



Subject: 2019 Annual Drinking Water Quality Report
Prepared by: Iustina Voinea, Program Coordinator, Water/Wastewater
Department: Operational Services
Date: February 18, 2020

In accordance with the Procedure By-law, any Member of Council may request that this Information Report be placed on an upcoming General Committee or Council meeting agenda for discussion.

Executive Summary

The Annual Drinking Water Quality Report (ADWQR) is a requirement under Schedule 22 of Ontario Regulation (O. Reg.) 170/03 - Drinking Water Systems (the "Regulation") and will be posted to the Town's website on February 28th, as per requirements.

The submission of the ADWQR to Council before March 31st is also a requirement of the Regulation and is fulfilled via this Council report.

The ADWQR highlights:

- Ontario Regulation 170/03 Drinking Water System outlines the testing and reporting requirements for water systems.
- Results of water quality testing for bacteria and harmful chemicals indicate that Aurora has a very safe, reliable and secure water supply.

Background

This ADWQR fulfills the requirements mandated under the Regulation by providing the municipal Council an annual summary report on the quality of the drinking water system for the 2019 reporting year.

Legislative amendments to the Safe Drinking Water Act, 2002, S.O. 2002, c.32 (the "Act") released in 2004 resulted in substantial changes to Water and Wastewater operations. Amendments to O. Reg. 170/03 increased the regulatory compliance

requirements on system operations. The amendments also required an increase in reporting by system owners on the performance of systems to the Ministry of the Environment, Conservation and Parks and applicable stakeholders.

Reporting under Schedule 22 and Section 11 of O. Reg. 170/03 was mandated, requiring the owner of a drinking water system to prepare an ADWQR in accordance with the Regulation and submit these reports to Council and the public.

Staff has regularly submitted these reports to Council since 2003 and has made the information available to the public through the Town website.

Analysis

Ontario Regulation 170/03 Drinking Water System outlines the testing and reporting requirements for water systems

The above regulation is in support of the Act and outlines all the testing and reporting requirements for drinking water systems. The attached ADWQR fulfills the requirements of this regulation.

- Results of water quality testing for bacteria and harmful chemicals indicate that Aurora has a very safe, reliable and secure water supply.

The attached ADWQR provides a summary of the legislative requirements under the Act, and includes the prescribed actions taken to address samples failing to meet parameters referred to in the Regulation.

An adverse result for bacteria testing indicates the presence of bacteria in a test referred to as a “presence/absence test”.

A total of 969 samples were collected for microbiological testing of which 3 samples had adverse test results. All re-test samples passed with no issues. It is important to note that in each of the 3 adverse samples, there was sufficient chlorine present in the water, well within the MECP standards for a safe drinking water system. Re-sampling and reporting protocols were followed for all instances.

There were no adverse chlorine residual events during the year of 2019.

An adverse test for harmful chemicals occurs when the concentration of a chemical element in the sample is higher than the Maximum Concentration specified by the Ontario Drinking Water Quality Standards. There were no adverse results for any of the chemical tests conducted in 2019.

Advisory Committee Review

Not applicable.

Legal Considerations

Legal considerations are discussed throughout this report.

Financial Implications

There are no financial implications with this report.

Communications Considerations

Based on the IAP2 Spectrum and the Town of Aurora Community Engagement Framework, the Town of Aurora will utilize the following level of engagement:

Inform	Consult	Involve	Collaborate	Empower
X				

The Town will inform residents of the safety of their drinking water by publicly posting the report to the Town website as per legislation. In addition, the Town will share the results through social media and by updating and sharing the annual water quality results video.

Link to Strategic Plan

The submission of the Annual Drinking Water Quality Report supports the Strategic Plan goal of Supporting an Exceptional Quality of Life for All through its accomplishment in satisfying requirements in the following key objective within this goal statement:

Invest in sustainable infrastructure. Maintain and expand infrastructure to support forecasted population growth through technology, waste management, roads, emergency services and accessibility.

Alternative(s) to the Recommendation

There are no alternatives to the recommendations presented in this report.

Conclusions

The findings from the 2019 reporting year continue to demonstrate that the Town of Aurora meets all regulatory compliance requirements prescribed through applicable legislation.

Attachments

Attachment #1 – Annual Drinking Water Quality Report – January 1 – December 31, 2019

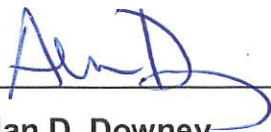
Previous Reports

None.

Pre-submission Review

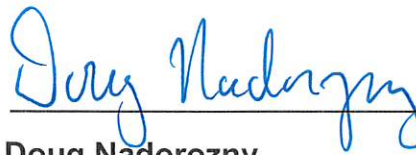
Agenda Management Team review on January 23, 2020

Departmental Approval



Allan D. Downey
Director of Operations
Operational Services

Approved for Agenda



Doug Nadorozny
Chief Administrative Officer

Town of Aurora Drinking Water Distribution System

Drinking Water Systems Regulation O. Reg. 170/03

***MODIFIED* OPTIONAL ANNUAL REPORT TEMPLATE**

Drinking-Water System Number:	260003227
Drinking-Water System Name:	Aurora Drinking Water Distribution System
Drinking-Water System Owner:	The Corporation of The Town of Aurora
Drinking-Water System Category:	Large Municipal Residential System
Period being reported:	January 1, 2019 to December 31, 2019

Town of Aurora's drinking water system is registered as Large Municipal Residential Systems

The Aurora Drinking Water System serves more than 10,000 people.

This annual report is available to the public at no charge on the Town's web site and upon request.

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection:

The Town of Aurora
100 John West Way, Box 1000
Aurora Ontario L4G 6J1

www.aurora.ca

List all Drinking Water Systems which receive their drinking water from York your system:

Drinking Water System Name	Drinking Water System Number

A copy of Town of Aurora's annual report was provided to York Region Drinking Water System owner from which the drinking water is obtained.

System users were notified that Town of Aurora's annual report is available free of charge by public access and notice through:

- Town's website
- Municipal Government Office
- Public Request at any time

Town of Aurora Drinking Water Distribution System

Drinking Water Systems Regulation O. Reg. 170/03

Description of the Aurora Drinking Water Distribution System

The Town of Aurora's water supply is a blended combination of ground water and surface water. York Region is the wholesale supplier of water to The Town of Aurora. York Region is responsible for the water supply, production, treatment, storage and trunk distribution.

In regards to the ground water, York Region operates seven production wells in Aurora, which range in depth from 98 to 104 meters. In respect to the surface water portion of the supply, the Town currently receives Lake Ontario surface water from two supply sources, the City of Toronto supply and the Region of Peel feed.

The Town owns and operates the distribution network, which includes the watermain piping, booster station, fire hydrants, bulk water filling station, service connections and meters. Aurora's distribution network, which provides water to the consumer, is divided into five pressure districts with pressures varying between 40-100 psi.

The Town's system is comprised of approximately 233 kilometers of watermain, located typically on local roads. The watermain pipe materials consist of ductile iron (55%), cast iron (5%), and PVC (40%).

List all water treatment chemicals used over this reporting period

Not applicable; Treatment chemicals are introduced at various sources by the City of Toronto, Peel Region and York Region only.

Were any significant expenses incurred to?

- Install required equipment
- Repair required equipment
- Replace required equipment

Brief description and breakdown of monetary expenses incurred

Hydrant maintenance	= \$ 50000
Water Booster Station maintenance	= \$ 24206
Water Box repairs	= \$ 29100
Emergency repairs	= \$ 98600

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 and Location	Parameter	Result	Unit of Measure	Corrective Action and Result	Corrective Action Date
June 24, 2019 (AWQI # 145835)	Total Coliforms	P	P/A	Flush main and resample	June 25, 2019
Sept 30, 2019 (AWQI # 148323)	Total Coliforms	P	P/A	Flush main and resample	October 1, 2019

Drinking Water Systems Regulation

Modified from 4435e01

Town of Aurora Drinking Water Distribution System Drinking Water Systems Regulation O. Reg. 170/03

Incident Date and Location	Parameter	Result	Unit of Measure	Corrective Action and Result	Corrective Action Date
Oct 21, 2019 (AWQI # 148686)	Total Coliforms	P	P/A	Flush main and resample	October 22, 2019

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.

	Number of Samples	Range of E.Coli Or Fecal Results (min)-(max)	Range of Total Coliform Results (min)-(max)	Number of HPC Samples	Range of HPC Results (min)-(max)
Raw	N/A	N/A	N/A	N/A	N/A
Treated	N/A	N/A	N/A	N/A	N/A
Distribution	969	0-P	0-P	450	0-71

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during this reporting period

	Number of Grab Samples	Range of Results (min #)-(max #)	Unit of Measure	<i>NOTE: For continuous monitors use 8760 as the number of samples.</i>
Turbidity (treated)	Not Applicable			
Chlorine (combined)	1169	Free: 0 - 0.19 Total: 0.89 - 3.6	mg/L	
Fluoride (If the DWS provides fluoridation)	Not Applicable			

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
Not Applicable				

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				
Arsenic				
Barium				
Boron				
Cadmium				

Town of Aurora Drinking Water Distribution System Drinking Water Systems Regulation O. Reg. 170/03

Chromium				
*Lead				
Mercury				
Selenium				
Sodium				
Uranium				
Fluoride				
Nitrite	Oct 7, 2019	<0.05	mg/L	No
Nitrate	Oct 7, 2019	<0.5	mg/L	No

*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems

Summary of lead testing under Schedule 15.1 during this reporting period

(applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results (min) – (max)	Unit of Measure	Number of Exceedances
Plumbing	0	NA	mg/L	0
Distribution	16	<0.0005	mg/L	0

Summary of Organic parameters sampled during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
HAA (annual average)	quarterly	2.175	ug/l	No
THM (annual average)	quarterly	21.18	ug/l	No

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Parameter	Result Value	Unit of Measure	Date of Sample
N/A			

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards

Parameter	Result Value	Unit of Measure	Date of Sample
N/A			