

Attachment – 1

February 13, 2024

ANNUAL WATER QUALITY REPORT

Drinking-Water System Number: 260003097
Drinking-Water System Name: Vaughan Distribution System
Drinking-Water System Owner: The Corporation of the City of Vaughan
Drinking-Water System Category: Large Municipal - Residential
Period being reported: January 1, 2023 to December 31, 2023

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:

<https://www.vaughan.ca/residential/water-wastewater-and-stormwater/water-services/water-quality>

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

None

Did you provide a copy of your annual report to all Drinking Water System owners that are connected to you and 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 Vaughan Distribution System consists of one booster pumping station (Maplewood Booster Station/North Maple Booster Station), one pressure elevating system (Woodland Acres Pressure Elevating System), and trunk and distribution watermains in the City of Vaughan.

Drinking water for the City of Vaughan is supplied from York Region, who obtains water from the City of Toronto and the Region of Peel. The City of Toronto operates four water treatment plants using Lake Ontario as a raw water source. The Region of Peel operates two water treatment plants using Lake Ontario as a raw water source.

List all water treatment chemicals used over this reporting period.

Water is treated by the City of Toronto and the Region of Peel. A list of water treatment chemicals used by the City of Toronto and the Region of Peel is available on their respective websites www.toronto.ca and www.peelregion.ca.

Were any significant expenses incurred to?

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

Brief description and a breakdown of monetary expenses incurred:

- Watermain replacements – \$14,365,898
- Scheduled and emergency valve repairs and maintenance – \$534,445
- Scheduled and emergency main repairs – \$777,493
- Scheduled and emergency hydrant repairs, maintenance, and inspections – \$1,059,125
- Operation and maintenance of the booster pumping station and pressure elevating system – \$17,818
- Scheduled and emergency water service repairs – \$795,200
- Water meter maintenance and installation – \$894,709
- Chamber repairs – \$63,000

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	Incident Resolution Date
01/03/23	Combined Chlorine	0.12mg/L	mg/L	Flush and retest	01/03/23
01/25/23	Combined Chlorine	3.84mg/L	mg/L	Flush and retest	01/25/23
02/15/23	Combined Chlorine	4.92mg/L	mg/L	Flush and retest	02/15/23
03/29/23	Lead	0.145mg/L	mg/L	Resample and test for pH, lead, and alkalinity	04/04/23
06/22/23	Total Coliform	TC – P	P-A/100mL	Flush and resample	06/26/23
07/14/23	Total Coliform	TC – P	P-A/100mL	Flush and resample	07/18/23
07/14/23	Total Coliform	TC – P	P-A/100mL	Flush and resample	07/18/23

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Incident Resolution Date
07/21/23	Total Coliform	TC – P	P-A/100mL	Flush and resample	07/24/23
07/26/23	Total Coliform	TC – P	P-A/100mL	Flush and resample	07/26/23
07/26/23	Total Coliform	TC – P	P-A/100mL	Flush and resample	08/04/23
07/28/23	Total Coliform & E. Coli	TC – NDOGN EC – NDOGN	Count/100mL	Flush and resample	08/04/23
07/28/23	Total Coliform	TC – P	P-A/100mL	Flush and resample	08/01/23
07/30/23	Total Coliform & E. Coli*	TC – 42 EC – 29	Count/100mL	Flush and resample	08/04/23
07/31/23	Total Coliform	TC – 1	Count/100mL	Flush and resample	08/04/23
08/04/23	Total Coliform	TC – P	P-A/100mL	Flush and resample	08/08/23
08/15/23	Combined Chlorine	0.05mg/L	mg/L	Flush and retest	08/15/23
08/16/23	Combined Chlorine	0.01mg/L	mg/L	Flush and retest	08/16/23
08/16/23	Total Coliform	TC – P	P-A/100mL	Flush and resample	08/21/23
08/18/23	Total Coliform	TC – P	P-A/100mL	Flush and resample	08/21/23
09/15/23	Total Coliform	TC – P	P-A/100mL	Flush and resample	09/18/23
09/21/23	Lead	Standing – 0.53 Flushed – 25.5	mg/L	Sample for lead, pH, and alkalinity	09/27/23
10/25/23	Total Coliform	TC – P	P-A/100mL	Flush and resample	10/30/23
11/03/23	Total Coliform	TC – P	P-A/100mL	Flush and resample	11/07/23

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

Location Type	Number of Samples	Range of E.Coli or Fecal Results Present (P) / Absent (A)	Range of Coliform Results Present (P) / Absent (A)	# of HPC Samples	Range of HPC Results (cfu/1mL)
Distribution	1,744	A – NDOGN MPN/100mL	A – P MPN/100mL	841	<1 CFU/mL – 1800 CFU/mL

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

Parameter	Number of Grab Samples	Range of Results (min #) - (max #)
Combined Chlorine	2,112	0.01mg/L – 4.92mg/L
Turbidity	0	N/A

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 Issuance	Parameter	Date Last Sampled	Range of Results	Unit of Measure
05/23/19	Nitrosodimethylamine (NDMA)	12/07/23	<0.0009 – 0.0015	µg/L

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	10/25/23	<0.0005	mg/L	No
Arsenic	10/25/23	<0.001	mg/L	No
Cadmium	10/25/23	<0.00009	mg/L	No
Chromium	10/25/23	<0.005	mg/L	No
Selenium	10/25/23	<0.002	mg/L	No
Sodium	10/25/23	16.6	mg/L	No
Fluoride	10/25/23	0.63	mg/L	No
Nitrite	12/07/23	<0.05	mg/L	No
Nitrate	12/07/23	<0.50	mg/L	No

Summary of lead testing under Schedule 15.1 during this reporting period.

Location Type	Number of Samples	Range of Lead Results (min #) – (max #)	Number of Exceedances
Plumbing	0	Not Applicable	Not Applicable
Distribution	22	<0.0005 – 0.145	1

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

Parameter	Sample Date	Running Annual Average Result	Unit of Measure	Exceedance
Haloacetic Acids (HAA's)	4/year	8.75	µg/L	No
Trihalomethane (THM)	4/year	16.9	µg/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
None			