2025

Annual Summary Report

January 1 to December 31, 2025
Prepared: February 28, 2026

Brockville Drinking Water System
Corporation of the City of Brockville

Elizabethtown Kitley Distribution System
Township of Elizabethtown Kitley

Water Systems Division
Engineering and Infrastructure
City of Brockville, Ontario

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Executive Summary

The City of Brockville's Water Systems Division is pleased to present the 2025 Annual Summary Report, covering the period from **January 1 to December 31, 2025**. This document provides a high-level overview of the operational status, water quality, and regulatory compliance of the drinking water systems for the City of Brockville and the Township of Elizabethtown-Kitley.

In accordance with the *Safe Drinking Water Act, 2002* this report serves as the primary compliance record for the following provincial requirements.

- O. Reg. 170/03 Section 11 - Annual Report
- O. Reg. 170/03 Schedule 22 - Summary Report for Municipalities
- O. Reg. 387/04 Water Taking & Transfer

The Water Systems Division operates under a strict Quality Management System (QMS) to ensure full regulatory compliance. Public health is protected through a proactive 'multi-barrier' approach that integrates source water protection, robust treatment, disinfection, distribution integrity, and operational oversight. This comprehensive approach ensures a reliable, high-quality water supply that consistently meets provincial standards.

The Ministry of the Environment, Conservation and Parks (MECP) conducted 2 annual inspections during the reporting period for The City of Brockville Drinking Water System and Elizabethtown Kitley Distribution System each receiving a final inspection rating of **96.23%** and **100%** respectively.

In accordance with regulatory requirements, a copy of this report has been shared with the Township of Elizabethtown-Kitley Drinking Water System #260007777.

Acronyms & Definitions

MECP	Ministry of the Environment, Conservation and Parks (Ontario)
MOH	Medical Officer of Health
SAC	Spills Action Center (the Ministry)
"City"	City of Brockville
O. Reg.	Ontario Regulation
R.R.O.	Revised Regulations Ontario (1990)
MDWL	Municipal Drinking Water License
MDWP	Municipal Drinking Water Permit
PTTW	Permit to Take Water
C of A	Certificate of Approval
SDWA	Safe Drinking Water Act, 2002
WTP	Water Treatment Plant
SCADA	Supervisory Control and Data Acquisition
VFD	variable frequency drive
PLC	programmable logic control
PVC	poly vinyl chloride
AWQI	Adverse Water Quality Incident
DWQMS	Drinking Water Quality Management Standard
CFU	colony forming units
L/s	litres per second
m^3/d	cubic metres per day
mg/L	milligrams per litre
ug/l	micrograms per litre
PPM	parts per million
mL	milliliter
ML/d	mega (million) litres per day
NTU	nephelometric turbidity units (clarity of water)
mJ/cm^2	millijoules per centimeter squared
mW/cm^2	milliwatts per centimeter squared
<	less than
>	greater than
THM	trihalomethane (disinfection by products)
HAA	halo acetic acid (disinfection by products)

1. Regulatory Framework for Drinking Water Systems

Regulated systems must meet stringent requirements as per the Ontario's *Safe Drinking Water Act, 2002* and associated regulations outlined below.

i. Annual Reporting Requirements

- **Section 11** requires an **Annual Report** covering January 1 to December 31 to be prepared and available to the public free of charge no later than **February 28**.

- **Schedule 22** requires a **Summary Report** to be submitted to Municipal Council by **March 31** detailing any instances where the system failed to meet the requirements of the *Safe Drinking Water Act*, its regulations, or system approvals, including the duration of the failure and the corrective measures taken.

ii. Water Taking & Transfer (O. Reg. 387/04)

Under Section 9, raw water taking data from the previous calendar year must be submitted to Director (MECP) through the digital reporting system on or before March 31. This report has been submitted for 2025.

iii. Flow Reporting & Rated Capacity

As required, this report includes a summary of monthly averages, maximum daily flows, and daily instantaneous peak flows water including values compared to the rated capacity and flow limits outlined in the Brockville Municipal Drinking Water Licence (MDWL).

The following table is a summary list of provincial legislation significant to water operations that govern the City of Brockville's Drinking Water System.

Act	O. Reg.
Water Opportunities and Water Conservation Act	
Water Opportunities and Water Conservation Act, 2010	Bill 72
Clean Water Act, 2006	
Source Protection Areas and Regions	O. Reg. 284/10
Source Protection Committees	O. Reg. 288/10
Terms of Reference	O. Reg. 287/07
Safe Drinking Water Act, 2002	
Drinking Water Systems Regulation	O. Reg. 170/03
Certification of Drinking-Water System Operators and Water Quality Analysts	O. Reg. 128/04
Drinking Water Testing Services - relating to laboratory licensing	O. Reg. 248/03
Schools, private schools and day nurseries	O. Reg. 243/07
Compliance and Enforcement Regulation	O. Reg. 242/05
Ontario Drinking Water Quality Standards	O. Reg. 169/03
Definitions of Words and Expressions Used in the Act	O. Reg. 171/03
Definition of Deficiency and Municipal Drinking Water System	O. Reg. 172/03
Licensing of Municipal Drinking-Water Systems	O. Reg. 188/07
Financial Plans	O. Reg. 453/07
Ontario Water Resources Act	

Licensing of Sewage Works Operators	O. Reg. 129/04
Approval Exemption	O. Reg. 525/98
Wells	R.R.O. 1990, Reg. 903
Revoking Ontario Regulation 459/00	O. Reg. 175/03
Revoking Ontario Regulation 505/01	O. Reg. 176/03
Water Taking	O. Reg. 387/04
Charges for Industrial and Commercial Water Users	O. Reg. 450/07
Environmental Protection Act	
Certificate of Approval Exemptions - Air	O. Reg. 524/98
Environmental Bill of Rights Act	
Prescribing the Safe Drinking Water Act, 2002	O. Reg. 257/03

2. City of Brockville Drinking Water System Description

i. System Profile Information

Drinking-Water System Number:	220001263
Drinking-Water System Name:	Brockville Drinking Water System
Drinking-Water System Owner:	City of Brockville
Accredited Operating Authority:	City of Brockville
Municipal Drinking Water Licence:	152-101
Drinking Water Works Permit:	152-201
Permit To Take Water:	3112-CZQS85
Drinking-Water System Category:	Large Municipal
Design Capacity:	36.4 ML/D
Treatment:	Direct Filtration Class III
Local Distribution:	Class II
Trunk Distribution:	Class III
Source Water:	St Lawrence River
Population Served:	22,000

The City of Brockville’s Water Treatment Plant is a Class III Direct Filtration facility located at 20 Rivers Avenue. Drawing from the St. Lawrence River, the facility employs a sophisticated multi-barrier approach to ensure high-quality drinking water, beginning with raw water drawn from the St. Lawrence River via a 900 mm intake pipe treated with chlorine for zebra mussel control. Upon entering the plant, a coagulant is added to form "flocs," which are then removed through dual-media filtration consisting of sand and Granular Activated Carbon (GAC) for taste, odor, and clarity control. For primary disinfection, the facility maintains a target free chlorine residual of 2.0 mg/L to 2.5 mg/L within the reservoir to ensure adequate contact time for

disinfection. In certain scenarios, the treatment process is supplemented by UV reactors to neutralize chlorine-resistant microorganisms. Finally, fluoride is added for community dental health before high-lift pumps distribute the water. A stable chlorine residual is maintained throughout the network ensuring water safety until it reaches the consumer. All treatment processes are continuously monitored and optimized by certified operators to exceed regulatory requirements and meet high standard of aesthetic objectives. A schematic of the treatment process can be found in **Appendix A.** The following table outlines chemicals used in the treatment process.

Chemical	Application Point & Purpose	Supplier
Chlorine Gas	Applied at Pre-Filter, Post-Filter, and Plant Effluent stages for primary disinfection and pathogen inactivation.	Brenntag Canada
Poly Aluminum Chloride (SternPAC XL-6)	Applied as a Pre-Filter coagulant to facilitate the removal of suspended solids and impurities.	Kemira Water Solutions
Hydrofluorosilicic Acid (HFSA)	Applied at the Plant Effluent for community water fluoridation in accordance with local health policy.	Brenntag Canada

The Water Systems Division also operates a Class III trunk and a Class II local distribution network including the Elizabethtown Kitley watermain west of the city. There are three distinct pressure zones with approximately 115 km of watermains (100–600 mm) supported by 8,575 service connections, 980 fire hydrants, and 3,030 valves. A 600 mm trunk feeder connects the Water Treatment Plant to Zone 1, with a 2,270 m^3 steel Water Tower providing gravity-fed pressure and emergency storage. The feedermain also extends throughout the City to Parkedale Avenue Reservoir and Booster Station. This station utilizes a 7,600 m^3 at-grade concrete reservoir to service Zones 1 and 2. First Avenue booster station provides pressure to Zone 3 at the east end of Brockville with a small below grade booster station servicing Sunset Blvd and Hollywood Place.

3. Summary of Major Expenses

The City remains committed to the long-term sustainability of the water system infrastructure through a proactive capital program. All infrastructure improvements are subject to the annual municipal budget process by Council. Central to this strategy are annual infrastructure reviews informed by robust risk assessments providing a detailed roadmap for the refurbishment or replacement of critical assets. This plan ensures funds are strategically allocated to maintain system reliability and prevent service disruptions. A summary of the 2025 Capital Program can be found in **Appendix B**. The following is a list of major expenses significant to repair, replace and/or upgrade the drinking water assets.

Project / Expense Item	Description	Cost / Investment
Tower Rehabilitation	Refurbish water tower: exterior/interior coating safety upgrades	Capital Infrastructure $2.76 Million
Water Main Reline	Relining of a critical 250mm ductile iron under 401 highway	Capital Infrastructure $200,000
Water Mains	Replacement of water mains and storm sewers; Oak St and Cedar St	Capital $625,000
Roofing	Replacement roofs at treatment plant and low lift pumping station	Capital $550,000
Highlift Motors/VFD	Replacement of highlift 1 and 2 motors with addition of variable frequency drives	Capital $75,000
Low Lift VFD	Replacement of low lift pump VFD's	Operational $50,000
Water Meters	Initiative to replace approximately 10%/year residential water meters.	Capital $140,000
Lead Services Lines	Replace legacy lead service pipes in older residential neighborhoods.	Capital $150,000
Bulk Water	New installation of Bulk Water Station (Broome Road)	Capital $85,000
Reservoir Maintenance	Main plant reservoir cleaned, inspected and spot repaired	Capital $35,000
VFD's	New VFD on Zone 2 booster pump 2	Capital $45,000
Online Analyzers	Replacement of obsolete units for raw and treated water turbidity online analyzers	Capital $25,000

4. Water Quality and Sampling

Extensive testing in strict accordance with applicable legislation to ensure public health and safety is carried out for key parameters such as free chlorine residual, turbidity, pH, and fluoride, alongside mandated microbiological and chemical parameters. Regular testing focuses on bacteriological indicators, lead residuals, HAAs, THMs, and the maintenance of required chlorine levels. While staff perform routine process testing, all compliance-based analysis is conducted by an external MECP-accredited laboratory. To ensure the highest level of data integrity, the division utilizes a sophisticated data management system. The following tables outline operational, microbiological and chemical testing parameters.

ii. Operational Monitoring

Operational testing results completed under **Schedules 6 and 7** of O. Reg. 170/03,

Parameter	# of Grab Samples	Results		
		MIN	MAX	AVG
Turbidity- Raw NTU	Continuous monitoring	0.09	9.99	0.26
Turbidity- Filter 1, NTU	Continuous monitoring	0.03	0.26	0.07
Turbidity- Filter 2, NTU	Continuous monitoring	0.03	0.36	0.07
Turbidity- Treated, NTU	Continuous monitoring	0.03	8.95	0.06
Chlorine - Pre Filter, mg/l	Continuous monitoring	0.0065	1.90	0.65
Chlorine - Reservoir Main Plant, mg/l	Continuous monitoring	1.66	2.69	2.21
Chlorine – Plant Effluent, mg/l	Continuous monitoring	0.82	3.00	2.18
Chlorine- Distribution System Parkedale Reservoir, mg/l	Continuous monitoring	1.02	2.41	1.90
Chlorine-Elizabethtown-Kitley Distribution System, mg/l	52	0.97	2.00	1.35
Fluoride – Plant Effluent, mg/l	365	0	1.1	0.63
UV Dosage, mJ/cm^2	Continuous monitoring	0	3277	2.36
UV Intensity, mW/cm^2	Continuous monitoring	0	0	n/a
UV Transmittance, %	365	95	95	95

iii. Microbiological Testing

Microbiological testing results completed under **Schedule 10, 11 or 12** of O. Reg. 170/03

Sample Description	Number of Samples	Range of E. Coli Or Fecal Results CFU/100ml		Range of Total Coliform Results CFU/100ml		Number of HPC Samples	Range of HPC Results CFU/ml	
		MIN	MAX	MIN	MAX		MIN	MAX
Raw	52	0	30	0	98	52	<10	550
Treated	52	0	0	0	0	52	<10	70
Distribution	518	0	0	0	0	363	<10	480

iv. Chemical Testing
Chemical testing results completed under **Schedule 13**. of per O. Reg. 170/03,

Schedule 23; Inorganic parameters tested this reporting period or most recent sample

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance of Standard	Exceedance of Half Standard
Antimony	2025-01-07	0.0001	mg/l	No	No
Arsenic	2025-01-07	0.0005	mg/l	No	No
Barium	2025-01-07	0.024	mg/l	No	No
Boron	2025-01-07	0.021	mg/l	No	No
Cadmium	2025-01-07	<0.00001 5	mg/l	No	No
Chromium	2025-01-07	<0.0010	mg/l	No	No
Mercury	2025-01-07	<0.00002	mg/l	No	No
Selenium	2025-01-07	<0.001	mg/l	No	No
Sodium	Jan. – Dec. (7 samples)	18.6*	mg/l	No	n/a
Uranium	2025-01-07	0.00031	mg/l	No	No
Nitrite	Quarterly (4 samples)	<0.05*	mg/l	No	No
Nitrate	Quarterly (4 samples)	0.23*	mg/l	No	No

*average, n/a – not applicable
Note: Sodium average includes 1 sample at 43 mg/l. A corrective action resample result of 13mg/l. Test results were reported as AWQI outlined in section 8 below. Therefore, the annual sodium average skewed slightly higher as a result, however, remains below the provincial standard.

Schedule 24: Organic parameters sampled this reporting period or most recent samples

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance of Standard	Exceedance of Half Standard
Alachlor	2025-01-07	<0.3	ug/l	No	No
Atrazine + N-dealkylated metabolites	2025-01-07	<0.5	ug/l	No	No
Azinphos-methyl	2025-01-07	<1	ug/l	No	No
Benzene	2025-01-07	<0.5	ug/l	No	No
Benzo(a)pyrene	2025-01-07	<0.006	ug/l	No	No
Bromoxynil	2025-01-07	<0.5	ug/l	No	No
Carbaryl	2025-01-07	<3	ug/l	No	No
Carbofuran	2025-01-07	<1	ug/l	No	No
Carbon Tetrachloride	2025-01-07	<0.2	ug/l	No	No
Chlorpyrifos	2025-01-07	<0.5	ug/l	No	No

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance of Standard	Exceedance of Half Standard
Diazinon	2025-01-07	<1	ug/l	No	No
Dicamba	2025-01-07	<1	ug/l	No	No
1,2-Dichlorobenzene	2025-01-07	<0.5	ug/l	No	No
1,4-Dichlorobenzene	2025-01-07	<0.5	ug/l	No	No
1,2-Dichloroethane	2025-01-07	<0.5	ug/l	No	No
1,1-Dichloroethylene	2025-01-07	<0.5	ug/l	No	No
Dichloromethane	2025-01-07	<5	ug/l	No	No
2-4 Dichlorophenol	2025-01-07	<0.2	ug/l	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2025-01-07	<1.0	ug/l	No	No
Diclofop-methyl	2025-01-07	<0.9	ug/l	No	No
Dimethoate	2025-01-07	<1	ug/l	No	No
Diquat	2025-01-07	<5	ug/l	No	No
Diuron	2025-01-07	<5	ug/l	No	No
Glyphosate	2025-01-07	<25	ug/l	No	No
Malathion	2025-01-07	<5	ug/l	No	No
2-Methyl-4-Chlorophenoxyacetic acid (MCPA)	2025-01-07	<10	mg/l	No	No
Metolachlor	2025-01-07	<3	ug/l	No	No
Metribuzin	2025-01-07	<3	ug/l	No	No
Monochlorobenzene	2025-01-07	<0.5	ug/l	No	No
Paraquat	2025-01-07	<1	ug/l	No	No
Pentachlorophenol	2025-01-07	<0.2	ug/l	No	No
Phorate	2025-01-07	<0.3	ug/l	No	No
Picloram	2025-01-07	<5	ug/l	No	No
Polychlorinated Biphenyls(PCB)	2025-01-07	<0.05	ug/l	No	No
Prometryne	2025-01-07	<0.1	ug/l	No	No
Simazine	2025-01-07	<0.5	ug/l	No	No
THM Note: latest annual average	Quarterly *(min)* (4 samples)	43.0*	ug/l	No	No

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance of Standard	Exceedance of Half Standard
HAA's Note: latest annual average	Quarterly *(min)* (4 samples)	22.8*	ug/l	No	No
Terbufos	2025-01-07	<0.5	ug/l	No	No
Tetrachloroethylene	2025-01-07	<0.5	ug/l	No	No
2,3,4,6-Tetrachlorophenol	2025-01-07	<0.2	ug/l	No	No
Triallate	2025-01-07	<10	ug/l	No	No
Trichloroethylene	2025-01-07	<0.5	ug/l	No	No
2,4,6-Trichlorophenol	2025-01-07	<0.2	ug/l	No	No
Trifluralin	2025-01-07	<0.5	ug/l	No	No
Vinyl Chloride	2025-01-07	<0.2	ug/l	No	No

*average

v. Lead Sampling

Our testing continues to show lead sampling annual average results of **1.72 micrograms**/litre are well below provincial standard of **10 micrograms/litre**. Note, there were **NO** exceedances of lead limits.

Brockville Drinking Water System

Sampling Period – Winter (Dec 15 to Apr 15, 2025)	Plumbing	Hydrants
Number of individual samples	N/A	4
Number of sample points (locations)	N/A	4
Number of individual sample exceedances	N/A	0
Number of sample points with an exceedance during the period	N/A	0
Percentage of sample points with an exceedance	N/A	0
Is the system required to have a Corrosion Control Plan prepared?	No	No
Do the reduced sampling & frequency requirements apply to the system?	N/A	Yes
Do the plumbing sample exemptions apply to the system?	**Yes**	N/A

Sampling Period -Summer (June 15 to Oct 15, 2025)	Plumbing	Hydrants
Number of individual samples	N/A	4
Number of sample points (locations)	N/A	4
Number of individual sample exceedances	N/A	0
Number of sample points with an exceedance during the period	N/A	0

Sampling Period -Summer (June 15 to Oct 15, 2025)	Plumbing	Hydrants
Percentage of sample points with an exceedance	N/A	0
Is the system required to have a Corrosion Control Plan prepared?	No	No
Do the reduced sampling & frequency requirements apply to the system?	N/A	Yes
Do the plumbing sample exemptions apply to the system?	**Yes**	N/A

Elizabethtown-Kitley Distribution System

Sampling Period – Winter (Dec 15 to Apr 15, 2025)	Plumbing	Hydrants
Number of individual samples	N/A	2
Number of sample points (locations)	N/A	2
Number of individual sample exceedances	N/A	0
Number of sample points with an exceedance during the period	N/A	0
Percentage of sample points with an exceedance	N/A	0
Is the system required to have a Corrosion Control Plan prepared?	No	No
Do the reduced sampling & frequency requirements apply to the system?	N/A	Yes
Do the plumbing sample exemptions apply to the system?	**Yes**	N/A
Sampling Period -Summer (June 15 to Oct 15, 2025)	Plumbing	Hydrants
Number of individual samples	N/A	2
Number of sample points (locations)	N/A	2
Number of individual sample exceedances	N/A	0
Number of sample points with an exceedance during the period	N/A	0
Percentage of sample points with an exceedance	N/A	0
Is the system required to have a Corrosion Control Plan prepared?	No	No
Do the reduced sampling & frequency requirements apply to the system?	N/A	Yes
Do the plumbing sample exemptions apply to the system?	**Yes**	N/A

5. MECP Inspection Results

The Ministry of the Environment, Conservation and Parks (MECP) conduct annual inspections of all municipal drinking water systems in Ontario. For the inspection period of **October 26, 2024, to October 9, 2025** (Inspection Event #1-139799694), the City of Brockville achieved a final inspection rating of **96.23%**. The City received one (1) non-compliance since resolved.

6. Permit to Take Water Overview

The City monitored water usage throughout the year to ensure all raw water taking remained within the limits established by provincial permits.

i. Maximum Permitted Water Taking (PTTW) – WTP

Condition:	Maximum Permitted Water Taking
Maximum Amount of Water Taken per Minute	25,278 (L/min)
Maximum Amount of Water Taken per Day	36.4 (ML/d)

The Permit to Take Water specifies the maximum flow into individual treatment systems as indicated below.

ii. Maximum Flow to Treatment System – WTP

Treatment System/Stage:	Maximum Flow Rate (ML/D)
GAC Filters – Flow (X 2)	19.6 each
UV Disinfection System	36.4 each

7. Annual Flow Summary Analysis

The Brockville Drinking Water System operated within permitted capacities, with no exceedances of maximum water taking. The Peak Instantaneous Flow occurred on September 21, recording **30.988 ML/day (21,519 L/min),** which remained below the allowable limit of 36.400 ML/day. The Maximum Daily Taking reached **12.635 ML** on August 6 within the 36.400 ML/day daily permit limit. Overall, the annual average daily raw water volume supplied to the Water Treatment Plant was **10.237 ML/day.** On average, the City utilized **28.1%** of its maximum approved treatment capacity. A comprehensive breakdown of daily raw water taking and the total annual flows supplied during the year is provided in **Appendix C**. This data includes performance metrics alongside a historical comparison of WTP pumping volumes from previous years**.** The total annual volume of treated water distributed was **2.4% higher** than in the previous year of 2024. Monitoring flow trends allows the City to evaluate long-term demand, ensure the system remains well within its rated capacity, and proactively plan for future infrastructure improvements. Historical distribution volumes are also maintained in **Appendix C** to support ongoing asset management and to ensure the treatment system evolves in alignment with community growth. **In conclusion, the data indicates the system has adequate reserve capacity to meet peak demands.**

8. Incidents of Adverse Water Quality Requiring Notification

In accordance with Schedule 16 and 17/18 of O. Reg 170/03, all required notifications and corrective actions were for 4 AWQI's were provided to the MOH, SAC along with the Operating Authority. Details of the incidents can be found in the table below.

AWQI #	Incident Date	Resolution Date	Parameter	Result	Duration	Corrective Action
167848	April 11, 2025	April 14, 2025	Sodium exceedance	43 mg/l	3 Day	Resample: 13.9 mg/l (< 20 mg/l R.L.)
170464	Oct 10, 2025	Oct 10, 2025	Operational Observation - Low Pressure (Negative)	-1.8 kPa	< 1 Min	Flushed H329 (1.67 mg/l) & Booster Station (1.68 mg/l); Bacti confirmed 0 TC/E.coli. Note: not a resample
170937	Dec 03, 2025	Dec 04, 2025	Free Chlorine Residual	0.00 mg/l	1 Day	Restored to free chlorine 1.64 mg/l; Flushed mains; 5 Hydrants confirmed Bacti 0 zero TC/E.coli.
171138	Dec 23, 2025	Dec 25, 2025	Operational Observation Cat 2 main break	Evidence of contamination	2 day	Flushed/Disinfected (2.05 mg/l); Boil Water Advisory issued; Bacti confirmed 0 TC/E.coli

9. Township of Elizabethtown Kitley Distribution System Description

Systems Profile Information

Drinking-Water System Number:	260007777
Drinking-Water System Name:	Elizabethtown Kitley Distribution System
Drinking-Water System Owner:	Township of Elizabethtown Kitley
Accredited Operating Authority:	City of Brockville
Municipal Drinking Water Licence:	257-101
Drinking Water Works Permit:	257-201
Drinking-Water System Category:	Large Municipal Class 1
Water Source:	City of Brockville DWS
Population Served:	700

The City of Brockville provides water treated from the Water Treatment Plant to the Elizabethtown-Kitley Class I Water Distribution System. As the operating authority the water division maintains the distribution system on behalf of the Township**.** Water is via 14-kilometer water main through a meter chamber at Country Club and associated appurtenances along County Road #2 west of Brockville. The Lily Bay booster station ensures adequate system pressures to the end of the system where an automated flushing station maintains free chlorine residuals.

10. Flow Comparison; City of Brockville & Township of Elizabethtown-Kitley

In accordance with Section 9.h. of Water Services Agreement By-Law 22-66 dated September 26, 2022, the City provides a guaranteed water supply of 5 percent (%) of rated capacity to the Township of Elizabethtown-Kitley equivalent to 1,670 cubic meters per day. Future adjustments to guaranteed volumes are subject to mutual agreement between both municipalities. Seen below are the Township's monthly average and maximum daily flow rates compared to guaranteed capacity. Upon review, flow totals are within acceptable limits and a summary of daily volumes taken and historical flow supplied during the 2025 calendar year is provided in **Appendix C**. For 2025, data indicates an increase of **11.0 percent** in annual flow totals from 2024. **As per the data below, the water treatment plant currently has adequate capacity to meet demand within the 5 percent (%) threshold.**

2025 Monthly Flow Report for Elizabethtown-Kitley Distribution System

Month:	Average (m^3):	Maximum (m^3):	% of COB WTP Rated Capacity (Average):	% of COB WTP Rated Capacity (Maximum):
January	107.1	130.6	0.29	0.36
February	106.8	126.6	0.29	0.35
March	108.5	128.8	0.30	0.35
April	117.3	151.0	0.32	0.41
May	141.1	175.6	0.39	0.48
June	178.2	226.8	0.49	0.62
July	229.9	290.1	0.63	0.80
August	222.9	336.5	0.61	0.92
September	159.1	219.2	0.44	0.60
October	134.4	173.2	0.37	0.48
November	129.5	157.1	0.36	0.43
December	210.2	257.5	0.58	0.71

11. MECP Inspection

As per MECP 2025 Inspection Event Number 1-1397990787 covering the period of **October 26, 2024 to October 9, 2025, zero** non-compliances or recommendations were issued. The final inspection rating for Elizabethtown Kitley Township was **100%**.

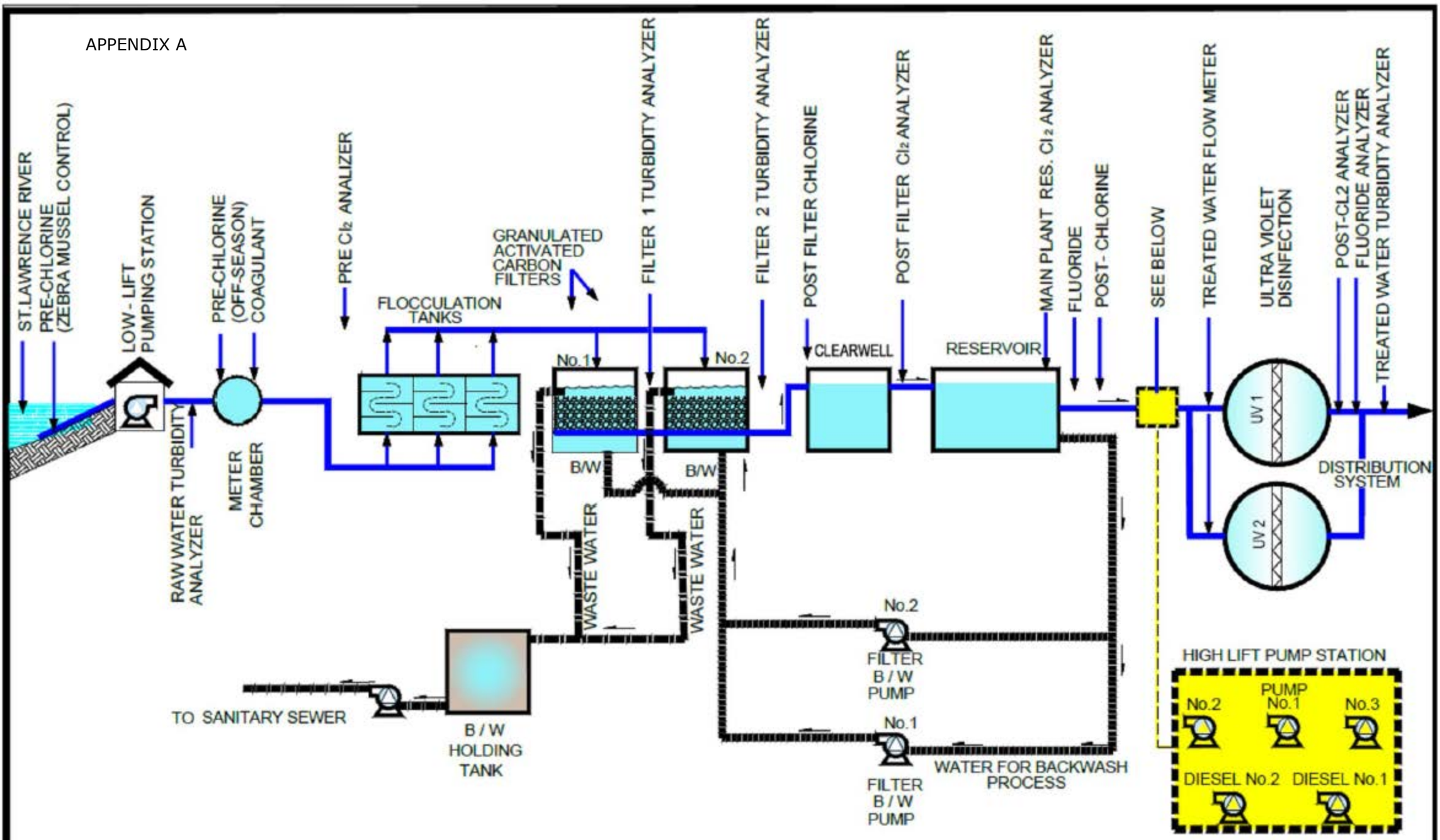
12. Incidents of Adverse Water Quality Requiring Notification

There were **no adverse water quality incidents** reported for the Township of Elizabethtown-Kitley Water Distribution System in 2025.

13. Public Access Notification and Availability

This report will be available to the public by **February 28** and presented to City Council by **March 31**. Notices of availability are generally made through our website and media releases on social media platforms. Requests for copies are available **free of charge** at the following locations:

- City of Brockville website - www.brockville.com
- City of Brockville – Public Library
- City of Brockville – Customer Service office, City Hall
- City of Brockville – Water Systems Division, 20 Rivers Ave., 613-342-8772 ext. 5512
- Township of Elizabethtown-Kitley's website - http://www.ektwp.ca
- Township of Elizabethtown-Kitley's Municipal Office – 6544 New Dublin Road, Addison



BROCKVILLE DRINKING WATER SYSTEM PROCESS DIAGRAM

2025 City of Brockville Capital Program

Project Name	Water Equipment/Construction - Proposed Maintenance and New Capital	Proposal Year: 2025
Location	Brockville Water Treatment Plant, Distribution System, Trunk Distribution System and Booster Stations	
Scope	Capital needs of the Water Treatment Plant, Distribution System, Trunk Distribution System and Booster Stations.Capital funding is provided by water revenues.	

Priority	Capital Project Name	Budget	Notes
1	King Street Watermain Reconstruction Oak st to Cedar St.	$475,000.00	Approved
2	Reservoir Inspection, Maintenance and Repair	$100,000.00	Approved
3	Portable Handheld Instrumentation	$20,000.00	Approved
4	Fluoride Drum Scale Replacement	$15,000.00	Approved
5	Water Treatment Plant and LowLift Roof Replacement	$550,000.00	Approved
6	Dobbie St Cost Sharing for Servicing	$25,000.00	Approved
7	Zebra Mussel Control Chlorine Lines Replacement	$150,000.00	Approved
8	Engineering for Highway 401 Watermain Crossing Replacement	$250,000.00	Approved
9	Master Water Study	$25,000.00	Approved
10	Feedermain Rehabilitation Program	$60,000.00	Approved
11	Programmable Logic Controllers Replacement Program	$50,000.00	Approved
12	WTP Highlift Pump and Motor Rebuild	$50,000.00	Approved
13	Backwash Surface Wash Agitator Pump & Motor Rebuild	$35,000.00	Approved
14	Lead Service Replacement Program	$150,000.00	Approved
15	Elizabethtown Kitley Country Club Electrical Cabinet	$35,000.00	Approved by EZK
	Total Capital Proposed	**$1,990,000**	
1	Parkedale Reservoir Generator - Engineering	$25,000.00	Deferred
2	Automatic Flushing Station Replacements	$50,000.00	Deferred
3	Low Lift Exterior Building Repairs	$75,000.00	Deferred
4	Water Plant Concrete and Brick Works	$50,000.00	Deferred
5	Parkedale Reservoir Zone 2 Pump - Engineering	$25,000.00	Deferred
	Total Capital Deferred	**$225,000**	

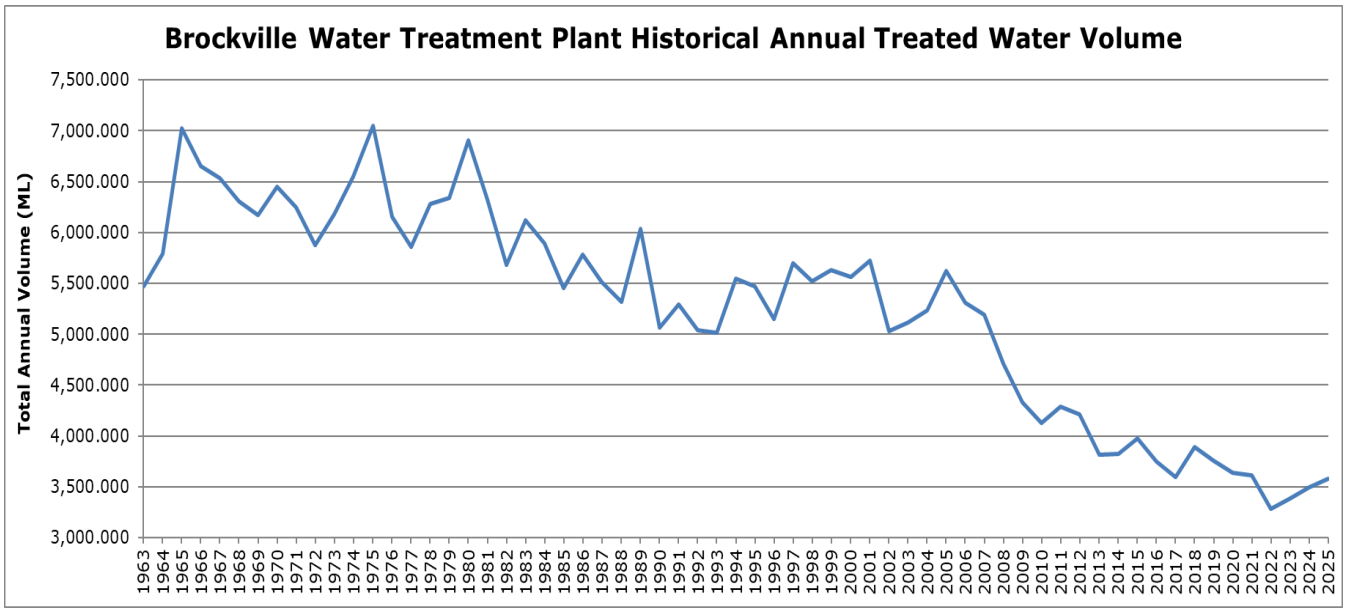
BROCKVILLE WATER SYSTEMS ANNUAL TREATED WATER VOLUME REPORT 2025

Month	WTP Raw Avg Daily Volume (ML)	WTP Raw Max Daily Volume (ML)	WTP Raw Peak Flow (ML/day)	WTP Raw Total Monthly Volume (ML)	WTP Treated Avg Daily Volume (ML)	WTP Treated Max Daily Volume (ML)	Rated Capacity (ML/day)	Rated Flow Capacity (%)	WTP Treated Total Monthly Volume (ML)
January	9.472	10.018	17.786	293.623	8.924	9.506	36.400	26.1%	276.641
February	10.673	9.624	21.189	283.687	9.624	10.673	36.400	29.3%	269.480
March	9.707	10.430	21.851	300.915	9.338	9.916	36.400	27.2%	289.475
April	9.426	10.032	19.245	282.779	8.990	9.540	36.400	26.2%	269.709
May	9.753	10.738	27.836	302.357	9.338	10.320	36.400	28.4%	289.470
June	10.809	12.049	30.695	324.268	10.299	11.640	36.400	32.0%	308.956
July	11.536	12.466	29.667	357.626	11.057	12.071	36.400	33.2%	342.770
August	11.535	12.635	20.017	357.589	11.148	12.258	36.400	33.7%	345.576
September	10.750	11.335	30.988	322.509	10.421	11.044	36.400	30.3%	312.644
October	10.440	10.893	13.689	323.652	10.093	10.553	36.400	29.0%	312.893
November	9.541	10.541	17.578	286.223	9.145	10.230	36.400	28.1%	274.353
December	9.721	12.189	20.102	301.359	9.361	11.540	36.400	31.7%	290.186
TOTAL				3,736.587					3,582.153

BROCKVILLE WATER SYSTEMS HISTORICAL ANNUAL TREATED WATER VOLUMES

Year	Annual Volume (ML)
1963	5,468.128
1964	5,792.558
1965	7,026.093
1966	6,652.020
1967	6,531.729
1968	6,302.901
1969	6,174.018
1970	6,447.978
1971	6,246.122
1972	5,876.886
1973	6,179.755
1974	6,552.608
1975	7,049.823
1976	6,157.384
1977	5,862.139
1978	6,283.413
1979	6,340.110
1980	6,905.996
1981	6,324.999
1982	5,685.995
1983	6,119.997
1984	5,894.998
1985	5,451.999
1986	5,780.998
1987	5,515.998
1988	5,319.997
1989	6,034.455
1990	5,064.771
1991	5,297.094
1992	5,037.999
1993	5,013.019
1994	5,548.256
1995	5,467.001

Year	Annual Volume (ML)
1996	5,148.340
1997	5,698.474
1998	5,519.157
1999	5,631.225
2000	5,565.808
2001	5,726.410
2002	5,032.500
2003	5,117.740
2004	5,238.190
2005	5,625.869
2006	5,308.800
2007	5,189.831
2008	4,715.116
2009	4,332.102
2010	4,128.747
2011	4,291.115
2012	4,213.592
2013	3,815.746
2014	3,822.724
2015	3,972.362
2016	3,744.720
2017	3,595,184
2018	3,889.242
2019	3,753.200
2020	3,641.936
2021	3,615.261
2022	3,280.074
2023	3,387.314
2024	3,497.753
2025	3,582.153



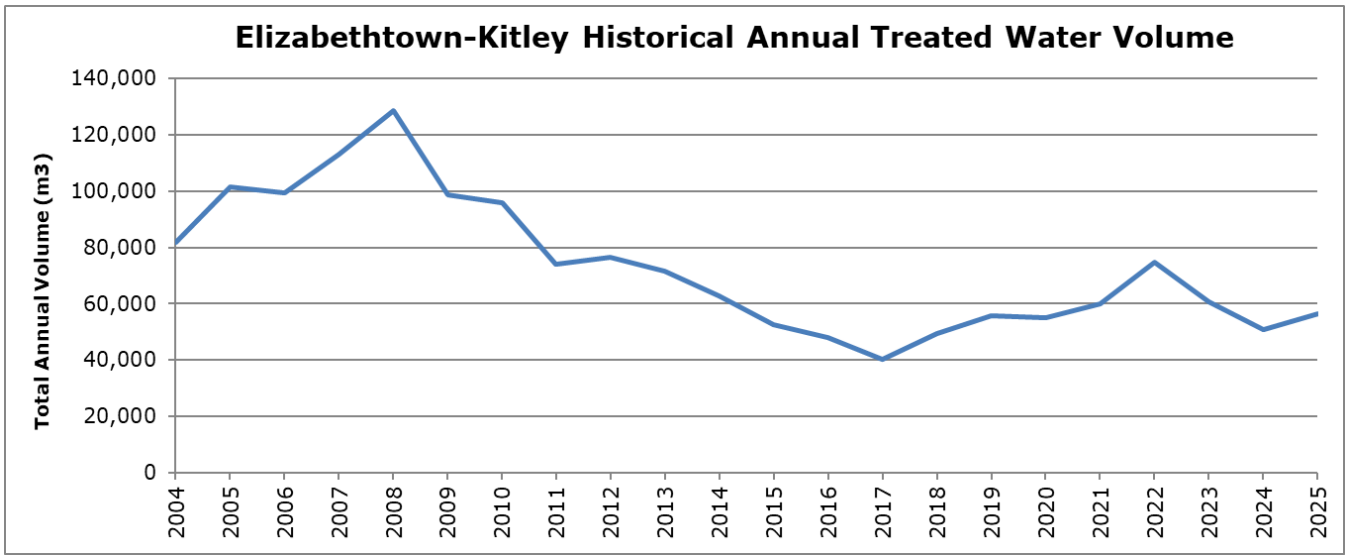
ELIZABETHTOWN-KITLEY WATER DISTRIBUTION ANNUAL TREATED WATER VOLUME REPORT 2025

Month	Avg Daily Volume (m3)	Max Daily Volume (m3)	Max Flow (L/min)	Total Volume (m3)
January	107	131	551.468	3320
February	107	127	513.346	2994
March	109	129	539.555	3367
April	117	151	529.591	3519
May	141	176	554.501	4374
June	178	227	2130.712	5348
July	230	290	623.813	7129
August	223	336	671.032	6911
September	159	219	1053.335	4775
October	134	173	721.933	4167
November	130	157	1465.095	3885
December	210	258	858.826	6517
TOTAL				56,306

ELIZABETHTOWN- KITLEY WATER DISTRIBUTION HISTORICAL ANNUAL TREATED WATER VOLUME

Year	Total Annual Volume (m3)
2004	81,913
2005	101,402
2006	99,254
2007	113,068
2008	128,460
2009	98,782
2010	95,876
2011	74,052
2012	76,372
2013	71,552
2014	62,873
2015	52,646

Year	Total Annual Volume (m3)
2016	47,965
2017	40,185
2018	49,216
2019	55,753
2020	54,968
2021	59,876
2022	74,804
2023	60,742
2024	50,726
2025	56,306


Elizabethtown-Kitley Historical Annual Treated Water Volume
Total Annual Volume (m3)
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025

BROCKVILLE
CITY OF THE 1000 ISLANDS

2025 WATER LOSS REPORT

WATER TREATMENT PLANT - DISTRIBUTION TOTAL	***3,582,153 m^3***

Water Sold to Customers	
Residential	1,486,230 m^3
Industrial	1,605,660 m^3
Sales to Elizabethtown-Kitley (East of Brockville, BCC)	22,919 m^3
Sales to Elizabethtown-Kitley (West of Brockville)	43,500 m^3
TOTAL BILLED WATER	***3,158,309 m^3***

Total Non-Revenue Water (NRW)	***423,844 m^3***
	11.83 %

NRW Sources Accounted For	
Flat Rate Water Users	25,200 m^3
Industrial Fire Flow Testing	500 m^3
Chlorinator Flow/Mechanical Seals	18,355 m^3
Watermain Breaks/Service Leaks	34,230 m^3
Anti-Freeze Taps	43,913 m^3
Fire Fighting and Training	7,527 m^3
Hydrant Fire Flow Testing and Flushing	1,000 m^3
Flushing Stations	207,170 m^3
Parks and Recreation Water Use	11,317 m^3
TOTAL	***349,211 m^3***
	9.75 %

TOTAL Unaccounted NRW	***74,633 m^3***
	2.08 %

Last Reviewed: Feb 10, 2026
By: S. Allen

Township of Elizabethtown-Kitley

2025 WATER LOSS REPORT

TOTAL METERED WATER	***56,306 m^3***
TOTAL BILLED WATER	***43,500 m^3***
Total Non-Revenue Water (NRW)	***12,806 m^3***
	22.74 %
NRW Sources Accounted For	
Watermain Breaks	600 m^3
Hydrant Fire Flow Testing	500 m^3
Flushing Stations	2,431 m^3
TOTAL	***3,531 m^3***
	6.3%
TOTAL LOST WATER	***9,275 m^3***
	16.47 %

Last Reviewed: Feb 10, 2026
By: S. Allen