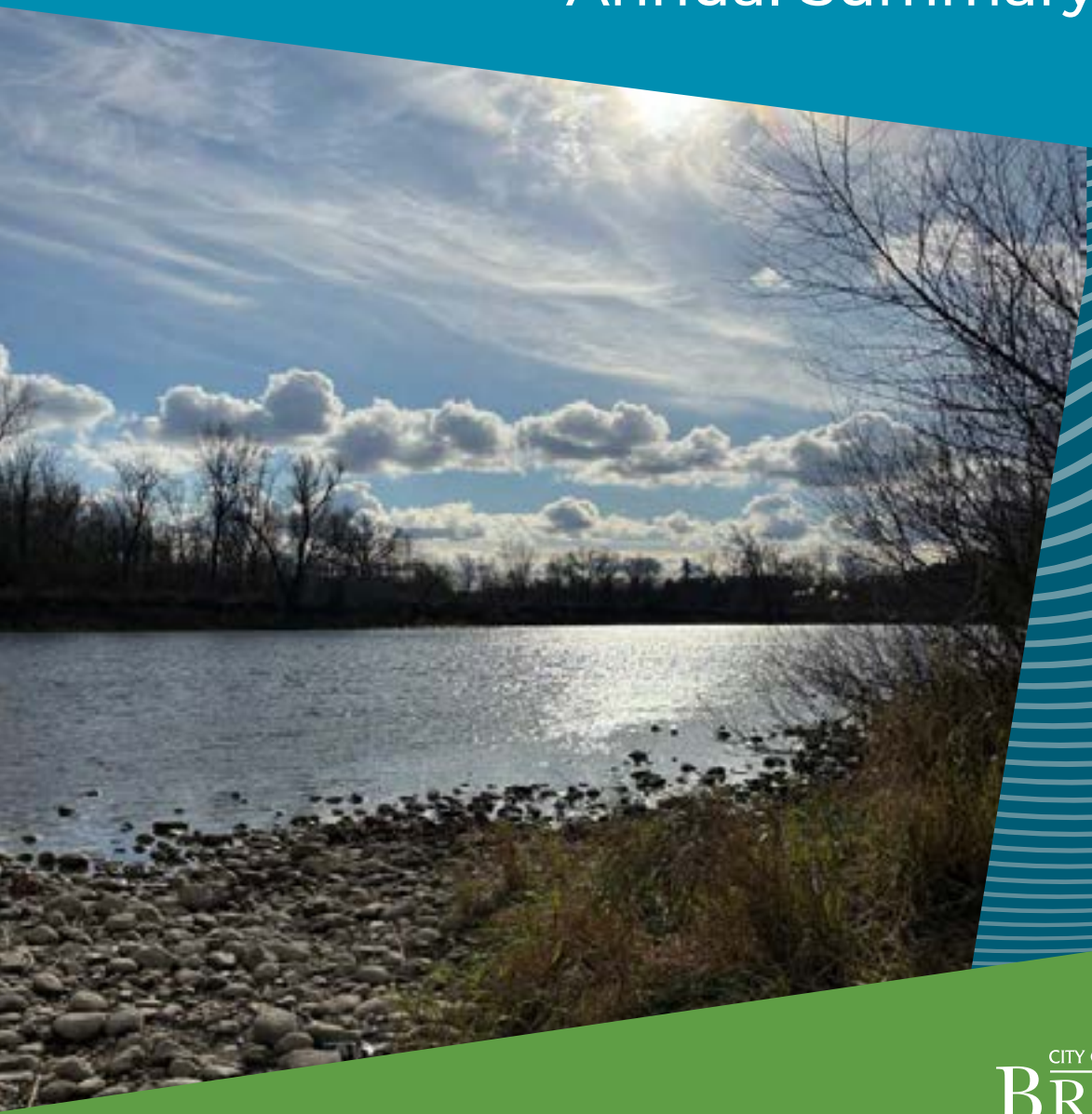
Appendix 1

2024 City of Brantford Water System

Annual Summary Report



CITY OF BRANTFORD

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2024 Annual Summary Report – Executive Summary

The City of Brantford is committed to providing our residents with a safe and adequate supply of drinking water that meets or surpasses applicable regulatory requirements in the Province of Ontario. The information in the Annual Summary Report is intended to inform the members of Council and the public about the current state of the Drinking Water System and to demonstrate the high quality of our drinking water.

The Brantford Water System is owned and operated by the Corporation of the City of Brantford. The raw water supply to produce drinking water is withdrawn from the Grand River through the Holmedale Canal. The raw water is treated at the Holmedale Water Treatment Plant before it is distributed through the extensive underground water pipe network. The water treatment plant is a state-of-the-art facility with the highest Class IV rating and is designed to produce up to 100 million liters per day (MLD) of drinking water. There are three reservoirs in the network in addition to an in-plant reservoir, one booster pumping station and two elevated tanks that are used in the distribution system to equalize water demand, to reduce pressure fluctuations and to provide adequate reserves for firefighting, power outages and other emergencies.

The municipal drinking water must satisfy the provincial requirements of O. Reg. 170/03 under the Safe Drinking Water Act, 2002 and additional requirements outlined in the Municipal Drinking Water License. The drinking water was tested for various operational, biological and chemical (inorganic and organic) parameters using a certified laboratory and all the parameters were within the regulatory limits. In 2024, 1704 bacteriological samples were tested throughout the city and 3 sample results were adverse and one sample was adverse for a chemical parameter, N-nitrosodimethylamine, or NDMA. Appropriate corrective actions were taken under the oversight of the Brant County Health Unit (now Grand Erie Public Health) following provincial regulations.

The quantity of raw water taken under the Permit to Take Water and the treated water produced under the Municipal Drinking Water License were in compliance with Provincial regulations.

The Ministry of Environment, Conservation and Parks (MECP) performs an annual inspection of the City's water treatment plant and the distribution system. Brantford's Drinking Water System received an impressive score of 100% in 2024.

A. Background

The information in the Annual Summary Report is intended to inform members of Council and the public about the current state of the Drinking Water System and demonstrate that high quality drinking water is continually supplied to consumers.

This report has been prepared in accordance with the terms and requirements set out in the Safe Drinking Water Act (2002), as Section 11 – Annual Reports and Schedule 22 – Summary Reports of Ontario Regulation 170/03. It covers the period from January 1st to December 31st, 2024.

The 2024 Annual Summary Report will be available to the public without charge, beginning March 31st, 2025. A copy of this report can be obtained via the Internet (www.brantford.ca) and at Brantford Customer Service by contacting (519)759-4150.

B. Description of Drinking Water System

Table 1: Description of the City of Brantford Drinking Water System

Water System Element	Details
Drinking Water System Number	#220003564
Owner	The Corporation of the City of Brantford
Classification	Large Municipal Residential
Treatment	Class IV
Distribution	Class III
Raw Water Supply	Grand River (Holmedale Canal)
DWS Location	324 Grand River Ave.
Municipal Drinking Water License (MDWL)	063-101 Issue # 9, Issued: October 30th, 2024
Drinking Water Works Permit (DWWP)	#063-201 Issue # 7, Issued: October 30th, 2024
Permit to Take Water	#2375-BLHMW5
Bulk Water Receiving Customer	The Corporation of the County of Brant. Town of Cainsville Distribution System (Drinking Water System #: 260002616, Class I) which is owned and managed by the County of Brant.

The City of Brantford Water System is owned and operated by the Corporation of the City of Brantford. The Drinking Water System is a Large Municipal Residential System consisting of a Class IV Water Treatment Plant (Holmedale Water Treatment Plant) and a Class III Distribution System. (Drinking Water System Number: 220003564, Municipal Drinking Water License (MDWL) 063-101 Issue # 9, Issued on October 30th, 2024, Drinking Water Works Permit (DWWP) #063-201 Issue # 7, Issued on October 30th, 2024).

The Holmedale Water Treatment Plant is located at 324 Grand River Avenue in Brantford, Ontario. The City's raw water supply is drawn from the Grand River through the Holmedale Canal. The City is responsible for the overall management of the production and distribution of Brantford's drinking water to homes and businesses across the city. Specifically, this includes treatment of Grand River water, maintenance of the plant, distribution and metering systems, expansion of the network systems and meeting and/or exceeding the applicable regulatory requirements. The water treatment plant is designed to produce drinking water up to 100 million liters per day (MLD). The volume of water permitted to be taken from the Grand River for drinking water supply is up to 260 million liters per day (MLD) (Permit to Take Water #2375-BLHMW5 Issued on May 8th, 2017, expires on May 31st, 2027). The water treatment plant contains the following process units: Screening, coagulation, sand-ballasted flocculation (John Meunier's Actiflo©), sedimentation, ozonation, biological filtration, UV disinfection, chlorination, chloramination and fluoridation.

Three reservoirs (in addition to an in-plant reservoir), one booster pumping station and two elevated tanks are used in the distribution system to equalize water demand, to reduce pressure fluctuations and to provide reserves for firefighting, power outages and other emergencies. A Residue Management Facility (RMF) treats the wastewater generated in the water production process for disposal in an environmentally sound manner. Wastewater treatment consists of concentrating the wastewater by three gravity settler thickeners and dewatering by two belt filter presses. Dewatered waste (sludge) is disposed at the Brantford Landfill.

The City of Brantford Water System is the water service provider to the Town of Cainsville Distribution System (Drinking Water System #:260002616, Class I) which is owned and managed by the County of Brant. The Tutela Heights area annexed by the City in 2017 was served by the County of Brant from their Mount Pleasant well water system for the majority of 2024. Connection of the Tutela Heights area to the City's water distribution system (disconnect from the Mount Pleasant well water system) was completed in January 2025.

C. List of Water Treatment Chemicals Used

Table 2: Water Treatment Chemicals

Chemical Name	Chemical Use
Polyaluminum chloride	Primary Coagulant
Flopam AN 934 PWG	Settling Aid
Microsand	Settling Aid
Liquid oxygen	Primary Chemical for Ozone Generation
Chlorine gas	Primary Disinfectant
Ammonia gas	Used in combination with free chlorine for secondary disinfection
Hydrofluosilicic Acid	Fluoridation
Sulfur dioxide gas	Dechlorination Chemical

D. Major Expenses

To maintain the water assets in optimal condition, the City regularly evaluates the condition and performance of the assets and plans upgrades accordingly with the 10-year capital program. Various critical capital projects delivered in 2024 are listed below.

Table 3: Major Expenses

Description of the Project	Cost
SCADA cybersecurity, infrastructure, and process upgrades	$293,477
Northwest reservoir inspection and remedial work	$35,495
Ozone analyzer replacements	$34,507
Actiflo improvements	$78,012
Total Expenses	$474,906

E. Summary of Test Results Required Under O.Reg 170/03

i) Operational Testing Required Under Schedule 7

Appendix A summarizes the Operational Testing required under Schedule 7. Water quality tests were conducted at the required frequency and all results were within compliance limits in 2024.

ii) Bacteriological Testing Required Under Schedule 10

Table 4 summarizes the Bacteriological Testing required under Schedule 10. Bacteriological tests were conducted at the required frequency. Adverse results are summarized in Section F of this report. All corrective actions were taken as per provincial requirements and guidelines.

Table 4: Results from Bacteriological Testing Required Under Schedule 10

Source	Number of Samples	Range of Total Coliform (colonies per 100mL)	Range of E.Coli (colonies per 100mL)	Range of Background (colonies per 100mL)	Range of HPC (colonies per mL)	Number of Samples Tested for HPC	Percentage of Samples Tested for HPC
Raw	55	60-152,000	0-2,000	80-228,000	80-100,000	55	100%
Treated	55	0	0	0	0-3	54	100%
Distribution	1651	0-2	0	0-65	0-11	831	50.3%

*General bacteria population expressed as Background
**HPC – Heterotrophic Plate Count – General bacteria population expressed as colony counts on a heterotrophic plate count
Regulatory Limits for Treated and Distribution Samples: Total Coliform <1 colony/100mL, E. Coli <1 colony/100mL, E. Coli - <1colony/100mL

iii) Summary of Inorganic Results Required Under Schedule 23

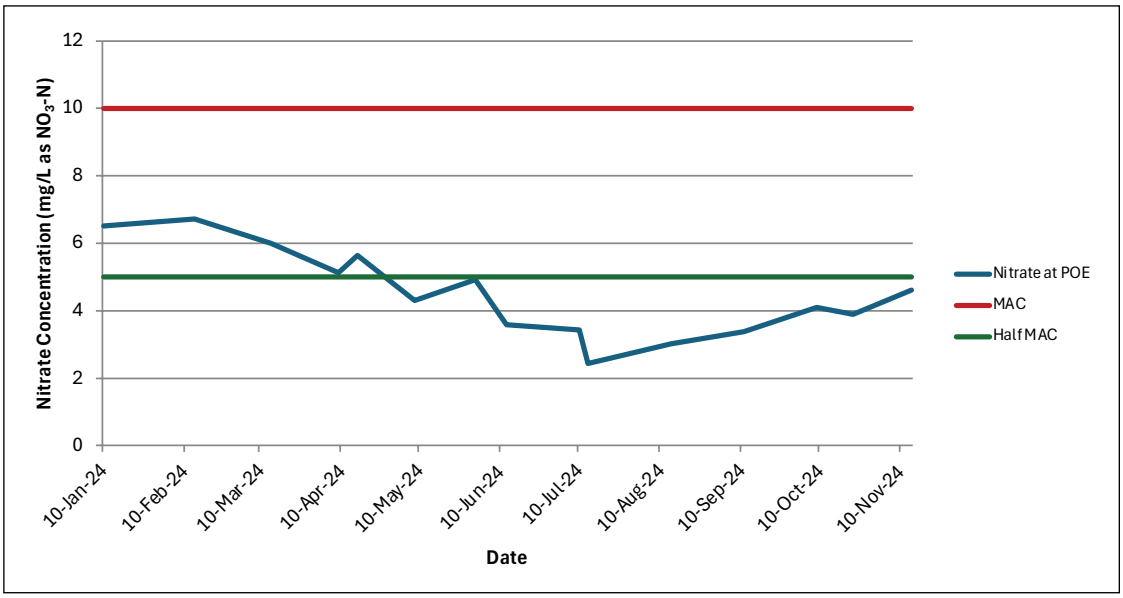
Appendix B summarizes the Inorganic parameter testing results required under Schedule 23; Samples were tested at the required frequency and all results where within compliance limits in 2024.

Nitrates

After a gradual rise in quarterly nitrate sampling results exceeding half of the Maximum Acceptable Concentration (MAC-10 mg/L, half-MAC 5 mg/L), the City voluntarily increased the frequency of Point of Entry (POE) and distribution system sampling. Data trending demonstrates nitrate levels tend to be higher in the cold winter months due to the reduced biological activity in the river that consumes nitrate.

The 2024 monthly nitrate sampling data indicates that the nitrate concentration in the river exceeded half of the MAC during six months (6 samples) in 2024, from January until May and increased again in December. The average nitrate concentration at the POE was 4.58 mg/L and the maximum was 6.72 mg/L.

Figure 1: Nitrate Concentration at the Point of Entry



Nitrates in the Grand River are a result of the cumulative inputs from rural non-point sources, urban runoff and wastewater discharges upstream of the City of Brantford water treatment plant .[1]

No corrective actions are required by the City when a water quality parameter level is between half its MAC and the MAC. However, as a proactive measure, City staff is planning for the possibility that the nitrate concentration in the river could exceed the MAC at some point in the future. An emergency response procedure has been developed that includes an online nitrate analyzer that will be installed at the head gates in early 2025. Furthermore, daily process nitrate sampling has been added to the required tests for the treatment operator in 2025 and staff are in the process of securing a secondary water source or treatment methodology to remove nitrates from the water to further mitigate the risk of exceeding the MAC.

A detailed summary of important information related to nitrate levels in drinking water and actions being taken to protect public health can be accessed at Brantford.ca/Nitrate.

1 GRCA Board Report – Update on Water Quality in the Grand River p. 3/5

iv) Summary of Organic Results required under Schedule 24

Appendix C summarizes the Organic parameters testing results required under Schedule 24; Samples were tested at the required frequency and all results where within compliance limits in 2024.

v) Summary of the results of tests required under the Municipal Drinking Water License (MDWL):

Under the City of Brantford Water System's Municipal Drinking Water License, several parameters are required to be tested at varying frequencies and locations throughout the water treatment process and distribution system. Parameters tested include Lead, N-Nitrosodimethylamine (NDMA), Bromate, Microcystin and Total Suspended Solids (TSS).

Health Related Parameter - Lead

Table 5 summarizes the lead samples tested before service line replacement and the regulatory lead sampling requirement detailed in the License. The distribution system lead sample result was representative of the drinking water with results well below the MAC of 10 µg/L, while the residential samples taken from homes supplied by lead water service pipes had variable results with some of the results exceeding the MAC.

The City's Lead Reduction Plan (LRP) main strategy for mitigating lead in drinking water is replacing old lead water service pipes. After replacement, a lead sample is tested to assess the performance of this strategy. The results unequivocally demonstrate that replacing lead water services reduces the concentration of lead in the tap water well below the provincial limit. It is to be noted that the City provides free funding of up to $1500 per water service to help with the cost of replacing a lead water service on the private property. The City also offers a loan of up to $3,000 for eligible work. In 2024, forty-one (41) residents benefited from the LRP financial incentives. In total, the grant cost $61,500 and the loan cost $32,218 in 2024. Of the forty-one (41) residents who applied for the grant, only eleven (11) also opted for the loan.

Table 5: Lead Sampling Results Summary

Sampling Locations	Number of Sampling Points Tested	Number of Sampling Points Required by Licence	Minimum (µg/L)	Maximum (µg/L)	Average (µg/L)	pH	Alkalinity (mg/L as $CaCO_3$)
Distribution	1	1	0.45	045	0.45	7.38	190
Non-residential	1	0	2.36	4.07	2.77	7.53	N/A*
Residential	85	20	0.03	58.2	6.65	7.39	N/A*
After Replacement	46	N/A*	0.04	5.44	0.60	7.45	N/A*

* N/A =Not Applicable

Health Related Parameter – Bromate

The monthly bromate testing at the POE is a requirement under the License. The results are summarized in Table 6. All the results were below the MAC of 0.01 mg/L.

Table 6: Summary of Bromate Test Results

Month	Bromate (mg/L)	Within Regulatory Limit?
January	0.005*	Yes
February	0.005*	Yes
March	0.005*	Yes
April	0.005*	Yes
May	0.005*	Yes
June	0.006	Yes
July	0.005*	Yes
August	0.005*	Yes
September	0.005*	Yes
October	0.006	Yes
November	0.005*	Yes
December	0.005*	Yes
Annual Average	0.005	Yes

*result was less than the method detection limit

Health Related Parameter – N-Nitrosodimethyamine (NDMA)

The quarterly NDMA testing from the distribution system is a requirement under the License. The NDMA results for 2024 include additional precautionary sampling from the water transfer in Tutela Heights. The results are summarized in Table 7 with the POE for comparison. Testing result for one sample, taken prior to supplying water to homes, showed above the regulatory limit, however, flushing and resampling result showed that the water met the regulatory limit.

Table 7: Summary of NDMA Test Results

Sample	POE (µg/L)	Distribution (µg/L)	Within Regulatory Limit?
First Quarter	0.0009*	0.0009	Yes
Second Quarter	0.0009*	0.0015	Yes
Third Quarter	0.0009*	0.0023	Yes
Fourth Quarter	0.0009*	0.0011	Yes
Tutela Heights 1	N/A	0.0095	No
Tutela Heights 1 Resample	N/A	0.0012	Yes
Tutela Heights 2	N/A	0.0009*	Yes
Tutela Heights 3	N/A	0.0010	Yes
Tutela Heights 4	N/A	0.0016	Yes
Tutela Heights 5	N/A	0.0018	Yes
Minimum	0.0009	0.0009	Yes
Maximum	0.0009	0.0095	No
Average	0.0009	0.0022	Yes

*result was less than the method detection limit

Algae Management Plan – Microcystin

Microcystin testing frequency is weekly on raw water and monthly at the POE from June 1 until October 31st. All results measured in 2024 had a microcystin concentration lower than the method detection limit.

Environmental Discharge Parameter - Residue Management Facility – Total Suspended Solids (TSS)

Under the City of Brantford Water System's License, the annual average concentration of TSS discharged from the RMF thickeners must be below 25 mg/L. Table 8 outlines the Monthly Average TSS for 2024. Each month was well below the 25 mg/L compliance limit with an annual average of 3.53 mg/L for 2024.

Table 8: Monthly Average TSS (mg/L)

Month	TSS (mg/L)	Within Regulatory Limit?
January	3.90	Yes
February	2.30	Yes
March	4.10	Yes
April	2.80	Yes
May	3.40	Yes
June	3.00	Yes
July	3.80	Yes
August	3.60	Yes
September	3.60	Yes
October	4.00	Yes
November	3.20	Yes
December	4.60	Yes
Annual Average	3.53	Yes

F. Summary of Reporting Adverse Test Results and Other Problems
(Schedule 16)

i) Adverse Bacteriological or Combined Chlorine Residual Results and Corrective Actions Results

In 2024, out of the 1704 bacteriological samples tested throughout the City, 14 sample results were adverse in 10 different incidents. Corrective actions were taken as per Ontario Regulation 170/03 and under the direction of the Brant County Health Unit. Details of the adverse sample results and corrective actions to ensure safe drinking water quality are described below:

Table 9: Summary of Adverse Water Quality Incidents, Bacteriological or Combined Chlorine

Location	Date	Adverse Water Quality Indicator (AWQI)	Corrective Actions
Colborne St. W	April 15th, 2024	Total Coliform 2 cfu/100mL	The sample collected following a permanent connection failed with 2 cfu/100mL. The water main was flushed and resampled and all subsequent resamples passed.
15-17 Webling St.	August 26th, 2024	Total Coliform 2 cfu/100mL	The sample collected following the installation of a new water service failed with 2 cfu/100mL. The water main was flushed and resampled and all subsequent resamples passed.
Macklin Sample Station	December 2nd, 2024	Total Coliform 1 cfu/100mL	A routine sample collected on December 2nd, 2024, was adverse for total coliform with 1 cfu/100mL. The water main was flushed and resampled and all subsequent resamples passed.

Bacteriological samples were collected until all results were negative and the drinking water was confirmed safe.
"cfu" stands for colony-forming unit which is a unit used to measure viable bacterial cell numbers.

ii) Adverse Chemical Results and Corrective Actions

Sodium

Samples collected from treated water and distribution system had an annual sodium average of 49.8 mg/L and 54.0 mg/L respectively. According to O.Reg 170/03, despite an aesthetic objective of 200 mg/L, any concentration above 20 mg/L is considered an adverse result. The City of Brantford Water System is required to report the results to the Ministry of Environment, Conservation and Parks (MECP) and the Brant County Health Unit (BCHU) once every 57 months. The sodium results were reported to both agencies in August 2022. Sodium concentration in the City's drinking water supply reflects the level found in the Grand River and cannot be removed by conventional water treatment methods.

N-Nitrosodimethylamine (NDMA)

During the transfer of water source to the Tutela Heights area, water quality samples were collected at the various stages of the transfer. NDMA was tested on the samples collected from the initial phase of the transfer to assess disinfection byproduct formation since the city uses a different form of secondary disinfectant than the County of Brant (Mount Pleasant). A sample collected on October 28th, 2024, from a fire hydrant had test results for NDMA of 0.0095 µg/L. The maximum acceptable concentration for NDMA is 0.009 µg/L. Additional samples were collected and tested according to O. Reg 170/03, and all resamples were low and comparable to city water.

iii) Non-Compliance Events with Provincial Regulations, Municipal Drinking Water License, Municipal Drinking Water Works Permit, and Other Official Documents

No non-compliance events were reported in 2024.

After reviewing the Drinking Water System, the MECP issued a score of 100.00% for the 2024 Brantford Drinking Water System Annual Inspection.

G. Holmedale Water Treatment Plant Flows

i) Drinking Water Flows

According to the City of Brantford Water System's Municipal Drinking Water License (Schedule C), the maximum daily volume of treated water that flows from the Holmedale Water Treatment Plant into the distribution system must not exceed 100 MLD.

At the Holmedale Water Treatment Plant, the treated water flow is measured by continuous on-line flow meters and monitored and controlled via a Supervisor Control and Data Acquisition (SCADA) computer system. The daily average flow for 2024 was 33.31 MLD.

Figure 2 outlines the monthly average daily flow and maximum total daily flow of treated water for the Holmedale Water Treatment Plant in 2024. The monthly average daily flow was calculated by averaging the total daily flows for a given month. The monthly maximum daily flow corresponds to the highest daily average flow for that month.

Figure 2: Drinking Water Flows (Million Liters per day or MLD)

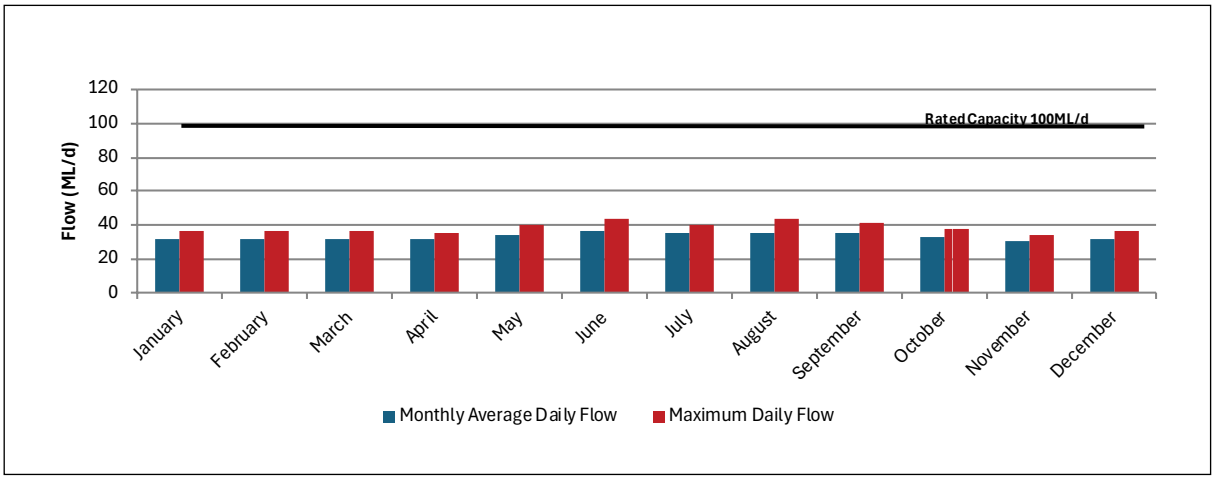


Figure 2 indicates that the monthly average daily flow and maximum total daily flow never exceeded the rated capacity in 2024. The highest monthly average daily flow was 36.68 MLD, which occurred in June. The highest maximum daily flow was 43.59 MLD, which occurred in August.

ii) Grand River Flow Intake

The City of Brantford Water System's Permit to Take Water (#2375-BLHMW5) for the water treatment plant allows the City of Brantford to withdraw up to 260 MLD of raw water from the Grand River daily at a peak flow not to exceed 181,000 L/min. At the Holmedale Water Treatment Plant, the raw water flow is measured by continuous on-line flow meters and monitored and controlled via a SCADA computer system. The daily average raw water flow for 2024 was 38.75 MLD.

Figure 3 outlines the monthly average daily flow, maximum daily flow and % Grand River flow taken for the Holmedale Water Treatment Plant in 2024. The monthly average daily flow was calculated by averaging the total daily flows for a given month. The monthly maximum daily flow corresponds to the highest daily average flow for that month. The City's Permit to Take Water requires monitoring of the water taking impact has on the Grand River. To ensure there are no negative effects to the Grand River, the City monitors the % of Grand River Flow Taken. The % Grand River Flow Taken is calculated by dividing the daily average flow taken from the Grand River by the Grand River flow measured at the Grand River Conservation Authority (GRCA) Brant Park monitoring station.

Figure 3: Raw Water Flows (million liters per day or ML/day)

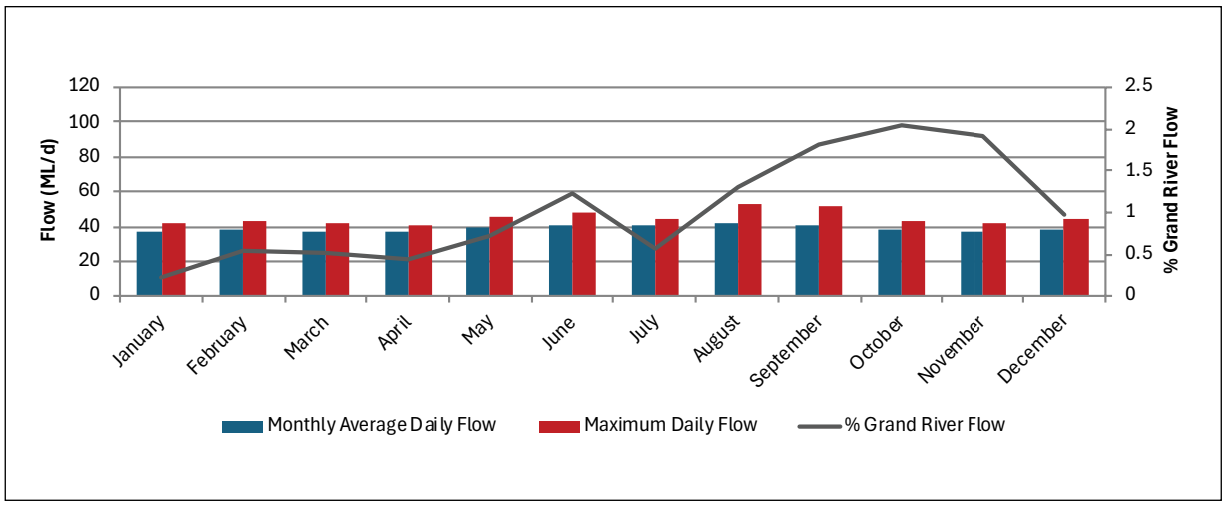


Figure 3 indicates that the highest monthly average daily flow was 42.30 MLD which occurred in August and the highest maximum daily flow was 53.28 MLD which also occurred in August. The maximum daily flow was well below the daily flow limit of 260 MLD as outlined in the City's Permit to Take Water.

The peak percentage of river flow taken from the Grand River was at 2.05% in October followed by a second peak at 1.91% in November. The peak in October and November can be attributed to lower flows in the Grand River due to a very dry and warm summer and fall. There were no reported complaints to the City of Brantford as a result of its water taking activities.

Appendix A-Operational Parameter Summary

Table 10: Operational Parameter Summary-Water Treatment

Location	Parameter	Unit	MAC	O.Reg 170/03 Limit	Minimum	Maximum	Average	Within Regulatory Limit?
Grand River	Turbidity	NTU	N/A	N/A	4.60	15.42	7.24	NRL
Filter 1	Turbidity	NTU	N/A	less than 1.00	0.028	0.047	0.037	Yes
Filter 2	Turbidity	NTU	N/A	less than 1.00	0.026	0.049	0.037	Yes
Filter 3	Turbidity	NTU	N/A	less than 1.00	0.028	0.047	0.040	Yes
Filter 4	Turbidity	NTU	N/A	less than 1.00	0.031	0.052	0.043	Yes
Filter 5	Turbidity	NTU	N/A	less than 1.00	0.026	0.048	0.037	Yes
Filter 6	Turbidity	NTU	N/A	less than 1.00	0.031	0.053	0.043	Yes
Filter 7	Turbidity	NTU	N/A	less than 1.00	0.027	0.054	0.041	Yes
Filter 8	Turbidity	NTU	N/A	less than 1.00	0.030	0.054	0.046	Yes
CCC Effluent	Log Removal (Giardia)	N/A	N/A	more than 3.0	8.85	28.74	16.20	Yes
Brantford POE	Combined Chlorine	mg/L	3.00	N/A	2.52	2.61	2.58	Yes
Brantford POE	Turbidity	NTU	N/A	N/A	0.030	0.067	0.050	NRL
Brantford POE	Pressure	psi	N/A	more than 20	97.07	97.38	97.29	Yes
Brantford POE	Fluoride	mg/L	1.50	N/A	0.65	0.74	0.70	Yes

Definitions: **POE** - Point of Entry to the Distribution System (Treated Water)
CCC - Chlorine Contact Chambers
Log Removal – a shorthand term for $\log_{10}$ removal, used in reference to the physical-chemical treatment of water to remove, kill, or inactivate pathogenic organisms.
Combined Chlorine -Combined chlorine residual is the chlorine species that exists in water in chemical combination with ammonia or other organic nitrogen compounds for the purpose of disinfection.
MAC - Maximum Acceptable Concentration
NTU - Nephelometric Turbidity Units
N/A - Not Applicable
NRL - No Regulatory Limit

Table 11: Operational Parameter Summary – Water Distribution

Location	Parameter	Unit	MAC	O.Reg 170/03 Limit	Minimum	Maximum	Average	Within Regulatory Limit?
Tollgate Reservoir	Total Chlorine	mg/L	3.00	N/A	2.00	2.42	2.23	Yes
Park Rd. Reservoir	Total Chlorine	mg/L	3.00	N/A	2.00	2.47	2.22	Yes
Northwest Reservoir	Total Chlorine	mg/L	3.00	N/A	2.11	2.58	2.35	Yes
Albion St. Booster	Pressure	psi	N/A	more than 20	89.79	90.68	90.31	Yes
Tollgate Reservoir	Pressure	psi	N/A	more than 20	57.83	58.62	58.32	Yes
Park Rd. Reservoir	Pressure	psi	N/A	more than 20	78.30	78.86	78.60	Yes
Northwest Reservoir	Pressure	psi	N/A	more than 20	83.92	86.46	85.29	Yes
Bell Lane	Pressure	psi	N/A	more than 20	50.65	50.91	50.79	Yes
Fifth Ave.	Pressure	psi	N/A	more than 20	96.15	96.74	96.38	Yes
Lawren Harris	Pressure	psi	N/A	more than 20	64.35	65.52	64.63	Yes
St. Andrews	Pressure	psi	N/A	more than 20	91.76	93.59	92.76	Yes
Empey St.	Pressure	psi	N/A	more than 20	81.96	82.64	82.37	Yes
Stauffer Rd.	Pressure	psi	N/A	more than 20	76.77	77.96	77.48	Yes

Definitions: Combined Chlorine - Combined chlorine residual is the chlorine species that exists in water in chemical combination with ammonia or other organic nitrogen compounds
MAC - Maximum Acceptable Concentration
PSI- Pounds per square inch
N/A - Not Applicable

Appendix B – Inorganic Parameter Summary

Table 12: Inorganic Parameter Summary

Parameter	Recent Sample	Unit of Measure	MAC	MDL	Treated Water	Within Regulatory Limit?
Bromate	14-August-24	mg/L	0.01	0.005	<MDL	Yes
Bromide	14-August-24	mg/L	N/A	0.001	0.027	NRL
Nitrite (as Nitrogen)	14-August-24	mg/L	1	0.003	<MDL	Yes
Nitrate (as Nitrogen)	14-August-24	mg/L	10	0.006	3.01	Yes
Antimony	14-August-24	ug/L	6	0.60	<MDL	Yes
Arsenic	14-August-24	ug/L	10	0.2	0.4	Yes
Barium	14-August-24	ug/L	1000	0.02	39.7	Yes
Boron	14-August-24	ug/L	5000	2	50	Yes
Cadmium	14-August-24	ug/L	5	0.003	0.003	Yes
Chromium	14-August-24	ug/L	50	0.08	0.25	Yes
Mercury	14-August-24	ug/L	1	0.01	<MDL	Yes
Sodium	14-August-24	mg/L	20	0.01	60.3	No
Selenium	14-August-24	ug/L	50	0.04	0.17	Yes
Uranium	14-August-24	ug/L	20	0.002	0.328	Yes

Definitions: **MAC** – Maximum Acceptable Concentration
MDL – Method Detection Limit
NRL - No Regulatory Limit

Appendix C – Organic Parameter Summary

Table 13: Organic Parameter Summary

Parameter	Recent Sample	Unit of Measure	MAC	MDL	Treated Water	Within Regulatory Limit?
1,1-Dichloroethylene	14-August-24	µg/L	14	0.33	< MDL	Yes
1,2-Dichlorobenzene	14-August-24	µg/L	200	0.41	< MDL	Yes
1,2-Dichloroethane	14-August-24	µg/L	5	0.35	< MDL	Yes
1,4-Dichlorobenzene	14-August-24	µg/L	5	0.36	< MDL	Yes
2,3,4,6-tetrachlorophenol	14-August-24	µg/L	100	0.2	< MDL	Yes
2,4,6-trichlorophenol	14-August-24	µg/L	5	0.25	< MDL	Yes
2,4-dichlorophenol	14-August-24	µg/L	900	0.15	< MDL	Yes
2,4-dichlorophenoxyacetic acid (2,4-D)	14-August-24	µg/L	100	0.19	< MDL	Yes
Alachlor	14-August-24	µg/L	5	0.02	< MDL	Yes
Atrazine	14-August-24	µg/L	N/A	0.01	0.02	NRL
Atrazine + N-dealkylated metabolites	14-August-24	µg/L	5	0.01	0.03	Yes
Azinphos-methyl	14-August-24	µg/L	20	0.05	< MDL	Yes
Benzene	14-August-24	µg/L	1	0.32	< MDL	Yes
Benzo(a)pyrene	14-August-24	µg/L	0.01	0.004	< MDL	Yes
Bromoacetic Acid	14-August-24	µg/L	N/A	2.9	< MDL	NRL
Bromodichloromethane	14-August-24	µg/L	N/A	0.26	14	NRL
Bromoform	14-August-24	µg/L	N/A	0.34	0.81	NRL
Bromoxynil	14-August-24	µg/L	5	0.33	< MDL	Yes
Carbaryl	14-August-24	µg/L	90	0.05	< MDL	Yes
Carbofuran	14-August-24	µg/L	90	0.01	< MDL	Yes
Carbon tetrachloride	14-August-24	µg/L	2	0.17	< MDL	Yes
Chloroacetic Acid	14-August-24	µg/L	N/A	4.7	< MDL	NRL
Chloroform	14-August-24	µg/L	N/A	0.29	19	NRL
Chlorpyrifos	14-August-24	µg/L	90	0.02	< MDL	Yes
Desethyl atrazine	14-August-24	µg/L	N/A	0.01	0.02	NRL
Diazinon	14-August-24	µg/L	20	0.02	< MDL	Yes
Dibromoacetic Acid	14-August-24	µg/L	N/A	2	< MDL	NRL
Dibromochloromethane	14-August-24	µg/L	N/A	0.37	7.4	Yes
Dicamba	14-August-24	µg/L	120	0.2	< MDL	Yes
Dichloroacetic Acid	14-August-24	µg/L	N/A	2.6	9.8	NRL
Dichloromethane	14-August-24	µg/L	50	0.35	< MDL	Yes

Appendix C – Organic Parameter Summary

Table 13: Organic Parameter Summary (continued)

Parameter	Recent Sample	Unit of Measure	MAC	MDL	Treated Water	Within Regulatory Limit?
Diclofop-methyl	14-August-24	µg/L	9	0.4	< MDL	Yes
Dimethoate	14-August-24	µg/L	20	0.06	< MDL	Yes
Diquat	14-August-24	µg/L	70	1	< MDL	Yes
Diuron	14-August-24	µg/L	150	0.03	< MDL	Yes
Geosmin	14-August-24	µg/L	N/A	3	< MDL	NRL
Glyphosate	14-August-24	µg/L	280	1	< MDL	Yes
Malathion	14-August-24	µg/L	190	0.02	< MDL	Yes
MCPA	14-August-24	µg/L	0.1	0.00012	< MDL	Yes
Metolachlor	14-August-24	µg/L	50	0.01	0.05	Yes
Metribuzin	14-August-24	µg/L	80	0.02	< MDL	Yes
MIB	14-August-24	µg/L	N/A	3	< MDL	NRL
Monochlorobenzene	14-August-24	µg/L	80	.30	< MDL	Yes
NDMA	14-August-24	µg/L	0.009	0.0009	< MDL	Yes
N-Nitrosodimethylamine	14-August-24					
Paraquat	14-August-24	µg/L	10	1	< MDL	Yes
Pentachlorophenol	14-August-24	µg/L	60	0.15	< MDL	Yes
Phorate	14-August-24	µg/L	2	0.01	< MDL	Yes
Picloram	14-August-24	µg/L	190	1	< MDL	Yes
Polychlorinated Biphenyls (PCBs) - Total	14-August-24	µg/L	3	0.04	< MDL	Yes
Prometryne	14-August-24	µg/L	1	0.03	< MDL	Yes
Simazine	14-August-24	µg/L	10	0.01	< MDL	Yes
Terbufos	14-August-24	µg/L	1	0.01	< MDL	Yes
Tetrachloroethylene	14-August-24	µg/L	30	0.35	< MDL	Yes
THMs (total)	14-August-24	µg/L	100	0.37	42	Yes
Total Haloacetic Acids (HAA5)	14-August-24	ng/L	80	5.3	17.3	Yes
Triallate	14-August-24	ng/L	230	0.01	< MDL	Yes
Trichloroacetic Acid	14-August-24	µg/L	N/A	5.3	7.5	NRL
Trichloroethylene	14-August-24	µg/L	5	0.44	< MDL	Yes
Trifluralin	14-August-24	µg/L	45	0.02	< MDL	Yes
Vinyl Chloride	14-August-24	µg/L	1	.17	< MDL	Yes

Definitions: MDL – Method Detection Limit **MAC** – Maximum Acceptable Concentration
NRL – No Regulatory Limit **N/A**– Not Available