

2017 Annual Drinking Water System (DWS) Quality Report for York DWS

Prepared by The Regional Municipality of York pursuant to Section 11 of O.Reg. 170/03

Drinking Water System Number: 260001929

Drinking Water System Name: York DWS

Drinking Water System Owner: The Regional Municipality of York

DWS Category: Large Municipal Residential

Drinking Water System Classification: Water Distribution IV

Reporting period: Jan 1, 2017 - Dec 31, 2017

The York DWS serves approximately 1078660 people

This annual report is available to the public at no charge on the Region's website (york.ca/drinkingwater) and upon request. Accessible formats or communication supports are also available upon request. Please contact AccessYork@york.ca or call 1-877-464-9675.

Summary report required under O.Reg. 170/03 Schedule 22 will be available for inspection at:

The Regional Municipality of York
Administrative Centre
Environmental Services Department
17250 Yonge Street, Newmarket ON
and online, at york.ca/drinkingwater

List all Drinking Water Systems which receive their drinking water from the York DWS:

King City Drinking Water System (220002299); York Drinking Water System - Stouffville (220002333); Kleinburg Drinking Water System (220002360); York Drinking Water System - Newmarket (220002413); York Drinking Water System - Aurora (220002440); York Drinking Water System - Holland Landing (220004046); Markham Distribution System (220004162); York Drinking Water System - Queensville (260001955); Richmond Hill Distribution System (260001968); Vaughan Distribution System (260003097); Town Of Aurora Distribution System (260003227)

A copy of York Region's annual report was provided to all Drinking Water System owners that are connected to and receive drinking water from York Region.

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

- Media (internet, social media)
- Public Requests at any time

Description of the York DWS

Introduction

The Town of Richmond Hill and the Cities of Vaughan and Markham form the southern border of York Region. These three municipalities receive all their water from Lake Ontario through the York Drinking Water System (York DWS). In these areas, initial treatment on the source water is done by Peel Region and the City of Toronto. In the communities north of Vaughan, Richmond Hill and Markham that receive water from the York DWS, the supply is supplemented with groundwater from wells.

Raw water source

Lake Ontario

Profile of water in distribution system

Lake Ontario

Water treatment description

In Vaughan, Richmond Hill, and Markham, purchased water is pre-treated and disinfected by the City of Toronto and Peel Region. Twelve storage facilities hold water and help the seven booster stations maintain pressure. Test results from certified labs and equipment confirm good water quality. Regional Operators test the water and inspect the process. Online analyzers continuously monitor treatment and water flow. When analyzers detect an issue, the system pauses operation until an operator takes action.

List of water treatment chemicals used in this system

York DWS water is purchased pre-treated from the City of Toronto and Peel Region. York Region does not add any more treatment in this system.

Brief description and breakdown of monetary expenses incurred

\$12,540,586 for general maintenance and repair, Islington watermain rehabilitation, and Bathurst watermain emergency replacement.

Notices submitted under Section 18(1) of the Safe Drinking Water Act or Section 16-4 of O.Reg. 170/03 and reported to MOECC Spills Action Centre

Test Parameter	Incident Date	Units	Result	Corrective Action	Corrective Action Date
Chlorine Residual	22-Feb-17	mg/L	5.0	Operator attended site, restored facility to normal operation. Compliant grab sample taken.	22-Feb-17
	24-Feb-17	mg/L	3.48	Operator attended site, restored facility to normal operation. Compliant grab sample taken.	24-Feb-17
	01-Mar-17	mg/L	4.54	Operator attended site, restored facility to normal operation. Compliant grab sample taken.	01-Mar-17
	06-Jul-17	mg/L	7.14	Operator attended site, restored facility to normal operation. Compliant grab sample taken.	06-Jul-17
	01-Sep-17	mg/L	>3.0	Operator attended site, restored facility to normal operation. Compliant grab sample taken.	01-Sep-17
	19-Sep-17	mg/L	3.08	Operator attended site, restored facility to normal operation. Compliant grab sample taken.	19-Sep-17
	08-Oct-17	mg/L	6.96	Operator attended site, restored facility to normal operation. Compliant grab sample taken.	08-Oct-17
	18-Nov-17	mg/L	4.87	Operator attended site, restored facility to normal operation. Compliant grab sample taken.	18-Nov-17
	04-Dec-17	mg/L	>3.00	Operator attended site, restored facility to normal operation	05-Dec-17
	13-Dec-17	mg/L	>3.00	Reported as due diligence. Operator attended site. Facility returned to normal operation. Compliant grab sample taken.	13-Dec-17
	18-Dec-17	mg/L	9.94	Reported as due diligence. Operator attended site. Facility returned to normal operation. Compliant grab sample taken.	18-Dec-17
	28-Dec-17	mg/L	>3.00	Operator attended site, restored facility to normal operation. Compliant grab sample taken.	28-Dec-17

Microbiological testing completed under Schedule 10 of O.Reg. 170/03

*For distribution samples collected under Schedule 10, refer to the local municipality

Not Applicable
 York DWS does not have any raw water or treatment facilities, so there are no microbiological tests to report here. For more data, view the Open Dataset or refer to the local municipality

Operational testing completed under Schedule 7 of Regulation 170/03 during this reporting period

*8,760 is used as the number of samples for continuous analyzers

Parameter	Units	No. of Samples	Average	Minimum	Maximum
Chlorine	mg/L	8,760	1.45	0.00	5.00

Summary of testing pursuant to Schedule 13 of O. Reg. 170/03 and sampling carried out in accordance with the requirement of an approval, order or other legal instrument

Values with a less than sign (“<”) indicate that the test result is below the method detection limit from the accredited laboratory (i.e. non-detect). Average results include values which were returned as non-detect and are rounded to four decimals. For a complete set of results, see the open dataset available at york.ca/drinkingwater

Parameter	Units	No. of Samples	Average	Minimum	Maximum
Fluoride	mg/L	36	0.560	0.45	0.66
Haloacetic Acids	mg/L	48	0.020	<0.02	<0.02
Nitrate	mg/L	12	1.000	<1	<1
Nitrate + Nitrite	mg/L	12	1.000	<1	<1
Nitrite	mg/L	12	0.100	<0.1	<0.1
Sodium	mg/L	12	17.075	15.3	19.3
Trihalomethanes	mg/L	48	0.016	0.0055	0.0275

*Lead testing under Schedule 15.1 is conducted by the Local Municipality - refer to Local Municipality reports for results. York Region occasionally collects samples tested for lead for non-regulatory research purposes

Organic and inorganic parameter(s) that exceeded half the standard prescribed in Schedule 2 of O.Reg. 169/03 Ontario Drinking Water Quality Standards

Not Applicable
 There were no parameters that exceeded half the standard indicated above for the York DWS during 2017

Summary of inorganic parameters teste pursuant to Schedule 23 of O.Reg. 170/03

Values with a less than sign (" $<$ ") indicate that the test result is below the method detection limit from the accredited laboratory (i.e. non-detect). Average results include values which were returned as non-detect and are rounded to four decimals. For a complete set of results, see the open dataset available at york.ca/drinkingwater

Test Parameter	Units	No. of Samples	Average	Minimum	Maximum	ODWS Limit
Antimony	mg/L	18	0.0014	<0.0025	0.0009	0.006
Arsenic	mg/L	18	0.0014	<0.0025	0.001	0.025
Barium	mg/L	18	0.0217	0.0211	0.0235	1
Boron	mg/L	18	0.1999	<0.0025	0.448	5
Cadmium	mg/L	18	0.0012	<0.0005	<0.0025	0.005
Chromium	mg/L	18	0.0012	<0.0005	<0.0025	0.05
Mercury	mg/L	12	0.0001	<0.00005	<0.00005	0.001
Selenium	mg/L	18	0.0012	<0.0005	<0.0025	0.01
Uranium	mg/L	18	0.0015	<0.0005	0.003	0.02

Summary of organic parameters tested pursuant to Schedule 24 of O.Reg. 170/03

Values with a less than sign (“<”) indicate that the test result is below the method detection limit from the accredited laboratory (i.e. non-detect). Average results include values which were returned as non-detect and are rounded to four decimals. For a complete set of results, see the open dataset available at york.ca/drinkingwater

Not Applicable

No organic parameters were tested for the York DWS as it does not have any wells