



2021 DRINKING WATER SUMMARY REPORT



EXECUTIVE SUMMARY

The “Drinking Water Summary Report” is prepared for members of Town Council in order to meet the requirements outlined in Schedule 22 of Drinking Water Systems Regulation O. Reg. 170/03 under the Safe Drinking Water Act. The report provides information for the purpose of enabling the owner of the system to assess the capability of the system to meet existing and planned uses of the system. The report provides summary information on the operation of both the Ballantrae/Musselman’s Lake Drinking Water System and the Community of Stouffville Drinking Water System.

MECP INSPECTION FINDINGS: MAY 11, 2020 - JANUARY 4, 2022

The annual inspection from the MECP of the Town's drinking water systems were conducted on January 25, 2022. The Ballantrae/Musselman's Lake system was given an Inspection Rating of 100% and a Risk Rating of 0%. There was no change from the 2020 inspection where the Ballantrae/Musselman's Lake system received an Inspection Rating of 100% and a Risk Rating of 0%. No further action was required by the MECP.

The Stouffville system was given an Inspection Rating of 100% and a Risk Rating of 0%. There was no change from the 2020 inspection where the Stouffville system received an Inspection Rating of 100% and a Risk Rating of 0%. No further action was required by the MECP.

There have been no further identified non-compliances from January 1 – December 31, 2021 for either system.

INCIDENTS OF ADVERSE WATER QUALITY JANUARY 1 – DECEMBER 31, 2021

There were three reported incidents of adverse water quality in the Stouffville Distribution System. A sample taken July 5, 2021 found a presence of Total Coliform (TC), which exceeds the Provincial Standard at the Norman Jones sampling station. The system was flushed and resampled July 6, 2021 and found to meet the Provincial Drinking Water Standards. No further action was required (AWQI #154539). A sample taken August 12, 2021 found a presence of Total Coliform (TC), which exceeds the Provincial Standard at the 6372 Main St sampling station. The system was flushed and resampled August 13, 2021 and found to meet the Provincial Drinking Water Standards. No further action was required (AWQI #155074). A sample taken August 30, 2021 found a presence of Total Coliform (TC), which exceeds the Provincial Standard at the 6833 Bethesda Rd sampling station. The system was flushed and resampled September 1, 2021 and found to meet the Provincial Drinking Water Standards. No further action was required (AWQI #155309).

There were four reported incidents of adverse water quality in the Ballantrae/Musselman's Lake Distribution System. A sample taken July 19, 2021 found a presence of Total Coliform (TC), which exceeds the Provincial Standard at the Brookdale Ct sampling station. The system was flushed and resampled July 20, 2021 and found to meet the Provincial Drinking Water Standards. No further action was required (AWQI #154763).

A sample taken September 14, 2021 found a presence of Total Coliform (TC), which exceeds the Provincial Standard at the 6197 Hillsdale sampling station. The system was flushed and resampled September 15, 2021 and found to meet the Provincial Drinking Water Standards. No further action was required (AWQI #155524). A sample taken October 25, 2021 found a presence of Total Coliform (TC), which exceeds the Provincial Standard at the 6197 Hillsdale sampling station. The system was flushed and resampled October 26, 2021 and found to exceed the Provincial Drinking Water Standards. The system was flushed and re-sampled October 28, 2021 and found to meet the Provincial Drinking Water Standards. No further action was required (AWQI #156213 & AWQI #156246).

NEW REGULATORY TESTING REQUIREMENTS IMPLEMENTED

Additional sampling and testing was introduced in 2016 for Haloacetic Acids (HAAs). These compounds are known as a disinfection by-product and can cause health problems in certain individuals over a long period of time. Continued sampling indicates that the HAAs in Stouffville and Ballantrae-Musselman's Lake Distribution Systems is well below the MECP requirements of 0.080 mg/L, which came into effect January 1, 2020.

SUPPLY SYSTEM CAPACITY AND OPERATIONS

The Regional Municipality of York is responsible for the supply of water (production and treatment). All systems operated below the maximum rated capacity of the system.

Information about the supply and treatment of the systems is available on York Region's website at www.york.ca/drinkingwater.

BALLANTRAE/MUSSELMAN'S LAKE - [GROUNDWATER]

York Region operates three wells and one elevated tank servicing the community of Ballantrae/Musselman's Lake. Water withdrawal from each of the wells is regulated by a Permit to Take Water issued by the Ministry of the Environment, Conservation and Parks (MECP). The Town of Whitchurch-Stouffville owns and operates the water distribution system consisting of approximately 47 kilometres of watermain, 305 valves, 360 hydrants and 17 sampling stations.

There is currently one storage tank servicing the community of Ballantrae/Musselman's Lake.

Raw Water Source Description

Wells draw water from the deep aquifer. Groundwater quality meets the Ontario Drinking Water Quality Standard. Aesthetic parameters such as iron and operational parameters including hardness fall outside the optimal operating range, which is common in deep aquifers in York Region. York Region staff use raw water test results to determine the best water treatment.

Water Treatment

Water from the Ballantrae/Musselman's Lake wells is treated by the addition of chlorine for disinfection and sodium silicate to

sequester iron to reduce potential staining of plumbing fixtures and laundry. Disinfection is maintained in the distribution system by the presence of free chlorine residual.

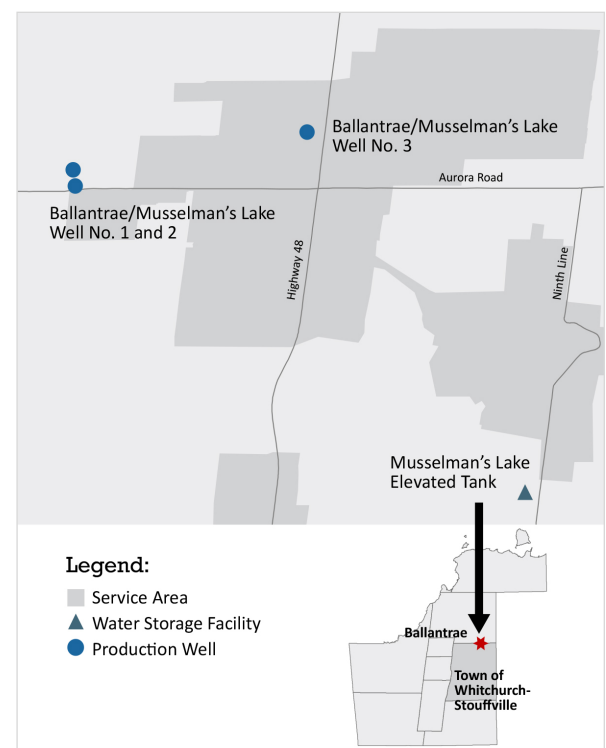
Treatment processes throughout the facility are monitored by online analyzers equipped with alarms and lockouts to alert operational staff of conditions requiring attention.

Town of Whitchurch-Stouffville staff sample and test the water in the distribution system in accordance with all MECP requirements.

For information related to water quality and system performance, please refer to the York Region website www.york.ca/drinkingwater

Summary of Approvals and Permits

Municipal Drinking Water License No.:	132-101
Issue Number:	Issue 4
Issue Date:	June 15, 2021
Expiry Date:	June 24, 2026
Drinking Water Works Permit Number:	132-201
Issue Number:	Issue 3
Issue Date:	June 15, 2021
Operational Plan Number:	132-401
Financial Plan Number:	132-301A
MECP Waterworks Number:	260006737
System Classification:	Class 1 Large Municipal Residential



STOUFFVILLE - [SURFACE + GROUNDWATER]

York Region operates five wells servicing the community of Stouffville. Water withdrawal from each of the wells is regulated by a Permit to Take Water issued by the Ministry of the Environment, Conservation and Parks. Groundwater supply is supplemented with water from Lake Ontario via the City of Toronto treatment and supply system.

The Town of Whitchurch-Stouffville owns and operates the water distribution system consisting of approximately 145 kilometres of watermain, 1650 valves, 1150 hydrants and 46 sampling stations. The distribution system is separated into three pressure districts controlled by a system of closed valves and pressure reducing valves. A separate system distributes municipal drinking water to approximately 20 properties along Highway 48 at Bloomington Road.

Currently, there are two reservoirs and two elevated tanks servicing Stouffville.

Raw Water Source Description

Wells draw water from two separate aquifers: shallow and deep aquifers. Groundwater quality meets the Ontario Drinking Water Quality Standard. Groundwater in the shallow aquifer wells (Wells No. 3, 5 and 6) show higher chloride, sulphate and sodium concentrations in comparison to Wells No. 1 and 2, which are in the deep aquifer. Concentrations remain within safe

limits and trends are monitored on an ongoing basis. Aesthetic parameters such as iron and operational parameters including hardness fall outside the optimal operating range, which is common in deep aquifers in York Region. York Region staff uses raw water test results to determine the best water treatment.

Water Treatment

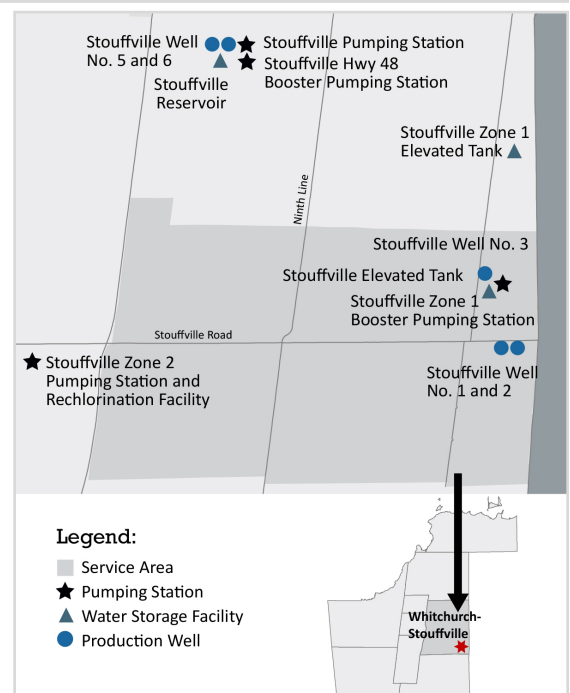
Water treatment for Stouffville wells includes the addition of chlorine for disinfection. At Wells No. 5 and 6, an ultraviolet light system achieves primary disinfection of the raw water prior to addition of chlorine to maintain residual levels. At the Zone 2 pumping station, disinfection of the lake-based water is converted from chloramine to free chlorine. Treatment processes throughout the system are continuously monitored and are equipped with alarms and automatic lockouts. Disinfection is maintained in the distribution system by the presence of free chlorine residual.

Town of Whitchurch-Stouffville staff sample and test the water in the distribution system in accordance with all MECP requirements.

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