Drinking Water Systems

Flow summary report 2024

Published March 2025

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
CT	contact time – used in determining level of disinfection treatment
DWWP	Drinking Water Works Permit
DWS	Drinking Water System
EC	E. coli
F3R	Form, Fit, Function, Reliability
GUDI	groundwater under the direct influence of surface water
KPI	Key Performance Indicators
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
RCM	Reliability Centered Maintenance
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 to residents in Burlington, Halton Hills, Milton and Oakville. Halton Region operates 11 drinking water systems that are governed by three municipal drinking water licences and 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*.

It includes information about the drinking water systems approvals, flow rates of the water supplied during the reporting period and a data comparison of the capacity of each system.

Key findings from the report include:

- Halton Region's water treatment and distribution facilities demonstrated excellent operational performance in 2024, achieving an overall average 99.62 per cent inspection rating.
- Halton Region's water systems produced more than 65,861 megalitres (ML) of safe, clean drinking water in 2024. This is the average equivalent of 180 ML of treated water per day, enough water to build over 3,500 professional hockey rinks, every day.
- In November of 2024, the drinking water source for parts of Georgetown changed from groundwater wells to Lake Ontario as the Georgetown Drinking Water System (DWS) was connected to the existing lake-based DWS. The Municipal Drinking Water Licences and Drinking Water Works Permits for Georgetown DWS and South Halton DWS amalgamated to form the Halton Region Drinking Water System. The Region of Halton Municipal Drinking Water Systems are now governed by 3 Licenses and associated Drinking Water Works Permits as opposed to the 4 that existed prior to the connection.
- In 2025, the Region will celebrate its 5th year anniversary of being the first Municipality in Canada to receive the Director's Awards from the American Water Works Association's Partnership for Safe Water Program for the Burloak, Burlington and Oakville Water Treatment Plants. These awards demonstrate our ongoing commitment to providing the highest quality drinking water possible. Halton will continue to improve and build on this achievement.
- The Region's Plant Maintenance "Reliability Centered Maintenance" Strategy continues to reduce water treatment asset risks through a combination of criticality analysis, tactical life-cycle asset management, adoption of advanced inspection technology and team based asset care activities.
- Over the past five years water plant assets have experienced a downward trend in failures and reactive costs, which has enabled the Region to extend the useful life of plant assets with great success.

Through these programs and partnerships, Halton Region continues to reliably provide high-quality, safe drinking water, now and into the future.

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

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 explains the reliability centered maintenance strategy and lists key performance indicators.

Section 18 concludes the report.

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.

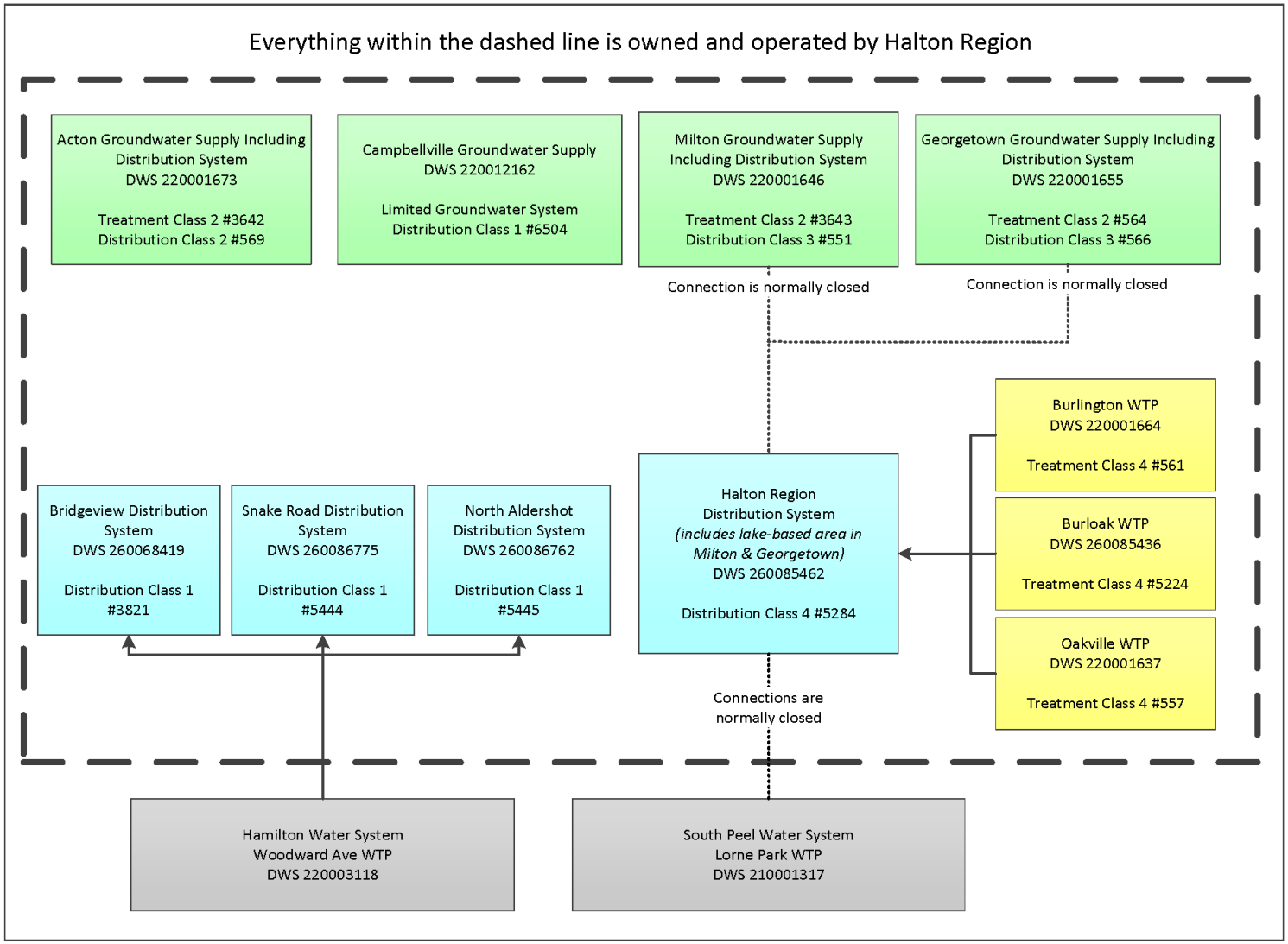
Table 2-1 Drinking Water System Annual Reports

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

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 analyses 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 the 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 2024 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(s) approval or if there is a problem with any flow monitoring device.

This annual flow report is prepared through the 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 65,861 ML of drinking water in 2024. On average, Halton produced 180 ML of treated water per day in 2024, enough water to build over 3,500 professional hockey rinks, every day.

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 sand ballasted clarification 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 Halton Region Distribution Subsystem.

Table 5-1 Burlington WTP General Information

Municipal Drinking Water Licence Drinking Water Works Permit	004-104 (Halton Region) 004-204
Drinking Water System Number	220001664
Classification	
Class Certificate Number	Treatment Class 4 561
Service Population	n/a – see Halton Region Distribution Subsystem
Permit to Take Water	
Number Expiry Date Water Taking Permitted	P-300-6148187785 November 12, 2031 291,000 m^3/d or 202,083 L/min. (equivalent)
Rated Capacity	263,000 m^3/d

5.2 2024 Flow Summary

A summary of the flows in 2024 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 2024

Month	Raw Water Flow m^3/d		Treated Water Flow m^3/d	
	Maximum Day	Average Day	Maximum Day	Average Day
January	80,046	74,410	73,212	66,891
February	75,336	72,643	68,095	65,812
March	93,374	73,667	82,898	64,788
April	89,305	75,695	77,824	65,487
May	106,263	87,152	94,165	76,609
June	133,662	105,365	119,952	93,001
July	130,001	110,309	114,514	97,300
August	140,814	116,677	123,324	102,379
September	121,462	98,162	107,131	85,960
October	124,828	86,674	108,247	75,454
November	88,000	75,896	78,890	65,980
December	97,517	77,144	87,606	67,258
Annual Average Day		**87,816**		**77,243**

Note: The shaded blocks denote the annual maximum daily flows for 2024.

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	48%	30%		
% Rated Capacity			47%	29%

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 2024, there were no adverse test results/incidents at the Burlington WTP.

Burlington Water Treatment Plant

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 sand ballasted clarification 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 Halton Region Distribution Subsystem.

Table 6-1 Oakville WTP General Information

Municipal Drinking Water Licence Drinking Water Works Permit	004-104 (Halton Region) 004-204
Drinking Water System Number	220001637
Classification	
Class Certificate Number	Treatment Class 4 557
Service Population	n/a - see Halton Region Distribution Subsystem
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 2024 Flow Summary

A summary of the flows in 2024 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 2024

Month	Raw Water Flow m^3/d[1]		Treated Water Flow m^3/d	
	Maximum Day	Average Day	Maximum Day	Average Day
January	47,863	43,067	45,276	40,405
February	54,523	43,932	51,424	41,090
March	49,978	43,764	47,875	40,923
April	49,238	43,944	46,129	40,680
May	72,379	55,011	67,714	50,933
June	80,474	63,121	75,724	58,086
July	74,955	54,257	69,615	48,565
August	86,755	66,148	81,430	60,599
September	104,530	66,181	99,201	60,706
October	57,456	46,215	51,882	41,885
November	55,767	45,910	52,723	42,692
December	48,833	42,493	45,992	39,453
Annual Average Day		**51,170**		**47,168**

Note: The shaded blocks denote the annual maximum daily flows for 2024.

[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	67%	33%		
% Rated Capacity			91%	43%

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 2024, there were no adverse test results/incidents at the Oakville WTP.

Oakville Water Treatment Plant

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 Halton Region Distribution Subsystem.

Table 7-1 Burloak WTP General Information

Municipal Drinking Water Licence Drinking Water Works Permit	004-104 (Halton Region) 004-204
Drinking Water System Number	260085436
Classification	
Class Certificate Number	Treatment Class 4 5224
Service Population	n/a - see Halton Region Distribution Subsystem
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 2024 Flow Summary

A summary of the flows in 2024 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 2024

Month	Raw Water Flow m^3/d		Treated Water Flow m^3/d	
	Maximum Day	Average Day	Maximum Day	Average Day
January	57,910	35,143	52,591	30,983
February	40,234	35,431	35,721	31,488
March	49,299	36,593	44,493	32,391
April	50,288	36,603	45,430	32,340
May	52,725	39,919	45,886	35,726
June	52,725	35,344	47,963	31,461
July	57,799	39,972	54,053	36,642
August	56,793	25,918	52,924	23,584
September	38,669	32,814	35,367	29,561
October	42,289	36,792	38,376	33,309
November	53,249	38,521	48,779	34,430
December	57,654	40,447	51,964	36,642
Annual Average Day		**36,125**		**32,380**

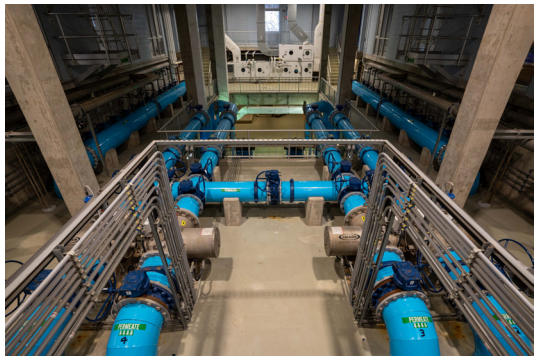
Note: The shaded blocks denote the annual maximum daily flows for 2024.

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	90%	56%		
% Rated Capacity			98%	59%

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 2024, there was one adverse test result/incident at the Burloak WTP as summarized in Table 7-4.



Burloak Water Treatment Plant

Table 7-4 Adverse Test Results and Actions - Burloak WTP

Date	Location	Adverse Condition	Corrective Action	Notice of Issue Resolution
August 28, 2024	Burloak WTP	Sodium = 25.4 mg/L Duplicate Sodium = 25.1 mg/L	Resamples collected and results within acceptable limits	August 29, 2024

8 Halton Region Distribution Subsystem

8.1 Water System Description

The Halton Region Distribution Subsystem is supplied by the Burlington, Oakville and Burloak WTP's. The Halton Region Distribution Subsystem serves Burlington, Oakville and parts of Milton and Halton Hills, and includes 16 reservoirs/storage tanks: Appleby Line, Ashgrove, Bailie, Beaufort, Tyandaga, Brant, Headon, Washburn, Waterdown, Kitchen, McCraney, Glenashton, Moore, Burnhamthorpe Tower, Third Line Reservoir and the Milton Tower.

In November of 2024, the drinking water source for parts of Georgetown changed from groundwater wells to Lake Ontario as the Georgetown Drinking Water System (DWS) was connected to the existing lake-based DWS. The Municipal Drinking Water Licences and Drinking Water Works Permits for Georgetown DWS and South Halton DWS amalgamated to form the Halton Region Drinking Water System.

As the Halton Region Subsystem is distribution only, it does not require a Permit to Take Water. Flows into the distribution subsystem are reported under the three water treatment plants, which provided the treated water in 2024.

Table 8-1 Halton Region Distribution Subsystem General Information

Municipal Drinking Water Licence Drinking Water Works Permit	004-104 (Halton Region) 004-204
Drinking Water System Number	260085462
Classification	
Class Certificate Number	Distribution Class 4 5284
Service Population	571,741

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 2024, there were three adverse test results/incidents in the Halton Region Distribution Subsystem as summarized in Table 8-2.

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

Date	Location	Adverse Condition	Corrective Action	Notice of Issue Resolution
September 19, 2024	Distribution	A confirmed Total Coliform	Resamples collected and results within acceptable limits	September 21, 2024
September 24, 2024	Distribution	PA confirmed Total Coliform Duplicate also PA confirmed Total Coliform	Resamples collected and results within acceptable limits	September 26, 2024
September 24, 2024	Distribution	PA confirmed Total Coliform	Resamples collected and results within acceptable limits	September 26, 2024

9 Milton Treatment and Distribution Subsystem

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 Steeles 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. The water flows by gravity from the surge tank to 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 Treatment and Distribution Subsystem General Information

Municipal Drinking Water Licence Drinking Water Works Permit	004-104 (Halton Region) 004-204	
Drinking Water System Number	220001646	
Classification		
Class	Treatment Class 2	Distribution Class 3
Certificate Number	3643	551
Service Population	24,281	
Permit to Take Water		
Number	87-P-3046	
Expiry Date	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 2024 Flow Summary

A summary of the flows in 2024 is provided in the following table (9-2). 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 in some reporting years. 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 Treatment and Distribution Subsystem Flow Summary 2024

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	6,974	6,070	526	467	6,511	5,246	6,525	5,604
February	6,987	6,095	514	472	6,476	5,615	6,499	5,624
March	8,535	5,876	528	414	7,521	5,418	8,071	5,462
April	7,380	5,930	520	492	7,441	5,621	6,910	5,438
May	8,401	6,810	546	512	8,285	6,186	7,864	6,298
June	9,972	7,256	674	600	9,358	6,449	9,391	6,656
July	8,659	7,514	689	578	8,353	7,035	7,997	6,936
August	8,427	6,892	1,062	753	7,921	6,040	7,823	6,139
September	7,827	6,562	785	751	6,907	5,815	7,827	6,562
October	7,629	5,960	918	787	7,095	5,213	6,827	5,172
November	7,196	5,735	897	794	6,579	5,007	6,307	4,942
December	6,335	5,734	621	552	6,088	5,249	5,792	5,182
Annual Average Day		**6,370**		**598**		**5,741**		**5,835**

Note: The shaded blocks denote the annual maximum daily flows for 2024.

The following tables (9-3 and 9-4) show the maximum day and average day raw water volumes for 2024 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	67%	42%		
% Rated Capacity			41%	26%

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

Walkers Line Well	Maximum Day Flow	Average Day Flow
% PTTW	33%	23%
% Rated Capacity	20%	11%

In 2024, 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 2024, there was one adverse test result/incident in the Milton Treatment and Distribution Subsystem as summarized in Table 9-5.

Table 9-5 Adverse Test Results and Actions – Milton Treatment and Distribution Subsystem

Date	Location	Adverse Condition	Corrective Action	Notice of Issue Resolution
July 16, 2024	Distribution	PA confirm E.coli/ Total Coliform	Resamples collected and results within acceptable limits	July 19, 2024

10 Georgetown Treatment and Distribution Subsystem

10.1 Water System Description

The Georgetown Treatment and Distribution Subsystem 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 Treatment and Distribution Subsystem General Information

Municipal Drinking Water Licence	004-104 (Halton Region)	
Drinking Water Works Permit	004-204	
Drinking Water System Number	220001655	
Classification		
Class	Treatment Class 2	Distribution Class 3
Certificate Number	564	566
Service Population	44,007	
Permit to Take Water		
Number	0736-CBMSHT	
Expiry Date	February 14, 2027	

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 2024 Flow Summary

A summary of the flows in 2024 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 Treatment and Distribution Subsystem Flow Summary 2024[2]

Month	Georgetown System Total Treated Flow m^3/d (GWTP Treated, PA 5, PA 6, 6B, LC)		Princess Anne Wells 5,6 and 6B m^3/d		Princess Anne Well 5 m^3/d		Princess Anne Well 6 m^3/d		Princess Anne Well 6B m^3/d		Lindsay Court Wells 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	14,873	13,545	9,411	5,573	2,866	2,011	5,428	1,768	7,674	1,793	4,790	4,140	4,790	2,331	4,310	1,809	5,070	4,090	4,016	3,832
February	14,259	13,647	6,636	5,408	3,023	2,207	5,003	1,612	4,540	1,588	4,818	4,368	4,818	2,564	4,301	1,804	4,243	4,071	4,018	3,872
March	14,221	13,261	6,028	5,141	3,082	2,359	4,270	1,425	4,212	1,358	4,294	1,644	4,645	2,562	4,294	1,644	4,248	4,083	4,080	3,913
April	16,875	13,446	8,635	5,421	3,109	2,239	4,549	1,504	6,718	1,679	4,702	4,084	4,622	1,315	4,294	2,769	4,723	4,139	4,418	3,940
May	16,258	14,565	8,410	6,552	2,932	1,594	5,519	2,248	6,440	2,710	5,175	4,487	5,175	2,489	4,292	1,998	4,474	3,676	3,978	3,526
June	18,658	15,179	12,522	8,360	2,503	1,021	10,026	2,898	12,522	4,441	6,035	5,011	6,035	3,724	4,297	1,287	4,147	3,649	3,937	1,809
July	17,890	15,709	10,650	7,361	2,521	1,369	9,042	2,812	10,650	3,180	6,033	4,880	6,033	2,732	5,178	2,148	6,587	3,649	5,671	3,468
August	19,327	15,494	6,595	6,887	3,888	1,732	3,127	2,820	6,595	2,335	6,034	5,107	6,034	3,298	4,306	1,808	3,888	3,675	3,856	3,500
September	17,291	15,018	9,203	6,659	3,889	1,748	6,064	1,736	9,203	3,175	6,036	5,105	6,036	3,184	4,307	1,922	3,974	3,447	3,939	3,253
October	14,684	13,790	6,570	5,344	3,888	2,906	3,862	1,100	4,414	1,338	6,034	4,649	6,034	2,555	4,312	2,093	4,004	3,934	3,973	3,797
November	13,976	10,700	6,415	4,044	4,051	1,385	4,158	1,372	3,820	1,288	4,648	2,821	4,483	1,515	4,298	1,306	4,242	4,028	4,094	3,835
December	11,625	9,896	6,913	3,953	231	25	5,721	2,025	6,913	1,902	3,443	2,107	2,725	750	3,443	1,357	4,061	4,034	4,004	3,836
Annual Average Day		**13,687**		**5,892**		**1,716**		**1,943**		**2,232**		**4,034**		**2,418**		**1,829**		**3,873**		**3,548**

Note: The shaded blocks denote the annual maximum daily flows for 2024.

[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 2024 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	52%	31%		
% Rated Capacity			52%	27%

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	85%	87% (Wells 5, 6 and 6B combined)
% Rated Capacity	85%	36%
Princess Anne Well 6		
% PTTW	77%	87% (Wells 5, 6 and 6B combined)
% Rated Capacity	77%	15%
Princess Anne Well 6B		
% PTTW	96%	87% (Wells 5, 6 and 6B combined)
% Rated Capacity	96%	17%
Lindsay Court Well 9		
% PTTW	92% (Wells 9 and 9B combined)	37%
% Rated Capacity	92%	37%
Lindsay Court Well 9B		
% PTTW	92% (Wells 9 and 9B combined)	28%
% Rated Capacity	79%	28%

[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 Treatment and Distribution Subsystem. and the flow comparison chart.

In 2024, 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 2024, there was one adverse test result/incident in the Georgetown Treatment and Distribution Subsystem as summarized in Table 10-5.

Table 10-5 Adverse Test Results and Actions - Georgetown Treatment and Distribution Subsystem

Date	Location	Adverse Condition	Corrective Action	Notice of Issue Resolution
October 28, 2024	Distribution	TC = 66 CFU/100mL Duplicate TC = 64 CFU/100mL	Resamples collected and results within acceptable limits	November 1, 2024

Georgetown Water Treatment Plant

11 Acton Drinking Water 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 which contribute to log removal/inactivation credits for some pathogens.

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 Drinking 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	10,294	

Table 11-1 Continued

Permit to Take Water	
Number	6520-CB7STU
Expiry Date	December 31, 2031.
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 2024 Flow Summary

A summary of the flows in 2024 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 Drinking Water System Flow Summary 2024[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	5,296	2,838	1,380	659	688	403	691	404	1,379	807	2,536	1,373	2,536	1,373
February	3,340	2,721	825	554	604	384	605	386	1,208	770	1,516	1,397	1,516	1,397
March	3,549	2,871	1,382	648	649	395	651	396	1,300	791	1,493	1,433	1,493	1,433
April	3,763	3,023	1,728	1,051	691	435	691	73	1,380	508	1,511	1,464	1,511	1,464
May	3,892	3,194	1,729	1,284	691	441	0	0	691	441	1,809	1,469	1,809	1,469
June	3,897	3,237	1,728	1,241	727	462	673	75	1,344	537	1,754	1,459	1,754	1,459
July	3,817	3,119	1,346	543	692	581	691	582	1,383	1,162	1,504	1,413	1,504	1,413
August	3,724	3,047	1,794	302	693	649	691	650	1,384	1,299	1,523	1,446	1,523	1,446
September	3,767	3,099	1,210	376	693	625	691	625	1,384	1,250	1,500	1,473	1,500	1,473
October	3,374	2,964	1,210	279	692	610	691	611	1,383	1,221	1,508	1,463	1,508	1,463
November	4,232	3,028	1,382	437	718	562	719	563	1,437	1,125	1,821	1,465	1,821	1,465
December	3,710	2,963	1,382	507	692	490	691	491	1,383	980	1,500	1,475	1,500	1,475
Annual Average Day		**3,009**		**657**		**503**		**405**		**908**		**1,444**		**1,444**

Note: The shaded blocks denote the annual maximum daily flows for 2024.

[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 2024 to the permitted water taking (PTTW) and the rated capacity.

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

Facility	Maximum Day Volume	Average Day Volume
Davidson Wells		
% PTTW	72%	26%
% Rated Capacity	72%	26%
Fourth Line Well A		
% PTTW	84% (Wells A and B combined)	38%
% Rated Capacity	84% (Wells A and B combined)	29%
Fourth Line Well B		
% PTTW	84% (Wells A and B combined)	31%
% Rated Capacity	84% (Wells A and B combined)	24%
Prospect Park		
% PTTW	75% (Wells 1 and 2 combined)	42%
% Rated Capacity	75% (Wells 1 and 2 combined)	42%

[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 Drinking 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 2024, there were no adverse test results/incidents in the Acton Drinking Water System.

12 Campbellville Drinking Water System

12.1 Water System Description

The Campbellville Drinking Water System, 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 Drinking 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	142
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 2024 Flow Summary

A summary of the flows in 2024 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 Drinking Water System Flows 2024

Month	**Campbellville Flow m^3/d**	
	Maximum Day	Average. Day
January	25	21
February	24	21
March	26	21
April	29	23
May	40	26
June	40	27
July	42	28
August	42	31
September	38	29
October	31	23
November	25	20
December	27	22
Annual Average Day		**24**

Note: The shaded blocks denote the annual maximum daily flows for 2024.

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	8%	5%		
% Rated Capacity			8%	5%

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 2024, there were no adverse test results/incidents in the Campbellville Drinking Water System.

13 Bridgeview Distribution Subsystem

13.1 Water System Description

The Bridgeview Distribution Subsystem is located at the west end of the City of Burlington, but it is not connected to the Halton Region Distribution Subsystem. Water is supplied by the City of Hamilton through an interconnection 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 Subsystem 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 Subsystem General Information

Municipal Drinking Water Licence Drinking Water Works Permit	004-104 (Halton Region) 004-204
Drinking Water System Number	260068419
Classification	
Class Certificate Number	Distribution Class 1 3821
Service Population	234

13.2 2024 Flow Summary

The water flows in 2024 based on customer meter readings were as follows:

Total annual water consumption: 13,944 m^3

Average day consumption: 38 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 2024, there were no adverse test results/incidents in the Bridgeview Distribution Subsystem.

14 Snake Road Distribution Subsystem

14.1 Water System Description

The Snake Road Distribution Subsystem is located at the north end of the City of Burlington, but it is not connected to the Halton Region Distribution Subsystem. 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 Subsystem 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 Subsystem General Information

Municipal Drinking Water Licence Drinking Water Works Permit	004-104 (Halton Region) 004-204
Drinking Water System Number	260086775
Classification	
Class Certificate Number	Distribution Class 1 5444
Service Population	268

14.2 2024 Flow Summary

The water flows in 2024 based on customer meter readings were as follows:

Total annual water consumption: 17,224 m^3
Average day consumption: 47 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 2024, there was one adverse test results/incidents in the Snake Road Distribution Subsystem as summarized in Table 14-2.

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

Date	Location	Adverse Condition	Corrective Action	Notice of Issue Resolution
July 18, 2024	Distribution	PA confirmed Total Coliform	Resamples collected and results within acceptable limits	July 20, 2024

15 North Aldershot Distribution Subsystem

15.1 Water System Description

The North Aldershot Distribution Subsystem is located in the north end of the City of Burlington. The system is connected to the Halton Region Distribution Subsystem; however, the connections are normally closed, thus isolating the two subsystems. 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 Subsystem General Information

Municipal Drinking Water Licence Drinking Water Works Permit	004-104 (Halton Region) 004-204
Drinking Water System Number	260086762
Classification	
Class Certificate Number	Distribution Class 1 5445
Service Population	287

15.2 2024 Flow Summary

The water flows in 2024 based on customer meter readings were as follows:

Total annual water consumption: 39,467 m^3
Average day consumption: 108 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 2024, there were no adverse test results/incidents in the North Aldershot Distribution Subsystem.

16 Drinking Water System Inspections

During the 2024 MECP inspection cycle, 11 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. There was one occurrence of regulatory non-compliance identified in the Halton Region Drinking Water System inspections.

16.1 Halton Region Distribution Subsystem

During the 2024 MECP drinking water inspection of the Halton Region Distribution Subsystem it was identified that four 72-hour data review records were not completed. The 72-hour review is a requirement of O.Reg. 170/03 condition 6.5 titled, Continuous Monitoring. As a result of this finding, Halton took corrective action to prevent a future recurrence.

To prevent recurrence, and to the Ministry's satisfaction, a process solution has been implemented. The compliance trend report review task will now be assigned to Halton's automated managed workflow system. The report will be automatically generated every 24 hours, 7 days a week and sent to all the Operational Staff. It will be the responsibility of the OIC SCADA (designated role on each shift) to review the trends/test results and sign off once the review has been completed.

If the compliance trends report in the assigned workflow are not reviewed within a 6-hour window (beginning at 7am), a notification will be sent automatically to the Superintendent and both Team Supervisors of Water Distribution Stations. The Superintendent and Team Supervisors have 2 hours to ensure that the trends are reviewed. If the trends are not reviewed within the 2-hour window, a notification will be sent to the Manager of Stations. This process will continue every 2 hours until the review process has been completed.

17 Reliability Centered Maintenance

The "reliability centered maintenance" strategy implemented by the treatment division continues to decrease water treatment asset risks through a combination of criticality analysis, tactical lifecycle asset management, reliability engineering, and advanced work planning and control activities. These efforts have resulted in a downward trend in failures over the past five years and have allowed maintenance to redirect resources from reactive work to proactive activities, thereby further increasing asset reliability.

The importance of effective maintenance and reliability practices cannot be overstated when it comes to ensuring the safe and high-quality production of water in treatment plants.

In Canada, strict regulations are in place to guarantee the safety and quality of the water produced. The region of Halton, in particular, has emerged as a leader in this field of work, utilizing and expanding its maintenance and reliability functions to meet the rigorous requirements with great success.

In summary, the "reliability centered maintenance" strategy, combined with best practices in maintenance and reliability, enables Halton to meet strict regulations for water quality and safety, increase the reliability of assets, and ensure that residents and communities have access to safe and clean water, while also demonstrating a commitment to environmental sustainability.

2024 – Reliability Maintenance KPI's

% Adherence to Plan (All Work Types)	% Planned of Total Complete (All Work Types)	% Proactive Order Types of Total Complete	% Water Quality PM Complete of Scheduled
90%	95%	96%	100%

Work Order Count Completed (All Work Types)	Total Scheduled Backlog Count (Cumulative)	Total Backlog (Year-end)	Breakdown count as a per centage of all work types
6544	198	361	1.5%

18 Conclusion

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 2024, all regulatory requirements related to water quality were met but there was a single incident of noncompliance observed related to having records available to verify that all continuous monitoring data was examined by an operator within 72 hours. The Region's average compliance rating from the MECP for all Municipal drinking water inspections in 2024 was 99.62%.

The Public Works Department in Halton has built a "one team" culture bringing together maintenance, engineering, operations and support staff to work as one. This approach aligns with the Partnership for Safe Water and optimization program capable plant concept. Teamwork within Halton has been the catalyst for providing clean, safe and reliable drinking water and excellent customer service to our residents and businesses and, with the partnership firmly implanted in our strategic vision, this will continue well into the future.

In 2025, the Region will celebrate its 5th year anniversary of being the first Municipality in Canada to receive the Director's Awards from the American Water Works Association's Partnership for Safe Water Program for the Burloak, Burlington and Oakville Water Treatment Plants. These awards demonstrate our ongoing commitment to providing the highest quality drinking water possible. Halton will continue to improve and build on this achievement.

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**.