Attachment #1 to Report PW-12-21

Drinking Water Systems

Flow summary report 2020

Published January 2021

Halton REGION

Table of Contents

List of Acronyms and Definitions

Adverse	Adverse water results are listed in Schedule 16, O. Reg. 170/03. Examples of adverse water results: • 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
CFU	colony forming units
CL_2	chlorine
CT	contact time – used in determining level of disinfection treatment
DWWP	Drinking Water Works Permit
EC	E. coli
GUDI	groundwater under the direct influence of surface water
L/s	litres per second
L/m	litres per minute
m^3/d	cubic metres per day
MDWL	Municipal Drinking Water Licence
MECP	Ministry of the Environment, Conservation and Parks (Ontario)
mg/L	milligrams per litre
mL	millilitre
ML/d	megalitres (million litres) per day (1 ML = 1,000 m^3)
MOH	Medical Officer of Health
O. Reg.	Ontario Regulation
PA	Presence/Absence
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	*Safe Drinking Water Act*, 2002
TC	total coliform
WTP	water treatment plant

1 Executive Summary

Halton Region is committed to providing reliable access to clean, safe drinking water for more than 594,000 residents in Burlington, Halton Hills, Milton and Oakville. Halton Region operates 11 drinking water systems that are governed by four municipal drinking water licences and associated drinking water works permits issued by the Ministry of the Environment, Conservation and Parks (MECP). Each year, a summary report for municipal drinking water systems is prepared and provided to Regional Council. The report addresses the regulatory requirements for Schedule 22 of the Drinking Water Systems Regulation (O. Reg. 170/03) under the *Safe Drinking Water Act*, 2002.

This report includes information about the drinking water systems' approvals, any MECP orders and inspection findings, a summary of the quantities and flow rates of the water supplied during the reporting period, and a data comparison of the related capacity of each system.

Here are some key findings from the report:

- Halton Region's water treatment and distribution facilities demonstrated excellent operational performance in 2020, achieving an overall average 99.7 per cent inspection rating.
- Halton Region's water systems produced more than 65,669 megalitres (ML) of safe, clean drinking water in 2020. This is the average equivalent of 179 ML of treated water per day, which is nearly enough to fill 72 Olympic-sized swimming pools.
- Protecting the natural environment is a priority for the Region, and one of the ways we are doing this is by reducing the impact of climate change. Halton Region is currently working to maximize energy efficiencies and develop an improved maintenance program, which will help reduce greenhouse gas emissions generated through the water treatment process and ensure a reliable supply of drinking water for the future.
- In 2020 Halton Region received the Partnership for Safe Water Directors Award from the American Water Works Association (AWWA) for our outstanding commitment to high quality drinking water and treatment, the first municipality in Canada to receive this award. This voluntary program aims to go beyond regulatory requirements for safe drinking water through detailed and documented water treatment optimization to provide enhanced water quality for Halton residents.
- Also, in 2020, Halton received the Maintenance Team of the Year Award from the Plant Engineering and Maintenance Association of Canada (PEMAC). This award recognizes Halton's reliability centered maintenance program which includes planning for the future, sustainability, improving the way we manage our processes and materials, and optimizing plant performance.

Through these programs and partnerships, Halton Region can continue to provide safe, clean and reliable drinking water to residents, now and into the future.

To learn more about the Region's drinking water, you can visit **halton.ca**

2 Legislated Requirements

In Ontario, water taking, drinking water treatment and distribution are governed by a number of acts and regulations. The owner/operator of each waterworks is required to follow additional legally-binding requirements laid out in various licenses, permits and approvals. Individual approvals issued by the MECP are site-specific, meaning the conditions of operation are tailored to a facility's characteristics, circumstances and the local environment.

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 along with the duration of these events 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. The reporting requirements are identified in Table 2-1

Table 2-1 Drinking Water System Annual Reports

Report Name	Description	Legislation or Regulation	Submitted to	Annual Due Date
Annual Flow Summary Report for Municipalities	• 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	• 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	• Electronic submission of water taking data	O. Reg. 387/04	MECP	March 31
Permit to Take Water Annual Report	• Reporting conditions set out in individual Permits to Take Water • Halton's groundwater systems only	Permits to Take Water issued under the *Ontario Water Resources Act*	MECP	March 31
Water Conservation Charges Report	• 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	MECP	March 31

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.

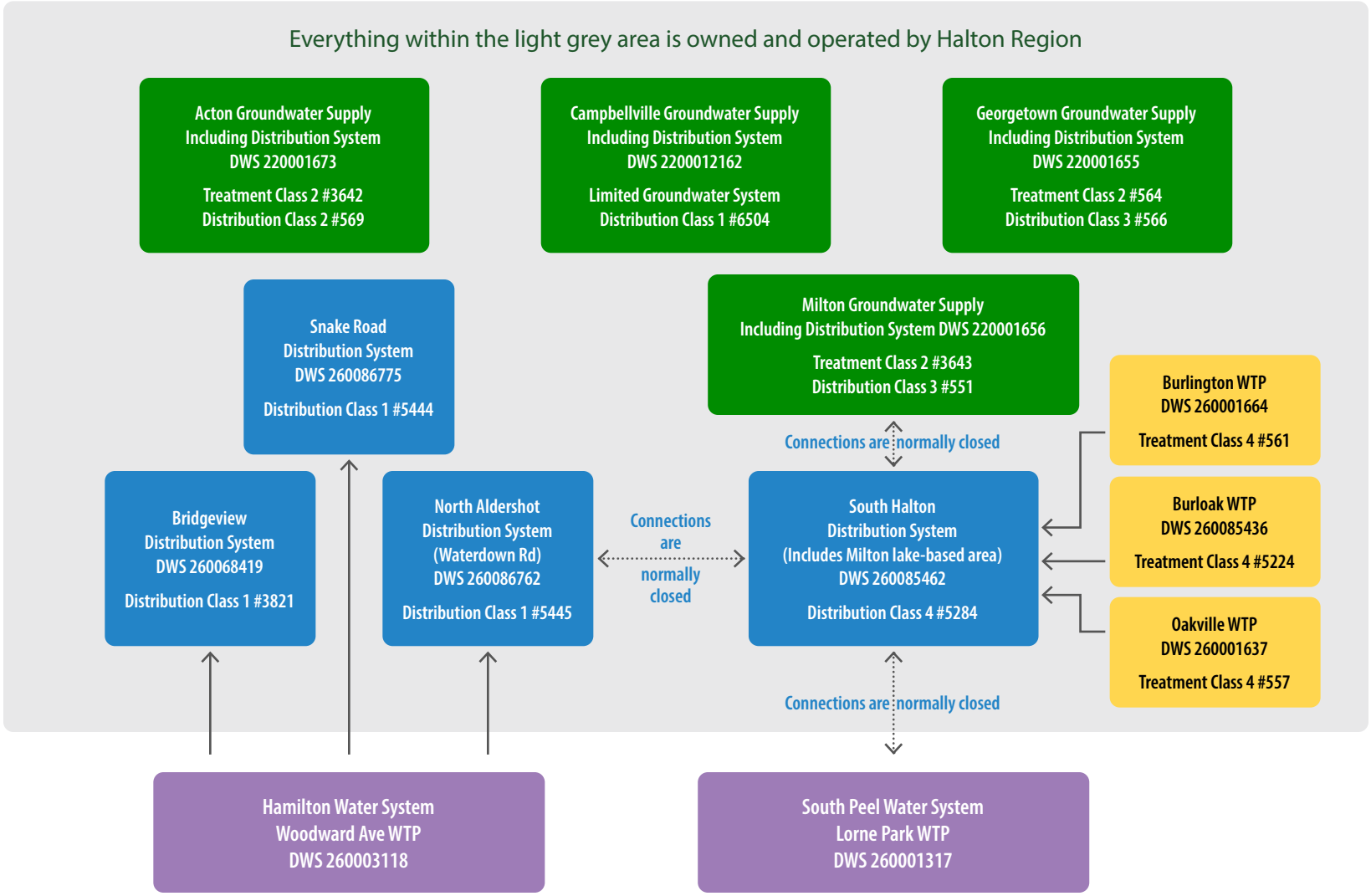
Section 16 summarizes the MECP drinking water system inspections.

Section 17 includes the conclusions of the report.

3 Halton's Drinking Water Systems

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

Figure 1 Halton's Drinking Water Systems



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; reservoirs; elevated tanks; booster 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.
A comprehensive maintenance program is in place that ensures continuous supply of safe and high quality drinking water from reliable systems.

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 MECP. This level of water quality monitoring along with a proven "multi barrier" approach to water treatment 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 an Adverse Water Quality Incidents Procedure in place that summarizes internal and external reporting requirements as well as ensuring that the appropriate corrective actions are implemented. A summary of notifications in 2020 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 verified in accordance with the manufacturer's specifications, or at least once every year, to help ensure data reliability. The MECP 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 (allowable volume of water to be 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 MECP "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 65,669 ML of drinking water in 2020. On average, Halton produced 179 ML of treated water per day in 2020 which is nearly enough to fill 72 Olympic-sized swimming pools with clean, safe drinking water.

5 Burlington Water Treatment Plant

5.1 Water System Description

The Burlington Water Treatment Plant (WTP) is located at 3249 Lakeshore Road in Burlington. The facility is a conventional filtration treatment plant with a process that consists of the Actiflo® process (microsand-enhanced clarification), filtration, fluoridation, optional 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 WTP 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 2020 Flow Summary

A summary of the flows in 2020 is provided in the following table (5-2). At the Burlington WTP, 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 data presented in Table 5-3 complies with the reporting requirements of the regulation (O. Reg.170/03, Schedule 22).

Table 5-2 Burlington WTP Flow Summary 2020

Month	Raw Water Flow m^3/d		Treated Water Flow m^3/d	
	Maximum Day	Average Day	Maximum Day	Average Day
January	91,475	72,658	85,460	67,400
February	82,653	70,323	74,537	63,461
March	84,696	70,723	76,960	63,872
April	112,453	78,018	98,970	70,274
May	115,888	85,337	104,440	77,889
June	139,957	108,898	126,464	99,299
July	160,769	129,829	146,304	117,362
August	160,005	120,538	146,975	108,609
September	127,641	106,745	115,175	96,379
October	95,614	77,813	87,846	70,003
November	103,732	81,195	94,602	75,004
December	97,368	85,487	92,813	80,723
Annual Average Day		**90,630**		**82,523**

Note: The shaded blocks denote the annual maximum daily flows for 2020.

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

Burlington WTP	Raw Water		Treated Water	
	Maximum Day	Average Day	Maximum Day	Average Day
% PTTW	55%	31%		
% Rated Capacity			56%	31%

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 2020, there were no adverse test results/incidents at the Burlington WTP.

Burlington WTP

6 Oakville Water Treatment Plant

6.1 Water System Description

The Oakville Water Treatment Plant (WTP) is located at 21 Kerr Street in Oakville. This facility is a conventional filtration treatment plant with a process that consists of the Actiflo® process (microsand-enhanced clarification), filtration, fluoridation, 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 WTP General Information

Municipal Drinking Water Licence Drinking Water Works Permit	004-104 (South Halton) 004-204
Drinking Water System Number	220001637
Classification	
Class Certificate Number	Treatment Class 4 557
Service Population	n/a - see South Halton Distribution System
Permit to Take Water	
Number Expiry Date Water Taking Permitted	3760-AZ8PKN July 31, 2028 155,000 m^3/d or 107,639 L/min (equivalent)
Rated Capacity	109,000 m^3/d

6.2 2020 Flow Summary

A summary of the flows in 2020 is provided in the following table (6-2). At the Oakville WTP, 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 WTP Flow Summary 2020

Month	Raw Water Flow m^3/d[1]		Treated Water Flow m^3/d	
	Maximum Day	Average Day	Maximum Day	Average Day
January	64,659	46,633	61,979	43,104
February	64,903	48,129	62,304	44,965
March	57,639	47,433	54,194	44,395
April	52,521	41,260	49,270	37,770
May	61,126	50,257	58,230	46,533
June	87,679	62,901	82,920	58,833
July	100,734	72,805	95,617	67,762
August	95,442	71,362	90,260	66,332
September	80,391	65,438	75,629	59,872
October	69,583	56,812	64,524	53,093
November	57,327	45,607	54,684	42,408
December	38,215	34,983	35,360	32,091
Annual Average Day		**53,635**		**49,763**

Note: The shaded blocks denote the annual maximum daily flows for 2020.

[1] During the course of a year the maximum raw flow may exceed the maximum treated flow due to facility shutdown and maintenance.

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

Oakville WTP	Raw Water		Treated Water	
	Maximum Day	Average Day	Maximum Day	Average Day
% PTTW	72%	35%		
% Rated Capacity			88%	46%

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 2020, there were no adverse test results/incidents at the Oakville WTP.

Oakville WTP

7 Burloak Water Treatment Plant

7.1 Water System Description

The Burloak Water Treatment Plant (WTP) 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), optional 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 WTP 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
Rated Capacity	55,000 m^3/d

7.2 2020 Flow Summary

A summary of the flows in 2020 is provided in the following table (7-2). At the Burloak WTP, some water is used in the chemical feed systems and for backwashing filters and subsequently 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 WTP Flow Summary 2020

Month	Raw Water Flow m^3/d		Treated Water Flow m^3/d	
	Maximum Day	Average Day	Maximum Day	Average Day
January	49,835	25,398	45,102	21,306
February	37,707	29,320	32,963	25,047
March	38,359	26,684	33,619	22,444
April	43,524	27,098	38,515	22,703
May	42,706	29,606	37,828	25,125
June	38,438	34,493	34,510	30,069
July	41,658	36,177	37,188	32,070
August	36,617	20,607	33,356	17,349
September	35,960	23,767	32,646	20,695
October	27,251	23,170	23,069	19,265
November	37,098	25,603	32,328	21,676
December	33,235	25,513	28,874	21,393
Annual Average Day		**27,286**		**23,262**

Note: The shaded blocks denote the annual maximum daily flows for 2020.

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

Burloak WTP	Raw Water		Treated Water	
	Maximum Day	Average Day	Maximum Day	Average Day
% PTTW	78%	43%		
% Rated Capacity			82%	42%

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 2020, there were no adverse test results/incidents at the Burloak WTP.

Burloak WTP

8 South Halton Distribution System

8.1 Water System Description

The South Halton Distribution System is supplied by the Burlington, Oakville and Burloak WTP's. The South Halton Distribution System serves Burlington, Oakville and parts of Milton and Halton Hills, and includes 17 reservoirs/storage tanks: Appleby Line, Ashgrove, Bailie, Beaufort, Tyandaga, Brant, Headon, Mount Forest, Washburn, Waterdown, Kitchen, McCraney, Eighth Line, Moore, Burnhamthorpe Tower, Third Line Reservoir 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 treatment plants, which provided the treated water in 2020.

Table 8-1 South Halton Distribution System General Information

Municipal Drinking Water Licence Drinking Water Works Permit	004-104 (South Halton) 004-204
Drinking Water System Number	260085462
Classification	
Class Certificate Number	Distribution Class 4 5284
Service Population	516,789

8.3 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 2020, there were 3 adverse test results/incidents in the South Halton Distribution System as summarized in Table 8-2.

Table 8-3 Adverse Test Results and Actions – South Halton Distribution

Date	Location	Adverse Condition	Corrective Action	Notice of Issue Resolution
May 4, 2020	Distribution	PA confirmed Total Coliform	Resamples collected and results within acceptable limits	May 6, 2020
July 23, 2020	Distribution	PA confirmed Total Coliform	Resamples collected and results within acceptable limits	July 25, 2020
November 12, 2020	Distribution	Murky water and settled particles observed in the new Ashgrove Reservoir	Resamples collected and results within acceptable limits	November 16, 2020

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 Treatment Plant. The treatment includes greensand filters for manganese 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 to the Milton Surge Tank. From the surge tank, the water flows by gravity into the distribution system. Fluoride is not added to the Milton groundwater system. The 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	23,047	
Permit to Take Water		
Number Expiry Date	87-P-3046 n/a	

Table 9-1 Continued

Water Taking Permitted Kelso	
Kelso Wells 3,4,5 and 6 combined Max.	13,635 m^3/d
combined for up to 5 days/year	22,730 m^3/d
combined for up to 10 days/year	20,457 m^3/d
combined for up to 30 days/year	18,184 m^3/d
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
Rated Capacity	
Kelso WTP	22,670 m^3/d
Walkers Line	5,240 m^3/d

9.2 2020 Flow Summary

A summary of the flows in 2020 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 WTP, 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 data, 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 Tables 9-3 and 9-4 complies with the reporting requirements of the regulation (O. Reg. 170/03, Schedule 22).

Table 9-2 Milton Groundwater System Flow Summary 2020

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	7,427	5,562	735	673	7,325	4,922	6,703	4,889
February	7,281	5,503	748	676	6,960	4,785	6,601	4,826
March	7,162	5,486	753	676	7,037	4,825	6,478	4,811
April	7,834	5,659	773	665	7,459	5,297	7,194	4,994
May	9,066	6,478	811	751	8,943	5,811	8,305	5,727
June	11,076	7,493	870	764	10,826	6,842	10,353	6,729
July	12,912	8,732	1,073	809	12,753	8,082	12,306	7,923
August	10,903	7,496	841	546	9,821	7,020	10,313	6,950
September	8,715	7,062	524	456	8,078	6,641	8,265	6,606
October	7,963	6,127	504	459	7,662	5,707	7,507	5,668
November	7,399	6,196	508	466	7,170	5,729	6,921	5,730
December	7,402	5,860	505	467	7,215	5,277	6,949	5,393
Annual Average Day		**6,471**		**617**		**5,912**		**5,854**

Note: The shaded blocks denote the annual maximum daily flows for 2020.

The following tables (9-3 and 9-4) show the maximum day and average day raw water volumes for 2020 in comparison to the permitted water taking (PTTW) and the rated capacity in the MDWL.

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

Kelso WTP	Raw Water		Treated Water	
	Maximum Day	Average Day	Maximum Day	Average Day
% PTTW	94%	43%		
% Rated Capacity			54%	26%

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

Walkers Line Well	Maximum Day Flow	Average Day Flow
% PTTW	34%	19%
% Rated Capacity	21%	12%

In 2020, the maximum flows taken and pumped into the treatment systems were not greater than the values specified in the MDWL and the PTTW.

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 2020, there were no adverse test results/incidents in the Milton Drinking Water System.

10 Georgetown Water Supply System

10.1 Water System Description

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

The Georgetown WTP 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 Drinking Water Works Permit	004-101 004-201	
Drinking Water System Number	220001655	
Classification		
Class	Treatment Class 2	Distribution Class 3
Certificate Number	564	566
Service Population	43,735	
Permit to Take Water		
Number	4705-AFCJ82	
Expiry Date	December 31, 2021	

Table 10-1 Continued

Water Taking Permitted Cedarvale Well 1A	
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 m3/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
Princess Anne Well 6B	13,090 m^3/d
Annual Average for all 3 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 WTP	13,046 m^3/d
Princess Anne Well 5	4,582 m^3/d
Princess Anne Well 6	13,080 m^3/d
Princess Anne Well 6B	13,080 m^3/d
Lindsay Court Well 9A and/9B	6,540 m^3/d

10.2 2020 Flow Summary

A summary of the flows in 2020 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 WTP (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 in Tables 10-3 and 10-4 complies with the reporting requirements of the regulation (O. Reg. 170/03, Schedule 22).

Table 10-2 Georgetown Drinking Water System Flow Summary 2020[2]

Month	Georgetown System Total Treated Flow m^3/d (GWPP Treated, PA 5, PA 6, 6B, LC)		Princess Anne Wells 5,6 and 6B m^3/d		Princess Anne 5 m^3/d		Princess Anne 6 m^3/d		Princess Anne 6B 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 WTP) Total Raw Flow m^3/d		Georgetown WTP 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	Max. Day	Avg. Day
January	13,996	12,555	6,449	4,636	4,235	3,674	4,485	962	0	0	5,172	3,651	5,172	2,719	4,283	932	4,493	4,424	4,377	4,267
February	14,225	12,742	6,578	4,720	4,234	2,369	6,037	2,351	0	0	5,153	3,772	5,153	2,327	4,277	1,445	4,493	4,410	4,362	4,250
March	14,260	12,810	5,815	3,311	4,234	3,155	2,394	156	0	0	5,554	3,482	5,171	1,311	5,554	2,172	7,205	6,290	6,813	6,016
April	14,923	12,959	9,103	4,827	4,236	3,633	7,823	1,194	0	0	5,600	3,884	5,173	2,863	5,600	1,021	4,496	4,452	4,377	4,248
May	19,629	14,923	10,872	7,331	3,188	1,369	9,376	4,779	8,061	963	4,766	3,304	4,312	2,128	4,766	1,176	4,631	4,446	4,446	4,288
June	21,098	17,310	12,097	9,738	53	10	12,097	1,100	11,230	8,628	4,742	3,491	4,742	2,433	4,732	1,058	4,666	4,300	4,371	4,081
July	27,492	19,744	14,996	9,301	2,639	728	12,228	4,685	12,512	3,888	6,034	5,007	6,034	3,021	5,343	1,986	8,985	5,852	8,645	5,436
August	21,608	16,535	11,436	7,015	4,233	1,943	7,589	3,031	9,734	2,041	6,033	5,364	6,033	3,260	5,007	2,105	4,381	4,256	4,282	4,155
September	16,779	14,784	10,525	6,626	4,061	1,130	7,775	3,063	6,832	2,432	5,066	3,995	4,961	1,758	4,764	2,237	4,583	4,402	4,284	4,163
October	16,970	13,264	10,303	5,316	3,254	840	6,128	2,471	4,314	2,005	4,146	3,822	4,140	1,796	4,146	2,026	5,401	4,396	5,085	4,126
November	14,803	12,897	6,729	4,748	3,325	965	4,427	1,709	5,225	2,145	4,308	4,131	4,143	2,006	4,308	2,125	5,339	4,471	4,776	4,019
December	15,474	13,260	7,240	3,792	3,499	2,660	4,134	355	4,822	415	4,145	3,051	4,096	1,380	4,145	1,672	8,986	6,751	8,537	6,417
Annual Average Day		**14,482**		**5,947**		**1,873**		**2,155**		**1,876**		**3,913**		**2,250**		**1,663**		**4,871**		**4,622**

Note: The shaded blocks denote the annual maximum daily flows for 2020.

[2] 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 and 10-4) compare the maximum day and average day volumes for 2020 to the permitted water taking (PTTW) and the rated capacity.

Table 10-3 Georgetown WTP Flow Comparison to MDWL and PTTW

Georgetown WTP	Raw Water		Treated Water	
	Maximum Day	Average Day	Maximum Day	Average Day
% PTTW	72%	39%		
% Rated Capacity			66%	35%

Table 10-4 Princess Anne and Lindsay Court Well Flow Comparison to MDWL and PTTW[3]

Facility	Maximum Day Flow	Average Day Flow
Princess Anne Well 5		
% PTTW	93%	88% (Wells 5, 6 and 6B combined)
% Rated Capacity	93%	41%
Princess Anne Well 6		
% PTTW	93%	88% (Wells 5, 6 and 6B combined)
% Rated Capacity	94%	17%
Princess Anne Well 6B		
% PTTW	96%	88% (Wells 5, 6 and 6B combined)
% Rated Capacity	96%	14%
Lindsay Court Well 9		
% PTTW	92% (Wells 9 and 9B combined)	34%
% Rated Capacity	92%	34%
Lindsay Court Well 9B		
% PTTW	92% (Wells 9 and 9B combined)	25%
% Rated Capacity	86%	25%

[3] 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 Drinking Water System and the flow comparison chart.

In 2020, the maximum flows taken and pumped into the treatment systems were not greater than the values specified in the PTTW and the MDWL.

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 2020, there were no adverse test results/incidents in the Georgetown Water System.

11 Acton Water Supply System

11.1 Water System Description

The Acton Drinking Water System draws water from three well fields. There are two wells in each of the Davidson well field, the Fourth Line well field and the Prospect Park well field. 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. Both the Davidson and Fourth Line well fields use preliminary and final cartridge filters. 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 Drinking Water Works Permit	004-102 004-202	
Drinking Water System Number	220001673	
Classification		
Class	Treatment Class 2	Distribution Class 2
Certificate Number	3642	569
Service Population	10,265	

Table 11-1 Continued

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 WTP	3,400 m^3/d
Davidson Wells 1 and 2	2,500 m^3/d
Fourth Line Wells (Wells A and B combined)	1,711 m^3/d

11.2 2020 Flow Summary

A summary of the flows in 2020 is provided in Table 11-2 on the following page. At the Prospect Park WTP, 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. The data presented in Table 11-3 complies with the reporting requirements of the regulation (O. Reg. 170/03, Schedule 22).

Table 11-2 Acton Flow Summary 2020[4]

Month	Total Flow Acton m^3/d		Davidson Wells m^3/d		4th Line Well A m^3/d		4th Line Well B m^3/d[4]		4th Line Wells A and B m^3/d		Prospect Park WTP Raw Water m^3/d		Prospect Park WTP 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	3,486	2,928	1,009	348	463	178	464	179	928	357	2,247	2,222	2,247	2,223
February	3,440	2,955	1,729	532	600	386	602	388	1,201	774	2,246	1,653	2,246	1,648
March	3,577	2,570	1,029	140	400	113	401	226	801	226	2,349	2,184	2,349	2,205
April	3,493	2,600	906	225	302	56	304	56	606	111	2,347	2,264	2,347	2,264
May	4,455	2,874	1,471	354	611	133	613	134	1,224	267	2,346	2,253	2,346	2,253
June	4,388	3,353	1,727	712	775	207	778	208	1,552	415	2,348	2,240	2,348	2,226
July	5,014	3,602	2,113	776	776	409	778	410	1,554	819	2,277	2,007	2,277	2,007
August	3,804	2,964	1,373	420	661	289	662	290	1,323	579	2,249	1,965	2,249	1,965
September	3,293	2,579	1,225	568	477	348	478	349	955	698	1,610	1,313	1,610	1,313
October	3,428	2,609	1,053	545	776	374	778	376	1,553	750	1,557	1,314	1,557	1,314
November	3,268	2,544	865	597	733	314	735	315	1,468	630	1,742	1,317	1,742	1,317
December	3,003	2,547	863	535	649	354	651	355	1,300	709	1,433	1,304	1,433	1,304
Annual Average Day		**2,844**		**479**		**263**		**274**		**528**		**1,837**		**1,837**

Note: The shaded blocks denote the annual maximum daily flows for 2020.

[4] The use of variable frequency drive pumps, such as those used at 4th Line Well B, 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.

Table 11-3 compares the maximum day and average day volumes for 2020 to the permitted water taking (PTTW) and the rated capacity.

Table 11-3 Acton Water System Flow Comparison to MDWL and PTTW[5]

Facility	Maximum Day Volume	Average Day Volume
Davidson Wells		
% PTTW	85%	19%
% Rated Capacity	85%	19%
Fourth Line Well A		
% PTTW	91% (Wells A and B combined)	20%
% Rated Capacity	91% (Wells A and B combined)	15%
Fourth Line Well B		
% PTTW	91% (Wells A and B combined)	21%
% Rated Capacity	91% (Wells A and B combined)	16%
Prospect Park		
% PTTW	69% (Wells 1 and 2 combined)	54%
% Rated Capacity	69% (Wells 1 and 2 combined)	54%

[5] 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 2020, there were no adverse test results/incidents in the Acton Drinking Water System.

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 Certificate Number	Limited Groundwater System Distribution Class 1 #6504
Service Population	145
Permit to Take Water	
Number Expiry Date	P-300-8039181501 June 30, 2029
Water Taking Permitted Campbellville Well 1 Campbellville Well 2A Total from both wells	524 m^3/d 524 m^3/d 524 m^3/d 524 m3/d
Rated Capacity	524 m^3/d

12.2 2020 Flow Summary

A summary of the flows in 2020 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 the most accurate representation of available capacity. The data presented in Table 12-3 complies with the reporting requirements of the regulation (O. Reg. 170/03, Schedule 22).

Table 12-2 Campbellville Water System Flows 2020

Month	**Campbellville Flow**	
	Maximum Day	Average. Day
January	22	18
February	57	20
March	22	19
April	27	19
May	36	24
June	40	29
July	59	33
August	53	27
September	37	23
October	26	18
November	27	19
December	27	19
Annual Average Day		**22**

Note: The shaded blocks denote the annual maximum daily flows for 2020.

Table 12-3 Campbellville Flow Comparison to MDWL and PTTW

Campbellville Wells	Raw Water		Treated Water	
	Maximum Day	Average Day	Maximum Day	Average Day
% PTTW	11%	4%		
% Rated Capacity			11%	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 2020, there were 2 adverse test results/incidents in the Campbellville Drinking Water System.

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

Date	Location	Adverse Condition	Corrective Action	Notice of Issue Resolution
June 23, 2020	Distribution	PA confirmed Total Coliform	Resamples collected and results within acceptable limits	June 25, 2020
September 28, 2020	Distribution	PA confirmed Total Coliform	Resamples collected and results within acceptable limits	September 30, 2020

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 Hamilton's 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.

In November 2018, the City of Hamilton implemented a new Corrosion Control Program (CCP), approved by the MECP by utilizing low concentrations of orthophosphate. A letter outlining Hamilton's CCP was delivered to all affected Halton residents and select members of Council ahead of the implementation date.

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	220

13.2 2020 Flow Summary

The water flows in 2020 based on customer meter readings were as follows:

Total annual water consumption: 20,173 m^3
Average day consumption: 55 m^3

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 2020, there were no adverse test results/incidents in the Bridgeview Distribution System.

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 Hamilton's 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.

In November 2018, the City of Hamilton implemented a new Corrosion Control Program (CCP), approved by the MECP by utilizing low concentrations of orthophosphate. A letter outlining Hamilton's CCP was delivered to all affected Halton residents and select members of Council ahead of the implementation date.

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 2020 Flow Summary

The water flows in 2020 based on customer meter readings were as follows:

Total annual water consumption: 16,629 m
Average day consumption: 45 m^3

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 2020, there was one adverse test result/incident in the Snake Road Distribution System as summarized in Table 14-2.

Table 14-2 Adverse Test Results and Actions – Snake Road Distribution System

Date	Location	Adverse Condition	Corrective Action	Notice of Issue Resolution
July 13, 2020	Distribution	PA confirmed Total Coliform	Resamples collected and results within acceptable limits	July 17, 2020

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 two systems. Water is supplied by the City of Hamilton through an inter-connection to Hamilton's distribution system on Waterdown Road. There are approximately 105 homes and businesses in the North Aldershot system.

In November 2018, the City of Hamilton implemented a new Corrosion Control Program (CCP), approved by the MECP by utilizing low concentrations of orthophosphate. A letter outlining Hamilton's CCP was delivered to all affected Halton residents and select members of Council ahead of the implementation date.

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 2020 Flow Summary

The water flows in 2020 based on customer meter readings were as follows:

Total annual water consumption: 41,659 m^3
Average day consumption: 114 m^3

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 2020, there were no adverse test results/incidents in the North Aldershot Distribution System

16 Drinking Water System Inspections

During the 2020 MECP inspection cycle, 10 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. For inspections conducted in 2020, there were 3 identified incidents of non-compliance in the Halton Drinking Water Systems.

Georgetown Well Supply System

On March 2, 2020 the flow rate was increased to 38.3 L/s at the Cedarvale 1A well, exceeding the PTTW limit of 30.3 L/s. SCADA alarms did notify staff of the exceedance however it took a total of 39 seconds for the flow rate to be corrected and returned to under the PTTW limit of 30.3 L/s. This resulted in 312 L being pumped in excess of the permitted limit. This also exceeded the pumping rates for both L/s and L/m as outlined in the PTTW.

To ensure this does not happen in the future and to the Ministries satisfaction the following actions and safeguards were put in place:

- The facility shut down timer reduced to 10 seconds for alarms related to the PTTW;
- SCADA was configured not to allow flow entries above the permitted limit.

Due to the nature of this non-compliance, it did not impact the Georgetown Drinking Water System's overall rating.

South Halton Drinking Water System

On September 4th, 2020 the Headon Reservoir overflowed, with an estimated 1000-2000 L of potable water overflowing onto the ground and into the neighbouring creek. De-chlorination pucks were immediately added to the overflow site in the station, to minimize any environmental impact chlorinated drinking water may have on the environment.

To ensure this does not happen in the future and to the Ministries satisfaction the following actions and safeguards were put in place:

- In depth training of operations staff which included: communication training, improving logbook entries and a work instruction review;
- Where possible and needed, de-chlorination puck devices have been installed to eliminate any potential impact on the environment should an overflow occur again.

Due to the nature of this non-compliance, it did not impact the South Halton Drinking Water System's overall rating.

Milton Well Supply System

On September 22nd, 2019 an Ethernet communications card failed, resulting in data not being communicated and stored. Under normal operating circumstances this would have caused the Milton WTP to shut down, however information was not received to shut the plant down due to the failure. The facility was shut down manually, however some potable water was released to distribution.

To ensure this does not happen in the future and to the Ministry's satisfaction the following action and safeguard was put in place:

- All Ethernet cards in the Kelso WTP were pro-actively replaced using a devise level ring configuration creating a redundant path of communication should an Ethernet failure occur again.

17 Conclusions

The report confirms that Halton residents and businesses continue to enjoy reliable access to safe drinking water, and the Region is meeting the requirements of the *Safe Drinking Water Act*, 2002. Compliance with regulatory requirements, Municipal Drinking Water Licences and Permits to Take Water continue to be monitored through MECP Inspections, the Region's SCADA system, professional staff and regular reporting mechanisms.

In 2020, 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 on Halton's website at **halton.ca.**