

## 2022 Annual Drinking Water System (DWS) Quality Report Keswick-Sutton Distribution Subsystem

**Prepared by the Town of Georgina pursuant to Section 11 of O. Reg. 170/03**

Drinking Water System Number: 260062686

Drinking Water System Name: Keswick-Sutton Distribution Subsystem

Drinking Water System Owner: The Town of Georgina

DWS Category: Large Municipal Residential

Drinking Water System Classification: Water Distribution II

Reporting period: Jan 1, 2022 - Dec 31, 2022

**The Keswick-Sutton Distribution Subsystem serves 39,150 people.**

This annual report is available to the public at no charge on the Town's website

<https://www.georgina.ca/living-here/home-and-property/municipal-water-and-wastewater/drinking-water-reports> and upon request at the Civic Centre.

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

The Town of Georgina

Civic Centre

Office of the Clerk

26557 Civic Centre Road, Keswick, Ontario, L4P 3G1

and online, <https://www.georgina.ca/living-here/home-and-property/municipal-water-and-wastewater/drinking-water-reports>

**List all Drinking Water Systems which receive their drinking water from the Keswick-Sutton Distribution Subsystem**

None

**Description of the Keswick-Sutton Distribution Subsystem**

**Introduction**

Municipal drinking water is being supplied to the communities of Keswick and Sutton, located on the south shore of Lake Simcoe. Surface water from Lake Simcoe is treated by the Regional Municipality of York, while the Town of Georgina distributes treated water to end users. The province governs the Region and Town of Georgina operations with its Acts and Regulations, a Permit to Take Water (PTTW), a Municipal Drinking Water License (MDWL) and an Operating Permit (OP).

**Raw water source**

Lake Simcoe

**List of water treatment chemicals used over this reporting period:**

None

**Brief description and breakdown of monetary expenses incurred:**

N/A

## 2022 Annual Drinking Water System (DWS) Quality Report Keswick-Sutton Distribution Subsystem

**Notices submitted under Section 18(1) of the Safe Drinking Water Act or Section 16-4 of O. Reg. 170/03 and reported to Ministry of Environment, Conservation and Parks, Spills Action Centre (SAC) as potential / suspected Adverse Water Quality Incidents (AWQIs)**

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
February 09, 2022	Watermain / Water Service Break / Leak TC - (Total Coliform) EC - (E. coli)	Absent	Presence/ Absence	Resample (at, upstream, and downstream), flush the line, record chlorine residuals, and microbiological samples in accordance with O. Reg. 170/03	Feb 09, 2022
August 23, 2022	Watermain / Water Service Break / Leak TC - (Total Coliform) EC - (E. coli)	Absent	Presence/ Absence	Resample (at, upstream, and downstream), flush the line, record chlorine residuals and microbiological samples in accordance with O. Reg. 170/03	Aug 23, 2022

Compared to the previous year 2021 where seven (7) potential AWQIs were recorded, only two (2) *potential* AWQIs were observed in 2022 as identified in the table above. This is a significant decrease in the number of potential AWQIs, most importantly, there was zero low chlorine residual incident was happened in an entire year. Sample results for each incident returned negative for microbiological contamination. Town staff reported each potential adverse incident to the MECP SAC and the York-Durham Public Health Unit (PHU) as a precaution to ensure due diligence and to keep the public safe from water-borne harm.

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

	Number of Samples	Range of E. Coli	Range of Total Coliform Results	No. of HPC Samples	Range of HPC Results
<b>Raw</b>	N/A				
<b>Treated</b>	N/A				
<b>Distribution</b>	777	Range: (Absent)	Range: (Absent)	238	Range: 0 – 20 CFU/mL

**Operational testing was done under Schedule 7 of Regulation 170/03 during the period covered by this Annual Report**

	Number of Grab Samples	Range of Results	Unit of Measure
<b>Chlorine residual</b>	4969	0.05 – 2.1	mg/L

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**Summary of testing pursuant to Schedule 13 of O. Reg. 170/03 and sampling carried out in accordance with the requirement of approval.**

	Date of Sample	Keswick (µg/L)		Sutton (µg/L)		Exceedance
		Total	Annual Running Ave	Total	Annual Running Ave	
<b>Trihalomethanes (THMs)</b> <i>(Regulatory Limit: 100 µg/L)</i>	February 2, 2022	50.2	70.25	50.2	58.13	No
	May 2, 2022	50.2	66.70	42.5	58.73	
	August 3, 2022	67.2	64.25	52.8	55.85	
	November 2, 2022	71.6	59.80	53.8	53.95	
<b>Haloacetic Acid (HAAs)</b> <i>(Regulatory Limit: 80 µg/L)</i>	February 2, 2022	44	39.25	35	43.75	No
	May 2, 2022	46	42.75	34	41.25	
	August 3, 2022	52	43.75	40	36.50	
	November 2, 2022	25	41.75	26	33.75	
<b>Nitrate</b>		*Refer to Regional Municipality of York Annual Report: O. Reg. 170/03 requires these parameters to be tested at the point where water enters the distribution system. The Town of Georgina relies on the Region of York to undertake this sampling and testing when the water leaves the treatment plant.				
<b>Nitrite</b>						
<b>Sodium</b>						
<b>Fluoride</b>						

**Summary of testing pursuant to Schedule 13 of O. Reg. 170/03 as chosen to be sampled for;**

	Date of Sample	MAC (mg/L)	Results (mg/L)	
			Keswick	Sutton
Nitrite (NO <sub>2</sub> <sup>-</sup> ) as N	February 7, 2022	1	<0.05	<0.05
Nitrate (NO <sub>3</sub> <sup>-</sup> ) as N		10	<0.50	<0.50
Nitrite (NO <sub>2</sub> <sup>-</sup> ) as N	May 09, 2022	1	<0.05	<0.05
Nitrate (NO <sub>3</sub> <sup>-</sup> ) as N		10	<0.50	<0.50
Nitrite (NO <sub>2</sub> <sup>-</sup> ) as N	November 07, 2022	1	<0.05	<0.05
Nitrate (NO <sub>3</sub> <sup>-</sup> ) as N		10	<0.50	<0.50

### Lead testing under Schedule 15.1 of O. Reg. 170/03

Systems serving under 50,000 users can transfer to a “reduced” lead sampling schedule on condition that no more than 10% of samples taken within the latest two (2) sampling periods do not exceed half of the 10µg/mL standard (0.010 mg/L). Since the Town has not had any exceedances for lead since 2007, the Town automatically falls under the “reduced” lead sampling schedule for the water distribution system and is exempt from Lead sampling within the plumbing system. Lead samples are taken every 36 months on a rolling three (3) year schedule under the “reduced” sampling protocol. Each year semi-annual alkalinity and pH sampling are mandatory, whereas lead must be sampled every 36 months on a semi-annual basis (summer, and winter).

The table below outlines the rolling three (3) year “reduced” Lead sampling schedule. In 2021, sampling was carried out as per year three (Y3).

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Sampling year	1 <sup>st</sup> Round Sampling	Date of 1 <sup>st</sup> Round Sampling	2 <sup>nd</sup> Round Sampling	Date of 2 <sup>nd</sup> Round Sampling	# Of Samples per Period	Sampling Requirements
Y3	Dec 15, 2020 - Apr 15, 2021	March 2021	Jun 15, 2021 - Oct 15, 2021	September 2021	4	Alkalinity, pH, and Lead
Y1	Dec 15, 2021 - Apr 15, 2022	March 2022	Jun 15, 2022 - Oct 15, 2022	September 2022	4	Alkalinity and pH
Y2	Dec 15, 2022 - Apr 15, 2023	March 2023	Jun 15, 2023 - Oct 15, 2023	September 2023	4	Alkalinity and pH

As of 2022, the Town was in year one (Y1) of this cycle, thus, was not required to sample for Lead in 2022. All Lead results from the previous 16 years of lead sampling and the distribution systems are below the regulatory limit of 0.010 mg/L. The Town is expected to sample and test for Lead in the distribution system in 2024.

### Summary of Inorganic (Schedule 23 of O. Reg. 170/03) parameters tested during this reporting period or the most recent sample results.

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	*Refer to Regional Municipality of York Annual Report  O. Reg. 170/03 requires these parameters to be tested at the point where water enters the distribution system. The Town of Georgina relies on the Region of York to undertake this sampling and testing when the water leaves the treatment plant.			
Arsenic				
Barium				
Boron				
Cadmium				
Chromium				
Mercury				
Selenium				
Sodium				
Uranium				
Fluoride				
Nitrite				
Nitrate				
*Lead				

### Summary of Organic (Schedule 23 of O. Reg. 170/03) parameters sampled during this reporting period or the most recent sample results.

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	*Refer to Regional Municipality of York Annual Report  O. Reg. 170/03 requires these parameters to be tested at the point where water enters the distribution system. The Town of Georgina relies on the Region of York to undertake this sampling and testing when the water leaves the treatment plant.			
Aldicarb				
Aldrin + Dieldrin				
Atrazine + N-dealkylated metabolites				
Azinphos-methyl				
Bendiocarb				
Benzene				
Benzo(a)pyrene				
Bromoxynil				
Carbaryl				
Carbofuran				
Carbon Tetrachloride				
Chlordane (Total)				
Chlorpyrifos				
Cyanazine				

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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: see table below)
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

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

Test	Date of Sample	Running Annual Average (µg/L)		Value exceeded over half of the regulatory standard
		Keswick	Sutton	
Trihalomethanes (THMs) (ODWS Standard 100 µg/L)	February 2, 2022	70.25	58.13	Yes
	May 2, 2022	66.70	58.73	
	August 3, 2022	64.25	55.85	
	November 2, 2022	59.80	53.95	