
MOLESWORTH DRINKING WATER SYSTEM

2025 ANNUAL
SUMMARY REPORT

Municipality of North Perth



Introduction

The treatment and delivery of potable water in Ontario is regulated by the Ministry of the Environment, Conservation and Parks (MECP) under the Safe Drinking Water Act. On June 1, 2003, O. Reg. 170/03 came into effect which prescribes requirements for owners and operators of municipal drinking water systems.

O. Reg. 170/03 requires the owner to produce an Annual Report, under Schedule 11. The Report must include the following:

- A description of the drinking water system including a list of the water treatment chemicals used;
- A summary of any adverse test results or observations and corrective actions;
- A summary of all required test results;
- A description of any major expenses incurred to install, repair or replace equipment.

Every time an Annual Report is prepared the owner of the system shall ensure that effective steps are taken to advise users of water from the system that copies of the report are available, without charge, and how a copy may be obtained.

The Regulation also requires the owner to produce a Summary Report as indicated in Schedule 22.

- The report must list the requirements of the Act, its Regulations, the system's Drinking Water Works Permit, Municipal Drinking Water Licence, and any orders the system failed to meet during the reporting period. The report must also specify the duration of the failure, and for each failure referred to, describe the measures that were taken to correct the failure.
- To enable the Owner to assess the rated capacity of their system to meet existing and future planned water uses, the following information is also required in the report.
 - A summary of the quantities and flow rates of water supplied during the reporting period, including the monthly average and maximum daily flows;
 - A comparison of the summary to the rated capacity and flow rates approved in the system's Permit to Take Water, Drinking Water Works Permit and Municipal Drinking Water Licence.



Part 1 - ANNUAL REPORT (as required by O. Reg. 170/03, Section 11)

Drinking-Water System Number:	260034996
Drinking-Water System Name:	Molesworth Drinking Water System
Drinking-Water System Owner:	Municipality of North Perth
Drinking-Water System Category:	Small Municipal Residential
Municipal Drinking Water Licence	091-104 (Issue #5)
Drinking Water Works Permit	091-204 (Issue #5)
Period being reported:	January 1 to December 31, 2025

Complete if your Category is Large Municipal Residential or Small Municipal Residential	Complete for all other Categories
<p><i>Does your Drinking-Water System serve more than 10,000 people?</i></p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p><i>Number of Designated Facilities served: 0</i></p>
<p><i>Is your annual report available to the public at no charge on a web site on the Internet?</i></p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p><i>Did you provide a copy of your annual report to all Designated Facilities you serve?</i></p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p><i>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</i></p> <p>Municipal Office and Municipality of North Perth Website</p>	<p><i>Number of Interested Authorities you report to: 0</i></p> <p><i>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?</i></p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:	
Drinking Water System Name	Drinking Water System Number
N/A	



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Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?
N/A

Indicate how you notified system users that your annual report is available and is free of charge.		
<input checked="" type="checkbox"/> Public access/notice via the web	<input checked="" type="checkbox"/> Public access/notice via Government Office	<input type="checkbox"/> Public access/notice via a newspaper
<input checked="" type="checkbox"/> Public access/notice via Public Request	<input type="checkbox"/> Public access/notice via a Public Library	<input type="checkbox"/> Public access/notice via Other Method _____

Describe your Drinking Water System

The Molesworth Water System is owned and operated by the Municipality of North Perth and provides a potable water supply to the residents and businesses of the Village of Molesworth.

A new well was drilled for the Molesworth Drinking Water System to replace 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 ensures 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.



List all water treatment chemicals used over this reporting period
<ul style="list-style-type: none"> • Liquid Chlorine 12% - NSF certified • Sodium Silicate - NSF certified
Please provide a brief description and a breakdown of monetary expenses incurred
No significant monetary expenses incurred in 2025.

Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre				
Incident Date	Parameter	Result	Corrective Action Date	Corrective Action
April 26/25	Low pressure for 5 minutes due to well pump starter blown control fuse	0 psi	April 26/25	Pressure restored, system flushed achieving free chlorine sample results between 1.58 and 1.69 mg/L in the distribution. No further action required.
May 11/25	Low pressure for 5 minutes due to well pump starter blown control fuse	0 psi	May 11/25	Pressure restored, system flushed achieving free chlorine sample results between 1.48 and 1.66 mg/L in the distribution. No further action required.

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period
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	Number of Samples	Range of E. Coli Results (Min-Max)	Range of Total Coliform Results (Min-Max)	Number of HPC Samples	Range of HPC Results (Min-Max)
Raw	12	0-0	0-0	N/A	N/A
Treated	N/A	N/A	N/A	N/A	N/A
Distribution	29	0-0	0-0	29	0-42

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report			
	Number of Samples	Range of Results (Min-Max)	Units
Turbidity – grab sample	12	0.19 – 0.46	NTU
Free Chlorine Residual – continuous monitor at well house	8,760	0.22* - 3.66*	mg/L
Free Chlorine Residual – grab sample in distribution system	121	1.20 – 1.87	mg/L

*Value due to operational maintenance

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument				
Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure
N/A				

Additional water information
N/A



Inorganic Testing

Summary of Inorganic parameters tested during this reporting period or the most recent sample results				
Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	Aug 11/25	ND	µg/L	No
Arsenic	Aug 11/25	2.5	µg/L	No
Barium	Aug 11/25	48	µg/L	No
Boron	Aug 11/25	ND	µg/L	No
Cadmium	Aug 11/25	ND	µg/L	No
Chromium	Aug 11/25	ND	µg/L	No
Mercury	Aug 11/25	ND	µg/L	No
Selenium	Aug 11/25	ND	µg/L	No
Sodium	Aug 11/25	12.8	mg/L	No
Uranium	Aug 11/25	ND	µg/L	No
Fluoride	Aug 11/25	1.06	mg/L	No
Nitrite	Feb 11/25	ND	mg/L	No
Nitrite	May 12/25	ND	mg/L	No
Nitrite	Aug 11/25	ND	mg/L	No
Nitrite	Nov 10/25	ND	mg/L	No
Nitrate	Feb 10/25	ND	mg/L	No
Nitrate	May 12/25	ND	mg/L	No
Nitrate	Aug 11/25	ND	mg/L	No
Nitrate	Nov 10/25	ND	mg/L	No

ND = Not detected

Lead Testing Results

Summary of Lead Results during this reporting period (Winter: Dec 15 – April 15; Summer: June 15 - Oct 15)					
Sampling Period	Location	pH	Alkalinity (mg/L)	Lead (ug/L)	Exceedance



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Feb 10/25	Blow off – Behind Bowling Lanes	7.60	232	N/A	No
Aug 11/25	Blow off – Behind Bowling Lanes	7.70	233	N/A	No

* Molesworth qualified for reduced Lead sampling in 2025

Organic Testing

Summary of Organic parameters tested during this reporting period or the most recent sample results				
Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	Aug 11/25	ND	µg/L	No
Atrazine + N-dealkylated metabolites	Aug 11/25	ND	µg/L	No
Azinphos-methyl	Aug 11/25	ND	µg/L	No
Benzene	Aug 11/25	ND	µg/L	No
Benzo(a)pyrene	Aug 11/25	ND	µg/L	No
Bromoxynil	Aug 11/25	ND	µg/L	No
Carbaryl	Aug 11/25	ND	µg/L	No
Carbofuran	Aug 11/25	ND	µg/L	No
Carbon Tetrachloride	Aug 11/25	ND	µg/L	No
Chlorpyrifos	Aug 11/25	ND	µg/L	No
Diazinon	Aug 11/25	ND	µg/L	No
Dicamba	Aug 11/25	ND	µg/L	No
1,2-Dichlorobenzene	Aug 11/25	ND	µg/L	No
1,4-Dichlorobenzene	Aug 11/25	ND	µg/L	No
1,2-Dichloroethane	Aug 11/25	ND	µg/L	No
1,1-Dichloroethylene (vinylidene chloride)	Aug 11/25	ND	µg/L	No
Dichloromethane	Aug 11/25	ND	µg/L	No
2-4 Dichlorophenol	Aug 27/25	ND	µg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Aug 11/25	ND	µg/L	No
Diclofop-methyl	Aug 11/25	ND	µg/L	No
Dimethoate	Aug 11/25	ND	µg/L	No
Diquat	Aug 11/25	ND	µg/L	No
Diuron	Aug 11/25	ND	µg/L	No
Glyphosate	Aug 11/25	ND	µg/L	No
HAA (running annual average)	2023	10.29	µg/L	No



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Summary of Organic parameters tested during this reporting period or the most recent sample results				
Malathion	Aug 11/25	ND	µg/L	No
Metolachlor	Aug 11/25	ND	µg/L	No
Metribuzin	Aug 11/25	ND	µg/L	No
Monochlorobenzene (Chlorobenzene)	Aug 11/25	ND	µg/L	No
Paraquat	Aug 11/25	ND	µg/L	No
Pentachlorophenol	Aug 27/25	ND	µg/L	No
Phorate	Aug 11/25	ND	µg/L	No
Picloram	Aug 11/25	ND	µg/L	No
Polychlorinated Biphenyls(PCB)	Aug 11/25	ND	µg/L	No
Prometryne	Aug 11/25	ND	µg/L	No
Simazine	Aug 11/25	ND	µg/L	No
THM (running annual average)	2024	21.8	µg/L	No
Terbufos	Aug 11/25	ND	µg/L	No
Tetrachloroethylene	Aug 11/25	ND	µg/L	No
2,3,4,6-Tetrachlorophenol	Aug 27/25	ND	µg/L	No
Triallate	Aug 11/25	ND	µg/L	No
Trichloroethylene	Aug 11/25	ND	µg/L	No
2,4,6-Trichlorophenol	Aug 27/25	ND	µg/L	No
Trifluralin	Aug 11/25	ND	µg/L	No
Vinyl Chloride	Aug 11/25	ND	µg/L	No
2 methyl-4-chlorophenoxyacetic acid (MCPA) Reported as MCPA on analysis	Aug 11/25	ND	µg/L	No

*ND = Not detected

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.				
Parameter	Sample Date	Result Value	Unit of Measure	ODWS Standard
Fluoride	Aug 11/2025	1.06	mg/L	1.5
Sodium	Aug 11/2025	12.8	mg/L	20

Note: Fluoride & Sodium are naturally occurring in the Molesworth Drinking Water Supply. For more information on fluoride or sodium visit Huron Perth Public Health Unit at:

<https://www.hpph.ca/health-topics/water/>



Part 2 – SUMMARY REPORT (as required by O. Reg. 170/03, Schedule 22)

Non-Compliance with Legislations, Regulations, Approvals & Orders		
<p>The Molesworth Drinking Water System is governed by, and must operate in accordance with, the following Acts and Regulations:</p> <ul style="list-style-type: none"> • Safe Drinking Water Act 2002; <ul style="list-style-type: none"> ○ 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; <p>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:</p>		
Requirement	Duration of Failure	Measures to Correct the Failure
<p>There were no non-compliances in 2025.</p>		



System Capability

Month	Average Flow (m ³ /d)	Maximum Flow (m ³ /d)	Total Monthly Flow (m ³ /d)	Maximum Flow Rate (L/min)	System Capacity
January	24.83	55.79	769.70	122	190.08 m ³ /day
February	24.22	28.47	678.03	122	
March	25.85	33.71	801.43	122	
April	26.76	34.02	802.90	122	
May	30.24	43.86	937.45	118	
June	34.30	40.88	1028.95	117	
July	35.49	48.89	1100.28	118	
August	20.96	36.12	649.76	118	
September	18.33	23.30	549.91	118	
October	18.76	28.10	581.45	118	
November	17.75	22.78	532.59	118	
December	16.93	24.73	524.73	118	
Average	24.54		746.43	119.25	
Maximum		55.79	1100.28	122	
% of Capacity	12.91	29.35			