

Drinking water systems

Flow summary report 2017

Published March 2018



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List of Acronyms and Definitions

Adverse	Adverse water results are listed in Schedule 16, O. Reg. 170/03 Examples of adverse water results: <ul style="list-style-type: none">• An analytical result that exceeds a health-based water quality standard (O. Reg. 169/03)• Any evidence that disinfection may not have been effective• Low chlorine residuals
DWWP	Drinking Water Works Permit
CFU	colony forming units
GUDI	groundwater under the direct influence of surface water
L/s	litres per second
MDWL	Municipal Drinking Water Licence
m ³ /d	cubic metres per day
mg/L	milligrams per litre
mL	millilitre
ML/d	Mega (million) litres per day (1 ML = 1000 m ³)
MOECC	Ministry of the Environment and Climate Change (Ontario)
O. Reg.	Ontario Regulation
PTTW	Permit to Take Water
Rated Capacity	Volume of treated water that meets all applicable Ontario drinking water quality regulations including the aesthetic water quality objectives and that may be made available by the water treatment plant for delivery to the drinking water system in any 24-hour period
R.R.O.	Revised Regulations Ontario (1990)
SCADA	Supervisory Control and Data Acquisition
SDWA	<i>Safe Drinking Water Act, 2002</i>
WPP	Water Purification Plant

1 Introduction

For each of Halton's municipal drinking water systems, up to five annual reports are required by the Ontario Ministry of the Environment and Climate Change (MOECC) under regulation as listed in Table 1-1.

Table 1-1 Drinking Water System Annual Reports

Report Name	Description	Legislation or Regulation	Submitted to	Annual Due Date
Annual Flow Summary Report for Municipalities	<ul style="list-style-type: none"> • Summary of flows • Description of any failure to meet requirements of an Act, regulations or the system's approval 	O. Reg. 170/03, Schedule 22	Regional Council; available to the public	March 31
Annual Water Quality Report	<ul style="list-style-type: none"> • Description of system • Water quality test results • Adverse test results and corrective action • Major expenses to repair, replace or install equipment 	O. Reg. 170/03, Section 11	Posted on Halton's website	February 28
Water Taking and Transfer Report	<ul style="list-style-type: none"> • Electronic submission of water taking data 	O. Reg. 387/04	MOECC	March 31
Permit to Take Water Annual Report	<ul style="list-style-type: none"> • Reporting conditions set out in individual Permits to Take Water • Halton's groundwater systems only 	Permits to Take Water issued under the <i>Ontario Water Resources Act</i>	MOECC	March 31
Water Conservation Charges Report	<ul style="list-style-type: none"> • Names, addresses and water usage of industrial and commercial water customers which used 50,000 litres of water in a single day in the year 	O. Reg. 450/07	MOECC	March 31

This Annual Flow Summary Report covers the period from January 1st to December 31st, 2017 and includes all of the municipal drinking water systems in Halton Region. This report fulfills the reporting requirements of the Drinking Water System Regulation (O. Reg. 170/03, Schedule 22) made under the *Safe Drinking Water Act, 2002*. The raw water flow data summarized in this report will also be submitted to the MOECC under the Water Taking and Transfer Regulation (O. Reg. 387/04).

The structure of this report is as follows:

Section 2 lists legislation and regulations of significance to drinking water systems and outlines the reporting requirements of O. Reg. 170/03, Schedule 22.

Section 3 provides an overview of Halton's drinking water systems.

Section 4 provides a description of how data is compiled and analyzed for this report.

Sections 5 to 15 include descriptions of each drinking water system, flow data and summaries of adverse water quality incidents.

Section 16 summarizes the 2017 MOECC drinking water system inspections.

Section 17 includes the conclusions of the report.



2

Legislated Requirements

2.1 Summary of Regulatory Requirements

In Ontario, water taking, drinking water treatment and distribution are governed by a number of Acts and Regulations. Table 2-1 below provides a summary of some of the more relevant provincial legislation.

Table 2-1 Summary of Provincial Legislation Significant to Water Operations

ACT	R.R.O. 1990	O. Reg.
<i>ENVIRONMENTAL PROTECTION ACT</i>		
Airborne Contaminant Discharge Monitoring and Reporting		127/01
Air Pollution — Local Air Quality		419/05
Ambient Air Quality Criteria	337	
Certificate of Approval Exemptions — Air		524/98
Fees — Certificates of Approval		363/98
Municipal Sewage and Water and Roads Class Environmental Assessment Project	354	
Registrations Under Part II.2 of the Act — General		245/11
Registrations Under Part II.2 of the Act — Heating Systems and Standby Power Systems		346/12
Registrations Under Part II.2 of the Act — Water Taking		63/16



<i>ONTARIO WATER RESOURCES ACT</i>		
Additional Charges		157/93
Approval Exemptions		525/98
Fees — Approvals		364/98
Municipal Sewage and Water and Roads Class Environmental Assessment Projects	900	
Water Taking and Transfer		387/04
Wells	903	
Charges for Industrial and Commercial Water Users		450/07
<i>SAFE DRINKING WATER ACT, 2002</i>		
Certification of Drinking Water System Operators and Water Quality Analysts		128/04
Compliance and Enforcement		242/05
Definitions of “Deficiency” and “Municipal Drinking Water System”		172/03
Definitions of Words and Expressions Used in the Act		171/03
Drinking Water Systems		170/03
Drinking Water Testing Services		248/03
Ontario Drinking Water Quality Standards		169/03
Licensing of Municipal Drinking Water Systems		188/07

Additional legally-binding requirements are imposed on the owner/operator of each waterworks through various licenses, permits and approvals. Individual approvals issued by the MOECC are site-specific, meaning the conditions of operation are tailored to a facility’s characteristics, circumstances and the local environment. Certificates and permits are stored locally on-site and additionally on Halton’s Drinking Water Quality Management Software.



2.2 Drinking Water Systems Regulation (O. Reg. 170/03)

Under Schedule 22 of the Drinking Water Systems Regulation (O. Reg. 170/03), annual summary reports are required to be prepared and distributed to owners of both small and large municipal residential systems. The summary report must be submitted no later than March 31 to members of municipal council. The contents must list the requirements of the *Safe Drinking Water Act, 2002*, the regulations, the system's approval and any applicable system orders for the reporting period. Where legislative requirements were not met, the report must specify the duration of this event and the resulting corrective measures.

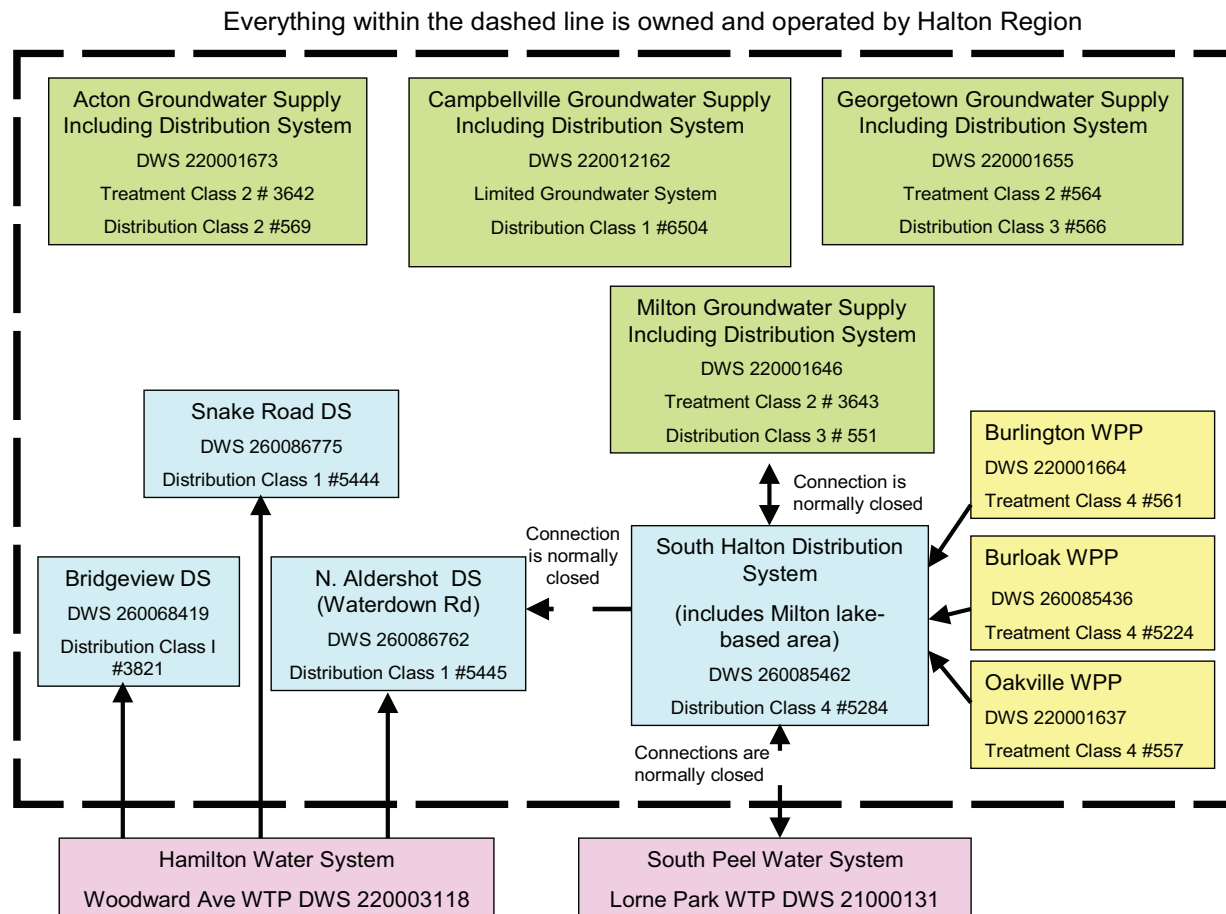
In addition, the report must include a summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly averages and maximum daily flows. The summary must be compared to the rated capacity provided in each system's approval.



3 Halton's Drinking Water Systems

Figure 1 shows Halton Region's operational drinking water systems for 2017.

Figure 1 Halton's Drinking Water Systems 2017



4 Annual Water Data

Halton's Public Works Department manages all of Halton's drinking water treatment and distribution systems including surface water intakes, wells, outlying reservoirs, elevated tanks, pumping stations and distribution systems. Staff's primary responsibilities are water taking, treatment and distribution in compliance with all applicable legislation and system approvals. Routine water quality testing and continuous monitoring of water quality and quantity is also conducted to ensure compliance.

4.1 Water Quality Data

Raw and treated water is sampled and tested for chemical, physical and microbiological parameters in accordance with the requirements of O. Reg. 170/03 and individual system approvals. Sampling is also conducted in the distribution system primarily for bacteriological indicators and evidence of sustained chlorine residuals. Enhanced sampling programs are defined by Water Treatment Operations, System Operations and the Regional Laboratory for parameters beyond those mandated or at a frequency greater than prescribed by the MOECC. This level of water quality monitoring helps protect public health and ensures public confidence in the water supply. As mandated, annual reports summarizing the water quality for each water system are posted on Halton's website for the public to review.

The majority of analysis is conducted by Halton's Regional Laboratory, with some specialized analysis contracted to other accredited laboratories. In accordance with Schedule 16 of O. Reg. 170/03, all notifications of adverse water quality incidents are provided to the Spills Action Centre and Medical Officer of Health. Halton has a *Municipal Drinking Water Response Procedure to Adverse Water Quality Incidents* in place that directs internal and external reporting requirements as well as ensuring that the appropriate corrective actions are undertaken. A summary of notifications in 2017 for each system is provided in this report.



4.2 Flow Data

While water quality is of utmost priority, attention is also directed to flow measurement and data management. In Halton Region, continuous monitoring equipment is used for measuring flow, including the rate and volume of taking. The flow measuring devices are connected to the Supervisory Control and Data Acquisition (SCADA) system for monitoring, alarming and data storage. In addition, the devices are calibrated in accordance with the manufacturer's specifications, or at least once every year, to help ensure data reliability. The MOECC is notified if the flow or volume exceeds a system approval or if there is a problem with any flow monitoring device.

This annual flow report is prepared through retrieval of archived SCADA data and logbook entries. The archived data is then analyzed and used to compile a summary report. The raw water flows are compared to the Permits to Take Water (volume of water taken). The treated water volumes are the amounts of water sent into the water distribution systems. These volumes are compared to the plant rated capacities in each Municipal Drinking Water License. The reporting of treated water flows is required by the MOECC "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" (O. Reg. 170/03, Schedule 22 (22-2(3)1)).

Halton Region's water systems produced just over 61,927 ML of drinking water in 2017. This marked a decrease in total production of approximately 6 per cent over the previous calendar year. Local climatic conditions are believed to have contributed to this decrease in demand. Halton experienced higher than normal rainfall in 2017, which started in May and continued through June. The impact was compounded by a colder than normal summer as reported by Conservation Halton. On average, Halton produced 170 ML of treated water per day in 2017 which is nearly enough to fill 68 Olympic-sized swimming pools with clean, safe drinking water.



5

Burlington Water Purification Plant

5.1 Water System Description

The Burlington Water Purification Plant (WPP) is located at 3249 Lakeshore Road in Burlington. The facility is a conventional filtration purification plant with a process that consists of the Actiflo® process (microsand-enhanced clarification), filtration, fluoridation, pH adjustment, ozonation (disinfection and taste and odour control) and chlorination (secondary disinfection). Seasonally, the water is chlorinated at the intake for zebra mussel control. The plant is controlled through a computerized SCADA system that is monitored 24 hours per day, seven days a week. The treated drinking water is pumped into the South Halton Water Distribution System.

Table 5-1 Burlington WPP General Information

Municipal Drinking Water Licence Drinking Water Works Permit	004-104 (South Halton) 004-204
Drinking Water System Number	220001664
Classification Class Certificate Number	Treatment Class 4 561
Service Population	n/a – see South Halton Distribution System
Permit to Take Water Number Expiry Date Water Taking Permitted	2581-8QSMHV January 31, 2022 291,000 m ³ /d or 202,083 L/min. (equivalent)
Rated Capacity	263,000 m ³ /d



5.2 2017 Flow Summary

A summary of the flows in 2017 is provided in the following table (5-2). At the Burlington WPP, some water is used in the chemical feed systems and for backwashing filters, thus, the raw water flow may be greater than the treated water flow. The treatment plants are designed to handle peak hour flows and, as such, a comparison of maximum and average daily volumes to permitted levels is not always the most accurate representation of available capacity. The figures in Table 5-3 comply with the reporting requirements of the regulation (O. Reg. 170/03, Schedule 22).

Table 5-2 Burlington WPP Flow Summary 2017

Month	Raw Water Flow m ³ /d		Treated Water Flow m ³ /d	
	Maximum Day	Average Day	Maximum Day	Average Day
January	83,190	71,825	76,673	66,856
February	85,079	65,685	80,940	61,079
March	83,418	68,618	78,477	64,188
April	83,423	66,036	77,031	61,322
May	84,766	66,426	78,946	63,678
June	110,127	73,766	100,631	68,558
July	116,224	79,969	106,781	73,928
August	101,345	81,147	93,648	75,313
September	105,694	80,247	99,284	75,096
October	120,496	78,652	112,349	73,609
November	83,413	69,297	76,018	62,954
December	120,561	72,665	109,772	65,866
Annual Average Day		72,861		67,704

Note: The shaded blocks denote the annual maximum daily flows for 2017.



Table 5-3 Burlington WPP Flow Comparison to MDWL and PTTW

Burlington WPP	Raw Water		Treated Water	
	Max. Day	Average Day	Max. Day	Average Day
% PTTW	41%	25%		
% Rated Capacity			43%	26%

5.3 Adverse Test Results

In accordance with Schedule 16 of O. Reg. 170/03, notifications of adverse water quality incidents are provided to the Spills Action Centre and the Medical Officer of Health. In 2017, there was one adverse test result/incident at the Burlington WPP as summarized in Table 5-4.

Table 5-4 Adverse Test Results and Actions – Burlington WPP

Date	Location	Adverse Condition	Corrective Action	Notice of Issue Resolution
June 22, 2017	Plant Treated	Threshold exceeded which triggered report	High lift discharge piping flushed back to plant clearwell. Water drained from clearwell and sent to waste.	June 23, 2017



6 Oakville Water Purification Plant

6.1 Water System Description

The Oakville Water Purification Plant (WPP) is located at 21 Kerr Street in Oakville. This facility is a conventional filtration purification plant with a process that consists of the Actiflo® process (microsand-enhanced clarification), filtration, fluoridation, pH adjustment, ozonation (disinfection and taste and odour control) and chlorination(disinfection). Seasonally, the water is chlorinated at the intake for zebra mussel control. The plant is controlled through a computerized SCADA system that is monitored 24 hours per day, seven days a week. The treated drinking water is pumped into the South Halton Water Distribution System.

Table 6-1 Oakville WPP General Information

Municipal Drinking Water Licence	004-104 (South Halton)
Drinking Water Works Permit	004-204
Drinking Water System Number	220001637
Classification	
Class	Treatment Class 4
Certificate Number	557
Service Population	n/a - see South Halton Distribution System
Permit to Take Water	
Number	8886-8QSMWC
Expiry Date	January 31, 2022
Water Taking Permitted	120,000 m ³ /d or 83,333 litres/minute (equivalent)
Rated Capacity:	109,000 m ³ /d



6.2 2017 Flow Summary

A summary of the flows in 2017 is provided in the following table (6-2). At the Oakville WPP, some water is used in the chemical feed systems and for backwashing filters. Thus, the raw water flow is greater than the treated water flow. The treatment plants are designed to handle peak hour flows and, as such, a comparison of maximum and average daily volumes to permitted levels is not always the most accurate representation of available capacity. The data presented in Table 6-3 complies with the reporting requirements of the regulation (O. Reg. 170/03, Schedule 22)..

Table 6-2 Oakville WPP Flow Summary 2017

Month	Raw Water Flow m ³ /d		Treated Water Flow m ³ /d	
	Maximum Day	Average Day	Maximum Day	Average Day
January	62,508	51,304	59,441	47,732
February	63,490	46,020	60,911	42,852
March	57,895	40,709	54,575	37,396
April	68,834	47,389	62,641	42,736
May	77,878	45,208	73,267	52,155
June	93,955	73,124	89,483	68,606
July	98,848	73,952	94,483	68,598
August	102,514	74,779	97,566	69,529
September	93,535	73,399	88,823	67,947
October	74,827	52,477	69,219	47,879
November	101,625	48,033	61,982	45,533
December	71,726	53,773	68,742	50,447
Annual Average Day		56,945		53,451

Note: The shaded blocks denote the annual maximum daily flows for 2017.



Table 6-3 Oakville WPP Flow Comparison to MDWL and PTTW

Oakville WPP	Raw Water		Treated Water	
	Max. Day	Average Day	Max. Day	Average Day
% PTTW	85%	47%		
% Rated Capacity			90%	49%

6.3 Adverse Test Results

In accordance with Schedule 16 of O. Reg. 170/03, notifications of adverse water quality incidents are provided to the Spills Action Centre and Medical Officer of Health. In 2017, there were no adverse test results/incidents at the Oakville WPP.



7 Burloak Water Purification Plant

7.1 Water System Description

The Burloak Water Purification Plant (WPP) is located at 3380 Rebecca Street, Oakville. This facility is a membrane filtration plant with a process that consists of flocculation, ultra-filtration (via membranes), ultra-violet irradiation, ozonation (disinfection and taste and odour control), fluoridation and chlorination (disinfection). Seasonally, the raw water intake is chlorinated for zebra mussel control. The plant is controlled through a computerized SCADA system that is monitored 24 hours per day, seven days per week. The treated drinking water is pumped into the South Halton Water Distribution System.

Table 7-1 Burloak WPP General Information

Municipal Drinking Water Licence Drinking Water Works Permit	004-104 (South Halton) 004-204
Drinking Water System Number	260085436
Classification Class Certificate Number	Treatment Class 4 5224
Service Population	n/a - see South Halton Distribution System
Permit to Take Water Number Expiry Date Water Taking Permitted	7500-A4ZM5N December 31, 2025 64,000 m ³ /d or 88,889 L/min (Table A in PTTW 7500-A4ZM5N)
Rated Capacity:	55,000 m ³ /d



7.2 2017 Flow Summary

A summary of the flows in 2017 is provided in the following table (7-2). At the Burloak WPP, some water is used in the chemical feed systems and for backwashing filters. Thus, the raw water flow is greater than the treated water flow. The treatment plants are designed to handle peak hour flows and, as such, a comparison of maximum and average daily volumes to permitted levels is not always the most accurate representation of available capacity. The data presented in Table 7-3 complies with the reporting requirements of the regulation (O. Reg. 170/03, Schedule 22).

Table 7-2 Burloak WPP Flow Summary 2017

Month	Raw Water Flow m ³ /d		Treated Water Flow m ³ /d	
	Maximum Day	Average Day	Maximum Day	Average Day
January	21,807	17,888	17,761	14,196
February	36,932	29,237	32,347	25,072
March	36,874	29,058	32,203	24,883
April	52,133	31,020	46,720	26,723
May	38,448	32,724	33,049	28,185
June	53,232	38,274	47,925	33,748
July	40,663	33,780	37,222	30,029
August	40,018	33,831	35,257	29,942
September	47,720	33,869	44,023	30,509
October	39,922	24,966	36,301	21,462
November	36,833	25,857	32,340	21,544
December	37,611	21,923	32,298	17,510
Annual Average Day		29,369		25,317

Note: The shaded blocks denote the annual maximum daily flows for 2017.



Table 7-3 Burloak WPP Flow Comparison to MDWL and PTTW

Burloak WPP	Raw Water		Treated Water	
	Max. Day	Average Day	Max. Day	Average Day
% PTTW	83%	46%		
% Rated Capacity			87%	46%

7.3 Adverse Test Results

In accordance with Schedule 16 of O. Reg. 170/03, notifications of adverse water quality incidents are provided to the Spills Action Centre and Medical Officer of Health. In 2017, there were no adverse test results/incidents at the Burloak WPP.



8 South Halton Distribution System

8.1 Water System Description

The South Halton Distribution System is supplied by the Burlington, Oakville and Burloak WPPs. The South Halton Distribution System serves Burlington, Oakville and parts of Milton and Halton Hills, and includes 16 reservoirs/storage tanks: Appleby Line, Bailie, Beaufort, Tyandaga, Brant, Headon, Mount Forest, Washburn, Waterdown, Kitchen, McCraney, Eighth Line, Moore, Burnhamthorpe Tower, Zone 5L and Steeles Avenue Tower in Milton. As the South Halton System is distribution only, it does not require a Permit to Take Water. Flows into the distribution system are reported under the three water purification plants, which provided the treated water in 2017; Burlington, Oakville and Burloak.

Table 8-1 South Halton Distribution System General Information

Municipal Drinking Water Licence	004-104 (South Halton)
Drinking Water Works Permit	004-204
Drinking Water System Number	260085462
Classification	
Class	Distribution Class 4
Certificate Number	5284
Service Population	475,488

8.2 Adverse Test Results

In accordance with Schedule 16 of O. Reg. 170/03, notifications of adverse water quality incidents are provided to the Spills Action Centre and the Medical Officer of Health. In 2017, there were eight adverse test results/incidents in the South Halton Distribution System as summarized in Table 8-2.



Table 8-2 Adverse Test Results and Actions – South Halton Distribution

Date	Location	Adverse Condition	Corrective Action	Notice of Issue Resolution
May 1, 2017	Distribution	Surface water entered reservoir – Washburn Reservoir	Reservoir cell by-passed, repairs made affected cell followed by cleaning and disinfection. Samples collected and results within acceptable limits.	July 19, 2017
July 11, 2017	Distribution	EC = 1 CFU/100 mL	Flushed system, resamples collected and results within acceptable limits.	July 15, 2017
July 18, 2017	Distribution	Free Cl ₂ = 0.03 mg/L, 0.02 mg/L	Flushed system, resamples collected and results within acceptable limits.	July 25, 2017
July 20, 2017	Distribution	Free Cl ₂ = 0.02 mg/L	Flushed system, resamples collected and results within acceptable limits.	July 21, 2017
August 10, 2017	Distribution	Free Cl ₂ = 0.04 mg/L, 0.04 mg/L	Flushed system, resamples collected and results within acceptable limits.	August 10, 2017
September 19, 2017	Lead Sampling Program – Plumbing - Private	Pb = 24.4 ug/L, 23.8 ug/L (duplicate)	No Action Required. Notified owner and Public Health Department.	NA
October 5, 2017	Lead Sampling Program – Plumbing – Non-Residential	Pb = 373.7 ug/L, 412.5 ug/L (duplicate)	No Action Required. Notified owner and Public Health Department.	NA
November 13, 2017	Distribution	TC = 1 CFU/100 mL	Resamples collected and results within acceptable limits.	November 16, 2017



9

Milton Groundwater Supply System

9.1 Water System Description

The Town of Milton is supplied with both groundwater and surface water. Treated surface (Lake Ontario) water from South Halton is pumped to the Steele's Avenue Water Tower. Under normal operating conditions, lake water and groundwater do not mix in Milton's distribution system.

The groundwater system consists of two well fields: Kelso and Walkers Line. There are four wells in the Kelso well field that pump raw water into the Kelso Water Purification Plant. The treatment includes greensand filters for manganese and iron removal and chlorination for disinfection. The water is pumped to the Milton Reservoir. From there, the water flows by gravity into the distribution system. The Walkers Line well field consists of one well with water being disinfected with chlorine and pumped into the Milton Surge Tank. From the surge tank, the water flows by gravity into the distribution system. Fluoride is not added to the Milton water supply. The Milton system is controlled through a computerized SCADA system that is monitored 24 hours per day, seven days a week.

Table 9-1 Milton Groundwater System General Information

Municipal Drinking Water Licence Drinking Water Works Permit	004-104 (South Halton) 004-204	
Drinking Water System Number	220001646	
Classification Class Certificate Number	Treatment Class 2 3643	Distribution Class 3 551
Service Population	26,675	



Permit to Take Water	
Number	87-P-3046
Expiry Date	n/a
Water Taking Permitted	
Kelso	
Kelso Wells 3,4,5 and 6 combined	13,635 m ³ /d
Max. combined for up to 5 days/year	22,730 m ³ /d
Max. combined for up to 10 days/year	20,457 m ³ /d
Max. combined for up to 30 days/year	18,184 m ³ /d
Max. combined for up to 60 days/year	15,911 m ³ /d
Walkers Line	
Walkers Line Well 1	2,618 m ³ /d or 1818 L/min (equivalent)
Walkers Line Well 2	2,946 m ³ /d or 2046 L/min (equivalent)
Max. from Walkers Line 1 and 2	3,180 m ³ /d
Emergency, combined	5,240 m ³ /d for up to 10 days/year
<hr/>	
Rated Capacity	
Kelso WPP	22,670 m ³ /d
Walkers Line	5,240 m ³ /d

9.2 2017 Flow Summary

A summary of the flows in 2017 is provided in the following table. At the Walkers Line site, the treated water flow is the same as the raw water flow. At the Kelso WPP, some water is used for backwashing filters and subsequently the raw water flow is greater than the treated water flow. However, due to rounding of flow figures the average treated water may be slightly higher than the average raw water taking for this report. The treatment plants are designed to handle peak hour flows and, as such, a comparison of maximum and average daily volumes to permitted levels is not always the most accurate representation of available capacity. The data presented in Table 9-2 complies with the reporting requirements of the regulation (O. Reg. 170/03, Schedule 22).



Table 9-2 Milton Groundwater System Flow Summary 2017

Month	Milton Total Treated Flow m ³ /d		Walkers Line m ³ /d		Kelso Raw Water m ³ /d		Kelso Treated m ³ /d	
	Max Day	Avg Day	Max Day	Avg Day	Max Day	Avg Day	Max Day	Avg Day
January	6,854	6,011	450	411	6,326	5,548	6,417	5,600
February	6,866	5,959	443	412	6,380	5,442	6,466	5,546
March	6,922	5,745	559	446	6,201	5,271	6,363	5,296
April	9,921	5,957	579	540	9,682	5,451	9,385	5,420
May	8,697	6,469	584	544	8,099	5,905	8,186	5,925
June	10,010	7,595	600	556	9,565	7,077	9,437	7,038
July	10,885	7,548	668	561	10,681	7,076	10,312	6,987
August	8,824	7,423	610	562	8,544	6,935	8,256	6,860
September	9,539	7,334	869	597	8,962	6,664	8,709	6,738
October	7,905	6,274	839	597	7,570	5,687	7,370	5,677
November	8,379	6,043	750	696	7,372	5,362	7,629	5,346
December	8,527	5,320	703	546	7,809	4,782	8,020	4,786
Annual Average Day		6,473		539		5,933		5,935

Note: The shaded blocks denote the annual maximum daily flows for 2017.



The following tables (9-3 & 9-4) show the maximum day and average day raw water volumes for 2017 in comparison to the permitted water taking (PTTW) and the rated capacity in the MDWL.

Table 9-3 Kelso WPP Flow Comparison to MDWL and PTTW

Kelso WPP	Raw Water		Treated Water	
	Max. Day	Average Day	Max. Day	Average Day
% PTTW	78%	44%		
% Rated Capacity			45%	26%

Table 9-4 Walkers Line Flow Comparison to MDWL and PTTW¹

Walkers Line Wells	Maximum Day Flow	Average Day Flow
% PTTW	33%	21%
% Rated Capacity	17%	10%

In 2017, the maximum flows taken and pumped into the treatment systems were not greater than the values specified in the MDWL and the PTTW.

¹ Comparison figures reflect Walkers Line Well 2 not operating for reporting period.

9.3 Adverse Test Results

In accordance with Schedule 16 of O. Reg. 170/03, notifications of adverse water quality incidents are provided to the Spills Action Centre and the Medical Officer of Health. In 2017, there were four adverse test results in the Milton Water System as summarized in Table 9-5.



Table 9-5 Adverse Test Results and Actions – Milton Drinking Water System

Date	Location	Adverse Condition	Corrective Action	Notice of Issue Resolution
March 20, 2017	Distribution	Lead = 0.0231 mg/L	Resamples collected and results within acceptable limits	March 30, 2017
May 8, 2017	Plant Treated Distribution Distribution	Sodium = 51.1 mg/L Sodium = 50.4 mg/L Sodium = 51.5 mg/L	No Action Required - Reportable every 57 months	May 9, 2017
December 8, 2017	Distribution	Watermain break and non-disinfected water may have entered the main.	Watermain isolated and MOH issued Do Not Drink Advisory, Watermain repaired & flushed. Sample results within acceptable limits.	December 12, 2017



10 Georgetown Water Supply System

10.1 Water System Description

The Georgetown Water Supply System draws groundwater from three well fields. There are four wells in the Cedarvale well field, two wells in the Princess Anne well field and two wells in the Lindsay Court well field.

The Georgetown WPP treats water from the four Cedarvale Wells with greensand filtration, ultraviolet light for primary disinfection, fluoridation, and chlorination for secondary disinfection. Water from the Princess Anne and Lindsay Court Wells receive treatment at the well sites with chlorination for disinfection and fluoridation. Together, these three sources pump water into the distribution system that includes 22 Side Road Reservoir, Moore Park Booster Station, Todd Road Tower and the Norval Standpipe under a water distribution Class III Certificate (# 566).

The Georgetown system is controlled through a computerized SCADA system that is monitored 24 hours per day, seven days a week.

Table 10-1 Georgetown Water System General Information

Municipal Drinking Water Licence	004-101	
Drinking Water Works Permit	004-201	
Drinking Water System Number	220001655	
Classification		
Class	Treatment Class 2	Distribution Class 3
Certificate Number	564	566
Service Population	38,844	

Permit to Take Water	
Number	4705-AFCJ82
Expiry Date	December 31, 2021
Water Taking Permitted	
Cedarvale Well 1A	2,618 m ³ /d
Cedarvale Well 3A	3,931 m ³ /d
Cedarvale Well 4	7,854 m ³ /d
Cedarvale Well 4A	5,890 m ³ /d
Maximum Daily (Cedarvale Well Field)	12,500 m ³ /d
Annual Avg. Daily (Cedarvale Wells)	6,972 m ³ /d
Princess Anne Well 5	4,582 m ³ /d
Princess Anne Well 6	13,090 m ³ /d
Annual Average Both PA Wells	6,800 m ³ /d
Lindsay Court Well 9 and 9B (Combined)	6,545 m ³ /d or 5210 L/min (max. rate)
Rated Capacity	
Georgetown WPP	13,046 m ³ /d
Princess Anne Well 5	4,582 m ³ /d
Princess Anne Well 6	13,080 m ³ /d
Lindsay Court Well 9A and/9B (Combined)	6,540 m ³ /d

10.2 2017 Flow Summary

A summary of the flows in 2017 is provided in Table 10-2 on the following page. At the Princess Anne and Lindsay Court wells, the treated water flow is the same as the raw water flow. At the Georgetown WPP (Cedarvale wells), some water is used in the chemical feed systems and for backwashing filters. Thus, the raw water flow is greater than the treated water flow. The treatment plants are designed to handle peak hour flows and, as such, a comparison of maximum and average daily volumes to permitted levels is not always the most accurate representation of available capacity. The data presented complies with the reporting requirements of the regulation (O. Reg. 170/03, Schedule 22).



Table 10-2 Georgetown Water System Flow Summary 2017¹

Month	Georgetown System Total Treated Flow m ³ /d (GWPP Treated, PA 5, PA 6, LC)		Princess Anne Wells 5 and 6 m ³ /d		Princess Anne 5 m ³ /d		Princess Anne 6 m ³ /d		Lindsay Court 9 and 9B m ³ /d		Lindsay Court Well 9 m ³ /d		Lindsay Court Well 9B m ³ /d		Cedarvale Wells (Georgetown WPP) Total Raw Flow m ³ /d		Georgetown WPP Treated m ³ /d	
	Max Day	Avg Day	Max Day	Avg Day	Max Day	Avg Day	Max Day	Avg Day	Max Day	Avg Day	Max Day	Avg Day	Max Day	Avg Day	Max Day	Avg Day	Max Day	Avg Day
January	13,705	12,840	3,696	624	2,124	427	1,572	197	5,606	4,315	5,603	2,161	5,606	2,154	8,993	8,290	8,554	7,901
February	13,872	12,740	5,316	1,934	3,641	1,247	2,009	688	5,605	5,031	5,604	2,654	5,605	2,378	8,640	6,014	8,430	5,775
March	14,128	12,638	6,924	1,327	3,189	251	5,575	1,076	5,604	4,506	5,604	2,592	4,727	1,914	8,554	6,996	8,356	6,805
April	14,579	12,995	5,282	2,710	4,105	2,119	3,534	590	5,603	4,474	5,603	2,278	5,212	2,196	8,813	6,038	8,650	5,811
May	15,410	13,802	7,654	2,464	3,587	1,801	7,654	664	5,608	4,707	5,502	2,088	5,608	2,619	8,899	6,834	8,656	6,631
June	17,504	15,513	12,130	9,496	2,313	280	12,130	9,216	5,603	2,055	5,173	832	5,603	1,223	4,493	4,270	4,330	3,962
July	19,169	15,099	10,158	6,101	4,147	2,889	10,158	3,212	5,609	4,434	5,211	1,147	5,609	3,286	5,357	4,800	5,197	4,565
August	17,011	15,035	7,878	5,050	3,909	2,465	5,706	2,585	5,612	4,881	5,169	2,667	5,612	2,214	8,640	5,347	8,459	5,104
September	16,864	14,895	9,304	6,114	3,751	2,397	8,778	3,718	5,618	3,697	4,313	2,385	5,618	2,459	4,556	4,131	4,362	3,937
October	14,894	13,189	7,122	4,607	3,311	2,524	5,148	2,083	5,613	4,761	4,313	2,006	5,613	2,755	4,609	4,064	4,299	3,821
November	13,480	12,799	5,469	3,617	3,372	2,711	3,183	906	5,615	5,148	4,313	1,114	5,615	4,034	4,432	4,254	4,277	4,034
December	18,409	13,149	7,745	3,040	3,112	1,883	5,508	1,157	5,607	4,192	0	0	5,607	4,192	6,566	6,205	6,437	5,917
Annual Average Day		13,725		3,924		1,749		2,174		4,350		1,827		2,619		5,604		5,355

Note: The yellow shaded blocks denote the annual maximum daily flows for 2017.

¹ The use of variable frequency drive pumps, such as those used at both Princess Anne and the Lindsay Court Wells, allow for accurate and consistent flow rates. It is not uncommon to have the same maximum flow rate for several days over the course of the year. Flow meters measure to one decimal place and when rounded, as is the case for the Annual Flow Report, may contribute to similar flow values on several days.

The following tables (10-3 & 10-4) compare the maximum day and average day volumes for 2017 to the permitted water taking (PTTW) and the rated capacity.

Table 10-3 Georgetown WPP Flow Comparison to MDWL and PTTW²

Georgetown WPP	Raw Water		Treated Water	
	Max. Day	Average Day	Max. Day	Average Day
% PTTW	72%	45%		
% Rated Capacity			66%	41%

Table 10-4 Princess Anne and Lindsay Court Well Flow Comparison to MDWL and PTTW²

Facility	Maximum Day Volume	Average Day Volume
Princess Anne Well 5		
% PTTW	91%	58% (Wells 5 and 6 combined)
% Rated Capacity	91%	38%
Princess Anne Well 6		
% PTTW	93%	58% (Wells 5 and 6 combined)
% Rated Capacity	93%	17%
Lindsay Court Well 9A		
% PTTW	86% (Wells 9 and 9B combined)	28%
% Rated Capacity	86%	28%
Lindsay Court Well 9B		
% PTTW	86% (Wells 9 and 9B combined)	40%
% Rated Capacity	86%	40%

In 2017, the maximum flows taken and pumped into the treatment systems were not greater than the values specified in the PTTW and the MDWL.

² The current Georgetown PTTW contains specific conditions for water taking at the Princess Anne and Lindsay Court Well Fields. There is a combined maximum day water taking limit on the Lindsay Court Wells and a maximum annual average daily taking limit placed on the Princess Anne Wells. This has been reflected in the general information for the Georgetown Water System and the flow comparison chart.



10.3 Adverse Test Results

In accordance with Schedule 16 of O. Reg. 170/03, notifications of adverse water quality incidents are provided to the Spills Action Centre and the Medical Officer of Health. In 2017, there were five adverse incidents in the Georgetown Water System as summarized in Table 10-5. Some reported incidents included more than one adverse test result.

Table 10-5 Adverse Test Results and Actions – Georgetown Drinking Water System

Date	Location	Adverse Condition	Corrective Action	Notice of Issue Resolution
May 1, 2017	Georgetown WPP Treated Princess Anne Lindsay Court Treated Distribution Distribution Distribution Distribution	Sodium = 69.5 mg/ Sodium = 58.9 mg/L, 56.1 mg/L (duplicate) Sodium = 26.0 mg/L Sodium = 26.6 mg/L Sodium = 62.8 mg/L Sodium = 67.7 mg/L, 67.9 mg/L (duplicate) Sodium = 47.6 mg/L	No Action Required - Reportable every 57 months	May 2, 2017
May 29, 2017	Distribution	Watermain Leak reported as "Other Observation"	Boil Water Advisory issued, watermain repaired flushed and sampled. - Sample results within acceptable limits.	July 19, 2017
June 29, 2017	Distribution	TC = 45 CFU/100 mL	Resamples collected and results within acceptable limits	July 1, 2017



August 10, 2017	Distribution	PA confirmed Total Coliform	Resamples collected and results within acceptable limits	August 14, 2017
September 27, 2017	Distribution	PA confirmed Total Coliform	Resamples collected and results within acceptable limits	September 30, 2017

11 Acton Water Supply System

11.1 Water System Description

The Acton Well Supply located in the Town of Acton draws groundwater from two separate aquifers. The two Davidson Wells and the Fourth Line Wells (a second well was brought online in 2017) draw from the Amabel Formation, and the Prospect Park (Fairy Lake) Wells draw from a sand-and-gravel aquifer. All of the wells use ultraviolet (UV) light for primary disinfection with chlorination for secondary disinfection. Fluoride is added to the water from all three sources. The Prospect Park facility is equipped with greensand filters for the removal of manganese and iron from the water. Treated water from the three sites is pumped to the Churchill Reservoir and the Acton water distribution system, The Acton system is controlled through a computerized SCADA system that is monitored 24 hours per day, seven days a week.



Table 11-1 Acton Water System General Information

Municipal Drinking Water Licence	004-102	
Drinking Water Works Permit	004-202	
Drinking Water System Number	220001673	
Classification		
Class	Treatment Class 2	Distribution Class 2
Certificate Number	3642	569
Service Population	9,913	
Permit to Take Water		
Number	3687-ABKHAP	
Expiry Date	December 31, 2021	
Water Taking Permitted		
Prospect Park Well 1	3,400 m ³ /d	
Prospect Park Well 2	3,400 m ³ /d	
Prospect Park Well 1 and 2 (Combined)	3,400 m ³ /d	
Davidson Well 1	1,250 m ³ /d	
Davidson Well 2	1,250 m ³ /d	
Fourth Line Well A	1,309 m ³ /d	
Fourth Line Well B	1,309 m ³ /d	
Fourth Line Well A and B (Combined)	1,711 m ³ /d	
Rated Capacity		
Prospect Park WPP	3,400 m ³ /d	
Davidson Well 1 and 2	2,500 m ³ /d	
Fourth Line Wells	1,711 m ³ /d	



11.2 2017 Flow Summary

A summary of the flows in 2017 is provided in Table 11-2 on the following page. At the Prospect Park WPP, filter backwash water is withdrawn from the distribution system following the treated water flow meter; therefore, the metered treated water is the same as the raw water flow, but the actual volumes available to the distribution system are less than those shown. At the Davidson and Fourth Line wells, the raw water flow is the same as the treated water flow to the distribution system.

Table 11-2 Acton Flow Summary 2017

Month	Acton Total Flow m ³ /d		Davidson Wells m ³ /d		4th Line Well A m ³ /d		4th Line Well B m ³ /d		4 th Line Wells A and B m ³ /d		Prospect Park WPP Raw Water m ³ /d		Prospect Park WPP m ³ /d	
	Max Day	Avg Day	Max Day	Avg Day	Max Day	Avg Day	Max Day	Avg Day	Max Day	Avg Day	Max Day	Avg Day	Max Day	Avg Day
January	3,561	3,295	951	395	520	490	518	491	1,038	981	1,997	1,919	1,958	909
February	3,555	3,096	1,963	412	520	425	519	425	1,038	851	1,990	1,959	1,976	930
March	3,673	2,658	2,333	1,686	669	338	671	339	1,341	655	1,921	188	0	0
April	3,255	2,818	677	183	514	365	515	369	1,029	734	1,984	1,901	1,984	897
May	3,646	3,100	1,429	543	632	347	633	348	1,266	695	1,954	1,871	1,954	1,064
June	4,151	3,176	1,219	383	678	483	679	484	1,356	966	1,967	1,826	1,967	932
July	4,257	3,265	1,266	363	777	488	778	488	1,555	976	1,964	1,927	1,964	1,061
August	3,402	2,946	1,225	394	713	314	715	307	1,428	621	1,954	1,931	1,954	874
September	3,592	2,985	1,330	540	644	289	646	218	1,290	506	1,978	1,936	1,953	901
October	3,246	2,422	2,333	1,309	778	525	778	525	1,556	1,050	1,940	125	1,928	62
November	2,900	2,358	1,753	1,240	681	557	682	561	1,363	1,118	0	0	0	0
December	2,852	2,400	1,504	1,256	683	572	685	573	1,368	1,114	0	0	0	0
Annual Avg Day		2,877		725		433		427		858		1,299		636

Note: The shaded blocks denote the annual maximum daily flows for 2017.



Table 11-3 compares the maximum day and average day volumes for 2017 to the permitted water taking (PTTW) and the rated capacity.

Table 11-3 Acton Water System Flow Comparison to MDWL and PTTW³

Facility	Maximum Day Volume	Average Day Volume
Davidson Wells		
% PTTW	93%	29%
% Rated Capacity	93%	29%
Fourth Line Well A		
% PTTW	91% (Wells A and B combined)	50%
% Rated Capacity	91% (Wells A and B combined)	50%
Fourth Line Well B		
% PTTW	91% (Wells A and B combined)	50%
% Rated Capacity	91% (Wells A and B combined)	50%
Prospect Park		
% PTTW	59% (Wells 1 and 2 combined)	38%
% Rated Capacity	58% (Wells 1 and 2 combined)	19%

³ The current Acton PTTW contains specific conditions for the Prospect Park and Fourth Line Well Fields. In addition to the water taking limits on the individual wells, there is also combined maximum day water taking limits stated for these sites. This has been reflected in the general information for the Acton Water System and the flow comparison chart.



11.3 Adverse Test Results

In accordance with Schedule 16 of O. Reg. 170/03, notifications of adverse water quality incidents are provided to the Spills Action Centre and Medical Officer of Health. In 2017, there was one adverse incident in the Acton Water System with four adverse test results as summarized in Table 11-4.

Table 11-4 Adverse Test Results and Actions – Acton Drinking Water System

Date	Location	Adverse Condition	Corrective Action	Notice of Issue Resolution
May 1, 2017	Prospect Park #1 Treated Prospect Park #2 Treated Distribution Distribution	Sodium = 38.9 mg/L, 37.8 mg/L (duplicate) Sodium = 33.7 mg/L Sodium = 38.3 mg/L Sodium = 38.5 mg/L	No Action Required - Reportable every 57 months	May 2, 2017



12 Campbellville Water Supply System

12.1 Water System Description

The Campbellville Well Supply, located in the Town of Milton, services a residential development of approximately 35 households in the village of Campbellville. The supply consists of two wells and the water is disinfected with ultraviolet (UV) light and chlorination. Four pressure tanks provide a small amount of treated water storage and maintain pressure in the distribution system. The Campbellville system is controlled through a computerized SCADA system that is monitored 24 hours per day, seven days a week.

Table 12-1 Campbellville Water System General Information

Municipal Drinking Water Licence Drinking Water Works Permit	004-103 004-203
Drinking Water System Number	220012162
Classification Class	Limited Groundwater System
Certificate Number	Distribution Class 1 #6503
Service Population	138
Permit to Take Water Number Expiry Date Water Taking Permitted Campbellville Well 1 Campbellville Well 2A Total from both wells	6830-9QAQNW December 31, 2019 524 m ³ /d 524 m ³ /d 524 m ³ /d 524 m ³ /d
Rated Capacity	524 m ³ /d

12.2 2017 Flow Summary

A summary of the flows in 2017 is provided in Table 12-2. In the Campbellville system, the treated water flow is the same as the raw water flow. The treatment plants are designed to handle peak hour flows and, as such, a comparison of maximum and average daily volumes to permitted levels is not always the most accurate representation of available capacity. The data presented in Table 12-2 complies with the reporting requirements of the regulation (O. Reg. 170/03, Schedule 22).

Table 12-2 Campbellville Water System Flows 2017

Month	Campbellville Flow m ³ /d	
	Maximum Day	Average Day
January	24	19
February	30	20
March	22	19
April	29	21
May	34	23
June	38	24
July	73	31
August	54	27
September	54	28
October	45	22
November	54	22
December	24	19
Annual Average Day		23

Note: The shaded block denotes the annual maximum daily flow for 2017.



Table 12-3 Campbellville Flow Comparison to MDWL and PTTW

Campbellville WPP	Raw Water		Treated Water	
	Max. Day	Average Day	Max. Day	Average Day
% PTTW	14%	4%		
% Rated Capacity			14%	4%

12.3 Adverse Test Results

In accordance with Schedule 16 of O. Reg. 170/03, notifications of adverse water quality incidents are provided to the Spills Action Centre and Medical Officer of Health. In 2017, there were three adverse incidents in the Campbellville Water System as summarized in Table 12-4.

Table 12-4 Adverse Test Results and Actions – Campbellville Drinking Water System



Date	Location	Adverse Condition	Corrective Action	Notice of Issue Resolution
May 8, 2017	Campbellville Treated Distribution	<i>Sodium = 167 mg/L</i> Sodium = 167 mg/L	No Action Required - Reportable every 57 months	May 9, 2017
June 27, 2017	Distribution	PA confirmed E. coli	Boil Water Advisory issued, watermain flushed, disinfected and sampled. Two sets of resamples collected and results within acceptable limit	June 30, 2017
September 25, 2017	Distribution	PA confirmed Total Coliform	Resamples collected and results within acceptable limits	September 28, 2017



13 Bridgeview Distribution System

13.1 Water System Description

The Bridgeview community distribution system is located at the west end of the City of Burlington, but it is not connected to the South Halton Water Distribution System. Water is supplied by the City of Hamilton through an inter-connection to their distribution system on Plains Road. There are approximately 70 homes and businesses in the Bridgeview System.

The City of Hamilton uses chloramination (a combination of chlorine and ammonia) for secondary disinfection in its drinking water system; and so, the water in the Bridgeview distribution system has a combined chlorine residual rather than a free chlorine residual.

Table 13-1 Bridgeview Distribution System General Information

Municipal Drinking Water Licence Drinking Water Works Permit	004-104 (South Halton) 004-204
Drinking Water System Number	260068419
Classification Class Certificate Number	Distribution Class 1 3821
Service Population	212

13.2 2017 Flow Summary

The water flows in 2017 based on customer meter readings were as follows:

Total annual water consumption: 15,008 m³

Average day consumption: 41 m³

Since there is no flow limitation in the MDWL for this distribution system, a comparison of flow data with approvals is not required.

13.3 Adverse Test Results

In accordance with Schedule 16 of O. Reg. 170/03, notifications of adverse water quality incidents are provided to the Spills Action Centre and Medical Officer of Health In 2017, there was one adverse test result/incident in the Bridgeview Water System as summarized in Table 13-2.

Table 13-2 Adverse Test Results and Actions – Bridgeview Drinking Water System

Date	Location	Adverse Condition	Corrective Action	Notice of Issue Resolution
October 5, 2017	Distribution	TC = 5 CFU/100 mL	Resamples collected and results within acceptable limits	October 10, 2017



14 Snake Road Distribution System

14.1 Water System Description

The Snake Road distribution system is located at the north end of the City of Burlington, but it is not connected to the South Halton Water Distribution System. Water is supplied by the City of Hamilton through an inter-connection to their distribution system on Snake Road. There are approximately 24 homes and businesses in the Snake Road system.

The City of Hamilton uses chloramination (a combination of chlorine and ammonia) for secondary disinfection in its drinking water system; and so, the water in the Snake Road distribution system has a combined chlorine residual rather than a free chlorine residual.

Table 14-1 Snake Road Distribution System General Information

Municipal Drinking Water Licence Drinking Water Works Permit	004-104 (South Halton) 004-204
Drinking Water System Number	260086775
Classification Class Certificate Number	Distribution Class 1 5444
Service Population	265



14.2 2017 Flow Summary

The water flows in 2017 based on customer meter readings were as follows:

Total annual water consumption: 15,230 m³

Average day consumption: 42 m³

Since there is no flow limitation in the MDWL for this distribution system, a comparison of flow data with approvals is not required.

14.3 Adverse Test Results

In accordance with Schedule 16 of O. Reg. 170/03, notifications of adverse water quality incidents are provided to the Spills Action Centre and Medical Officer of Health In 2017, there were no adverse test results/incidents in the Snake Road Water System.



15 North Aldershot Distribution System

15.1 Water System Description

The North Aldershot distribution system is located in the north end of the City of Burlington. The system is connected to the South Halton Water Distribution System however the connections are normally closed, thus isolating the system. Water is supplied by the City of Hamilton through an inter-connection to their distribution system on Waterdown Road. There are approximately 105 homes and businesses in the North Aldershot system.

The City of Hamilton uses chloramination (a combination of chlorine and ammonia) for secondary disinfection in its drinking water system; and so, the water in the North Aldershot distribution system has a combined chlorine residual rather than a free chlorine residual.

Table 15-1 North Aldershot Distribution System General Information

Municipal Drinking Water Licence Drinking Water Works Permit	004-104 (South Halton) 004-204
Drinking Water System Number	260086762
Classification Class Certificate Number	Distribution Class 1 5445
Service Population	280



15.2 2017 Flow Summary

The water flows in 2017 based on customer meter readings were as follows:

Total annual water consumption: 44,161 m³

Average day consumption: 121 m³

Since there is no flow limitation in the MDWL for this distribution system, a comparison of flow data with approvals is not required.

15.3 Adverse Test Results

In accordance with Schedule 16 of O. Reg. 170/03, notifications of adverse water quality incidents are provided to the Spills Action Centre and Medical Officer of Health. In 2017, there were no adverse water test results/incidents for the North Aldershot Distribution System.

16 Drinking Water System Inspections

During the 2017 MOECC inspection cycle, eleven drinking water system inspections were completed. Schedule 22-2(2) of O. Reg. 170/03 stipulates that any cases where the requirements of the SDWA were not met are to be listed in the Flow Summary Report along with the resulting corrective actions. The following table (16-1) summarizes the non-compliances identified during the 2017 MOECC inspection cycle.



Table 16-1 Non-compliance Summary

System	Non-Compliance With SDWA	Cause	Corrective Action	Inspection Rating
South Halton Drinking Water System – South Halton Distribution System DWS 220085462	The owner did not update the document describing the distribution components within 12 months of the alteration. Safe Drinking Water Act, 2002, s.31-b and Drinking Water Works Permit 004-204 Schedule B, s. 3.5	A set of “as constructed” drawings was not submitted for a watermain addition in the South Halton distribution system. The alteration was not documented on the Region’s GIS database at the time of the MOECC inspection	The following action items were stipulated by the MOECC Inspector; develop a procedure tracing the progression of Form 1s (watermain approvals) for new development applications to ensure compliance with legal instruments and to provide training for staff involved in this process	100% ¹

¹ The observed non-compliance was outside of the scope of the focused MOECC inspection for the South Halton Distribution System. Subsequently, it was noted in the “Other Inspection Findings” section of the final inspection report and didn’t subtract from the drinking water system inspection rating.

17 Conclusions

Halton Region continued to provide clean, safe and reliable drinking water to over 550,000 residents in 2017. The total volume of water delivered to consumers in 2017 decreased to 61,927 ML which is down from 65,758 ML in 2016. The local climate is believed to have contributed to this decrease in demand as Halton experienced higher than normal precipitation in the spring and cooler than normal temperatures in the summer of 2017 as reported by Conservation Halton.

Compliance with regulatory requirements, Municipal Drinking Water Licences and Permits to Take Water continue to be monitored through MOECC Inspections, the Region’s SCADA system, professional staff and regular reporting mechanisms. In 2017, no regulatory compliance issues related to water quality were identified.

As required under O. Reg. 170/03, this report was prepared and presented to members of Municipal Council prior to March 31. Copies of the report are available in the Regional Municipality of Halton Citizen’s Library and posted on Halton’s website (www.halton.ca).





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