



2018 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 2017 - MAY 2018

The annual inspection from the MECP of the Town's drinking water systems were conducted on May 22, 2018. The Ballantrae/Musselman's Lake system was given an Inspection Rating of 85.71% and a Risk Rating of 14.29%. This is down from the 2017 inspection where the Ballantrae/Musselman's Lake system received an Inspection Rating of 100% and a Risk Rating of 0%. At the time of the inspection, the log books for the system was not present on site as required in the Act. The log books were provided to the MECP and Staff produced a Standard Operating Procedure for Log Book and Record Keeping ensuring future compliance with the Act. No further action was required by the MECP. It was also identified by the inspector that on three occasions regulated chlorine residual sampling was conducted within 48 hours of each other. The requirement of the Act is a minimum 48 hours between regulated chlorine residual sampling. Staff had changed the procedure from conducting chlorine residual sampling on Mondays and Wednesdays to Mondays and Thursdays on January 1, 2018. No further action was required by the MECP.

The Stouffville system was given an Inspection Rating of 87.86% and a Risk Rating of 12.14%. This is down from the 2017 inspection where both systems received an Inspection Rating of 100% and a Risk Rating of 0%. At the time of the inspection, the log books for the system was not present on site as required in the Act. The log books were provided to the MECP and Staff produced a Standard Operating Procedure for Log Book and Record Keeping ensuring future compliance with the Act. No further action was required by the MECP. It was also identified by the inspector that on five occasions regulated chlorine residual sampling was conducted within 48 hours of each other. The requirement of the Act is a minimum 48 hours between regulated chlorine residual sampling. Staff had changed the procedure from conducting chlorine residual sampling on Mondays and Wednesdays to Mondays and Thursdays on January 1, 2018. No further action was required by the MECP.

There have been no further identified non-compliances from May – December 31, 2018 for either system.

INCIDENTS OF ADVERSE WATER QUALITY JANUARY 1 – DECEMBER 31, 2018

There were no reported incident of adverse water quality in the Ballantrae/ Musselman's Lake or Stouffville Distribution System.

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 will come 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). Quantity of water supplied and flow rates from Regional facilities are provided for Council's information. All systems operated below the maximum rated capacity of the system indicating that capacity is available in the systems for planned growth.

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]

Drinking Water System

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, 300 valves, 340 fire hydrants and 16 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. Region of York 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.

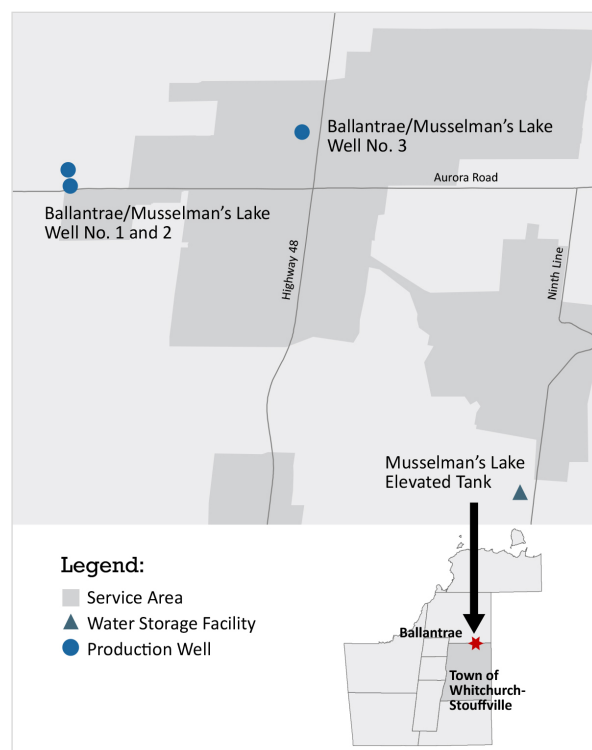
Treatment processes throughout the facility are monitored by online analyzers equipped with alarms and lockouts to alert operational staff of conditions requiring attention.

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 3
Issue Date:	June 24, 2016
Expiry Date:	June 23, 2021
Drinking Water Works Permit Number:	132-201
Issue Number:	Issue 2
Issue Date:	June 24, 2016
Operational Plan Number:	132-401
Financial Plan Number:	132-301A
MECP Waterworks Number:	260006737
System Classification:	Class 1 Large Municipal Residential



STOUFFVILLE - [SURFACE + GROUNDWATER]

Drinking Water Sub-System - York Drinking Water System

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 140 kilometres of watermain, 1530 valves, 1050 hydrants and 44 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. Region of York staff uses raw water test results to determine the best water treatment.

Water Treatment

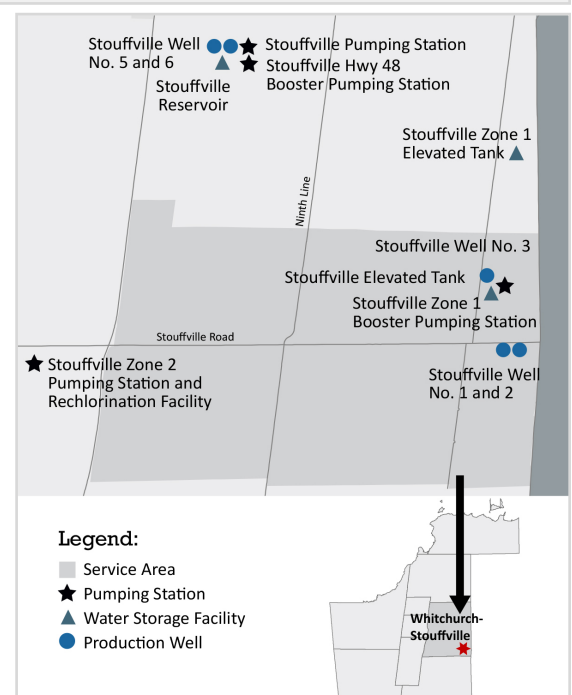
Water treatment for Stouffville wells includes the addition of chlorine for disinfection. At Wells No. 5 and 6, an ultraviolet light system achieves primary disinfection of the raw water prior to addition of chlorine to maintain residual levels. At the Zone 2 pumping station, disinfection of the lake-based 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. The Town completed the replacement and upgrading of the watermain on a portion of Main St. and Burkholder St. in 2017.

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
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Expiry Date:	June 23, 2021
Drinking Water Works Permit Number:	132-201
Issue Number:	Issue 2
Issue Date:	June 24, 2016
Operational Plan Number:	132-401
Financial Plan Number:	132-301A
MECP Waterworks Number:	260006737
System Classification:	Class 1 Large Municipal Residential





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