
HALDIMAND COUNTY

Report ENV-01-2022 Annual Water Quality Reports

For Consideration by Council in Committee on February 8, 2022



OBJECTIVE:

To provide an annual summary of Haldimand County's Drinking Water Systems.

RECOMMENDATIONS:

1. THAT Report ENV-01-2022 Annual Water Quality Reports be received.

Prepared by: Sam Armstrong, Water Wastewater Technologist, Environmental Operations

Reviewed by: Joseph Kuriger, Supervisor Water Wastewater

Respectfully submitted: Philip Mete, P. Eng., General Manager of Public Works Operations

Approved: Craig Manley, MCIP, RPP, Chief Administrative Officer

EXECUTIVE SUMMARY:

The Annual Water Quality Reports address requirements identified in Ontario Regulation 170/03 under the Safe Drinking Water Act, 2002 and are intended to provide the public and Council with information about Haldimand County's drinking water systems.

The reports include summaries of water quality, water taken/supplied by the drinking water systems and regulatory compliance.

The County did not receive any non-compliances during its annual drinking water inspections in 2021. The 2021 Caledonia/Cayuga Distribution Ministry Inspection Report is still pending and will be included in the 2022 annual reports.

BACKGROUND:

Drinking water is regulated by the Ontario Government through the Ministry of the Environment, Conservation and Parks (MECP). Ontario Regulation 170/03, under the Safe Drinking Water Act 2002, requires Haldimand County to prepare an annual report for each County drinking water system and present them to Council. These reports must be made available to the public free of charge. Copies can be obtained at any County office or from the Haldimand County website.

The purpose of the Annual Report, under Schedule 11 of Ontario Regulation 170/03, is to provide the public with drinking water system information, which includes water quality sample results for water supplied by the distribution system.

The Annual Report must:

- a) contain a brief description of the drinking water system, including a list of water treatment chemicals used by the system during the period covered by the report;

- b) summarize any reports made to the Ministry under subsection 18 (1) of the Act or section 16-4 of Schedule 16 during the period covered by the report;
- c) summarize the results of tests required under this Regulation, or an approval or order, including an Ontario Water Resources Act (OWRA) order, during the period covered by the report and, if tests required under this Regulation in respect of a parameter were not required during that period, summarize the most recent results of tests of that parameter;
- d) describe any corrective actions taken under Schedule 17 or 18 during the period covered by the report;
- e) describe any major expenses incurred during the period covered by the report to install, repair or replace required equipment; and
- f) in the case of a large municipal residential system or a small municipal residential system, include a statement of where a report prepared under Schedule 22 will be available for inspection under subsection 12(4) O.Reg. 170/03, s.11 (6).

The purpose of the Summary Report, under Schedule 22 of Ontario Regulation 170/03, is to provide the Owner, specifically the Mayor and Members of Council, with information to allow them to make informed decisions regarding the drinking water systems under their care. This report is intended as a full disclosure mechanism to ensure that Council, Senior Management, Regulatory Agencies and the public are aware of any outstanding compliance issues or operating changes within the systems.

The Summary Report must:

- a) list the requirements of the Act, the Regulations, the system's approval and any order that the system failed to meet at any time during the period covered by the report and specify the duration of the failure;
- b) for each requirement referred to in clause (a) of this section, that was not met, specify the duration of the failure and the measures that were taken to correct the failure;
- c) 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 and daily instantaneous peak flow rates; and
- d) a comparison of the summary referred to in item (c) to the rated capacity and flow rates approved in the system's approval.

ANALYSIS:

Haldimand County has three distinct drinking water systems: the Nanticoke Drinking Water System; the Dunnville Drinking Water System; and the Caledonia and Cayuga Distribution System. As a result, the County is required to develop water quality reports for each drinking water system.

In all drinking water systems, the County consistently achieved all operational targets and regulatory requirements for water quality. The County reported one adverse water quality sample result during 2021. This was as a result of low distribution chlorine coming from the City of Hamilton into the Caledonia/Cayuga Distribution system. Haldimand County Operators responded by notifying the MECP and Haldimand-Norfolk Health Unit, isolating the Caledonia reservoir and isolating and notifying the six customers before the reservoir. Operators flushed off the low residual water until proper water quality was restored.

In 2021, all three drinking water systems experienced increases in distribution system potable water demand. Although flows increased, the maximum day flow for each system was below the rated capacity for each facility. When comparing 2020 and 2021 flows, the changes are summarized in the table below:

Drinking Water System	2021 Percent Change
Caledonia and Cayuga Distribution System	+ 2.0%
Dunnville Drinking Water System	+ 1.7 %
Nanticoke Drinking Water System	+ 5.1%

In 2021, staff continued water meter head replacements to improve water meter accuracy, conducted leak detection surveys to identify water main leaks and aging water mains were replaced.

MECP inspections were completed for all drinking water systems. These inspections provide Haldimand County and its Contract Operators an opportunity to review best management practices and work towards continually improving the operation and management of the drinking water systems.

There were no non-compliances identified during the annual drinking water inspections completed in 2021. The 2021 Caledonia and Cayuga Distribution System inspection report had not been finalized prior to completion of the annual drinking water reports. A summary will be included in the 2022 annual reports.

Since the 2020 Caledonia/Cayuga Distribution system report was not finalized prior to the previous annual reports, a non compliance summary is included in the table below:

Caledonia and Cayuga Distribution System	1. An alkalinity and pH sample was not collected according to regulatory requirements
--	---

Due to an administrative issue, County staff did not collect samples within the required sample period. Upon discovery of the issue, the MECP was contacted and provided an action plan to address the issue and prevent future occurrences. County staff have initiated corrective actions for the non-compliance identified above and have met the required follow-up deadlines imposed by the MECP.

The MECP provides an inspection risk rating to the County based on their inspection findings for the reporting year. The 2021 drinking water system inspection ratings are as follows:

Drinking Water System	2021 MECP Inspection Rating
Caledonia and Cayuga Distribution System	Rating Pending Final Inspection Report
Dunnville Drinking Water System	100%
Nanticoke Drinking Water System	100%

Drinking Water System	2020 MECP Inspection Rating
Caledonia and Cayuga Distribution System	100%

An inspection rating of less than 100 percent does not mean that the drinking water system is unsafe, but is intended to show areas where a system's operations can improve. The County continues to perform well during the drinking water inspections and continuously strives to improve the drinking water system's performance. The 2021 inspection ratings remained consistent with the previous inspections and the County's five year average for all drinking water systems is approximately 98%.

Haldimand County and its Contract Operators are diligent in ensuring that regulatory requirements are achieved and Haldimand County residents are provided with safe, reliable drinking water.

FINANCIAL/LEGAL IMPLICATIONS:

Not applicable.

STAKEHOLDER IMPACTS:

Not applicable.

REPORT IMPACTS:

Agreement: No

By-law: No

Budget Amendment: No

Policy: No

ATTACHMENTS:

1. Caledonia and Cayuga Distribution System 2021 Annual Water Quality Report.
2. Dunnville Drinking Water System 2021 Annual Water Quality Report.
3. Nanticoke Drinking Water System 2021 Annual Water Quality Report.