

# **Southview Estates Drinking Water System**

## **2024 Annual Water Report**

Drinking Water System Number: 220012260

Drinking Water System Operating Authorities: City of Kawartha Lakes and Ontario  
Clean Water Agency

Drinking Water System Category: Large Municipal Residential

Reporting Period: January 1 – December 31, 2024



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# 2024 Annual Drinking Water System Summary Report

## General Information

The City of Kawartha Lakes prepares a report summarizing system operation and water quality for every municipal drinking water system annually. This report has been prepared to satisfy the annual reporting requirements in O. Reg. 170/03 Section 11 and Schedule 22. The annual reports will be available to residents at the City of Kawartha Lakes Public Works Administration Office by appointment and the [City's website](#). Notification that the reports are available free of charge will be made on the City of Kawartha Lakes website. The City of Kawartha Lakes Public Works Administration Office is located at 322 Kent Street West in Lindsay, Ontario.

This system does not serve more than 10,000 residences.

**Drinking Water System Number:** 220012260

**Drinking Water System Name:** Southview Estates Drinking Water System

**Drinking Water System Owner:** City of Kawartha Lakes

**Drinking Water System Category:** Large Municipal Residential

**Reporting Period:** January 1, 2024 – December 31, 2024

## Compliance Summary

**Table 1. Drinking Water Compliance Summary**

	Number of Events	Date	Details
Ministry (MECP) Inspections	1	November 20, 2024	2024/2025 Announced Focused Drinking Water Inspection – Rating not received before Annual Report date
Adverse Water Quality Incidents (AWQIs)	1	November 2, 2024	Failure to dose primary coagulant – Poly Aluminum Chloride
Non-Compliances	0		
Boil Water Advisories	0		
Health and Safety	0		

## Drinking Water System Description

The Southview Estates drinking water system is a large municipal residential drinking water system that serves the subdivision of Southview Estates located in Cameron, Ontario. The drinking water system is classified as a Class II Water Treatment and Class I Water Distribution subsystems under O. Reg. 128/04.

### Source Water

The water supply for the system comes from Sturgeon Lake, which is a surface water source.

### Water Treatment Facility

The Southview Estates drinking water system consists of a dual train conventional filtration package system. Each train consists of a flocculator/clarifier unit with automatic sludge withdrawal, and dual media high rate gravity filters with automatic backwash. Primary disinfection is accomplished using sodium hypochlorite. Coagulant and polymer are added to the treatment process. Treated water is directed to one dual celled baffled clearwell and then sent to the distribution system by three high lift pumps. Online analyzers monitor treated free chlorine and filter effluent turbidity. A wastewater treatment system exists that consists of two backwash pumps and two settling tanks that receive backwash water and clarifier sludge.

A diesel generator is onsite to provide standby power to the water treatment facility in the event of a power failure.

### Distribution System

The distribution system has approximately 4.8 kilometers of watermain and is not rated for fire protection. There is no storage, chlorine boosting, secondary disinfection or pressure boosting capabilities within the control of the distribution system. The watermain in the Southview Estates Distribution System are all PVC.

**Table 2. Treatment Chemicals Used**

Chemical Name	Use	Supplier
Sodium Hypochlorite	Disinfection	Jutzi Water Technology
SternPAC	Coagulant	Kemira
Magnafloc	Coagulant Aid	Basf

## Summary of Non-Compliance

### Adverse Water Quality Incidents

**Table 3. Adverse Water Quality Incidents**

Date	AWQI #	Location	Problem	Details	Legislation	Corrective Action Taken
2024 11 02	166807	Primary Treatment	Failure to dose primary coagulant	Responded to alarm and noticed coagulant not dosing. Found set point low.	O. Reg. 170/03 Schedule 1-4	Coagulant set point changed to increase dosing, Flushed distribution system and collect bacteriological samples.

### Non-Compliance

There were no non-compliances reported during the reporting period.

### Non-Compliance Identified in a Ministry Inspection

There were no non-compliances identified in a Ministry Inspection during this period.

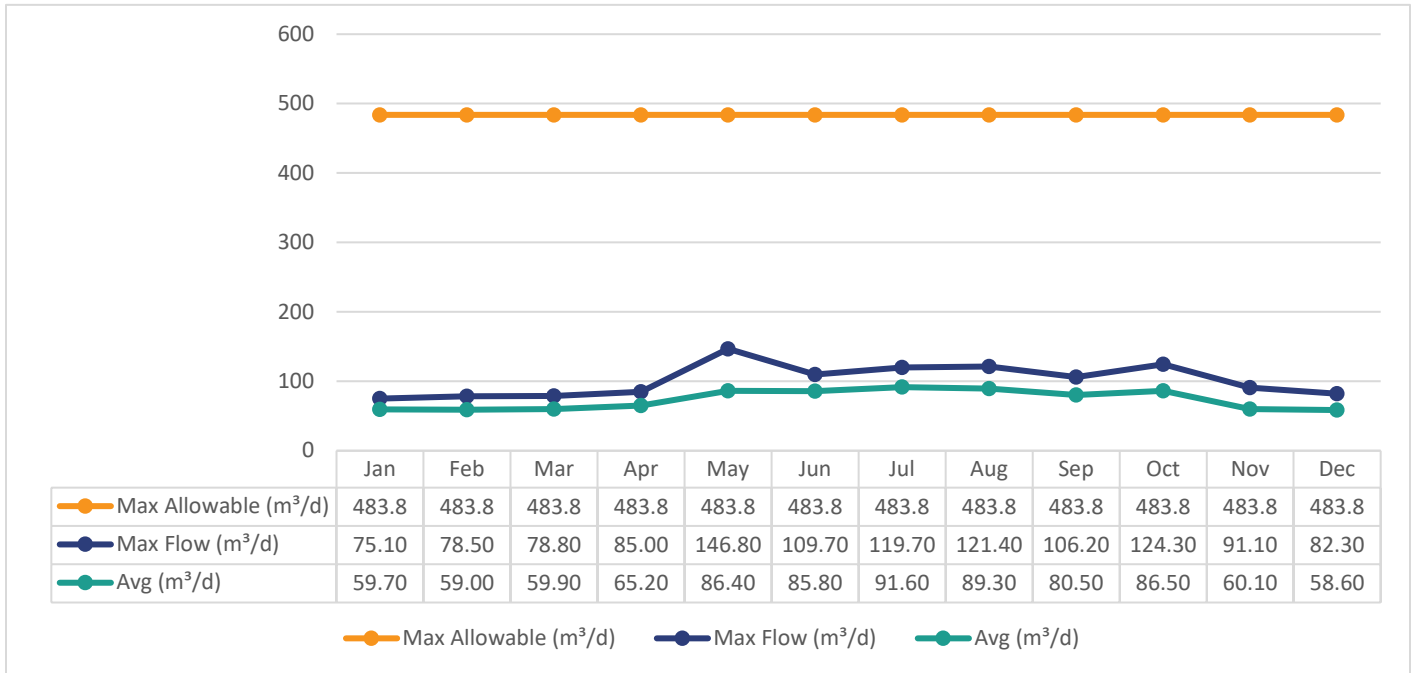
## Flows

The Southview Estates Drinking Water System is operating on average under half the rated capacity. The rated capacity of the system (treated water flows) is 484 m<sup>3</sup>/day.

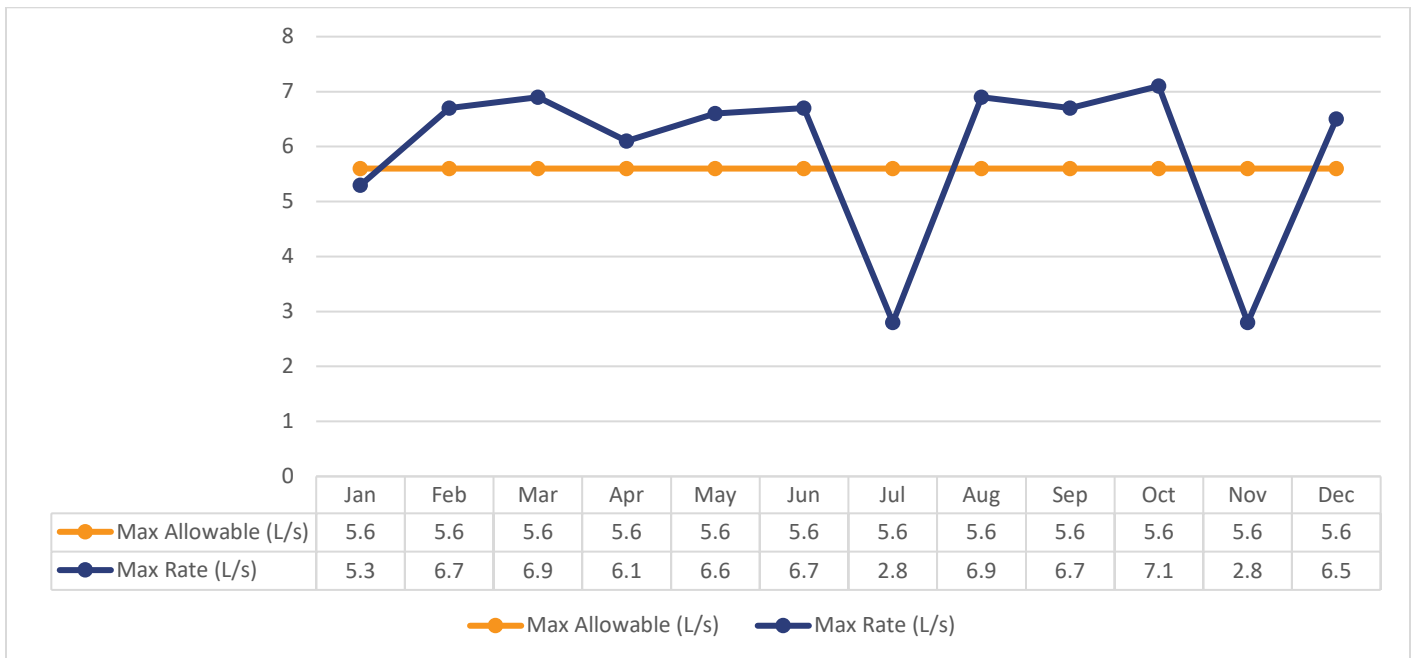
### Raw Water Flows

The raw water flows are regulated under the Permit to Take Water. Raw flow data for 2024 was submitted to the Ministry of Environment, Conservation and Parks (MECP) electronically under permit #8118-AW2NZT. The confirmation of the data that was submitted is attached in Appendix A.

**Graph 1. Total Monthly Flows (m<sup>3</sup>/d) – Sturgeon Lake (Max Allowable PTTW)**



**Graph 2. Monthly Rated Flows (L/s) – Sturgeon Lake (Max Allowable Rate PTTW)**

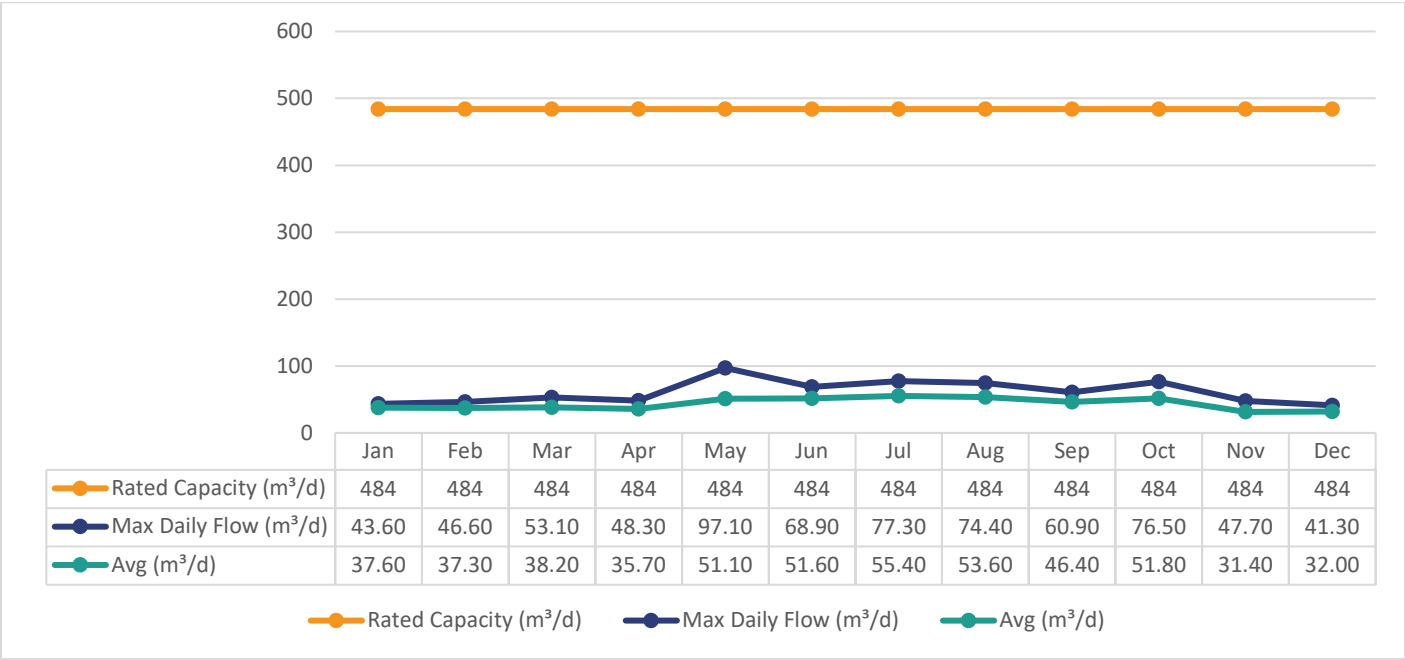


**Note:** The above table shows there were exceedances in instantaneous peak flow rate (L/s), exceedances were short in duration and reviewed for compliance. The schedule flow meter calibration was in August 2024. Readings can also spike during generator runs or unplanned power outages, and maintenance.

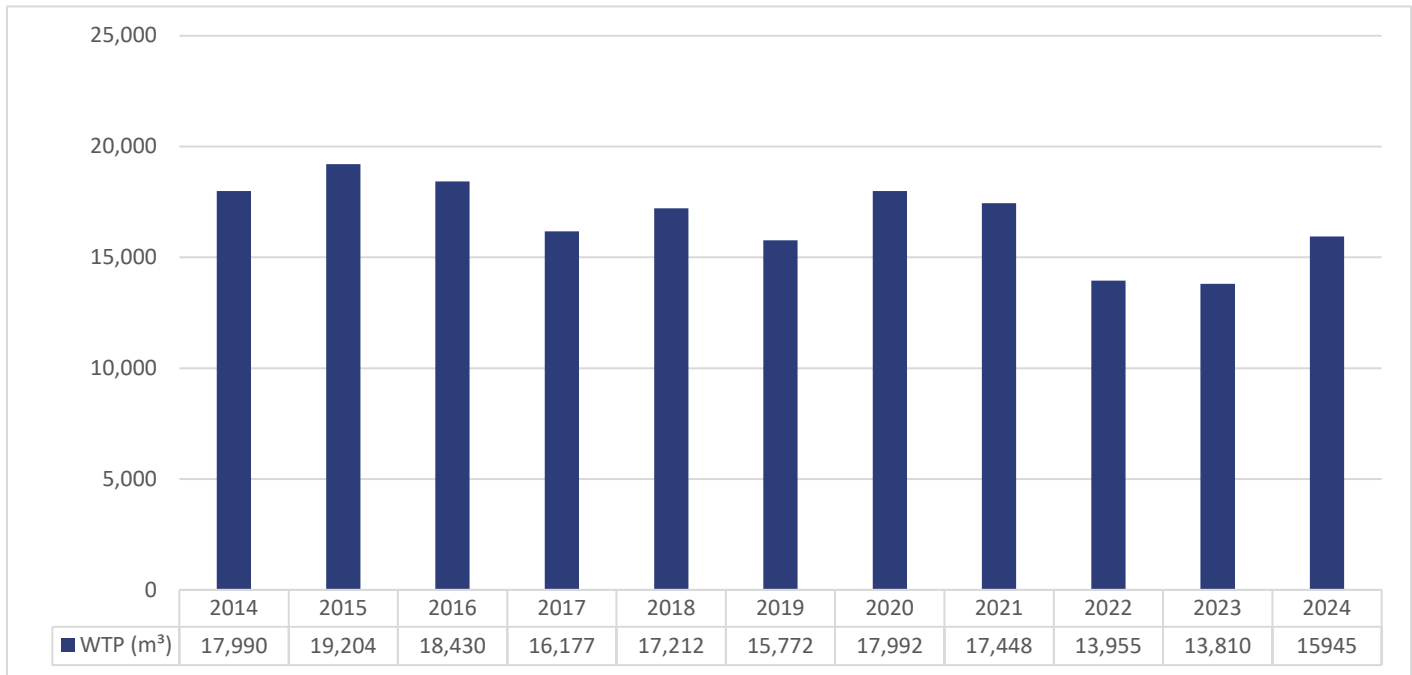
Treated Water Flows

The Treated Water flows are regulated under the Municipal Drinking Water Licence 141-101.

Graph 3. Monthly Rated Flows (m³/d) – Rated Capacity - MDWL



**Graph 4. Annual Total Flow Comparison (m³)**



## Regulatory Sample Results Summary

### Microbiological Testing

**Table 4. Microbiological Test Results**

	No. of Samples Collected	Range of E. Coli Results	Range of E. Coli Results	Range of Total Coliform Results	Range of Total Coliform Results	Range of HPC Results	Range of HPC Results
		Min	Max	Min	Max	Min	Max
<b>Raw</b>	52	0	3	0	78	N/A	N/A
<b>Treated</b>	56	0	0	0	0	0	2
<b>Distribution</b>	156	0	0	0	0	0	3

OG = Overgrowth

HPC = Heterotrophic Plate Count

**Note:** There was 1 NDOGT sample result did occur. NDOGT – No Data, Overgrown with Target bacteria



## Operational Testing

**Table 5. Operational Test Results**

Parameter	Number of Samples Collected	Range of Results Minimum	Range of Results Maximum
<b>Turbidity Raw (NTU)</b>	51	0.07	2.39
<b>Turbidity Filter 1 (NTU)</b>	8760	0.02	2.03
<b>Turbidity Filter 2 (NTU)</b>	8760	0.03	2.29
<b>Chlorine</b>	8760	0.00	2.91
<b>Fluoride</b> (If the DWS provides fluoridation)	N/A	N/A	N/A

**Note:** Record the unit of measurement if it is **not** milligrams per litre.

**Note:** For continuous monitors 8760 is used as the number of samples. Spikes recorded by online instrumentation were a result of air bubbles and various maintenance/calibration activities. All spikes are reviewed for compliance with O. Reg. 170/03.

## Inorganic Parameters

These parameters are tested as a requirement under O. Reg. 170/03. Sodium and Fluoride are required to be tested every five years. Nitrate and Nitrate are tested quarterly and the metals are tested annually as required under O. Reg. 170/03. In the event any of the parameters listed in Schedule 23 or 24 of O. Reg. 170/03 exceed half of the maximum allowable concentration the parameter is required to be samples quarterly. Based on the latest test results no additional testing is required.

**Table 6. Inorganic Parameters Test Results**

	Sample Date (yyyy/mm/dd)	Sample Result	Unit of Measure	MAC	Exceedance
<b>Treated Water</b>					
Antimony	2024 01 02	<MDL 0.6	µg/L	6.0	No
Arsenic	2024 01 02	<MDL 0.2	µg/L	10.0	No
Barium	2024 01 02	21.5	µg/L	1000.0	No
Boron	2024 01 02	8.0	µg/L	5000.0	No
Cadmium	2024 01 02	<MDL 0.003	µg/L	5.0	No
Chromium	2024 01 02	0.12	µg/L	50.0	No
Mercury	2024 01 02	<MDL 0.01	µg/L	1.0	No

	Sample Date (yyyy/mm/dd)	Sample Result	Unit of Measure	MAC	Exceedance
Selenium	2024 01 02	<MDL 0.04	µg/L	50.0	No
Uranium	2024 01 02	0.009	µg/L	20.0	No
<b>Additional Inorganics</b>					
Fluoride	2023 01 03	<MDL 0.06	mg/L	1.5	No
Nitrite	2024 01 02	<MDL 0.003	mg/L	1.0	No
Nitrite	2024 04 09	<MDL 0.003	mg/L	1.0	No
Nitrite	2024 07 03	<MDL 0.003	mg/L	1.0	No
Nitrite	2024 10 01	<MDL 0.003	mg/L	1.0	No
Nitrate	2024 01 02	0.263	mg/L	10.0	No
Nitrate	2024 04 09	0.70	mg/L	10.0	No
Nitrate	2024 07 03	0.153	mg/L	10.0	No
Nitrate	2024 10 01	0.086	mg/L	10.0	No
Sodium	2023 01 03	13.8	mg/L	20*	No

MAC = Maximum Allowable Concentration as per O. Reg. 169/03

MDL = Method Detection Limit

\*There is no "MAC" for Sodium. The aesthetic objective for sodium in drinking water is 200 mg/L. Sodium results exceeding 20 mg/L are to be reported to the Medical Officer of Health as per Schedule 16-3 (8) of O. Reg. 170/03.

## Schedule 15 Sampling (Lead)

The Schedule 15 sampling is required under O. Reg. 170/03. This system is under reduced sampling. Only distribution samples were collected, and no plumbing samples were collected.

**Table 7. Schedule 15 Test Results (Lead)**

	Number of Sampling Points	Number of Samples	Range of Results Minimum	Range of Results Maximum	MAC (µg/L)	Number of Exceedances
<b>Alkalinity (mg/L)</b>	2	2	72	92	N/A	N/A
<b>pH</b>	2	2	7.55	8.07	N/A	N/A
<b>Lead (µg/L)</b>	N/A	N/A	N/A	N/A	10.0	

## Organic Parameters

These parameters are tested as a requirement under O. Reg. 170/03. In the event any of the parameters listed in Schedule 23 or 24 of O. Reg. 170/03 exceed half of the maximum allowable concentration the parameter is required to be samples quarterly. Based on the latest test results no additional testing is required.

**Table 8. Organic Parameters Test Results**

	Sample Date (yyyy/mm/dd)	Sample Result	Unit of Measure	MAC	Exceedance
<b>Treated Water</b>					
Alachlor	2024 01 02	<MDL 0.02	µg/L	5.0	No
Atrazine + N-dealkylated metabolites	2024 01 02	<MDL 0.01	µg/L	5.0	No
Azinphos-methyl	2024 01 02	<MDL 0.05	µg/L	20.0	No
Benzene	2024 01 02	<MDL 0.32	µg/L	1.0	No
Benzo(a)pyrene	2024 01 02	<MDL 0.004	µg/L	0.01	No
Bromoxynil	2024 01 02	<MDL 0.33	µg/L	5.0	No
Carbaryl	2024 01 02	<MDL 0.05	µg/L	90.0	No
Carbofuran	2024 01 02	<MDL 0.01	µg/L	90.0	No
Carbon Tetrachloride	2024 01 02	<MDL 0.17	µg/L	2.0	No
Chlorpyrifos	2024 01 02	<MDL 0.02	µg/L	90.0	No
Diazinon	2024 01 02	<MDL 0.02	µg/L	20.0	No
Dicamba	2024 01 02	<MDL 0.2	µg/L	120.0	No
1,2-Dichlorobenzene	2024 01 02	<MDL 0.41	µg/L	200.0	No
1,4-Dichlorobenzene	2024 01 02	<MDL 0.36	µg/L	5.0	No
1,2-Dichloroethane	2024 01 02	<MDL 0.35	µg/L	5.0	No
1,1-Dichloroethylene	2024 01 02	<MDL 0.33	µg/L	14.0	No
Dichloromethane (Methylene Chloride)	2024 01 02	<MDL 0.35	µg/L	50.0	No
2,4-Dichlorophenol	2024 01 02	<MDL 0.15	µg/L	900.0	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2024 01 02	<MDL 0.19	µg/L	100.0	No
Diclofop-methyl	2024 01 02	<MDL 0.4	µg/L	9.0	No
Dimethoate	2024 01 02	<MDL 0.06	µg/L	20.0	No
Diquat	2024 01 02	<MDL 1.0	µg/L	70.0	No
Diuron	2024 01 02	<MDL 0.03	µg/L	150.0	No
Glyphosate	2024 01 02	<MDL 1.0	µg/L	280.0	No
Malathion	2024 01 02	<MDL 0.02	µg/L	190.0	No

	Sample Date (yyyy/mm/dd)	Sample Result	Unit of Measure	MAC	Exceedance
2-Methyl-4chlorophenoxyacetic Acid (MCPA)	2024 01 02				
Metolachlor	2024 01 02	<MDL 0.01	µg/L	50.0	No
Metribuzin	2024 01 02	<MDL 0.02	µg/L	80.0	No
Monochlorobenzene (Chlorobenzene)	2024 01 02	<MDL 0.3	µg/L	80.0	No
Paraquat	2024 01 02	<MDL 1.0	µg/L	10.0	No
PCB	2024 01 02	<MDL 0.04	µg/L	3.0	No
Pentachlorophenol	2024 01 02	<MDL 0.15	µg/L	60.0	No
Phorate	2024 01 02	<MDL 0.01	µg/L	2.0	No
Picloram	2024 01 02	<MDL 1.0	µg/L	190.0	No
Prometryne	2024 01 02	<MDL 0.03	µg/L	1.0	No
Simazine	2024 01 02	<MDL 0.01	µg/L	10.0	No
Terbufos	2024 01 02	<MDL 0.01	µg/L	1.0	No
Tetrachloroethylene	2024 01 02	<MDL 0.35	µg/L	10.0	No
2,3,4,6-Tetrachlorophenol	2024 01 02	<MDL 0.2	µg/L	100.0	No
Triallate	2024 01 02	<MDL 0.01	µg/L	230.0	No
Trichloroethylene	2024 01 02	<MDL 0.44	µg/L	5.0	No
2,4,6-Trichlorophenol	2024 01 02	<MDL 0.25	µg/L	5.0	No
Trifluralin	2024 01 02	<MDL 0.02	µg/L	45.0	No
Vinyl Chloride	2024 01 02	<MDL 0.17	µg/L	1.0	No
<b>Distribution Water</b>					
Trihalomethane Total Annual Average Q1	2024 01 02	70.75	µg/L	100.0	No
Trihalomethane Total Annual Average Q2	2024 04 09	70.4	µg/L	100.0	No
Trihalomethane Total Annual Average Q3	2024 07 02	89.2	µg/L	100.0	No
Trihalomethane Total Annual Average Q4	2024 10 01	94.0	µg/L	100.0	No
HAA Total Annual Average Q1	2024 01 02	40.93	µg/L	80.0	No
HAA Total Annual Average Q2	2024 04 09	42.53	µg/L	80.0	No
HAA Total Annual Average Q3	2024 07 02	52.5	µg/L	80.0	No
HAA Total Annual Average Q4	2024 10 01	55.98	µg/L	80.0	No

MAC = Maximum Allowable Concentration as O. Reg. 169/03

MDL = Method Detection Limit

## Additional Legislated Samples

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

Harmful Algal Blooms monitoring is required as a condition within the Municipal Drinking Water Licence between June and October of each reporting year at a minimum. Treated and Raw samples are collected weekly during this time period and tested for Microcystin, which is an indicator for harmful algal blooms.

**Table 9. Microcystin Sample Results**

Municipal Drinking Water Licence	Collected Weekly June – Oct	Total Microcystin Raw Results Range (µg/L)	Total Microcystin Treated Water Results Range (µg/L)	Treated Water Total Microcystin Limit 1.5 µg/L Exceeded
Harmful Algal Blooms Monitoring	June	<0.1 - <0.1	<0.1 - <0.1	N
	July	<0.1 - <0.1	<0.1 - <0.1	N
	August	<0.1 - <0.1	<0.1 - <0.1	N
	September	<0.1 - <0.1	<0.1 - <0.1	N
	October	<0.1 - <0.1	<0.1 - <0.1	N

Method Detection Limit is 0.1 µg/L

**Table 10. Various Additional Testing Required by MDWL**

Municipal Drinking Water Licence	Location	No. of Samples Collected	Range of Results Minimum	Range of Results of Maximum
Alkalinity (mg/L as CaCO <sub>3</sub> )	Point of Entrance to Distribution System	4	73.0	103.0
Aluminum (µg/L)	Point of Entrance to Distribution System	4	25.0	63.0
Dissolved Organic Carbon (mg/L)	Point of Entrance to Distribution System	54	2.0	5.0
Total Suspended Solids (mg/L)	Settling Tank Discharge Point	12	3.0	15.0

## Minor Maintenance

- Chlorine analyzer replacement
- High lift pump #2 motor replacement
- Heater contactor replacement
- Composite sampler replacement
- UPS Replacement
- Outpost panel battery replacement


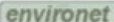

## Major Maintenance Expense (above \$10,000)

Under Section 11 of O. Reg. 170/03, a description of any major expenses incurred during this reporting period to install, repair or replace required equipment must be included in the annual report. The details of the major expenses for this drinking water system are as follows:

- Southview Estates WTP – THM and HAA Study - \$93,956

# APPENDIX A

## WTR Submission Confirmation



Ministry of the Environment,  
Conservation and Parks

| [WT DATA](#) | [REPORTS](#) | [SEARCH WT DATA](#) | [ADMINISTRATION](#) | [USER PROFILE](#) | [CONTACT US](#) | [HELP](#) | [HOME](#) | [LOGOUT](#) |

Location: [WTRS](#) / [WT DATA](#) / [Input WT Record](#) WTRS-WT-008

Water Taking Data submitted successfully.

**Confirmation:**

Thank you for submitting your water taking data online.

Permit Number: 8118-AW2NZT  
Permit Holder: THE CORPORATION OF THE CITY OF KAWARTHA LAKES.  
Received on: Feb 6, 2025 10:46 AM

This confirmation indicates that your data has been received by the Ministry, but should not be construed as acceptance of this data if it differs from that specified on the Permit Number, assigned to the Permit Holder stated above.