



**Town of Aurora
Information Report**

No. IES17-014

Subject: Submission of Annual Drinking Water Quality Report

Prepared by: Lindsay Hayworth, Supervisor, Water and Wastewater

Department: Infrastructure and Environmental Services

Date: March 21, 2017

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

This report fulfills the requirements mandated under Schedule 22 of Ontario Regulation (O. Reg.) 170/03, Drinking Water Systems (the "Regulation"), by providing the municipal Council an annual summary report on the quality of the drinking water system for the 2016 reporting year. This report is required to be submitted to Council and publicly posted no later than March 31 following the reporting year ending December 31.

Background

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 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 annual report 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 report fulfills the requirements of this regulation.

Results of water quality testing indicate a very reliable and secure water supply for Aurora

The attached report 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. A total of two (2) adverse samples were reported out of a total of 867 samples. All retest samples passed with no issues.

An adverse sample is the result of the presence of bacteria in a test referred to as a “presence/absence test”. In each case there was chlorine present in the sampled water which indicates a secure water system and in all cases the necessary re-sampling protocol resulted in favorable outcomes. This is a very low rate of occurrence and is indicative of a secure water supply.

An adverse chlorine residual event is where the combined chlorine residual is below the 0.25 mg/L and free chlorine is below 0.05mg/L. There were no adverse chlorine events during the year of 2016.

Advisory Committee Review

Not applicable.

Financial Implications

There are no financial implications with this report.

Communications Considerations

This report is required to be submitted to Council and publicly posted no later than March 31 following the reporting year ending December 31.

Link to Strategic Plan

Objective 2: 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 2016 reporting year continue to demonstrate that the Town of Aurora meets all regulatory compliance requirements prescribed through applicable legislation.

Attachments

Appendix "A" – Drinking Water Quality Report – January 1 to December 31, 2016

Previous Reports

None.

Pre-submission Review

Agenda Management Meeting review on February 23, 2017

Approved for Agenda



Doug Nadorozny
Chief Administrative Officer



OPTIONAL ANNUAL REPORT TEMPLATE

Drinking-Water System Number:	260003227
Drinking-Water System Name:	Aurora Water distribution
Drinking-Water System Owner:	The Corporation of The Town of Aurora
Drinking-Water System Category:	Large Municipal Residential System
Period being reported:	January 1,2016 to December 31,2016

Complete if your Category is Large Municipal Residential or Small Municipal Residential

Does your Drinking-Water System serve more than 10,000 people? Yes No

Is your annual report available to the public at no charge on a web site on the Internet? Yes No

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

Complete for all other Categories.

Number of Designated Facilities served:

Not applicable

Did you provide a copy of your annual report to all Designated Facilities you serve?

Yes No

Number of Interested Authorities you report to:

Not applicable

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?

Yes No

Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

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

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?

Yes No



Indicate how you notified system users that your annual report is available, and is free of charge.

- Public access/notice via the web
- Public access/notice via Government Office
- Public access/notice via a newspaper
- Public access/notice via Public Request
- Public access/notice via a Public Library
- Public access/notice via other method _____

Describe your Drinking-Water 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 six 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, 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 p.s.i.

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 P.V.C. (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

Please provide a brief description and a breakdown of monetary expenses incurred

New watermains	= \$438,325
Watermain repairs	= \$ 34,156.33
Hydrant maintenance	= \$ 28,801.00
Hydrant Painting	= \$ 6,169.00

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	Unit of Measure	Corrective Action	Corrective Action Date
July 13, 2016 AWQIR(130220)	Total Coliform	P	P/A	Flush mains and resample	July 13, 2016
July 20, 2016 (AWQIR#130373)	Total Coliform	P	P/A	Flush mains and resample	July 20, 2016



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					
Treated					
Distribution	867	0-P	0-P	392	0-590

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

	Number of Grab Samples	Range of Results (min #)-(max #)	Unit of Measure
Turbidity			
Chlorine	2,080	F 0.00-0.22 T 0.66-2.20	mg/L
Fluoride (If the DWS provides fluoridation)			

NOTE: For continuous monitors use 8760 as the number of samples.

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

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				
Chromium				
*Lead				
Mercury				
Selenium				
Sodium				
Uranium				
Fluoride				



Nitrite	October 17 2016	0.003	mg/L	No
Nitrate	October 17 2016	0.306	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				
Distribution	8	<0.0005 (MDL)	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
Alachlor				
Aldicarb				
Aldrin + Dieldrin				
Atrazine + N-dealkylated metabolites				
Azinphos-methyl				
Bendiocarb				
Benzene				
Benzo(a)pyrene				
Bromoxynil				
Carbaryl				
Carbofuran				
Carbon Tetrachloride				
Chlordane (Total)				
Chlorpyrifos				
Cyanazine				
Diazinon				
Dicamba				
1,2-Dichlorobenzene				
1,4-Dichlorobenzene				
Dichlorodiphenyltrichloroethane (DDT) + metabolites				
1,2-Dichloroethane				
1,1-Dichloroethylene (vinylidene chloride)				
Dichloromethane				
2,4 Dichlorophenol				
2,4-Dichlorophenoxy acetic acid (2,4-D)				



Diclofop-methyl				
Dimethoate				
Dinoseb				
Diquat				
Diuron				
Glyphosate				
Heptachlor + Heptachlor Epoxide				
Lindane (Total)				
Malathion				
Methoxychlor				
Metolachlor				
Metribuzin				
Monochlorobenzene				
Paraquat				
Parathion				
Pentachlorophenol				
Phorate				
Picloram				
Polychlorinated Biphenyls(PCB)				
Prometryne				
Simazine				
THM (NOTE: show latest annual average)	19.02 ug/L			
Temephos				
Terbufos				
Tetrachloroethylene				
2,3,4,6-Tetrachlorophenol				
Triallate				
Trichloroethylene				
2,4,6-Trichlorophenol				
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)				
Trifluralin				
Vinyl Chloride				

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