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**Subject:** 2018 Annual Drinking Water Quality Report  
**Prepared by:** Iustina Voinea, Program Coordinator, Water/Wastewater  
**Department:** Operational Services  
**Date:** February 12, 2019

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**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 28<sup>th</sup>, as per requirements.

The submission of the ADWQR to Council before March 31<sup>st</sup> 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 2018 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 supports 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 935 samples were collected for microbiological testing of which 11 samples had adverse test results. All re-test samples passed with no issues. It is important to note that in each of the 11 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 2018.

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 2018.

### **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**

It is required that the Annual Drinking Water Quality Report be publicly posted to the Town website no later than February 28 and submitted to Council no later than March 31, following the reporting year ending December 31.

### **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 2018 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, 2018

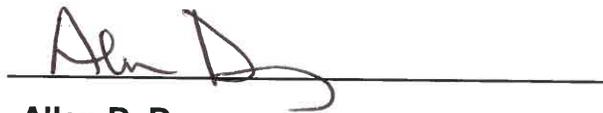
## Previous Reports

None.

## Pre-submission Review

Agenda Management Team review on January 24, 2019

### Departmental Approval



**Allan D. Downey**  
Director  
Operational Services

### Approved for Agenda



**Doug Nadorozny**  
Chief Administrative Officer



OPTIONAL ANNUAL REPORT TEMPLATE

Drinking-Water System Number:	260003227
Drinking-Water System Name:	Aurora 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, 2018 to December 31, 2018

<p><b><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></b></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [ X ]      No [ ]</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [ X ]      No [ ]</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px;"> <p>The Town of Aurora 100 John West Way, Box 1000 Aurora Ontario L4G 6J1</p> <p>www.aurora.ca</p> </div>	<p><b><u>Complete for all other Categories.</u></b></p> <p>Number of Designated Facilities served: <div style="border: 1px solid black; padding: 2px;">Not Applicable</div></p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [ ] No [ ]</p> <p>Number of Interested Authorities you report to: <div style="border: 1px solid black; padding: 2px;">Not Applicable</div></p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [ ] No [ ]</p>
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This annual report is available to the public at no charge on Town of Aurora’s web site and upon request.

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.

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  Not Applicable

**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, bulk water filling station, service connections and meters. Aurora's distribution network, which provides water to the consumer, is divided into six 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

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

Watermain repairs	= \$ 627,545
Hydrant maintenance	= \$ 46,056
Water Booster Station maintenance	= \$ 19,550
Water Box repairs	= \$ 46,267
Emergency repairs	= \$ 50,570

**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
June 25, 2018 (AWQI # 140058)	Total coliforms	P	P/A	Flush main and resample	June 26, 2018
June 25, 2018 (AWQI # 140060)	Total coliforms	P	P/A	Flush main and resample	June 26, 2018
July 30, 2018 (AWQI # 141235)	Total coliforms	P	P/A	Flush main and resample	July 31, 2018
Aug 7, 2018 (AWQI # 141453)	Total coliforms	P	P/A	Flush main and resample	Aug 8, 2018
Aug 8, 2018 (AWQI # 141547)	Total coliforms	P	P/A	Flush main and resample	Aug 10, 2018 Aug 13, 2018
Sept 10, 2018 (AWQI # 142695)	Total coliforms	P	P/A	Flush main and resample	Sept 11, 2018
sept 17, 2018 (AWQI # 142900)	Total coliforms	P	P/A	Flush main and resample	Sept 18, 2018
Sept 17, 2018 (AWQI # 142912)	Total coliforms	P	P/A	Flush main and resample	Sept 18, 2018
Oct 1, 2018 (AWQI # 143337)	Total coliforms	P	P/A	Flush main and resample	Oct 3, 2018
Oct 3, 2018 (AWQI # 143377)	Total coliforms	P	P/A	Flush main and resample	Oct 4, 2018
Dec 10, 2018 (AWQI # 144291)	Total coliforms	P	P/A	Flush main and resample	Dec 11, 2018

**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)



<b>Raw</b>					
<b>Treated</b>					
<b>Distribution</b>	929	0-P	0-P	450	0-220

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

	<b>Number of Grab Samples</b>	<b>Range of Results (min)-(max)</b>	<b>Unit of Measure</b>
<b>Turbidity</b>			
<b>Chlorine</b>	1173	F: 0.00-0.20 T: 0.60-3.5	mg/L
<b>Fluoride</b> (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.**

<b>Date of legal instrument issued</b>	<b>Parameter</b>	<b>Date Sampled</b>	<b>Result</b>	<b>Unit of Measure</b>
Not Applicable				

**Summary of Inorganic parameters tested during this reporting period or the most recent sample results**

<b>Parameter</b>	<b>Sample Date</b>	<b>Result Value</b>	<b>Unit of Measure</b>	<b>Exceedance</b>
<b>Antimony</b>				
<b>Arsenic</b>				
<b>Barium</b>				
<b>Boron</b>				
<b>Cadmium</b>				
<b>Chromium</b>				
<b>*Lead</b>				
<b>Mercury</b>				
<b>Selenium</b>				
<b>Sodium</b>				
<b>Uranium</b>				
<b>Fluoride</b>				
<b>Nitrite</b>	Oct 15, 2018	<0.05	mg/L	No
<b>Nitrate</b>	Oct 15, 2018	<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
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				
HAA (annual average)	Oct 15, 2018	<0.020	mg/L	No
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)	Oct 15, 2018	0.022	mg/L	No
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