
HALDIMAND COUNTY

Report ENV-01-2020 Annual Water Quality Reports

For Consideration by Council in Committee on February 4, 2020



OBJECTIVE:

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

RECOMMENDATIONS:

1. THAT Report ENV-01-2020 Annual Water Quality Reports be received as information.

Prepared by: Joseph Kuriger, Water and Wastewater Technologist, Environmental Operations

Reviewed by: Jeff Oakes, Manager, Environmental Operations

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 and supplied by the drinking water systems and regulatory compliance.

The County received four non-compliances during its annual drinking water inspections and all drinking water systems achieved regulatory requirements for sampling and monitoring. Corrective actions have been completed or initiated for all of the non-compliances identified.

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:

The Statutory Standard of Care extends legal responsibility to people with decision making authority over municipal drinking water systems. It requires that a level of care, diligence and skill is exercised with regard to municipal drinking water systems. A presentation was taken to the October 8, 2019 Council in Committee meeting to provide an overview of the County's Quality Management System and Council's responsibilities under the Safe Drinking Water Act.

Haldimand County has three (3) 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 met regulatory requirements for sampling and monitoring, while consistently achieving all operational targets. The County reported four adverse water quality sample results for total coliform bacteria in 2019. Total coliform bacteria are used as an indicator of potential water quality issues and positive samples are not uncommon in County Drinking Water Systems. In each instance, corrective action consists of taking bacteriological re-samples as directed by the Haldimand-Norfolk Health Unit. All re-sample results were negative for the presence of coliform bacteria and confirmed the integrity of the drinking water systems.

In 2019, two drinking water systems experienced increases in distribution system potable water demand. Although flows increased, the maximum day flow for each system was well below the rated capacity for each facility. When comparing 2018 and 2019 flows, the changes are summarized in the table below:

Drinking Water System	2019 Percent Change
Caledonia and Cayuga Distribution System	- 0.1%
Dunnville Drinking Water System	2.9%
Nanticoke Drinking Water System	11.5%

In 2019, staff continued water meter head replacements to improve water meter accuracy, conducted leak detection surveys to identify water main leaks and developed a system-wide water audit methodology for improved water balance monitoring within the drinking water systems.

MECP inspections were completed for all drinking water systems. These inspections provide Haldimand County and Veolia Water Canada (Haldimand's Contract Operator) an opportunity to review best management practices and work towards continually improving the operation and management of the drinking water systems. There were four non-compliance issues identified during the annual drinking water inspections, which are summarized in the table below:

Caledonia and Cayuga Distribution System	<ol style="list-style-type: none"> 1. Documentation was not completed prior to placing a water main in service. 2. Disinfection procedure used for Cayuga Reservoir modifications was not documented.
Dunnville Drinking Water System	<ol style="list-style-type: none"> 1. Disinfection procedure used for water main replacement was not documented.
Nanticoke Drinking Water System	<ol style="list-style-type: none"> 1. At the time of the inspection, chemical feed pumps were not connected to the injection lines at the Hagersville Booster Station.

Corrective actions have been completed or initiated for all of the non-compliances identified in the table above.

The MECP provides an inspection risk rating to the County based on their inspection findings for the reporting year. The 2019 drinking water system inspection ratings are as follows:

Drinking Water System	2019 MECP Inspection Rating
Caledonia and Cayuga Distribution System	91.17%
Dunnville Drinking Water System	95.44%
Nanticoke Drinking Water System	97.23%

An inspection rating of less than 100 per cent 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.

Haldimand County and Veolia Water Canada 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 2019 Annual Water Quality Report.
2. Dunnville Drinking Water System 2019 Annual Water Quality Report.
3. Nanticoke Drinking Water System 2019 Annual Water Quality Report.