

VILLE DE
TOWN OF **HAWKESBURY**
USINE D'EAU POTABLE
WATER TREATMENT PLANT

L'ÉDIFICE **JEAN-CLAUDE DROUIN** BUILDING

 **HAWKESBURY**

Drinking Water System

2024

Annual Report

Prepared by the Environmental Service
M. Perron, B.Sc, Superintendent / N. Beks, QMS Rep.
February 14, 2025

TABLE OF CONTENTS

Introduction	2
Drinking Water System Description	2
Drinking Water System Process	3
Water Treatment Chemicals Used.....	4
Major Expenses	4
Annual Water Quality Summary	5
Non-Compliance Findings	8
Adverse Test Results and other observations.....	9
Availability of Report	9

Introduction

This Annual Drinking Water Report has been prepared to satisfy Section 11 of O. Reg. 170/03 Drinking Water Systems Regulation, under *the Safe Drinking Water Act, 2002*. It describes the Hawkesbury Drinking Water System, details the water quality testing results, any non-compliances findings and adverse conditions that may have occurred from January 1 to December 31, 2024.

The Corporation of the Town of Hawkesbury is engaged to provide safe and clean drinking water to all its citizens and customers, to remain compliant with all regulatory requirements and to maintain and continually improve its drinking water quality management system. All efforts have been made to ensure the information presented is accurate.

Drinking Water System Description

The Hawkesbury Drinking Water System is categorized as a Large Municipal Residential System. It provides drinking water to the citizens of the Town of Hawkesbury and to three stand-alone systems owned by the Township of Champlain.

The key elements of Hawkesbury’s Drinking Water System are:

- A raw water pumping station,
- A drinking water treatment plant,
- A water distribution system for the Town of Hawkesbury,
- A remote standpipe water storage in the Town of Hawkesbury completed with a booster pumping system and secondary disinfection system,
- A pipeline connection to supply the Town of Vankleek Hill,
- A pipeline connection to supply the Village of L’Original, and
- A pipeline connection to supply the Laurentian Park

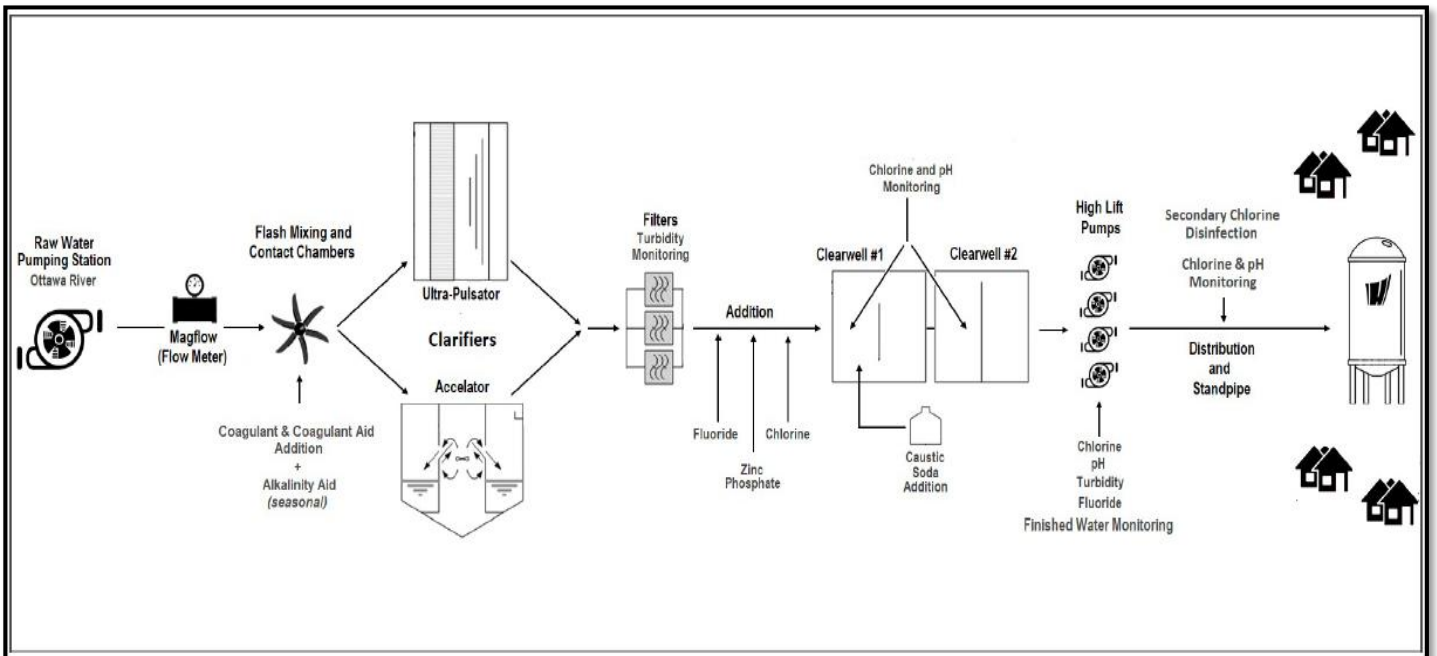
Hawkesbury Drinking Water System Profile Description	
Drinking Water System Number	220002832
Drinking Water System Name	Hawkesbury Drinking Water System
Drinking Water System Owner & Operating Authority	The Corporation of the Town of Hawkesbury
Municipal Drinking Water Licence	177-101
Drinking Water Works Permit	177-201
Permit to Take Water	1862-D3HQRQ
Drinking Water System Category	Large Municipal Residential System
Water Source	Ottawa River
Population Served	>10,000

The three stand-alone systems owned by the Township of Champlain are as follows and are all operated under the Ontario Clean Water Agency (OCWA):

Drinking Water System Receivers	
Township of Champlain (L'Original)	260037102
Township of Champlain (Vankleek Hill)	260002395
Township of Champlain (Park Laurentien)	260090012

Drinking Water System Process

The water is drawn from the Ottawa River through the intake pipe from the low lift pumping station and flows into the drinking water treatment plant where it undergoes a treatment process based on coagulation and flocculation followed by clarification and filtration. The plant is equipped with two dynamic clarifier package units, three high rate sand/anthracite filters, a two-cell clear well with a capacity of 2,300 m³ per cell, four high lift pumps that supplies treated water into the Town's 45 km water distribution system and a 5,450 m³ standpipe water storage.



Water Treatment Chemicals Used

Every chemical used in the operations and treatment processes of Hawkesbury Drinking Water System satisfies the NSF International (NSF) and American National Standards Institute (ANSI) in contact with drinking water applicable standards.

Treatment Chemical Name	Role
Poly Hydroxy Aluminum Sulfate (<i>PAS-8</i>)	Coagulant for treatment process in winter
Sodium Silicate	To form activated silica, a coagulant aid
Sodium Aluminate	To form activated silica, a coagulant aid
Liquid Chlorine (<i>compressed gas</i>)	Primary disinfection
Hydrofluosilicic Acid	Help prevent tooth decay
Zinc Orthophosphate	Corrosion control in the distribution system
Caustic Soda	pH adjustment
Sodium Hypochlorite	Secondary disinfection of the distribution system

Major Expenses

The major expenses incurred for the maintenance and operations of the drinking water treatment system are as follows:

- High lift pump #1 new motor installation
- Pressure relief valve & gate valve replacement
- Water Treatment Plant roof section repair
- Standpipe inspection and condition assessment
- Water Treatment Plant security system upgrade
- Kipling & Allan Street watermain rehabilitation
- Cameron Street watermain replacement and new hydrant installations

Annual Water Quality Summary

In-plant samples are collected and tested on site throughout the day by certified operators, while on-line systems continuously monitor chlorine residuals, turbidity and other quality-related parameters. Additionally, samples are collected for bacteriological, inorganic, organic and other chemical parameters, as required by O. Reg. 170/03. These sample analysis are performed by Caduceon Environmental Laboratories, accredited by the Canadian Association for laboratory Accreditation and licensed by the Ministry of the Environment, Conservation and Parks (MECP).

The following tables describe the water quality monitoring, both regulatory and operational, that has been performed during this reporting period.

Microbiological testing performed under Schedule 10 of Reg. 170/03

Sample Type	Parameter	Total Analysis	Range Results	Units	# Analysis Exceeding Standard
Raw	E. coli	53	0 – 72	CFU/100 mL	<i>n/a</i>
	Total coliforms	53	30 – 33,000	CFU/100 mL	<i>n/a</i>
Treated	E. coli	53	0 - 0	CFU/100 mL	0
	Total coliforms	53	0 - 0	CFU/100 mL	0
	HPC	53	2 - 2	CFU/mL	<i>n/a</i>
Distribution	E. coli	417	0 - 0	CFU/100 mL	0
	Total coliforms	417	0 - 0	CFU/100 mL	0
	HPC	157	0 - 500	CFU/mL	<i>n/a</i>

Operational testing performed under Schedule 6 & 7 of Reg. 170/03

Sample Type	Parameter	# Samples	Range Results	Units
Raw	Turbidity	Continuous monitoring	2.73 – 33.60	NTU
Treated	Turbidity	Continuous monitoring	0.03 - 0.16	NTU
Treated	Free Chlorine Residual	Continuous monitoring	0.75 - 1.29	mg/L
Treated	Fluoride	Continuous monitoring	0.17 - 0.74	mg/L
Treated	Fluoride	Grab - 725	0.13 – 0.78	mg/L
Distribution	Free Chlorine Residual	Grab - 679	0.18 - 1.16	mg/L
Note for Continuous Monitoring (zero days offline): Number of Grab Samples = 24 samples/day x 365 days/year (or 366 days/leap year) = 8760 (or 8784)				

**Residual Management testing performed under Schedule C
of the Municipal Drinking Water Licence**

Legal Instrument Issue Date	Parameter	Total Analysis	Annual Average	Units	Maximum Annual Allowed Concentration
April 25, 2005	Total Suspended Solids	12	7	mg/L	25

**Harmful Algal Blooms Monitoring performed under Schedule C
of the Municipal Drinking Water Licence**

The Hawkesbury Drinking Water System monitored for harmful algal blooms (HAB), as per its approved HAB monitoring plan, between June 1 and October 31, at the raw water source intake. During that period, no blooms were observed or reported.

**Summary of Inorganic parameters identified under Schedule 23, performed
per Schedule 13**

Parameter	Date Sampled	Result	Units	Exceeded the Standard	Exceeded Half the Standard
Antimony	2024-09-03	< 0.0001	mg/L	No	No
Arsenic	2024-09-03	0.0002	mg/L	No	No
Barium	2024-09-03	0.017	mg/L	No	No
Boron	2024-09-03	0.009	mg/L	No	No
Cadmium	2024-09-03	< 0.000015	mg/L	No	No
Chromium	2024-09-03	< 0.0010	mg/L	No	No
Mercury	2024-09-03	<0.00002	mg/L	No	No
Selenium	2024-09-03	< 0.001	mg/L	No	No
Uranium	2024-09-03	< 0.00005	mg/L	No	No

**Summary of Organic parameters identified under Schedule 24, performed
per Schedule 13**

Parameter	Date Sampled	Result	Units	Exceeded the Standard	Exceeded Half The Standard
Alachlor	2024-09-03	< 0.3	µg/L	No	No
Atrazine + N-dealkylated metabolites	2024-09-03	<0.5	µg/L	No	No
Azinphos-methyl	2024-09-03	<1.0	µg/L	No	No
Benzene	2024-09-03	<0.5	µg/L	No	No
Benzo(a)pyrene	2024-09-03	<0.006	µg/L	No	No
Bromoxynil	2024-09-03	<0.5	µg/L	No	No
Carbaryl	2024-09-03	<3.0	µg/L	No	No
Carbofuran	2024-09-03	<1.0	µg/L	No	No
Carbon Tetrachloride	2024-09-03	<0.2	µg/L	No	No
Chlorpyrifos	2024-09-03	<0.5	µg/L	No	No
Diazinon	2024-09-03	<1.0	µg/L	No	No
Dicamba	2024-09-03	<1.0	µg/L	No	No
1,2-Dichlorobenzene	2024-09-03	<0.5	µg/L	No	No
1,4-Dichlorobenzene	2024-09-03	<0.5	µg/L	No	No
1,2-Dichloroethane	2024-09-03	<0.5	µg/L	No	No
1,1-Dichloroethylene (vinylidene chloride)	2024-09-03	<0.5	µg/L	No	No
Dichloromethane	2024-09-03	<5.0	µg/L	No	No
2-4 Dichlorophenol	2024-09-03	<0.2	µg/L	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2024-09-03	<1.0	µg/L	No	No
Diclofop-methyl	2024-09-03	<0.9	µg/L	No	No
Dimethoate	2024-09-03	<1.0	µg/L	No	No
Diquat	2024-09-03	<5.0	µg/L	No	No
Diuron	2024-09-03	<5.0	µg/L	No	No
Glyphosate	2024-09-03	<25.0	µg/L	No	No
Malathion	2024-09-03	<5.0	µg/L	No	No
MCPA	2024-09-03	<10	µg/L	No	No
Metolachlor	2024-09-03	<3.0	µg/L	No	No
Metribuzin	2024-09-03	<3.0	µg/L	No	No
Monochlorobenzene	2024-09-03	<0.5	µg/L	No	No
Paraquat	2024-09-03	<1.0	µg/L	No	No
Pentachlorophenol	2024-09-03	<0.2	µg/L	No	No
Phorate	2024-09-03	<0.3	µg/L	No	No
Picloram	2024-09-03	<5.0	µg/L	No	No
Polychlorinated Biphenyls (PCB)	2024-09-03	<0.05	µg/L	No	No
Prometryne	2024-09-03	<0.1	µg/L	No	No
Simazine	2024-09-03	<0.5	µg/L	No	No

**Summary of Organic parameters identified under Schedule 24, performed per
Schedule 13 *continue*:**

Parameter	Date Sampled	Result	Units	Exceeded the Standard	Exceeded Half The Standard
Terbufos	2024-09-03	<0.5	µg/L	No	No
Tetrachloroethylene	2024-09-03	<0.5	µg/L	No	No
2,3,4,6-Tetrachlorophenol	2024-09-03	<0.2	µg/L	No	No
Triallate	2024-09-03	<10.0	µg/L	No	No
Trichloroethylene	2024-09-03	<0.5	µg/L	No	No
2,4,6-Trichlorophenol	2024-09-03	<0.2	µg/L	No	No
Trifluralin	2024-09-03	<0.5	µg/L	No	No
Vinyl Chloride	2024-09-03	<0.2	µg/L	No	No

Summary of other parameters performed under Schedule 13

Sample Type	Parameter	Total Analysis	Range Results	Units	Exceeded the Standard
Treated	Nitrite	4	0.05 – 0.05	mg/L	None
Treated	Nitrate	4	0.20 – 0.30	mg/L	None
Distribution	Haloacetic acids (<i>running annual average</i>)	12	37.6	µg /L	No
Distribution	THM (<i>running annual average</i>)	12	55.9	µg /L	No
Treated	Sodium*	1	16.0	mg/L	No
Distribution	Sodium*	1	1.6	mg/L	No

Sodium: 2021 results. Is required to be tested once every 5 years. Next sampling will be performed in 2026.*

Summary of lead testing performed under Schedule 15.1

Sample Type	Total Analysis	Range Results	Units	Exceeded the Standard
Plumbing	12	0.00002 - 0.00012	mg/L	None
Distribution	8	0.00011 - 0.00109	mg/L	None

Non-Compliance Findings

The annual Ministry of the Environment, Conservation and Parks (MECP) inspection for this reporting period took place in January 2025. There were no non-compliance findings and the Inspection Report Rating was 100% for the Hawkesbury Drinking Water System. No best practice recommendations were noted as well.

Adverse Test Results and other observations

During this review period, zero (0) drinking water tests exceeded provincial water quality standards.

One (1) on-site observation was made during a watermain break repair. The Environmental Service performed the regulatory notifications and corrective actions to rectify the situation. This observation had no indications of unsafe drinking water being directed to residents.

Availability of Report

This report, along with the Hawkesbury Drinking Water Annual Summary Report prepared in accordance with Schedule 22 of O.Reg.170/03 is available at no charge at the following places:

1. *Environmental Service*

Corporation of the Town of Hawkesbury
815 Main East
Hawkesbury (Ontario) K6A 1B5
(613) 678-9269

2. *Hawkesbury Public Library*

550 Higginson Street
Hawkesbury, Ontario
K6A 1H1

3. *Town's website* www.hawkesbury.ca

Additionally, this report is provided to the Township of Champlain and the Ministry of the Environment, Conservation and Parks.

If the format of this document is inadequate, the Clerk's office can be contacted at 613-632-0106 and the municipality can provide, to the best of its abilities, the required assistance.