2024 Annual Drinking Water System Quality Report for Stouffville DWS

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

Drinking Water System Number: 220002333
Drinking Water System Name: Stouffville DWS
Drinking Water System Owner: The Regional Municipality of York
Drinking Water System Category: Large Municipal Residential
Drinking Water System Classification: Water Distribution and Supply III, Water Treatment I
Reporting period: Jan 1, 2024 - Dec 31, 2024

The Stouffville DWS serves approximately 38,120 people.
(Population is the most recent available estimate based on Statistics Canada census data and building permits)

List all Drinking Water Systems which receive their drinking water from the Stouffville DWS:
Stouffville Distribution System (260003162)

This annual report is available to the public at no charge on York 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.

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

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

The Regional Municipality of York
Administrative Centre
Public Works Department
17250 Yonge Street, Newmarket ON L3Y 6Z1

Description of the Stouffville DWS

Introduction:
Stouffville is a community in the Town of Whitchurch-Stouffville. Local groundwater is naturally high in minerals, and blends with Lake Ontario water from the York DWS. York Region operates the water supply, while the Town maintains water quality and distributes it to users. The Province governs York Region's operations with Acts and Regulations, a Permit to Take Water, a Municipal Drinking Water License and an operating Permit. Lake Ontario water is purchased with supply agreements.

Raw water source:
Groundwater

Profile of water in distribution system:
Blended - Lake and Groundwater

Water treatment description:
Stouffville DWS includes five wells, three storage facilities, and four booster pumping stations (one of these booster stations is within York DWS and converts chloramines to free chlorine for the Stouffville DWS). Chlorine provides disinfection and maintains a secondary residual. Sodium silicate is added to sequester naturally occurring iron and manganese. Storage facilities hold treated water and help booster stations maintain pressure. Operators test the water and inspect the process. Online analyzers continuously monitor the facilities. When analyzers detect a significant process or water quality issue, the system automatically pauses operation until an operator takes action.

List of water treatment chemicals used in this system:
Chlorine (Sodium Hypochlorite and Chlorine gas); Sodium Silicate

Brief description and breakdown of monetary expenses incurred:
$203,752 for for well rehabilitation and pump maintenance, valve chamber upgrades design, new regional remote operations center construction, general maintenance and repairs.

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

Not Applicable

Intentionally blank. No notices were submitted for this report period.

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

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

Raw Samples

Test Parameter	Count of Samples	Count of Presence
E. Coli	265	0
Total Coliforms	265	0

Treated Samples

Test Parameter	Count of Samples	Count of Presence
E. Coli	159	0
Heterotrophic Plate Count	160	19
Total Coliforms	159	0

Operational testing completed under Schedule 7 of O. Reg. 170/03 during this reporting period

Test Parameter	Test Unit	No. of Samples [1]	Average	Minimum	Maximum
Free Chlorine	mg/L	8,760	1.81	0.00	3.57
Turbidity (Treated)	NTU	8,760	0.04	0.01	5.00

[1] 8,760 is used as the number of samples for continuous analyzers.

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 (i.e. the "<" is omitted) and are rounded to three decimals. For a complete set of results, see the open dataset available at york.ca/drinkingwater.

Test Parameter [2] [3]	Test Unit	No. of Samples [1]	Average	Minimum	Maximum
Fluoride	mg/L	40	0.102	<0.050	0.180
Haloacetic Acids (Treated)	ug/L	4	8.000	<8.000	<8.000
Haloacetic Acids (Distribution)	ug/L	8	8.463	<8.000	9.800
Nitrate (Treated)	mg/L	12	1.182	<0.500	2.860
Nitrate (Distribution)	mg/L	28	0.544	<0.500	0.740
Nitrite (Treated)	mg/L	12	0.050	<0.050	<0.050
Nitrite (Distribution)	mg/L	28	0.050	<0.050	<0.050
N-Nitrosodimethylamine (NDMA) (Treated)	ug/L	3	0.0009	<0.0009	<0.0009
N-Nitrosodimethylamine (NDMA) (Distribution)	ug/L	4	0.0009	<0.0009	<0.0009
Sodium	mg/L	5	49.580	26.600	84.900
Trihalomethanes (Treated)	ug/L	6	6.717	1.500	12.800
Trihalomethanes (Distribution)	ug/L	8	20.050	15.300	27.600

*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.

[1] 8,760 is used as the number of samples for continuous analyzers.

[2] The Average for Haloacetic Acids and Trihalomethanes is calculated as the running annual average of quarterly results in accordance with O. Reg 170/03. The Minimum and Maximum values reflect individual test results.

[3] Where sampling for 'N-Nitrosodimethylamine (NDMA)' is required, locations were selected to represent the farthest points in the distribution system. For York DWS and sub-systems, representative sample locations were selected from across the interconnected sub-systems and include at least one facility from every subsystem.

Organic and inorganic parameter(s), from Schedule 23 and 24, that exceeded half the standard prescribed in Schedule 2 of O. Reg. 169/03 Ontario Drinking Water Quality Standards

Not Applicable
Intentionally blank. There were no applicable test results.

Summary of inorganic parameters tested 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	Test Unit	No. of Samples	Average	Minimum	Maximum	ODWS Limit
Antimony	mg/L	5	0.0005	<0.0005	<0.0005	0.006
Arsenic	mg/L	5	0.0010	<0.0010	<0.0010	0.01
Barium	mg/L	5	0.1230	0.0950	0.1500	1
Boron	mg/L	5	0.0232	0.0120	0.0430	5
Cadmium	mg/L	5	0.0001	<0.0001	<0.0001	0.005
Chromium	mg/L	5	0.0050	<0.0050	<0.0050	0.05
Mercury	ug/L	5	0.0500	<0.0500	<0.0500	1
Selenium	mg/L	5	0.0020	<0.0020	<0.0020	0.05
Uranium	mg/L	5	0.0018	<0.0001	0.0030	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 three decimals. For a complete set of results, see the open dataset available at york.ca/drinkingwater.

Test Parameter	Test Unit	No. of Samples	Average	Minimum	Maximum	ODWS Limit
1,1-dichloroethylene (vinylidene chloride)	ug/L	9	0.300	<0.300	<0.300	14
1,2-(o-dcb) Dichlorobenzene	ug/L	9	0.100	<0.100	<0.100	200
1,2-Dichloroethane	ug/L	9	0.100	<0.100	<0.100	5
1,4-(p-dcb) Dichlorobenzene	ug/L	9	0.100	<0.100	<0.100	5
2,3,4,6-Tetrachlorophenol	ug/L	3	0.500	<0.500	<0.500	100
2,4,6-Trichlorophenol	ug/L	3	0.500	<0.500	<0.500	5
2,4-Dichlorophenol	ug/L	3	0.700	<0.700	<0.700	900
2,4-dichlorophenoxyacetic acid (2,4-D)	ug/L	3	0.800	<0.800	<0.800	100
2-methyl-4-chlorophenoxyacetic acid	ug/L	3	5.000	<5.000	<5.000	100
Alachlor	ug/L	3	0.400	<0.400	<0.400	5
Atrazine + N-dealkylated metabolites	ug/L	3	0.200	<0.200	<0.200	5
Azinphos-methyl	ug/L	3	0.300	<0.300	<0.300	20
Benzene	ug/L	9	0.100	<0.100	<0.100	1
Benzo(a)pyrene	ug/L	3	0.010	<0.010	<0.010	0.01
Bromoxynil	ug/L	3	0.400	<0.400	<0.400	5
Carbaryl	ug/L	3	3.000	<3.000	<3.000	90
Carbofuran	ug/L	3	3.000	<3.000	<3.000	90
Carbon Tetrachloride	ug/L	9	0.200	<0.200	<0.200	2
Chlorpyrifos	ug/L	3	0.200	<0.200	<0.200	90
Diazinon	ug/L	3	0.200	<0.200	<0.200	20
Dicamba	ug/L	3	0.400	<0.400	<0.400	120
Dichloromethane	ug/L	9	4.000	<4.000	<4.000	50
Diclofop-methyl	ug/L	3	0.400	<0.400	<0.400	9
Dimethoate	ug/L	3	0.300	<0.300	<0.300	20
Diquat	ug/L	3	1.000	<1.000	<1.000	70
Diuron	ug/L	3	3.000	<3.000	<3.000	150
Glyphosate	ug/L	3	25.000	<25.000	<25.000	280
Malathion	ug/L	3	0.200	<0.200	<0.200	190
Metolachlor	ug/L	3	0.200	<0.200	<0.200	50
Metribuzin	ug/L	3	0.300	<0.300	<0.300	80
Monochlorobenzene	ug/L	9	0.100	<0.100	<0.100	80
Paraquat	ug/L	3	1.000	<1.000	<1.000	10
Pentachlorophenol	ug/L	3	0.400	<0.400	<0.400	60
Phorate	ug/L	3	0.200	<0.200	<0.200	2
Picloram	ug/L	3	0.700	<0.700	<0.700	190
Polychlorinated Biphenyls (PCBs)	ug/L	3	0.100	<0.100	<0.100	3
Prometryne	ug/L	3	0.200	<0.200	<0.200	1
Simazine	ug/L	3	0.200	<0.200	<0.200	10
Terbufos	ug/L	3	0.200	<0.200	<0.200	1
Tetrachloroethylene (perchloroethylene)	ug/L	9	0.300	<0.300	<0.300	10
Triallate	ug/L	3	4.000	<4.000	<4.000	230
Trichloroethylene	ug/L	9	0.100	<0.100	<0.100	5
Trifluralin	ug/L	3	0.006	<0.006	<0.006	45
Vinyl Chloride	ug/L	9	0.200	<0.200	<0.200	1