



2018 ANNUAL WATER QUALITY SUMMARY REPORT FOR MUNICIPAL OFFICIALS

Summary

This annual performance report provides the results of sampling, testing and monitoring of the Town of Georgina drinking water system as required by the *Safe Drinking Water Act, SDWA 2002*. In 2018, the Ministry of Environment, Conservation and Parks (MECP) performed two (2) Inspections of the Town of Georgina drinking water system. Both inspections resulted in ranking the Towns' drinking water system performance at 100%. This score indicates the lowest possible risk rank and highest possible inspection rating for drinking water systems in Ontario.

Ministry of the Environment - Inspection Summary Rating Record (Reporting Year - 2018-2019)

DWS Name: KESWICK-SUTTON DISTRIBUTION SYSTEM
DWS Number: 260062686
DWS Owner: Georgina, The Corporation Of The Town Of
Municipal Location: Georgina

Inspection Module	Non-Compliance Rating
Treatment Processes	0 / 34
Distribution System	0 / 25
Operations Manuals	0 / 42
Logbooks	0 / 26
Certification and Training	0 / 43
Water Quality Monitoring	0 / 75
Reporting & Corrective Actions	0 / 81
Treatment Process Monitoring	0 / 21
TOTAL	0 / 347

Inspection Risk Rating 0.00%

FINAL INSPECTION RATING: 100.00%

Background

Schedule 22, of O.Reg 170/03, under the *Safe Drinking Water Act* require owners of municipal drinking water systems to publish annual reports describing the operation of the drinking water system and the results of testing performed that ensures residents are provided with safe drinking water. This report covers the period from January 1, 2018 to December 31, 2018.



The Town of Georgina operates the water distribution and delivery system, and The Regional Municipality of York provides the treatment and storage of drinking water.

Section 19 of the Safe Drinking Water Act: Standard of Care, requires every person who on behalf of the municipality oversees the accredited operating authority of the system or exercises decision-making authority over the system, to act honestly, competently and with integrity while exercising a level of care, diligence and skill to protect the health and safety of the users of the Town's drinking water system. This includes, the Mayor, Municipal Councilors, Management and *Ministry of Environment, Conservation and Parks (MECP)* Certified Operators.

The Drinking Water System

The source of water supply for the Keswick-Sutton system is Lake Simcoe. York Region owns and operates a water treatment plant at Clarlyn Drive and Metro Road North and another plant on Kennedy Road in Willow Beach. York Region also owns and operates four (4) water storage tanks located at Westpark Heights, Woodbine Avenue just north of Old Homestead Road, Deer Park Drive and Dalton Road. Water is taken from Lake Simcoe at each plant and undergoes a complete treatment process consisting of screening, filtration, taste and odor control, disinfection and fluoridation before being supplied to the Town's water distribution system. York Region also carries out extensive testing at each plant and summarizes the results of these tests in an annual report. The reports describe the treatment and chemicals used in the process in more detail. Copies of York Region's annual report may be obtained by contacting York Region at 1-877-464-9675, accessing their web site at York.ca or obtaining a copy at the Town of Georgina Civic Centre located at 26557 Civic Centre Road, Keswick, Ontario.

The Town of Georgina owns and operates the water distribution system that receives water from the York Region treatment plants. The system is comprised of water booster stations, watermains, service connections up to the property line, valves, hydrants and meters. The Town provides distribution, whereas York Region provides treatment.

Town of Georgina *MECP* Certified Drinking Water Operators take water samples from various locations serviced by the Keswick-Sutton water distribution system every week. The York-Durham Laboratory in Pickering analyses and tests each sample for the presence of bacteria. York and Durham Regions jointly own this accredited laboratory and employees of Durham Region staff the laboratory.

Microbiology Testing from January 1 to December 31, 2018

Seven hundred and thirty seven (737) samples from the Keswick-Sutton distribution system were analyzed for the presence of coliform bacteria between January 1, 2018 and



December 31, 2018. One (1) sample tested positive for Total Coliforms. Town staff took immediate corrective action in accordance with *O.Reg 170/03: Drinking Water Systems*. The location of the adverse sample, as well as upstream and downstream locations was resampled. The results of the resample were negative for the presence of coliforms indicating the likely cause of the initial positive result was from secondary contamination and not from the treated water within the Distribution System.

Two hundred and ten (210) samples were analyzed by using the heterotrophic plate count (HPC) method to check for background colonies within the drinking water. This test is used as a supplement to the routine analysis for coliform bacteria and is used as an aide in assessing overall drinking water quality.

Shown in the table below are the results from two hundred and ten (210) heterotrophic plate count (HPC) samples. The *MECP* Operational Guideline determines a maximum allowable concentration of 500 CFU/mL HPC. The maximum concentration of HPC analyzed within the Town of Georgina water distribution system in 2018 was 260 CFU/mL.

HPC Range in Colony Forming Units (CFU/mL)	Number of Samples
0	156
1 to 10	44
11 to 20	4
21 to 260	6
Total HPC Sample Count	210

The results above indicate overall drinking water quality is acceptable as all HPC samples throughout 2018 are well below 500 CFU/mL.

Chlorine Residual

The Town is also required to monitor chlorine residual concentrations to ensure that bacteria does not develop within the drinking water system. Four thousand seven hundred and forty three (4743) samples were analyzed. The range of free chlorine residual from the 4743 samples analyzed was 0.06 mg/L to 2.02 mg/L. The minimum acceptable chlorine residual is 0.05 mg/L and the maximum is 4.00 mg/L. All samples had sufficient chlorine residual levels to maintain bacterial disinfection within the Towns' water distribution system.

Lead Testing

In 2007, the Ontario Government required municipal and non-municipal drinking water systems to undertake mandatory semi-annual testing for lead in drinking water to ensure levels meet the standards set forth in *O.Reg. 169/03: Ontario Drinking Water Quality Standards* and *O.Reg. 170/03: Drinking Water Systems*, under the *Safe Drinking Water Act, SDWA 2002*. The Ontario drinking water quality standard for lead is 10 micrograms per litre (10 µg/L) or 0.010 milligrams per litre (0.010 mg/L). This standard is based on the national guideline set by Health Canada, and reflects the most current estimate that consider children's health as the primary concern.

The lead testing performed over the past decade has demonstrated that the vast majority of municipal and non-municipal residential drinking water systems have met the regulated standards. As a result, the Ministry has amended regulations under the *Safe Drinking Water Act* to clarify requirements for lead testing and to introduce an automatic lead testing exemption within plumbing systems for municipal drinking water systems serving under 50,000 people.

Systems serving under 50,000 users can transfer to a "reduced" lead sampling schedule on condition that less than 10% of samples taken within the latest two (2) sampling periods do not exceed 10ug/mL. Since the Town has not had any exceedances for lead since 2007, the Town automatically follows this "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 "reduced" sampling protocol. Each year semi-annual alkalinity and pH sampling is 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 2018, sampling was carried out as per year three (3).

Sample Period (Year)	1 st Round Sampling	Date of 1 st Round Sampling	2 nd Round Sampling	Date of 2 nd Round Sampling	# of Samples per Period	Sampling Requirements
3	Dec 15/17 to Apr 15/18	March 2018	Jun 15/18 to Oct 15/18	September 2018	4	Alkalinity, pH and Lead
	Dec 15/18		Jun 15/19			



1	to Apr 15/19	March 2019	to Oct 15/19	September 2019	4	Alkalinity and pH
2	Dec 15/19 to Apr 15/20	March 2020	Jun 15/20 to Oct 15/20	September 2019	4	Alkalinity and pH

Eight (8) distribution samples were taken in 2018 and were tested for lead, alkalinity and pH. The table below summarizes the results.

Sample Date	Number of Samples	Lead (mg/L) Min. – Max.	Alkalinity (mg/L)	pH Min. – Max.
Mar. 7/18	4	<0.0005 – 0.0009	111 – 113	6.74 – 7.84
Sep. 19/18	4	<0.0005 – 0.0030	96 – 110	6.65 – 6.92
MAC – (Maximum Allowable Concentration) OG – (Operational Guideline)		MAC 0.01mg/L	OG 500mg/L	6.5-8.5

Other Testing

Twenty-four (24) samples were tested for trihalomethanes (THM). The THM twelve (12) month running average for 2018 was 58.18 µg/L. The maximum twelve (12) month running average allowable limit is 100 µg/L.

Ministry Inspections

In 2018, The *Ministry of Environment, Conservation and Parks (MECP)* completed two (2) inspections of the Town of Georgina Drinking Water System. One (1) unannounced inspection was conducted in February 2018, and one (1) announced inspection was conducted in November 2018.

During each inspection, the *MECP* Inspector performed an off-site desktop audit, and an on-site inspection of processes, operations manuals, standard operating procedures, logbooks, operator certification and training credentials, water quality, water quality monitoring processes, reporting procedures, and corrective actions.



26557 Civic Centre Rd.
Keswick, Ontario L4P 3G1

Attachment 2: Annual Water Quality Summary Report For
Municipal Officials [Council Report No. OI-2019-0001]

There were no non-compliance findings in 2018, and the Town of Georgina was given a final inspection score of 100%. This score is the highest possible inspection rating, and the lowest possible risk rank for water systems in Ontario.

Private Wells

Residents that obtain water from private wells are encouraged to take samples periodically to determine if their water is safe to drink. Sample bottles may be obtained at the Civic Centre and returned to the same location for testing conducted by the Ministry of Health laboratory at no cost to the residents.

Further Information

The *Safe Drinking Water Act, SDWA 2002*, requires that an Annual Report be prepared on or before February 28 of the following year. The Summary Report must be prepared and presented to members of Council by March 31 of each year. A copy of this report will be available for inspection in the Office of the Clerk and on the Town's website on or before March 31, 2018.

Detailed lab reports are available for review at the Civic Centre, located at 26557 Civic Centre Road, Keswick.

Please direct any questions or concerns regarding this report to Talal Latif, DWQMS Compliance Officer at 905-476-4301 extension 3924.



Dean Rurak, P.Eng.
Manager of Operations & Infrastructure

25 FEB 2019.

Date



John Armstrong
Director of Operations & Infrastructure

FEB 25 | 19

Date

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