Four 430-liter pre-charged pressure tanks provide pressure to the distribution system when the well pump is not operating. Predetermined pressure set points automatically start and stop the well pumps. Two chemical feed pumps operate with the well pump on a rotating duty basis, automatically adding predetermined quantities of sodium hypochlorite. A third pump adds sodium silicate.

The first chemical added is sodium hypochlorite (liquid chlorine). It is used to kill any disease-causing organisms (disinfect) that may be present in the water. It is important to add enough of this chemical to maintain a free chlorine residual throughout the water distribution system. A chlorine analyzer has been installed to ensure a sufficient residual is maintained in the water entering the distribution. The second chemical added is sodium silicate. It is used as a

sequestering agent to prevent iron from oxidizing thereby minimizing the rust formation in the water.

## **B. Non-Compliance with Legislations, Regulations, Approvals & Orders**

The Molesworth Drinking Water System is governed by, and must operate in accordance with, the following Acts and Regulations:

- Safe Drinking Water Act 2002;
  - O. Reg 128/04 – Certification of Drinking Water System Operators
  - O. Reg 170/03 – Drinking Water Systems
  - O. Reg 169/03 – Ontario Drinking Water Quality Standards
- Environmental Protection Act, where applicable;
- Clean Water Act, where applicable;
- Municipal Drinking Water Licence - 091-104;
- Drinking Water Works Permit - 091-204.

During this period, the Facility was operated in full compliance with the Act, the regulations and the Facility's license and permit save and except for the following:

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<b>Requirement</b>	<b>Duration of Failure</b>	<b>Measures to Correct the Failure</b>
<hr/> <p>There were no non-compliances in 2020.</p> <hr/>		

## C. System Capability

Comparison of Flow Rates (All flows expressed in cubic meters per day, m<sup>3</sup>/d)

Month	Average Flow (m <sup>3</sup> /d)	Maximum Flow (m <sup>3</sup> /d)	Total Monthly Flow (m <sup>3</sup> /d)	Maximum Flow Rate (L/min)	System Capacity
January	14.95	23.00	463.37	122	190.08 m <sup>3</sup> /day
February	17.51	29.00	507.87	131	
March	16.51	26.65	511.84	119	
April	16.76	24.74	502.85	119	
May	20.97	34.89	649.94	118	
June	20.07	26.48	602.16	117	
July	18.95	29.76	587.35	117	
August	18.90	25.83	585.89	116	
September	17.26	21.77	517.91	116	
October	17.55	24.86	550.30	116	
November	17.52	24.27	525.56	119	
December	21.38	34.67	662.75	121	
Average	18.19		555.65	119.25	
Maximum		34.89	662.75	131	
% of Capacity	9.57	18.36			