



# 2013 NEWMARKET WATER DISTRIBUTION SYSTEM ANNUAL WATER QUALITY SUMMARY REPORT

1 JAN 2013 – 31 DEC 2013

*Report prepared by: the Town of Newmarket, Public Works Services – Development & Infrastructure Services Commission*

# 2013 ANNUAL WATER QUALITY SUMMARY REPORT

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## EXECUTIVE SUMMARY

Town of Newmarket Public Works Services, as part of the Development and Infrastructure and Services Commission of the Corporation of the Town of Newmarket (“the Town”) delivers drinking water to its residents’ through the Water Distribution System (WDS). The Town acts as the Operating Authority and owns/operates the Newmarket WDS (DWS 260003188).

The Town has approximately 25, 117 fully metered water service connections, 300 kilometers of watermain, 2,636 mainline valves, 2,291 fire hydrants and an approximate population of 79,978 (2011 Census). The Town is considered a Large Municipal Residential System under the Safe Drinking Water Act and is known as the “Newmarket WDS” (Class I).

The Newmarket WDS is divided into 3 zones (East, Central, and West) that range in pressure from approximately 40 psi – 100 psi.

The Town’s water operators, certified by the Province of Ontario through the Ministry of the Environment

(MOE), maintain and operate the WDS. Some of the typical but are not limited to: operational activities performed by staff include,

- ❖ Water sampling for submission to accredited laboratories for analysis
- ❖ Field testing for disinfectant residuals
- ❖ Uni-directional flushing
- ❖ Watermain/service repair
- ❖ Locates of municipal infrastructure
- ❖ Valve exercising/inspections
- ❖ Hydrant inspection
- ❖ Customer service for water quality inquiries



The Newmarket WDS is required by law to comply with the *Safe Drinking Water Act (SDWA)* and associated regulations (i.e. *O. Reg. 170/03*), as well as related requirements. The numbers of samples that are tested annually exceed the requirements of *O. Reg. 170/03*.

The Town’s water quality monitoring program ensures that sufficient disinfectant levels are present in the water that we provide such that Regulatory requirements are met, as well as ensuring that there is no presence of pathogenic organisms.

Water samples are collected at various locations in town through the use of designated Sampling Stations. This practice assures that samples are being drawn at points which represent the entire distribution system.

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The York-Durham Regional Environmental Laboratory (located in Pickering, Ontario), an accredited laboratory registered with the Canadian Association for Laboratory Certification Inc. (CALA), is under contract with the Town for water quality analysis of all water samples sent to them from our distribution system.

From January 1, 2013 to December 31, 2013, the Town of Newmarket reported 105 Adverse Water Quality Incidents (AWQIs) in the Newmarket WDS. 100 were as a result of disinfectant (chloramine) residuals dropping below the regulated lower limits of 0.25mg/L combined chlorine and 0.05mg/L free chlorine. One (1) AWQI was for the presence of E. Coli (which was resampled and came back negative, indicating a false result), and four (4) were for the presence of Total Coliform.

In an effort to address the ongoing challenges in the Newmarket WDS in regards to disinfectant residual decay, the Town hired Stantec Consulting to create a hydraulic model of the Newmarket WDS to model water quality trends/scenarios. This model has been instrumental in aiding us in addressing water quality challenges, and has been noted as being one of the most advanced water system models created to date in North America.



The Region of York (“the Region”) is responsible for water supply, treatment, storage, and transmission to the Town of Newmarket. All supplied water was tested against and met all regulatory standards. Continuous monitoring by the Region via online monitoring systems (SCADA) ensures the highest quality of water is provided to our municipality at all times. Six Regionally-

owned/operated/maintained storage tanks located throughout the distribution system provide additional storage, pressure, and fire protection. The Region publishes a report with respect to water quality of both source and treated waters. This report is updated annually and is posted on their website: [www.york.ca](http://www.york.ca).

Newmarket is supplied with both surface (lake-based) and ground source (well) waters. The purpose of blending these two sources is to decrease the demand on the underground aquifer and provide additional security by having a second supply source to supplement the needs of our rapidly growing community. The ground source is supplied through the Yonge Street aquifer (5 wells located along the Yonge Street corridor, numbered 13 & 16, 1 & 2, and 15) as well as from an additional 4 wells located in the community of Queensville. All 9 of these wells are owned and operated by the Region. In 2008, the Region began to supplement the ground water supply with surface water from Lake Ontario via Peel Region. This water is conveyed through four connections with the Town of Aurora located along our Southern boundary (Bathurst Street, Yonge Street, Bayview Avenue, and Leslie Street). Five interface connections owned and operated by the Region, with the Town of East Gwillimbury have also been established to provide water to their drinking water systems (Harry Walker Parkway, Davis Drive, Yonge Street-east side, Yonge Street-west side, and Woodspring Avenue).

Treatment of the water supplied to the Newmarket WDS by the Region is through the process of chloramination (the addition of chlorine and ammonia). From August 2012 – May 2013, the Town of

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Newmarket, in conjunction with the Region, temporarily changed to a free chlorine (chlorine only) disinfection method in three phases of the WDS.



As the Operating Authority, the Newmarket WDS is inspected annually by the Ministry of the Environment (MOE) to ensure compliance with regulatory requirements. An unannounced inspection was conducted September 25, 2013 (for the period of January 1, 2013 to September 25, 2013) with a resulting final inspection rating of 90.99%.

The Newmarket WDS has been accredited by SAI Global under the requirements of the SDWA. To receive this third party accreditation, the Town was required to develop an Operational Plan. This plan has been completed and is available to view upon request from the Town of Newmarket Operations Centre.

Additionally, internal and external audits of this Operational Plan have been conducted for 2013. The Town has met the Quality Management System Requirements as required by the SDWA.

The Town maintained the drinking water system in a fit state of repair in 2013 and followed best industry practices during the repair, inspection, and maintenance of the system.

The Town has completed this summary report to satisfy the regulatory requirements of the *Safe Drinking Water Act, O. Reg. 170/03*. For more information, please visit [www.newmarket.ca](http://www.newmarket.ca) or call The Town of Newmarket at 905-895-5193.

Any questions related to the Newmarket Water System, this report, or any water quality issue may be directed to the Overall Responsible Operator, Bill Wilson (Supervisor of Water/Wastewater Operations) at our Operations Centre 905-953-5300, ext. 2550, or via email at [bwilson@newmarket.ca](mailto:bwilson@newmarket.ca).



# 2013 ANNUAL WATER QUALITY SUMMARY

## INTRODUCTION

### PURPOSE

The purpose of this report is to provide information to our consumers and stakeholders as well as to satisfy regulatory requirements of the Safe Drinking Water Act, 2002 including the Drinking Water Quality Management System (DWQMS), reports to Owner, and regulatory reporting required under O. Reg. 170/03. This report is a compilation of information that helps to illustrate the ongoing delivery of safe drinking water to our consumers in the Town of Newmarket.

### SCOPE

This Annual Water Quality Report includes information pertaining to the Town of Newmarket's WDS for the period of January 1, 2013 to December 31, 2013. This information is required by law to be reported to the following:

1. The Drinking Water System Owners (The Corporation of the Town of Newmarket – Mayor and Council)
2. Top Management (Director – Public Works Services)
3. The public

### **NEWMARKET'S QUALITY MANAGEMENT POLICY**

The Town of Newmarket is committed to the consistent delivery of safe drinking water through compliance with legislative and regulatory requirements. We will strive to achieve this goal through the implementation and continuous improvement of the Quality Management System.

The Town of Newmarket also pledges to ensure open communication, both with public, as well as staff concerning all policies, procedures, and documentation pertaining to drinking water quality.

The Quality Management Policy applies to all municipal management and staff, and is posted at the municipal offices, operations centre and on the municipal website.

*April 11, 2011*

*Figure 1: Quality Management Policy*



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## Report Requirements of the Safe Drinking Water Act

This report satisfies the Ministry of the Environment's (the "ministry", "MOE") *Safe Drinking Water Act (SDWA)* and *Ontario Regulation (O. Reg.) 170/03*:

- *Section 11, Annual Reports* which include:
  - A brief description of the Drinking Water System
  - A summary of the most recent water test results required under *O.Reg. 170/03*
  - A summary of adverse test results and other issues reported to the Ministry including corrective actions taken
  - A description of the major expenses incurred to install, repair, or replace required equipment/infrastructure
  - The locations where this report is available for inspection

And;

- *Schedule 22, Summary Report* which includes:
  - List the requirements of the *SDWA*, the regulations, the system's approval, *Drinking Water Works Permit (DWWP)*, *Municipal Drinking Water Licence (MDWL)*, and any orders applicable for the system that were not met at any time during the period covered by the report
  - For each requirement that was not met, the duration of the failure and the measures that were taken to correct the failure

This report satisfies the requirements for the Newmarket WDS.

A copy of the Annual Report is available for viewing at:

- Newmarket Operations Centre, 1275 Maple Hill Court
- Newmarket Municipal Offices, Customer Service Counter, 395 Mulock Drive
- Online at [www.newmarket.ca](http://www.newmarket.ca)

## NOTICE:

**Please note that every reasonable effort has been made to ensure the accuracy of this report. This report is published with the best available information at the time of publication.**

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## NEWMARKET WATER DISTRIBUTION SYSTEM OVERVIEW

The mission of the Town of Newmarket's Public Works Services is to provide customers and the community with a safe, consistent supply of high quality drinking water while meeting, exceeding, and continually improving on legal, operational, and quality management system requirements.



The Newmarket WDS is a Class I Distribution Subsystem. From January 1, 2013 to December 31, 2013, sixteen (16) water operators and staff were certified to operate/maintain the system (14 full-time water/wastewater operators, plus 2 additional licenced staff who work in a different department that are available for support).

The Distribution System Infrastructure (including watermains, valves, hydrants, water services, and meters) services approximately 79,978 people (2011 Census) within the Town of Newmarket. All new components meet NSF 61 requirements or approved equivalents and are installed and maintained in accordance with approved industry standards.

The Newmarket WDS is comprised of/maintains the following infrastructure:

- ❖ 298.16 kilometers of distribution system watermain with a diameter <500mm
- ❖ 2636 mainline valves
- ❖ 2291 municipally owned fire hydrants
- ❖ 25,117 metered water services
- ❖ 2 Pressure Regulating Valves

Water pressure is maintained throughout the distribution system ranging between approximately 40-100 psi.



Newmarket is supplied with both surface (lake-based) and ground (well) source waters. The purpose of blending these two sources is to decrease the demand on the underground aquifer and provide additional security by having a second supply source to supplement the needs of our rapidly growing community. The ground source is supplied through the Yonge Street aquifer (5 wells located along the Yonge Street corridor, numbered 13 & 16, 1 & 2, and 15) as well as from an additional 4 wells located in the community of Queensville. All 9 of

these wells are owned and operated by the Region of York ("the Region"). In 2008, the Region began to supplement the ground water supply with surface water from Lake Ontario via Peel Region. This water is conveyed through four connections with the Town of Aurora located along our Southern boundary (Bathurst Street, Yonge Street, Bayview Avenue, and Leslie Street). Five interface connections with the Town of East



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Gwillimbury have also been established to provide water to their systems (Harry Walker Parkway, Davis Drive, Yonge Street-east side, Yonge Street-west side, and Woodspring Avenue).

From January 1, 2013 to December 31, 2013, a total of 8,803,271 m<sup>3</sup> of water was purchased from the Region for the Newmarket WDS. Of this total amount purchased, it was necessary to flush (through the use of fire hydrant flows) approximately 232,110 m<sup>3</sup> in order to maintain water quality throughout the distribution system.

From January 1, 2013 to December 31, 2013, over 1000 regulatory microbiological and chemical quality samples were taken by certified operators; and tests performed by accredited, licenced laboratories on water samples collected throughout the drinking water system. In all cases, the drinking water supplied to all customers was confirmed safe.

From January 1, 2013 to December 31, 2013, the Town recorded 103 concerns from customers regarding colour, taste, and/or odour in relation to their drinking water.

The Newmarket WDS is classified as a Large Municipal Residential system and operates under the provincially regulated requirements of the Safe Drinking Water Act which may be found at <http://www.e-laws.gov.on.ca>. The DWS operates under:

**Municipal Drinking Water Licence (MDWL) 124-101 (Issue 2)**

**Drinking Water Works Permit (DWWP) 124-201(Issue 1).**

The MDWL and the DWWP describe system-specific requirements that are supplementary to provincial regulations and act as licences for WDS's. These documents outline specific conditions and requirements regarding operation, maintenance and upgrades that are required by the system and considered regulatory in nature. These documents are available by request for viewing at the Newmarket Operations Centre, 1275 Maple Hill Court.

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## MAJOR EXPENSES INCURRED TO INSTALL, REPAIR, OR REPLACE REQUIRED EQUIPMENT/INFRASTRUCTURE

From January 1, 2013 to December 31, 2013, the Town incurred several significant expenses in regards to enhanced maintenance, replacement programs, and repair of infrastructure related to the WDS.

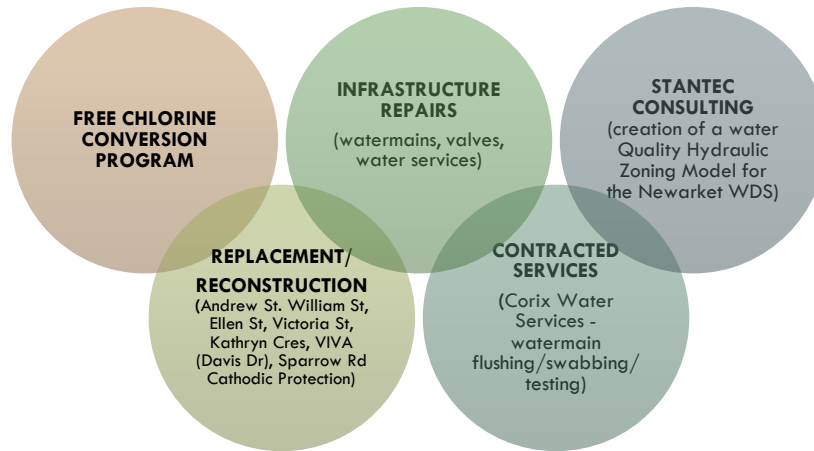


Figure 2: 2013 Major Expenses Incurred

Table 1: 2013 Excavation Details

EXCAVATION DATE	ADDRESS	TYPE OF REPAIR	PIPE MATERIAL	PIPE SIZE	BREAK TYPE	APPARENT CAUSE
2 JAN 2013	William St @ Eagle	Watermain	Cast Iron	200mm	Circumference	Beam Failure
JAN 2013	669 Elgin St	Watermain	Ductile Iron	150mm	Blow Hole	Corrosion
18 JAN 2013	315 Cotter St	Watermain	PVC	200mm	Split at bell	Bore machine
22 JAN 2013	986 Srigley St	Watermain	Ductile Iron	200mm	Circumference	Beam Failure
29 JAN 2013	115 William St @ Eagle	Watermain	Ductile Iron	150mm	Blow Hole	Swabbing
31 JAN 2013	66 Charlotte St. N	Watermain	Ductile Iron	150mm	Circumference	Beam Failure

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EXCAVATION DATE	ADDRESS	TYPE OF REPAIR	PIPE MATERIAL	PIPE SIZE	BREAK TYPE	APPARENT CAUSE
31 JAN 2013	70 Charlotte St. N	Watermain	Cast Iron	150mm	Circumference	Beam Failure
4 FEB 2013	175 Deerfield	Watermain	Cast Iron	150mm	Circumference	Unknown
4 FEB 2013	309 Plymouth Trail	Valve	Ductile Iron	150mm	Bolts on valve broken	Corrosion
5 FEB 2013	232 Cherrywood	Watermain	Cast Iron	150mm	Circumference	Over storm sewer
11 FEB 2013	231 Kathryn Cres.	Watermain	Ductile Iron	150mm	Corrosion	Beam Failure
13 FEB 2013	796 Arnold Cres.	Watermain	Cast Iron	200mm	Circumference	Unknown
15 FEB 2013	81 Gladman Ave	Watermain	Steel & Ductile Iron	150mm	Beam	Corrosion
17 FEB 2013	141 Harrison Dr.	Watermain	Ductile Iron	150mm	Unknown	Corrosion
18 FEB 2013	96 Cherrywood	Watermain	Ductile Iron	150mm	Ring Break	Unknown
18 FEB 2013	26 Walter Ave	Watermain	Ductile Iron	150mm	Ring Break	Unknown
FEB 2013	415 Roywood Cres.	Watermain	Cast Iron	150mm	Circumference	Beam Failure
1 FEB 2013	117 Cherrywood	Watermain	Cast Iron	150mm	Circumference	Beam Failure
21 FEB 2013	348 Glenrose	Watermain	Ductile Iron	150mm	Circumference	Age
24 FEB 2013	300 Prospect St	Watermain	Water Service	25mm	Service Leak	Age
1 MAR 2013	24 Longford Dr.	Watermain	Cast Iron	150mm	Circumference	Beam Failure
2 MAR 2013	109 Meadowbank	Watermain	Cast Iron	150mm	Circumference	Beam Failure
4 MAR 2013	16774 Bayview Ave S	Watermain	Cast Iron	300mm	Circumference	Beam Failure

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EXCAVATION DATE	ADDRESS	TYPE OF REPAIR	PIPE MATERIAL	PIPE SIZE	BREAK TYPE	APPARENT CAUSE
5 MAR 2013	289 Roywood Cres.	Watermain	Cast Iron	150mm	Circumference	Beam Failure
5 MAR 2013	226 Cherrywood	Watermain	Cast Iron	150mm	Circumference	Beam Failure
5 MAR 2013	132 Harrison Dr.	Watermain	Ductile Iron	150mm	Circumference	Age
7 MAR 2013	93 Walter Ave	Watermain	Cast Iron	150mm	Circumference	Frost
5 MAR 2013	137 Harrison Dr.	Watermain	Cast Iron	150mm	Circumference	Beam Failure
4 FEB 2013	309 Liverpool	Watermain	Ductile Iron	150mm	Blow Hole	Corrosion
MAR 2013	372 Glenrose	Watermain	Ductile Iron	150mm	Blow Hole	Corrosion
12 MAR 2013	141 Patterson	Watermain	Ductile Iron	250mm	Blow Hole	Corrosion
17 MAR 2013	Walter @ Sheldon	Watermain	Cast Iron	150mm	Circumference	Beam Failure
12 MAR 2013	417 Patterson	Watermain	Ductile Iron	250mm	Blow Holes	Corrosion
14 MAR 2013	381 Eagle St	Water Service	Copper	16mm		
20 MAR 2013	419 Church St	Valve	Cast Iron	150mm	Missing bolts	Corrosion
10 APR 2013	490 Cody Cres.	Watermain	Ductile Iron	150mm	Blow Hole	Corrosion
22 MAY 2013	383 Davis Dr.	Water Service	Copper	19mm	Leak	Corrosion
23 MAY 2013	498 Cody Cres.	Watermain	Ductile Iron	150mm	Blow Hole	Corrosion
3 JUN 2013	74 Millard Ave	Valve	Cast Iron	150mm	n/a	Corrosion
6 JUN 2013	692 Sunnypoint	Curbstop Rod Replacement	n/a	n/a	n/a	Corrosion
17 JUN 2013	760 Greenfield Cres.	Curbstop Rod Replacement	n/a	n/a	n/a	Corrosion
17 JUN 2013	160 Pony Dr.	Valve Box Repair	n/a	n/a	Offset	Unknown

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EXCAVATION DATE	ADDRESS	TYPE OF REPAIR	PIPE MATERIAL	PIPE SIZE	BREAK TYPE	APPARENT CAUSE
9 JUL 2013	227 Talbot	Watermain	Ductile Iron	150mm	Main stop Blow Out	Swabbing
11 JUL 2013	405 Roywood Cres.	Watermain	Cast Iron	150mm	Circumference	Swabbing
14 JUL 2013	354 Buckingham	Watermain	Ductile Iron	150mm	Blow Hole	Corrosion
23 JUL 2013	109 Meadowbank	Watermain	Cast Iron	150mm	Circumference	Beam Failure
24 JUL 2013	501 Bristol Rd	Watermain	Ductile Iron	200mm	Blow Hole	Corrosion
25 JUL 2013	181 Penn Ave	Watermain	Cast Iron	150mm	Longitude Split	Swabbing
1 AUG 2013	20 Hill St	Water Service	Copper/Galvanized	50mm	Leak	Corrosion
12 AUG 2013	261 Alex Doner	Curbstop Rod Replacement	n/a	n/a	n/a	Corrosion
20 AUG 2013	185 Grant Blight	Service Replacement	Copper	19mm	n/a	Corrosion
27 AUG 2013	270 Rogers Rd	Curbstop Rod Replacement	n/a	n/a	n/a	Corrosion
30 AUG 2013	119 Glenway Circle	Curbstop Rod Replacement	n/a	n/a	n/a	Corrosion
9 SEPT 2013	Harewood Blvd @ Willow Ln	Valve Box Repair	n/a	n/a	Offset	Unknown
10 SEPT 2013	57 Ashton Rd	Curbstop Leak	Brass/Copper	19mm	Curbstop Leak	Unknown
11 SEPT 2013	383 Davis Drive	Water Service	Copper	19mm	Leak	Corrosion
17 SEPT 2013	531 Davis Dr.	Abandoned Water Service Leak	Copper	50mm	Abandoned Water Service Leak	Corrosion
2 OCT 2013	Eagle St @ James Ave	Mainline Valve Removal	Cast Iron	150mm	Mainline Valve Removal	Corrosion
20 OCT 2013	53 Wilstead Dr.	Watermain	Cast Iron	150mm	Blow out - top section	Corrosion
21 OCT 2013	Charles St @ Davis Dr.	Watermain	PVC/Hypotech	150mm	Blow off of Elbow	Unrestrained at original install
21 OCT 2013	1058 East Hill Crt.	Curbstop rod Replacement	n/a	n/a	n/a	Corrosion

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EXCAVATION DATE	ADDRESS	TYPE OF REPAIR	PIPE MATERIAL	PIPE SIZE	BREAK TYPE	APPARENT CAUSE
19 DEC 2013	72 George St	Water Service	Copper	16mm	Leaking at flared fitting	Corrosion

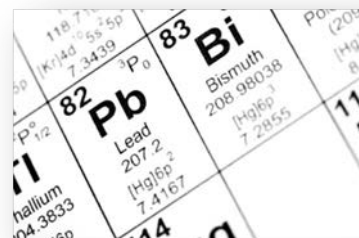
## FREE CHLORINE CONVERSION PROGRAM

Difficulties maintaining chlorine residuals in sections of the Newmarket WDS led to multiple adverse water quality incidents in 2012 and 2013. After increased maintenance programs, several third-party studies/analyses, careful deliberation amongst industry professionals, as well as local and regional governments, the Town initiated a formal request to the Region to convert areas of challenge from a chloraminated (chlorine + ammonia) disinfection system to a free chlorine (chlorine only) system for enhanced maintenance. Ontario Ministry of the Environment Drinking Water Inspectors and the local Medical Officer of Health were also consulted throughout the process to ensure they understood and supported the program.

Free chlorine disinfection is one of the Ministry of the Environment's (MOE) approved methods for drinking water disinfection in Ontario and is one of the most widely-used processes across North America. Free chlorine is a stronger disinfectant than chloramine, and was chosen for enhanced maintenance of the WDS to maintain Newmarket's high standard of water quality.

## REGULATORY LEAD SAMPLING PROGRAM

In 2013, lead sampling programs were conducted in compliance with Schedule 15.1 of O. Reg. 170/03 of the *Safe Drinking Water Act*. Sixteen (16) samples were taken and submitted to the York-Durham Regional Environmental Laboratory for analysis. Sample results ranged from between 0.0001mg/L-0.0005mg/L for distribution system samples. Due to sufficient evidence indicating that lead is not leaching from infrastructure in the Newmarket WDS, combined with a significant decline in volunteers for residential samples, the Corporation of the Town of Newmarket, on April 20, 2012, submitted a request for Regulatory Relief from Lead Sampling Requirements.



“Amendments to Ontario Regulation 170/03 (Drinking Water Systems) to reduce the potential for elevated levels of lead in drinking water at the tap came into effect on July 26, 2007. These amendments include mandatory community-wide testing for lead, notification of results from the community testing program, and the development and implementation of corrosion control measures for lead reduction... Under Part V (municipal systems) and Part VI (regulated non-municipal systems) of the *Safe Drinking Water Act*, 2002, the Director, through conditions of an approval, may provide relief for a drinking water system from a regulatory requirement related to the treatment of water, the sampling, testing or monitoring of water quality, or the reporting of the results. As outlined in the December 17, 2007 letter to municipal and non-municipal residential



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drinking water system owners, the ministry will consider granting regulatory relief to owners who, despite best efforts, are not able to secure the required number of sampling locations.”

Section 38 (Municipal Drinking Water Systems),  
 Guide for Requesting Regulatory Relief from Lead Sampling  
 Requirements in Schedule 15.1 of Regulation 170/03, Safe Drinking

The application for relief was approved by the Ontario Ministry of the Environment, with the below table updated to illustrate the Newmarket WDS’s new regulatory requirements (effective until October 15, 2016).

NUMBER OF SAMPLING POINTS REQUIRED FOR RELIEF FROM REGULATORY REQUIREMENTS

Column 1 Drinking Water System Or Drinking Water Subsystem name	Column 2 DWS Number	Column 3 Number of Sampling Points in Plumbing that Serves Private Residences	Column 4 Number of Sampling Points in Plumbing that Does Not Serve Private Residences	Column 5 Number of Sampling Points in Distribution System
Newmarket Distribution System	260003188	0	0	8

Source: Municipal Drinking Water Licence number 124-101 Dated 18<sup>th</sup> day of May, 2012

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## WATER SAMPLING SUMMARY

Table 3: Microbiological Parameters

PARAMETER	REGULATED LIMIT	TOTAL NO. OF SAMPLES TESTED	NO. OF DETECTABLE RESULTS	SAMPLES EXCEEDING LIMIT	REPORTED EXCEEDANCES	RANGE OF RESULTS
Heterotrophic Plate Count (HPC)	*no current standards	512	111	0	0	<1CFU/mL – 4,000 CFU/mL
Total Coliforms (MPN/PA)	0 MAC	1152	5	5	4*	A MPN/100mL – P MPN/100mL
Escherichia E. Coli/E. (MPN/PA)	0 MAC	1152	1	1	1	A MPN/100mL – P MPN/100mL

Table 4: Organic/Inorganic Parameters

PARAMETER	REGULATED LIMIT	TOTAL NO. OF SAMPLES TESTED	NO. OF DETECTABLE RESULTS	SAMPLES EXCEEDING LIMIT	REPORTED EXCEEDANCES	RANGE OF RESULTS
Alkalinity (total as CaCO <sub>3</sub> )	Operational Guideline: 30-500mg/L	16	16	0	0	90.7mg/L – 204mg/L
Ammonia (free, as N) *field tested	*no current standards	76*	76	0	0	0.00mg/L – 0.55mg/L
Ammonia (total, as N)	*no current standards	6	6	0	0	0.34mg/L – 0.42mg/L
Bromide		6	0	0	0	<0.04mg/L - <0.04mg/L
Bromodichloromethane	*no current standards	14	14	0	0	0.0028mg/L – 0.0062mg/L
Bromoform	(one of the 4 THMs that make up Total THMs)	14	11	0	0	<0.0002mg/L – 0.0005mg/L
Calcium	*no current standards	6	6	0	0	34.9mg/L – 41.5mg/L
Chloride	Aesthetic Object (AO) 250 mg/L	6	6	0	0	18.1mg/L – 24.1mg/L
Chloroform	(one of the 4 THMs that make up Total THMs)	14	14	0	0	0.0033mg/L – 0.0087mg/L

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PARAMETER	REGULATED LIMIT	TOTAL NO. OF SAMPLES TESTED	NO. OF DETECTABLE RESULTS	SAMPLES EXCEEDING LIMIT	REPORTED EXCEEDANCES	RANGE OF RESULTS
<b>Dibromochloromethane</b>	(one of the 4 THMs that make up Total THMs)	14	14	0	0	0.0010mg/L – 0.0049mg/L
<b>Fluoride</b>	1.5 mg/L	6	6	0	0	0.35mg/L – 0.45mg/L
<b>Hardness (total, as CaCO<sub>3</sub>)</b>	Operational Guideline 80-100mg/L	6	6	6	0	131mg/L – 157mg/L
<b>Lead (total)</b>	0.01 mg/L	16	16	0	0	0.0001mg/L – 0.0005mg/L
<b>Magnesium (total)</b>	*no current standards	6	6	0	0	10.4mg/L – 12.8mg/L
Nitrate (as N)	10 mg/L (as Nitrogen)	6	6	0	0	0.754mg/L – 0.844mg/L
Nitrate + Nitrite (as N)	10 mg/L (as Nitrogen)	6	6	0	0	0.75mg/L – 0.84mg/L
o-Phosphate (as P)	*no current standards	6	1	0	0	<0.01mg/L – 0.02mg/L
pH	Operational Guideline 6.5 – 8.5	611	611	18	0	7.07mg/L – 9.25 mg/L
Potassium (total)	*no current standards	6	6	0	0	1.3mg/L – 1.5mg/L
Sodium (total)**	Aesthetic Objective (AO) 200 mg/L Indicator of adverse quality 20 mg/L	6	6	0	0	14.9mg/L – 17.6mg/L
Sulphate	Aesthetic Objective (AO) 500 mg/L	6	6	0	0	13.6mg/L – 21.0mg/L
Total Trihalomethanes (TTHMs)	0.100 mg/L	14	14	0	0	0.0097mg/L – 0.0180mg/L

# 2013 ANNUAL WATER QUALITY SUMMARY REPORT

Table 5: Disinfectant Residual Monitoring

PARAMETER	MINIMUM REGULATED LIMIT	TOTAL NO. OF SAMPLES	RANGE	SAMPLES EXCEEDING LIMIT	REPORTED EXCEEDANCES (AWQIs)
Chlorine (Combined Chlorine/Free Chlorine)	0.25 mg/L (combined)	7015	0.00mg/L – 2.69mg/L	100	100
- routine sampling/daily residuals/ extra sampling	0.05 mg/L (free)				

## 2013 WATER QUALITY CHALLENGES

Disinfectant (chloramine) residual maintenance challenges in sections of the Newmarket WDS led to multiple adverse water quality incidents in 2013. After increased maintenance programs, several third-party studies/analyses, careful deliberation amongst industry professionals, as well as local and regional governments, the Town initiated a formal request to the Region to convert areas of challenge from a chloraminated (chlorine + ammonia) disinfection system to a free chlorine (chlorine only) system for enhanced maintenance. Free chlorine disinfection is one of the Ministry of the Environment's (MOE) approved methods for drinking water disinfection in Ontario and is one of the most widely-used processes across North America. Free chlorine is a stronger disinfectant than chloramine, and was chosen for enhanced maintenance of the WDS to maintain Newmarket's high standard of water quality. Ontario Ministry of the Environment Drinking Water Inspectors and the local Medical Officer of Health were also consulted throughout the process to ensure they understood and supported this very successful program.

In a continuing effort to address the ongoing challenges in the Newmarket WDS in regards to disinfectant residual decay and ensure the provision of safe drinking water to our residents, the Town also:

- Hired Stantec Consulting to create a hydraulic model of the Newmarket WDS to model water quality trends/scenarios. This model has been instrumental in aiding us in addressing water quality challenges, and has been noted as being one of the most advanced water system models created to date in North America
- Contracted Corix Water Services to assist with watermain flushing for water quality
- Continues to work closely with industry experts, the Local Medical Officer of Health, the Ministry of the Environment, the Region of York, and the Town of East Gwillimbury in trying to address our ongoing challenges and come up with both short and long-term solutions

# 2013 ANNUAL WATER QUALITY SUMMARY REPORT

## ADVERSE WATER QUALITY INCIDENTS (AWQIs)

Table 6: 2013 AWQIs

DATE	TIME	AWQI	PARAMETER	STANDARD	RESULT (mg/L)	LOCATION	RESOLUTION
14 JAN 2013	13:20	109750	Combined chlorine	0.25 mg/L	0.07	H1828- 111 Gail Parks Cres.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> <li>14 Jan 2013 14:20</li> <li>0.44 mg/l</li> </ul>
7 FEB 2013	13:00	109924	Combined chlorine	0.25 mg/L	0.14	H1040- Aspenwood/Yonge St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> <li>7 Feb 2013 13:50</li> <li>0.40 mg/l</li> </ul>
14 MAR 2014	13:45	110255	Total coliform	0 MAC	PRESENT	SS-17 William Roe Blvd.	<ul style="list-style-type: none"> <li>Flushed system &amp; resampled</li> <li>Present 13 Mar 2013</li> </ul>
15 MAR 2013	10:00	110273	Total coliform	0 MAC	PRESENT	SS-17 William Roe Blvd	<ul style="list-style-type: none"> <li>Flushed system &amp; resampled</li> <li>Absent 15 Mar 2013</li> <li>Absent 19 Mar 2013</li> </ul>
31 MAY 2013	08:20	111326	E. Coli	0 MAC	PRESENT	SS-25 William Dunn Ave.	<ul style="list-style-type: none"> <li>Flushed system &amp; resampled</li> <li>Absent 31 May 2013</li> </ul>
20 JUN 2013	10:30	111780	Combined chlorine	0.25 mg/L	0.06	H0047 - 620 Haines Rd.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
25 JUN 2013	08:35	111855	Combined chlorine	0.25 mg/L	0.16	H0049- 584 Haines Rd.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
28 JUN 2013	10:45	111970	Combined chlorine	0.25 mg/L	0.19	H0052- 599 Brooks Howard Crt.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>

## 2013 ANNUAL WATER QUALITY SUMMARY REPORT

DATE	TIME	AWQI	PARAMETER	STANDARD	RESULT (mg/L)	LOCATION	RESOLUTION
3 JUL 2013	08:15	112054	Combined chlorine	0.25 mg/L	0.17	H0084 - N of London Rd. on Main St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
4 JUL 2013	08:35	112094	Combined chlorine	0.25 mg/L	0.12	H0084 - N of London Rd. on Main St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
10 JUL 2013	13:50	112310	Total coliform	0 MAC	PRESENT	SS-14 Shoniker Dr.	<ul style="list-style-type: none"> <li>Flushed system &amp; resampled</li> </ul>
12 JUL 2013	08:00	112413	Combined chlorine	0.25 mg/L	0.00	H1582 - 984 Gorham St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
12 JUL 2013	11:10	112418	Combined chlorine	0.25 mg/L	0.17	H0520 - 287 Woodland Crt.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
16 JUL 2013	08:15	112491	Combined chlorine	0.25 mg/L	0.09	H0049- 584 Haines Rd.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
16 JUL 2013	08:45	112494	Combined chlorine	0.25 mg/L	0.17	SS-10 Lindsay Ave.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
16 JUL 2013	10:30	112501	Combined chlorine	0.25 mg/L	0.06	H1582 - 984 Gorham St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
18 JUL 2013	10:25	112580	Combined chlorine	0.25 mg/L	0.12	SS-10 Lindsay Ave.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
19 JUL 2013	13:30	112632	Combined chlorine	0.25 mg/L	0.12	H0220 - 391 Harewood Blvd.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>



## 2013 ANNUAL WATER QUALITY SUMMARY REPORT

DATE	TIME	AWQI	PARAMETER	STANDARD	RESULT (mg/L)	LOCATION	RESOLUTION
22 JUL 2013	10:35	112726	Combined chlorine	0.25 mg/L	0.04	H0307 - 406 Weddell Crt.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
22 JUL 2013	11:35	112832	Total coliform	0	PRESENT	SS -24 18100 Yonge St.	<ul style="list-style-type: none"> <li>Flushed system &amp; resampled</li> </ul>
23 JUL 2013	14:45	112802	Combined chlorine	0.25 mg/L	0.18	H0224 - Harewood Blvd.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
24 JUL 2013	09:50	112820	Combined chlorine	0.25 mg/L	0.06	SS-28 Max Stiles Park	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
29 JUL 2013	13:40	112980	Combined chlorine	0.25 mg/L	0.11	H0506 - 187 Queen St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
30 JUL 2013	12:40	113011	Combined chlorine	0.25 mg/L	0.14	H0382- 693 Mountview Pl.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
31 JUL 2013	09:10	113044	Combined chlorine	0.25 mg/L	0.18	H0520 - 287 Woodland Crt.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
1 AUG 2013	09:30	113080	Combined chlorine	0.25 mg/L	0.10	SS-10 Lindsay Ave.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
1 AUG 2013	09:45	113084	Combined chlorine	0.25 mg/L	0.10	H2084 - 18100 Yonge St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
6 AUG 2013	10:05	113175	Combined chlorine	0.25 mg/L	0.13	H0226 - 379 Harewood Blvd.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>

## 2013 ANNUAL WATER QUALITY SUMMARY REPORT

DATE	TIME	AWQI	PARAMETER	STANDARD	RESULT (mg/L)	LOCATION	RESOLUTION
7 AUG 2013	09:30	113205	Combined chlorine	0.25 mg/L	0.08	H1675- 52 George St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
8 AUG 2013	08:20	113262	Combined chlorine	0.25 mg/L	0.04	H1675- 52 George St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
9 AUG 2013	08:50	113295	Combined chlorine	0.25 mg/L	0.08	H1675- 52 George St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
10 AUG 2013	10:20	113324	Combined chlorine	0.25 mg/L	0.16	H2084 - 18100 Yonge St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
14 AUG 2013	11:05	113403	Combined chlorine	0.25 mg/L	0.09	SS-06 30 Main St S @ Simcoe St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
14 AUG 2013	10:05	113397	Combined chlorine	0.25 mg/L	0.09	H2084 - 18100 Yonge St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
15 AUG 2013	09:45	113433	Combined chlorine	0.25 mg/L	0.23	H0531 - 308 Millard Ave	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
19 AUG 2013	08:10	113468	Combined chlorine	0.25 mg/L	0.13	H0531 - 308 Millard Ave	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
20 AUG 2013	08:55	113486	Combined chlorine	0.25 mg/L	0.08	H9015 - 482 Ontario St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
21 AUG 2013	11:45	113519	Combined chlorine	0.25 mg/L	0.01	H0416 - 755 Botany Hill Cres.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>

## 2013 ANNUAL WATER QUALITY SUMMARY REPORT

DATE	TIME	AWQI	PARAMETER	STANDARD	RESULT (mg/L)	LOCATION	RESOLUTION
23 AUG 2013	10:55	113581	Combined chlorine	0.25 mg/L	0.07	H2084 - 18100 Yonge St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
25 AUG 2013	12:51	113609	Combined chlorine	0.25 mg/L	0.05	H2055 - 487 Queen St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
25 AUG 2013	10:25	113606	Combined chlorine	0.25 mg/L	0.07	H2084 - 18100 Yonge St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
26 AUG 2013	08:35	113611	Combined chlorine	0.25 mg/L	0.13	H1528 - 471 Eagle St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
27 AUG 2013	08:40	113645	Combined chlorine	0.25 mg/L	0.13	H1528 - 471 Eagle St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
27 AUG 2013	11:00	113657	Combined chlorine	0.25 mg/L	0.14	H2084 - 18100 Yonge St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
29 AUG 2013	09:05	113725	Combined chlorine	0.25 mg/L	0.00	H0596 - 424 D'arcy St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
30 AUG 2013	09:45	113769	Combined chlorine	0.25 mg/L	0.11	H2055 - 487 Queen St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
3 SEPT 2013	11:00	113981	Combined chlorine	0.25 mg/L	0.22	H0596 - 424 D'arcy St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
5 SEPT 2013	09:35	113879	Combined chlorine	0.25 mg/L	0.06	H0113 – D'arcy St Lions Park	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>

## 2013 ANNUAL WATER QUALITY SUMMARY REPORT

DATE	TIME	AWQI	PARAMETER	STANDARD	RESULT (mg/L)	LOCATION	RESOLUTION
6 SEPT 2013	09:00	113900	Combined chlorine	0.25 mg/L	0.16	SS-11 Cedarwood Ave.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
9 SEPT 2013	13:15	113933	Combined chlorine	0.25 mg/L	0.14	H0563 - 347 Simcoe St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
12 SEPT 2013	08:00	114009	Combined chlorine	0.25 mg/L	0.11	H1528 - 471 Eagle St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
13 SEPT 2013	08:25	114037	Combined chlorine	0.25 mg/L	0.14	H1528 - 471 Eagle St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
14 SEPT 2013	12:50	114060	Combined chlorine	0.25 mg/L	0.14	H1400 - 184 Sherwood Pl.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
16 SEPT 2013	08:30	114075	Combined chlorine	0.25 mg/L	0.16	H1528 - 471 Eagle St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
17 SEPT 2013	09:30	114091	Combined chlorine	0.25 mg/L	0.11	H2084 - 18100 Yonge St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
19 SEPT 2013	09:20	114131	Combined chlorine	0.25 mg/L	0.13	H1528 - 471 Eagle St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
20 SEPT 2013	08:50	114153	Combined chlorine	0.25 mg/L	0.03	H1527 - 433 Eagle St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
23 SEPT 2013	10:15	114240	Combined chlorine	0.25 mg/L	0.08	H0757 - 16900 Bayview Ave.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>

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DATE	TIME	AWQI	PARAMETER	STANDARD	RESULT (mg/L)	LOCATION	RESOLUTION
25 SEPT 2013	08:35	114264	Combined chlorine	0.25 mg/L	0.14	H1573 - 315 Cotter St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
27 SEPT 2013	09:35	114299	Combined chlorine	0.25 mg/L	0.17	SS-04 531 Davis Dr.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
30 SEPT 2013	08:25	114319	Combined chlorine	0.25 mg/L	0.12	H1400 - 184 Sherwood Pl.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
30 SEPT 2013	11:00	114321	Combined chlorine	0.25 mg/L	0.20	H1594 - 186 Coleridge Dr.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
30 SEPT 2013	13:45	114326	Combined chlorine	0.25 mg/L	0.11	H1913 - 573 Roeder Crt.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
1 OCT 2013	09:35	114331	Combined chlorine	0.25 mg/L	0.18	SS-06 30 Main St S @ Simcoe St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
2 OCT 2013	10:45	114343	Combined chlorine	0.25 mg/L	0.12	SS-17 William Roe Blvd.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
3 OCT 2013	09:40	114359	Combined chlorine	0.25 mg/L	0.02	H0656 - 151 William Roe Blvd.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
4 OCT 2013	08:40	114381	Combined chlorine	0.25 mg/L	0.02	H0697 - 385 Lorne Ave.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
7 OCT 2013	07:50	114442	Combined chlorine	0.25 mg/L	0.05	SS-11 738 Cedarwood Ave.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>

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DATE	TIME	AWQI	PARAMETER	STANDARD	RESULT (mg/L)	LOCATION	RESOLUTION
8 OCT 2013	08:40	114469	Combined chlorine	0.25 mg/L	0.10	H0933 - 756 Cedarwood Ave.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
9 OCT 2013	08:45	114498	Combined chlorine	0.25 mg/L	0.01	H0933 - 756 Cedarwood Ave.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
10 OCT 2013	08:15	114516	Combined chlorine	0.25 mg/L	0.01	H0933 - 756 Cedarwood Ave.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
11 OCT 2013	08:20	114539	Combined chlorine	0.25 mg/L	0.09	H1581 - 270 Doak Lane	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
15 OCT 2013	08:40	114566	Combined chlorine	0.25 mg/L	0.22	H0933 - 756 Cedarwood Ave.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
16 OCT 2013	08:00	114574	Combined chlorine	0.25 mg/L	0.04	H1602 - 276 Stewart St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
17 OCT 2013	08:55	114611	Combined chlorine	0.25 mg/L	0.08	H1691 - 531 Davis Dr.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
18 OCT 2013	09:00	114630	Combined chlorine	0.25 mg/L	0.02	H3000 - 339 Gaston Pl.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
19 OCT 2013	12:00	114650	Combined chlorine	0.25 mg/L	0.09	SS-27 College Manor Dr.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
21 OCT 2013	08:10	114662	Combined chlorine	0.25 mg/L	0.12	H3000 - 339 Gaston Pl.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>



## 2013 ANNUAL WATER QUALITY SUMMARY REPORT

DATE	TIME	AWQI	PARAMETER	STANDARD	RESULT (mg/L)	LOCATION	RESOLUTION
23 OCT 2013	10:35	114689	Combined chlorine	0.25 mg/L	0.12	H3000 - 339 Gaston Pl.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
24 OCT 2013	09:35	114714	Combined chlorine	0.25 mg/L	0.21	H0933 - 756 Cedarwood Ave.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
25 OCT 2013	10:00	114734	Combined chlorine	0.25 mg/L	0.01	H1934 - 619 Steven Crt.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
28 OCT 2013	11:20	114777	Combined chlorine	0.25 mg/L	0.13	H0598 - 238 Lorne Ave.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
29 OCT 2013	12:49	114792	Combined chlorine	0.25 mg/L	0.20	H1913 - 573 Roeder Crt.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
30 OCT 2013	12:50	114803	Combined chlorine	0.25 mg/L	0.15	H0248 - 311 Sheridan Crt.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
31 OCT 2013	15:00	114828	Combined chlorine	0.25 mg/L	0.05	H1949 - 869 Surin Crt.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
1 NOV 2013	10:00	114864	Combined chlorine	0.25 mg/L	0.19	H3015 - 522 Pickering Cres.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
4 NOV 2013	11:15	114899	Combined chlorine	0.25 mg/L	0.18	H0680 - 183 Hodgson Dr.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
4 NOV 2013	14:40	114902	Combined chlorine	0.25 mg/L	0.08	H0598 - 238 Lorne Ave.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>

## 2013 ANNUAL WATER QUALITY SUMMARY REPORT

DATE	TIME	AWQI	PARAMETER	STANDARD	RESULT (mg/L)	LOCATION	RESOLUTION
5 NOV 2013	13:45	114912	Combined chlorine	0.25 mg/L	0.08	H0047 - 620 Haines Rd.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
6 NOV 2013	08:30	114919	Combined chlorine	0.25 mg/L	0.14	Hyd- 700 College Manor Dr	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
7 NOV 2013	08:30	114934	Combined chlorine	0.25 mg/L	0.08	H0520 - 287 Woodland Crt.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
8 NOV 2013	13:30	114956	Combined chlorine	0.25 mg/L	0.09	H0520 - 287 Woodland Crt.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
11 NOV 2013	09:35	114976	Combined chlorine	0.25 mg/L	0.15	H2038 - 314 Avenue Rd.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
12 NOV 2013	10:10	114982	Combined chlorine	0.25 mg/L	0.20	H0527 - 166 Millard Ave.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
14 NOV 2013	08:30	115001	Combined chlorine	0.25 mg/L	0.15	SS-28 Max Stiles Park	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
18 NOV 2013	09:00	115060	Combined chlorine	0.25 mg/L	0.16	SS-28 Max Stiles Park	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
19 NOV 2013	11:40	115094	Combined chlorine	0.25 mg/L	0.17	H0381- 661 Mountview Pl.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
22 NOV 2013	09:05	115133	Combined chlorine	0.25 mg/L	0.12	H0048 - 602 Haines Rd.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>

## 2013 ANNUAL WATER QUALITY SUMMARY REPORT

DATE	TIME	AWQI	PARAMETER	STANDARD	RESULT (mg/L)	LOCATION	RESOLUTION
25 NOV 2013	13:00	115164	Combined chlorine	0.25 mg/L	0.12	SS-06 30 Main St S @ Simcoe St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
26 NOV 2013	10:10	115171	Combined chlorine	0.25 mg/L	0.23	H0381- 661 Mountview Pl.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
27 NOV 2013	09:30	115179	Combined chlorine	0.25 mg/L	0.08	SS-27 College Manor Dr.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
28 NOV 2013	12:50	115202	Combined chlorine	0.25 mg/L	0.24	H0598 - 247 Lorne Ave.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
3 DEC 2013	09:20	115250	Combined chlorine	0.25 mg/L	0.11	H1528 - 471 Eagle St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
4 DEC 2013	10:00	115267	Combined chlorine	0.25 mg/L	0.17	H1528 - 471 Eagle St.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>
10 DEC 2013	08:05	115319	Combined chlorine	0.25 mg/L	0.15	SS-08 238 Lorne Ave.	<ul style="list-style-type: none"> <li>Flushed system &amp; restored residual</li> </ul>

# 2013 ANNUAL WATER QUALITY SUMMARY REPORT

## 2013 WATER CONSUMPTION



*The below table is a summary of 2013 area municipality wastewater and water billing. For more detailed information, please contact the Public Works Services Department at 905.953.5300, ext. 2550.*


*Table 7: 2013 Consumption Data*

<b>DESCRIPTION</b>	<b>AMOUNT</b>
Total water billed to Newmarket by York Region	8,803,271 m <sup>3</sup>
Total water billed to consumers by Newmarket	7,080,898 m <sup>3</sup>
m <sup>3</sup> Unbilled	1,722,373 m <sup>3</sup>
% Loss	*19.57%

\* % loss includes water used for flushing to maintain water quality, firefighting, new watermain commissioning/testing, routine maintenance activities, watermain breaks, meter reading inaccuracies, and system leakage

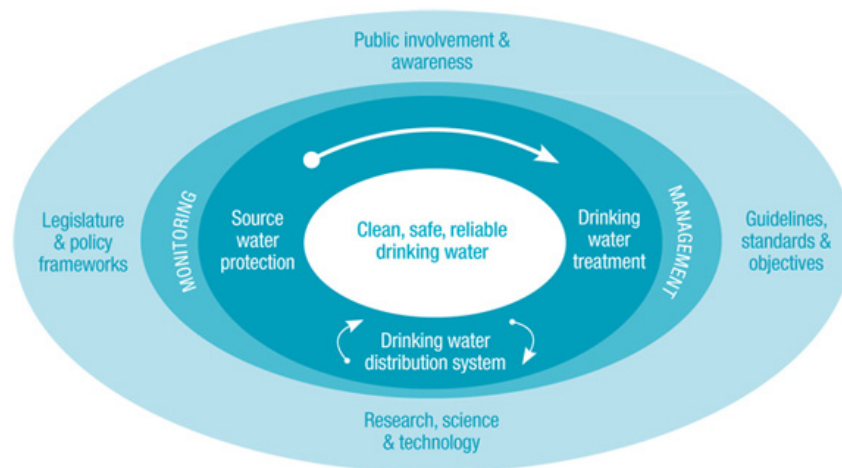
# 2013 ANNUAL WATER QUALITY SUMMARY REPORT

Table 8: 2013 Production Flow Data

													
<b>Town of Newmarket</b>													
<b>Monthly Water Flows 2013</b>													
<b>Newmarket</b>													
<b>Production Data 2013</b>													
	P1		P2		P3		P4		P5		P6		
Production Flows	January	February	March	April	May	June	July	August	September	October	November	December	Year to Date
No. 1 Well m³	27,591	25,690	25,342	27,140	25,537	14,021	5,481	22,244	26,302	34,820	19,955	17,793	271,916
No. 2 Well m³	85,935	56,793	67,046	61,288	54,254	55,151	12,030	68,015	104,443	84,031	25,251	17,412	691,649
No. 13 Well m³	107,973	67,570	85,631	66,097	47,317	57,765	14,941	59,183	31,456	94,976	55,808	48,548	737,265
No. 15 Well m³	54,885	25,615	44,698	34,271	14,491	4,838	1,128	41,837	60,812	43,431	27,559	20,986	374,551
No. 16 Well m³	93,087	26,553	1,967	26,206	58,626	3,527	0	38,991	36,533	90,496	49,381	48,959	474,326
Queensville Wells	109,366	57,661	43,158	33,683	191,620	152,255	221,598	212,134	202,327	178,879	175,959	257,497	1,836,137
AU-NM Yonge WMC (Interface)	4,248	85,832	131,544	138,720	35,864	99,626	254,544	81,494	62,828	8,290	20,860	37,978	961,828
AU-NM Ballymore WMC	104,823	43,599	63	77	127,552	124,688	179,345	114,112	77,776	45,744	42,304	55,424	915,507
AU-NM Bathurst WMC (West)	108,118	184,217	262,819	230,305	4,789	69,739	98,742	83,413	78,670	23,628	102,195	136,184	1,382,819
AU-NM Leslie WMC (East)	82,304	123,230	103,868	117,134	251,906	205,986	220,772	272,482	213,418	220,264	226,076	122,368	2,159,808
Sharon WMC #1	3,720	3,360	3,720	3,600	13,330	16,347	16,369	16,690	13,238	11,661	12,692	13,502	128,229
North Sharon WMC	8,440	8,157	8,588	10,802	12,916	15,961	16,553	16,791	11,438	11,229	12,527	12,975	146,377
Colonel Waying	8,040	7,952	8,397	10,304	13,919	12,600	14,074	13,175	12,120	10,912	9,600	10,261	131,354
Queensville WMC #2	9,595	9,209	9,464	9,337	3,720	3,600	3,720	3,720	3,600	3,720	3,600	3,720	67,005
Herald Road WMC #3	437	729	481	473	736	1,107	1,321	1,550	1,354	1,088	430	465	10,171
<b>Sub-Total Water Production</b>	<b>748,098</b>	<b>667,353</b>	<b>735,485</b>	<b>700,404</b>	<b>767,338</b>	<b>737,980</b>	<b>956,543</b>	<b>941,976</b>	<b>852,814</b>	<b>785,948</b>	<b>706,500</b>	<b>722,226</b>	<b>9,322,665</b>
NM-EG Yonge & Bristol WMC	7,241	5,109	6,255	5,061	6,087	5,847	7,516	6,943	6,379	4,526	4,533	5,456	70,953
NM-EG Woodspring WMC	60,324	35,566	17,481	24,660	12,225	13,813	58,622	93,730	111,726	45,374	47,498	48,470	569,489
NM-EG Aspenwood WMC	-38	12	5,300	15,307	3,378	5,122	19,936	-18	-27	-33	-34	-26	48,879
<b>Total Water Consumption m³</b>	<b>680,570</b>	<b>626,666</b>	<b>706,510</b>	<b>655,349</b>	<b>745,648</b>	<b>713,198</b>	<b>870,469</b>	<b>841,321</b>	<b>734,736</b>	<b>736,081</b>	<b>654,503</b>	<b>668,326</b>	<b>8,633,377</b>
<b>Adjustments</b>	<b>240,140</b>		<b>61</b>	<b>-27</b>	<b>-5,485</b>	<b>-3,020</b>	<b>-1,200</b>	<b>-1,200</b>	<b>-230</b>	<b>-2,449</b>			<b>227,790</b>
<b>Billed Water m³</b>	<b>440,430</b>	<b>626,666</b>	<b>706,510</b>	<b>655,349</b>	<b>740,163</b>	<b>710,179</b>	<b>870,469</b>	<b>840,121</b>	<b>734,506</b>	<b>733,632</b>	<b>654,503</b>	<b>668,326</b>	<b>8,380,854</b>
Maximum Daily Flow m³	28,158	28,532	29,759	29,326	29,012	29,591	35,052	33,958	30,314	27,108	26,665	29,119	35,052
Maximum Date	31-Jan	19-Feb	31-Mar	17-Apr	28-May	24-Jun	17-Jul	12-Aug	10-Sep	21-Oct	21-Nov	24-Dec	17-Jul
Minimum Daily Flow m³	17,435	15,634	15,128	14,173	15,604	18,311	21,927	18,908	19,188	19,567	18,940	16,173	14,173
Minimum Date	28-Jan	04-Feb	08-Mar	18-Apr	29-May	06-Jun	02-Jul	03-Aug	30-Sep	05-Oct	20-Nov	16-Dec	18-Apr
Average Daily Flow m³	21,954	24,103	22,432	21,846	24,053	23,773	28,080	27,139	24,491	23,745	21,817	21,559	24,332
<b>Town Flow Calculation</b>													
Newmarket Flow = Well #1 + Well #2 + Well #9 + Well #11 + Well #13 + Well #14 + Well #15 + Well #16 + Queensville Wells + AU-NM Yonge WMC (Interface) + AU-NM Ballymore WMC + AU-NM Bathurst (West) + AU-NM Leslie WMC - Sharon WMC #1 - North Sharon WMC - Colonel Waying - Queensville WMC #2 - Herald Road WMC #3 - NM-EG Yonge & Bristol WMC - NM-EG Woodspring WMC - NM-EG Aspenwood WMC													
WMC = Water Meter Chamber													

## KEEPING NEWMARKET'S DRINKING WATER SAFE

As a part of the Walkerton Inquiry, Justice Dennis O'Connor endorsed a "multi-barrier approach" to ensure drinking water safety. This multi-faceted system is a collection of "procedures, processes, and tools that collectively prevent or reduce the contamination of drinking water from source to consumer in order to reduce the risks to public health." (Source: Ontario Ministry of the Environment, 2007, Implementing Quality Management: A Guide for Ontario's Drinking Water Systems)



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The multiple barriers include:

- ❖ **Source Protection** to keep the raw water as clean as possible in order to lower the risks that hazards present
- ❖ **Treatment** to remove and/or neutralize hazards
- ❖ **Monitoring Program** to detect and act on system problems that could impair drinking water safety and to verify the performance of the system components and finished drinking water quality
- ❖ Effective **management systems** including automatic control systems, well-developed responses, and operating practices that are the ultimate means for protecting the safety of drinking water systems."

(Source: Ontario MOE, 2007, Implementing Quality Management: A Guide for Ontario's Drinking Water Systems")

# 2013 ANNUAL WATER QUALITY SUMMARY

The Ontario *Safe Drinking Water Act, 2002 (SDWA)* enhances the level of drinking water protection across the province by providing a clear, consistent set of standards and rules to ensure the provision of safe, high-quality drinking water. This Act holds owners of drinking water systems to their responsibilities to protect drinking water consumers: It specifies the requirements for drinking water systems, testing services, and for the certification of operators, as well as setting quality standards and mechanisms for compliance and enforcement. The section of the SDWA that specifically applies to the owners and operating authority of the Newmarket WDS is “*Part III – General Requirements*”. This document outlines the minimum standards that owners/operating authorities must adhere to.

## PART III GENERAL REQUIREMENTS

### Potable water

10. Despite any other Act, a requirement that water be “potable” in any Act, regulation, order or other document issued under the authority of any Act or in a municipal by-law shall be deemed to be a requirement to meet, at a minimum, the requirements of the prescribed drinking water quality standards. 2002, c. 32, s. 10.

### Duties of owners and operating authorities

- \_\_\_\_\_ 11. (1) Every owner of a municipal drinking water system or a regulated non-municipal drinking water system and, if an operating authority is responsible for the operation of the system, the operating authority for the system shall ensure the following:
1. That all water provided by the system to the point where the system is connected to a user’s plumbing system meets the requirements of the prescribed drinking water quality standards.
  2. That, at all times in which it is in service, the drinking water system,
    - i. is operated in accordance with the requirements under this Act,
    - ii. is maintained in a fit state of repair, and
    - iii. satisfies the requirements of the standards prescribed for the system or the class of systems to which the system belongs.
  3. That the drinking water system is operated by persons having the training or expertise for their operating functions that is required by the regulations and the licence or approval issued or granted for the system under this Act.
  4. That all sampling, testing and monitoring requirements under this Act that relate to the drinking water system are complied with.
  5. That personnel at the drinking water system are under the supervision of persons having the prescribed qualifications.

# 2013 ANNUAL WATER QUALITY SUMMARY

6. That the persons who carry out functions in relation to the drinking water system comply with such reporting requirements as may be prescribed or that are required by the conditions in the licence or approval issued or granted for the system under this Act. 2002, c. 32, s. 11 (1).

## **Duty of owner to report to public**

(2) If an owner of a municipal drinking water system or regulated non-municipal drinking water system is required by the regulations to report on any matter to the public, the owner shall report in accordance with the regulations. 2002, c. 32, s. 11 (2).

## **Out-of-province drinking water testing service**

(3) No owner or operating authority of a municipal drinking water system or regulated non-municipal drinking water system shall obtain a drinking water testing service from a person who is not licensed under Part VII to offer or provide the service unless,

- (a) the laboratory at which the testing is to be conducted is located outside Ontario and is an eligible laboratory in respect of the particular tests to be conducted;
- (b) the person agrees in writing to comply with section 18 and any prescribed requirements; and
- (c) the owner or operating authority provides to the Director appointed for the purposes of Part VII,
  - (i) written notice of the use of the testing service,
  - (ii) a copy of the accreditation referred to in clause (4) (a), if applicable, and
  - (iii) a copy of the agreement referred to in clause (b). 2002, c. 32, s. 11 (3).

## **Eligible laboratory**

(4) For the purposes of this section, a laboratory located outside Ontario is an eligible laboratory in respect of a particular test if the laboratory is on a list maintained by the Director appointed for the purposes of Part VII and,

- (a) the laboratory is accredited for the conduct of the test and, in the Director's opinion, the accreditation is equivalent to the accreditation standard of an accreditation body for drinking water testing under Part VII; or
- (b) in the Director's opinion,
  - (i) it is desirable for the purposes of this Act that the test be available,
  - (ii) there is no laboratory, or there are insufficient laboratories, in the area for the conduct of the test under a licence issued under Part VII, and
  - (iii) the person who is to provide the drinking water testing service will be capable of conducting the test at the laboratory, or causing the test to be conducted there. 2002, c. 32, s. 11 (4).



# 2013 ANNUAL WATER QUALITY SUMMARY

## List of out-of-province laboratories

(5) For the purposes of subsection (4), a laboratory may be added to the list maintained by the Director, and may be retained on the list, only if,

- (a) any fee required under this Act has been paid in respect of the laboratory; and
- (b) the laboratory complies with the prescribed requirements. 2002, c. 32, s. 11 (5).

## Director's direction

(6) The Director may issue a direction to one or more owners or operating authorities prohibiting them from obtaining drinking water testing services from a laboratory located outside Ontario if the Director has reason to believe that the laboratory has ceased to be an eligible laboratory or has failed to comply with section 18 or a prescribed requirement. 2002, c. 32, s. 11 (6).

## Same

(7) Every person who receives a direction under subsection (6) shall comply with the direction and advise the Director in writing of the alternative laboratory from which the person will obtain drinking water testing services. 2002, c. 32, s. 11 (7).

## Revocation of direction

(8) The Director may revoke a direction issued under subsection (6) if he or she is of the opinion that the reasons for issuing the direction no longer exist. 2002, c. 32, s. 11 (8).

## Operator's certificate

12. (1) No person shall operate a municipal drinking water system or a regulated non-municipal drinking water system unless the person holds a valid operator's certificate issued in accordance with the regulations. 2002, c. 32, s. 12 (1).

## Transitional

(2) For the purposes of subsection (1), a valid operator's licence issued under section 6 of Ontario Regulation 435/93 under the Ontario Water Resources Act shall be deemed to be an operator's certificate until the day the operator's licence expires or is cancelled or suspended. 2002, c. 32, s. 12 (2).

## Same

(3) For the purposes of subsection (1), a valid operator's licence issued under section 7 or 8 of Ontario Regulation 435/93 under the Ontario Water Resources Act shall be deemed to be an operator's certificate until the earlier of,

- (a) the day the operator's licence is cancelled or suspended; and
- (b) the day that is the second anniversary of the day of filing of a regulation made under this Act governing the application and issue of operator's certificates. 2002, c. 32, s. 12 (3).

# 2013 ANNUAL WATER QUALITY SUMMARY

## Same

(4) If an operator's licence mentioned in subsection (3) expires before the day described in clause (3) (b) and is not renewed, the licence ceases to be deemed to be an operator's certificate on the day it expires. 2002, c. 32, s. 12 (4).

## Duty to have accredited operating authority

13. (1) Every owner of a municipal drinking water system shall ensure that an accredited operating authority is in charge of the system at all times on and after the day specified in the regulations for the municipality, the system or the owner of the system. 2002, c. 32, s. 13 (1).

## Same

(2) If the Minister makes a regulation requiring an accredited operating authority to be in charge of a non-municipal drinking water system, the owner of the system shall ensure that an accredited operating authority is in charge of the system at all times. 2002, c. 32, s. 13 (2).

## Agreement with accredited operating authority

14. (1) If an accredited operating authority is in charge of a drinking water system and it is not the owner of the system, the accredited operating authority and the owner of the system shall enter into an agreement that contains the following:

1. A description of the system or the parts of the system for which the operating authority is responsible.
2. A description of the respective responsibilities of the owner and the operating authority to ensure that the operation, maintenance, management and alteration of the system comply with this Act, the regulations, any order under this Act and the conditions in,
  - i. the drinking water works permit and the municipal drinking water licence for the system, in the case of a municipal drinking water system, or
  - ii. the approval for the system, in the case of a non-municipal drinking water system.
3. A description of the respective responsibilities of the owner and the accredited operating authority in the event a deficiency is determined to exist or an emergency occurs.
4. A description of the respective responsibilities of the owner and the accredited operating authority to ensure that the operational plans for the system are reviewed and revised appropriately and that both parties are informed of all revisions.
5. Any other provisions required by the regulations. 2002, c. 32, s. 14 (1).

## Delegation of duty

(2) If an owner of a drinking water system enters into an agreement with an accredited operating authority, the owner may, in the agreement, delegate a duty imposed on the owner under this Act to the accredited operating authority. 2002, c. 32, s. 14 (2).

# 2013 ANNUAL WATER QUALITY SUMMARY

## Exception

(3) A delegation referred to in subsection (2) shall not relieve the owner of the drinking water system from the duty to comply with section 19 or the duty,

(a) to ensure that the accredited operating authority carries out its duties under this Act and the agreement in a competent and diligent manner while it is in charge of the system; and

(b) upon discovery that the accredited operating authority is failing to act in accordance with clause (a), to take all reasonable steps to ensure that the operation of the system complies with the requirements under this Act. 2002, c. 32, s. 14 (3).

## Agreement to be made public

(4) The contents of every agreement referred to in subsection (1) between an owner of a drinking water system and an accredited operating authority shall be made public by the owner of the system in accordance with the requirements prescribed by the Minister. 2002, c. 32, s. 14 (4).

## Directions, operational plans

15. (1) The Director shall, on or before the prescribed date, issue directions governing the preparation and content of operational plans for municipal drinking water systems and may issue such additional directions as the Director considers necessary for the purposes of this section. 2002, c. 32, s. 15 (1).

## Same

(2) If the Minister makes a regulation requiring a non-municipal drinking water system or a class of non-municipal drinking water systems to have operational plans, the Director shall, on or before the date prescribed by the Minister, issue directions governing the preparation and content of operational plans for the system or systems. 2002, c. 32, s. 15 (2).

## Same

(3) The Director may amend, revoke or replace a direction issued under this section. 2002, c. 32, s. 15 (3).

## Content of direction

(4) The direction shall include,

(a) minimum content requirements for operational plans;

(b) rules respecting the retention of copies of versions of operational plans;

(c) rules respecting the public disclosure of the contents of operational plans; and

(d) such other requirements as the Director considers necessary for the purposes of this Act and the regulations. 2002, c. 32, s. 15 (4).

## Same

(5) A direction issued under this section may,

(a) be general or limited in its application;

# 2013 ANNUAL WATER QUALITY SUMMARY

(b) apply in respect of any class of drinking water systems;

(c) require the preparation of operational plans for a treatment system, a distribution system or any part of either or both of them. 2002, c. 32, s. 15 (5).

## **Publication**

(6) A direction, amendment to a direction or revocation of a direction takes effect when a notice of the direction, amendment or revocation, as the case may be, is given in the Registry. 2002, c. 32, s. 15 (6).

## **Legislation Act, 2006, Part III**

(7) Part III (Regulations) of the Legislation Act, 2006 does not apply to a direction issued under this section. 2002, c. 32, s. 15 (7); 2006, c. 21, Sched. F, s. 132 (1).

## **Operational plans**

16. (1) If operational plans are required for a drinking water system under this Act, every owner and accredited operational authority of the system shall,

(a) ensure that the plans comply with such directions issued under section 15 that apply in respect of the system; and

(b) make public the contents of the operating plans in accordance with the Director's directions. 2002, c. 32, s. 16 (1).

## **Submission of plans, municipal drinking water system**

(2) Every owner of a municipal drinking water system shall provide a copy of all operational plans for the system to the Director on or before the day prescribed by the regulations for the municipality, the system or the owner of the system. 2002, c. 32, s. 16 (2).

## **Review of plans**

(3) The Director shall review the operational plans for the municipal drinking water system and shall issue a notice,

(a) accepting the plans if the Director is satisfied that the plans satisfy the directions; or

(b) rejecting the plans for the reasons set out in the notice, if the Director is not satisfied that the plans satisfy the directions. 2002, c. 32, s. 16 (3).

## **Resubmission of plans**

(4) The owner of a municipal drinking water system whose operational plans are rejected by the Director shall revise and resubmit the revised plans to the Director in accordance with the directions specified in the notice. 2002, c. 32, s. 16 (4).

## **Ownership of operational plans**

17. (1) All operational plans for a drinking water system remain the property of the owner of the system, irrespective of who prepares or revises the plans. 2002, c. 32, s. 17 (1).

# 2013 ANNUAL WATER QUALITY SUMMARY

## Retention of plans

(2) Every accredited operating authority of a drinking water system for which operational plans are required under this Act shall retain copies of the operational plans for the system in accordance with the Director's directions under section 15. 2002, c. 32, s. 17 (2).

## Same

(3) Upon termination of an agreement between the owner and the accredited operating authority of a system, the accredited operating authority shall ensure that the owner has copies of the most recently prepared and revised operational plans for the system. 2002, c. 32, s. 17 (3).

## Duty to report adverse test result

18. (1) Each of the following persons shall report every prescribed adverse result of a drinking water test conducted on any waters from a municipal drinking water system or a regulated non-municipal drinking water system to the Ministry and the medical officer of health immediately after the adverse result is obtained:

1. The operating authority responsible for the system or, if there is no operating authority responsible for the system, the owner of the system.
2. The person operating the laboratory at which the adverse result was obtained. 2002, c. 32, s. 18 (1); 2007, c. 10, Sched. D, s. 3 (6).

## Same

19. A report under subsection (1) shall be made in accordance with the regulations. 2002, c. 32, s. 18 (2).

## Duty to report to the owner

(3) If an operating authority is required to report an adverse test result under subsection (1), the operating authority shall also immediately report the adverse test result to the owner of the system for which the operating authority is responsible. 2007, c. 10, Sched. D, s. 3 (7).

## Duty of laboratory to report

(4) Every person operating a laboratory who is required to report an adverse test result under subsection (1) shall also notify the operating authority responsible for the system or, if there is no operating authority responsible for the system, the owner of the system, of every adverse test result relating to the system, immediately after the adverse result is obtained. 2007, c. 10, Sched. D, s. 3 (7).

## Duty to report adverse test result

18.1 (1) The person operating the laboratory at which an adverse result was obtained shall report every prescribed adverse result of a drinking water test conducted on any waters from a small drinking water system within the meaning of the Health Protection and Promotion Act to the Ministry of Health and Long-Term Care and the medical officer of health immediately after the adverse result is obtained. 2007, c. 10, Sched. D, s. 3 (8).

## Same

(2) A report under subsection (1) shall be made in accordance with the regulations. 2007, c. 10, Sched. D, s. 3 (8).

# 2013 ANNUAL WATER QUALITY SUMMARY

## Duty of laboratory to report

(3) Every person operating a laboratory who is required to report an adverse test result under subsection (1) shall also notify the operator responsible for the system or, if there is no operator responsible for the system, the owner of the system, of every adverse test result relating to the system, immediately after the adverse result is obtained. 2007, c. 10, Sched. D, s. 3 (8).

## Standard of care, municipal drinking water system

19. (1) Each of the persons listed in subsection (2) shall,

(a) exercise the level of care, diligence and skill in respect of a municipal drinking water system that a reasonably prudent person would be expected to exercise in a similar situation; and

(b) act honestly, competently and with integrity, with a view to ensuring the protection and safety of the users of the municipal drinking water system. 2002, c. 32, s. 19 (1).

## Same

20. The following are the persons listed for the purposes of subsection (1):

1. The owner of the municipal drinking water system.

2. If the municipal drinking water system is owned by a corporation other than a municipality, every officer and director of the corporation.

3. If the system is owned by a municipality, every person who, on behalf of the municipality, oversees the accredited operating authority of the system or exercises decision-making authority over the system. 2002, c. 32, s. 19 (2).

## Offence

21. Every person under a duty described in subsection (1) who fails to carry out that duty is guilty of an offence. 2002, c. 32, s. 19 (3).

## Same

22. A person may be convicted of an offence under this section in respect of a municipal drinking water system whether or not the owner of the system is prosecuted or convicted. 2002, c. 32, s. 19 (4).

## Reliance on experts

(5) A person shall not be considered to have failed to carry out a duty described in subsection (1) in any circumstance in which the person relies in good faith on a report of an engineer, lawyer, accountant or other person whose professional qualifications lend credibility to the report. 2002, c. 32, s. 19 (5).

## Prohibition

20. (1) No person shall cause or permit any thing to enter a drinking water system if it could result in,

(a) a drinking water health hazard;

(b) a contravention of a prescribed standard; or

# 2013 ANNUAL WATER QUALITY SUMMARY

(c) interference with the normal operation of the system. 2002, c. 32, s. 20 (1).

## **Exception**

(2) Subsection (1) does not apply to prohibit activities that are carried out,

(a) in the course of the proper operation, maintenance, repair or alteration of a drinking water system; or

(b) under a statutory authority or for the purposes of complying with a statutory requirement. 2002, c. 32, s. 20 (2).

## **Dilution no defence**

(3) For the purposes of prosecuting the offence of contravening subsection (1), it is not necessary to prove that the thing, if it was diluted when or after it entered the system, continued to result in or could have resulted in a drinking water health hazard. 2002, c. 32, s. 20 (3).

Safe Drinking Water Act, 2002 (S.O. 2002, CHAPTER 32), PART III - GENERAL REQUIREMENTS

Consolidation Period: From December 31, 2012 to the e-Laws currency date.

Last amendment: See Table of Public Statute Provisions Repealed under Section 10.1 of the Legislation Act, 2006 – December 31, 2012.

# 2013 ANNUAL WATER QUALITY SUMMARY

## CONTACT INFORMATION

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The Public Works Services Department is pleased to present this report for 2013 to members of Council and our residents.

