



Chatham-Kent

Public Utilities Commission

2025 Annual Drinking Water Summary Report

Chatham Drinking Water System

Reporting Period of January 1st – December 31st, 2025



This Annual Drinking Water Summary Report is prepared in accordance with the following requirements:

Ontario Regulation 170/03 – Drinking Water Systems	
Section 11	Annual Reports
Schedule 22	Summary Reports for Municipalities

1. INTRODUCTION AND BACKGROUND

1.1. System Description

Drinking-Water System Number:	260003378
Drinking-Water System Name:	Chatham Drinking Water System
Drinking-Water System Owner:	PUC for the Municipality of Chatham-Kent
Drinking-Water System Category:	Large Municipal Residential
Municipal Drinking Water Licence:	027-102
Drinking Water Works Permit:	027-202
Period being reported:	January 1 – December 31, 2025

Source Water:

Surface Water	Lake Erie
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Treatment:

The Chatham Water Treatment Plant is located at 325 Grand Ave East, Chatham.

Coagulation	Poly Aluminum Chloride / Polymer
Flocculation	Actiflo Process
Sedimentation / Clarification	Actiflo Process
Filtration	Conventional Sand Filtration
Primary Disinfection	Chlorination – Chlorine Gas
Taste & Odour	Powdered Activated Carbon
Colour	Sodium Permanganate
Tooth Decay Prevention	Fluoridation - Hydrofluosilicic Acid

Distribution:

The Chatham Water Distribution System consists of approximately 600 km of watermains which serves the city of Chatham and surrounding communities including Dover, Grande Pointe, Pain Court, Mitchell's Bay, Ebert's, Dresden and Thamesville along with outlying areas. Population served is approximately 48,000.

Chatham & Dover Distribution System:

Secondary Disinfection	Chlorination – Sodium Hypochlorite
Pumping & Re-chlorination	Dover Re-chlorination & Booster Pumping Station
Re-chlorination	Grande Point Re-chlorination Station
Storage	Chatham Elevated Tank Pain Court Elevated Tank Mitchell's Bay Elevated Tank

North Kent Distribution System:

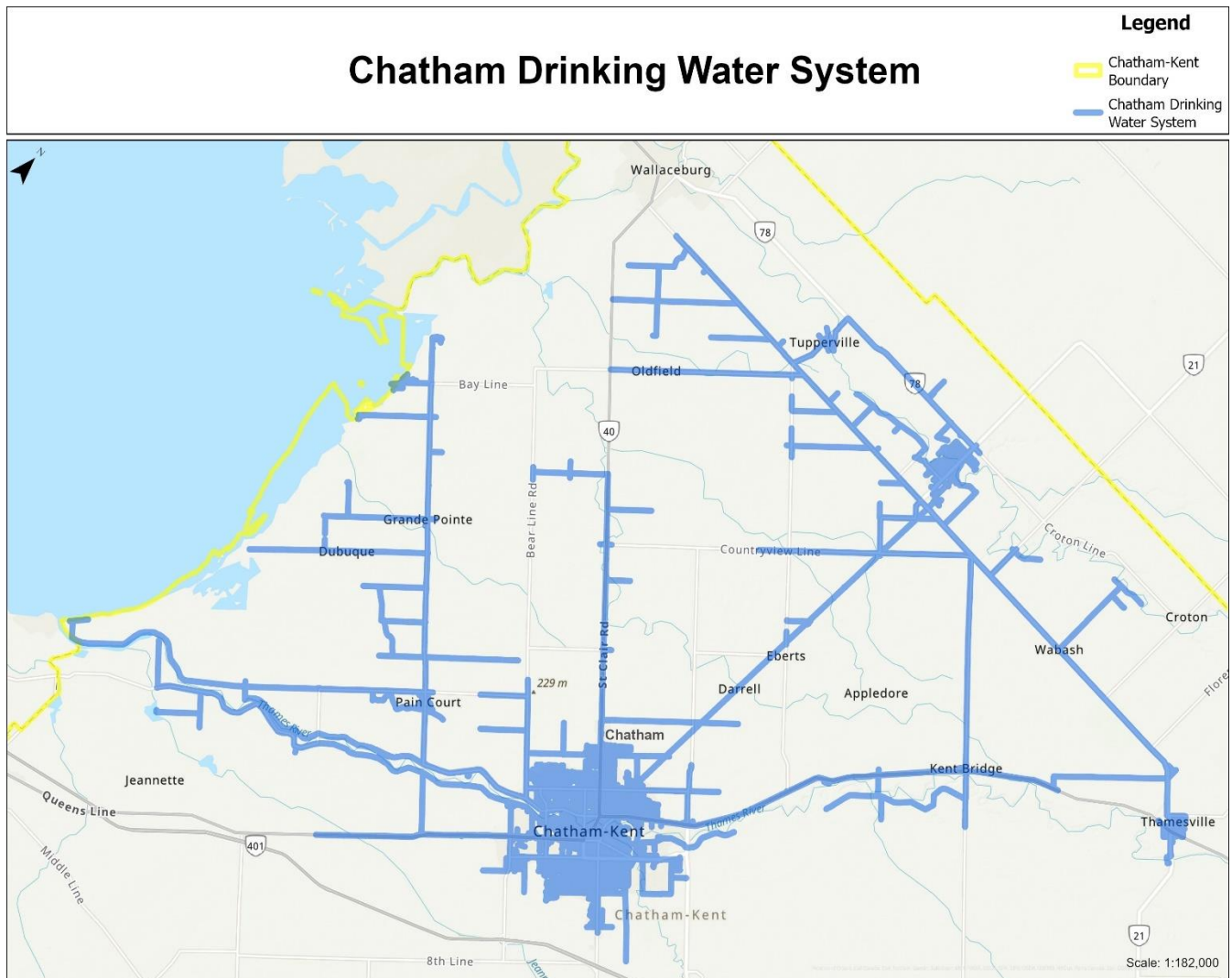
The North Kent Distribution System is an extension of the Chatham Distribution System, supplied via the Chatham Water Treatment Plant. The North Kent Distribution System consists of approximately 160 kms of watermains servicing the rural residents of North-West Chatham-Kent including Dresden, Ebert's, Tupperville and Wabash.

Secondary Disinfection	Chlorination – Sodium Hypochlorite
Storage, Pumping & Re-chlorination	Eberts Standpipe, Re-chlorination, & Booster Pumping Station
Storage & Re-chlorination	Dresden Elevated Tank

Thamesville Distribution System:

The Thamesville Distribution System is an extension of the Chatham Distribution System, supplied via the Chatham Water Treatment Plant. The Thamesville Distribution System consists of approximately 13 kms of water mains servicing the residents of Thamesville.

Secondary Disinfection	Chlorination – Sodium Hypochlorite
Re-chlorination	Thamesville Re-chlorination Station
Storage	Thamesville Standpipe



1.2. List all Drinking-Water Systems (if any), which receive all their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
None	

1.3. Description and breakdown of monetary expenses incurred

Expense	Cost (\$)
Cox Ave & Faircourt Ave, Chatham – Watermain Replacement	320,000
King Street West, Chatham – Watermain Replacement	123,500
Laboratory Analysis	56,000
High Lift Pump #1 Repairs	15,000
SCADA, Controls, Communication & Associated Equipment	12,000
Dover Booster Pumping Station – Pump #1 Replacement	13,500
Actiflo Cyclone Equipment	11,000
High Voltage Switchgear Repairs	11,000
Actiflo Valve Actuator Repair	9,000
27,000 Volt Cable Repair	8,800
Perimeter Drain Pump	7,500
High Lift Pump #2 VFD Repairs	5,000
Surge Tower Singer Valve Repair Equipment	4,500
Dover Booster Pumping Station - Pump #3 Repair Equipment	4,000
Actiflo Air Unit Combustion Blower	4,000
Vacuum Pump Repairs	3,500
HACH Pocket Colourimeters	2,000
Chlorine Ton Cylinder Repair Gaskets	1,000

2. WATER QUANTITY

2.1. System Performance

According to the Municipal Drinking Water License, rated capacity is determined by the maximum daily treated volume from the treatment subsystem to the distribution system.

Rated Capacity: Maximum Daily Treated Volume m ³ /day	Maximum Daily Treated Volume m ³ /day	Maximum Daily Treated Volume vs Rated Capacity %
67,999	43,681	64

2.2. Total Treated Water flows from the treatment subsystem to the distribution system:

The following table outlines total monthly flow, average daily flow, and maximum daily flow supplied to the distribution system from the Chatham Water Treatment Plant. Additionally, the average daily flows and maximum daily flows are compared to the rated capacity outlined in the Municipal Drinking Water License.

Month	Total Monthly Flow m ³ /day	Average Daily Flow m ³ /day	% of Rated Capacity	Maximum Daily Flow m ³ /day	% of Rated Capacity
Limits			100	67,999	100
January	844,092	27,229	40	30,946	46
February	762,470	27,231	40	29,307	43
March	856,352	27,624	41	30,500	45
April	870,254	29,008	43	34,221	50
May	952,398	30,723	45	36,257	53
June	1,066,517	35,551	52	40,263	59
July	1,211,140	39,069	57	43,681	64
August	1,168,155	37,682	55	41,971	62
September	1,104,199	36,807	54	42,239	62
October	1,011,716	32,636	48	39,645	58
November	768,940	25,631	38	28,039	41
December	820,146	26,456	39	34,749	51
	Total Yearly Flow m³/day	Annual Average m³/day	Maximum %	Maximum m³/day	Maximum %
	11,436,380	31,333	57	43,681	64

2.3. Total Treated Water flows from the treatment subsystem to the distribution system (5 years):

The following table outlines historic total monthly flows from January 2021 until the end of the reporting period.

Month	2021 Total Monthly Flow m ³ /day	2022 Total Monthly Flow m ³ /day	2023 Total Monthly Flow m ³ /day	2024 Total Monthly Flow m ³ /day	2025 Total Monthly Flow m ³ /day
January	662,108	725,020	722,063	764,441	844,092
February	636,769	700,683	670,522	731,207	762,470
March	707,400	789,951	768,518	780,450	856,352
April	726,341	761,163	773,842	834,620	870,254
May	861,086	956,082	1,035,305	967,250	952,398
June	1,032,882	1,003,323	1,056,316	1,037,957	1,066,517
July	1,106,921	994,569	1,008,530	1,098,719	1,211,140
August	1,056,329	1,111,223	1,042,597	1,104,658	1,168,155
September	1,042,884	1,074,353	1,073,774	1,100,841	1,104,199
October	850,779	848,921	890,888	943,448	1,011,716
November	711,984	747,236	750,623	801,635	768,940
December	721,926	720,122	735,550	789,945	820,146
	Total Yearly Flow m³/day	Total Yearly Flow m³/day	Total Yearly Flow m³/day	Total Yearly Flow m³/day	Total Yearly Flow m³/day
	10,117,410	10,432,645	10,528,527	10,955,173	11,436,380

3. OPERATIONAL TESTING

3.1. Operational testing done under Schedule 7 of Regulation 170/03 during the period covered by this Annual Report:

As per Schedule 7 of Regulation 170/03, the Chatham Drinking Water System must ensure that sampling and testing for turbidity is carried out by continuous monitoring equipment on each filter effluent line. Sampling and testing for free chlorine residuals must be carried out by continuous monitoring equipment where the intended contact time had been completed. Additionally, since the Chatham Water Treatment Plant provides fluoridation, one water sample must be taken at the end of the fluoridation process at least once per day to be tested for fluoride.

Parameter	Number of Grab Samples	Range of Results (min #) - (max #)
Turbidity (Filter Discharge)	8760	0.000 – 0.432 NTU
Chlorine (Reservoir 2 Discharge)	8760	0.72 – 4.95 mg/L
Chlorine (Reservoir 1 Discharge)	8760	0.04* – 5.00 mg/L
Fluoride (Point of Entry)	8760	0.13 – 0.76 mg/L

NOTE: For continuous monitors use 8760 as the number of samples.

*CT (Concentration X Time) achieved and greater than CT required in Reservoir 2, prior to low chlorine residual discharged from Reservoir 1.

4. WATER QUALITY MONITORING

4.1. Microbiological Testing done under the Schedule 10 of Regulation 170/03, during this reporting period:

As per Schedule 10 of Regulation 170/03, the Chatham Drinking Water System is required to take the following samples:

Raw Water:

A minimum of one raw water sample per week to be tested for Escherichia coli (E.coli) and total coliforms (TC).

Treated Water:

A minimum of one treated water sample is required per week to be tested for E. coli, TC, and heterotrophic plate count (HPC).

Distribution Water:

At least eight distribution samples, plus one additional distribution sample for every 1,000 people served by the system, are taken every month, with at least one of the samples being taken in each week. Each distribution sample is tested for E.coli and TC and 25% of distribution samples are tested for HPC.

	Number of Samples	Range of E. coli Results (min #) - (max #)	Range of Total Coliform Results (min #) - (max #)	Number of HPC Samples	Range of HPC Results (min #) - (max #)
Raw	52	< 5 – 20	< 5 – > 4000	0	
Treated	52	0 – 0	0 – 0	52	< 10 – 20
Distribution	1,500	0 – 0	0 – 1	1,484	< 10 – 180

4.2. Summary of Inorganic parameters tested during this reporting period or the most recent sample results:

As per Schedule 13 of Regulation 170/03, the Chatham Drinking Water System is required to take a minimum of one treated water sample to be tested for the parameters outlined in Schedule 13 and 23 as reported in the table below.

Any results displayed as less than (<) are below the detection limit of the accredited third-party laboratory.

Parameter	Sample Date	Result Value	MAC* Limit	Unit of Measure	Exceedance
Antimony	Aug 11	< 0.50	6	ug/L	No
Arsenic	Aug 11	<1.0	10	ug/L	No
Barium	Aug 11	19	1,000	ug/L	No
Boron	Aug 11	23	5,000	ug/L	No
Cadmium	Aug 11	< 0.090	5	ug/L	No
Chromium	Aug 11	< 5.0	50	ug/L	No
Mercury	Aug 11	< 0.0001	0.001	mg/L	No
Selenium	Aug 11	< 2.0	50	ug/L	No
Sodium	Aug 11	9,600	20,000	ug/L	No
Uranium	Aug 11	<0.10	20	ug/L	No
Fluoride	Continuous Monitoring: See Operational Section				
Nitrite	Nov 17	< 0.010	1	mg/L	No
Nitrate	Nov 17	0.13	10	mg/L	No
Nitrite + Nitrate	Nov 17	0.13	-	mg/L	No

* MAC: Maximum Acceptable Concentration

4.3. Summary of Organic parameters sampled during this reporting period or the most recent sample results:

As per Schedule 13 of Regulation 170/03, the Chatham Drinking Water System is required to take a minimum of one treated water sample to be tested for the parameters outlined in Schedule 24 as reported in the table below.

Any results displayed as less than (<) are below the detection limit of the accredited third-party laboratory.

Parameter	Sample Date	Result Value	MAC* Limit	Unit of Measure	Exceedance
Alachlor	Aug 11	< 0.50	5	ug/L	No
Atrazine + N-dealkylated metabolites	Aug 11	< 1.0	5	ug/L	No
Azinphos-methyl	Aug 11	< 2.0	20	ug/L	No
Benzene	Aug 11	< 0.10	1	ug/L	No
Benzo(a)pyrene	Aug 11	< 0.0050	0.01	ug/L	No
Bromoxynil	Aug 11	< 0.50	5	ug/L	No
Carbaryl	Aug 11	< 5.0	90	ug/L	No
Carbofuran	Aug 11	< 5.0	90	ug/L	No
Carbon Tetrachloride	Aug 11	< 0.10	2	ug/L	No
Chlorpyrifos (Dursban)	Aug 11	< 1.0	90	ug/L	No
Diazinon	Aug 11	< 1.0	20	ug/L	No
Dicamba	Aug 11	< 1.0	120	ug/L	No
1,2-Dichlorobenzene	Aug 11	< 0.20	200	ug/L	No
1,4-Dichlorobenzene	Aug 11	< 0.20	5	ug/L	No
1,2-Dichloroethane	Aug 11	< 0.20	5	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	Aug 11	< 0.10	14	ug/L	No
Dichloromethane	Aug 11	< 0.50	50	ug/L	No
2,4-Dichlorophenol	Aug 11	< 0.25	900	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Aug 11	< 1.0	100	ug/L	No
Diclofop-methyl	Aug 11	< 0.90	9	ug/L	No
Dimethoate	Aug 11	< 2.5	20	ug/L	No
Diquat	Aug 11	< 7.0	70	ug/L	No
Diuron	Aug 11	< 10	150	ug/L	No
Ethylbenzene	Aug 11	< 0.10	140	ug/L	No
Glyphosate	Aug 11	< 10	280	ug/L	No
Malathion	Aug 11	< 5.0	190	ug/L	No
2 Methyl-4-chlorophenoxyacetic acid (MCPA)	Aug 11	< 10	100	ug/L	No
Metolachlor	Aug 11	< 0.50	50	ug/L	No
Metribuzin (Sencor)	Aug 11	< 5.0	80	ug/L	No
Monochlorobenzene	Aug 11	< 0.10	80	ug/L	No

Paraquat	Aug 11	< 1.0	10	ug/L	No
Pentachlorophenol	Aug 11	< 0.50	60	ug/L	No
Phorate	Aug 11	< 0.50	2	ug/L	No
Picloram	Aug 11	< 5.0	190	ug/L	No
Polychlorinated Biphenyls (PCB)	Aug 11	< 0.05	3	ug/L	No
Prometryne	Aug 11	< 0.25	1	ug/L	No
Simazine	Aug 11	< 1.0	10	ug/L	No
Terbufos	Aug 11	< 0.50	1	ug/L	No
Tetrachloroethylene	Aug 11	< 0.10	10	ug/L	No
2,3,4,6-Tetrachlorophenol	Aug 11	< 0.50	100	ug/L	No
Toluene	Aug 11	< 0.20	60	ug/L	No
Triallate	Aug 11	< 1.0	230	ug/L	No
Trichloroethylene	Aug 11	< 0.10	5	ug/L	No
2,4,6-Trichlorophenol	Aug 11	< 0.50	5	ug/L	No
Trifluralin	Aug 11	< 1.0	45	ug/L	No
Vinyl Chloride	Aug 11	< 0.20	1	ug/L	No
Xylenes	Aug 11	< 0.10	90	ug/L	No

* MAC: Maximum Acceptable Concentration

As per Schedule 13 of Regulation 170/03, The Chatham Drinking Water System is required to ensure that at least one distribution sample is taken in each calendar quarter, from a point in the drinking water system's distribution system, or plumbing that is connected to the drinking water system, that is likely to have an elevated potential for the formation of Trihalomethanes (THMs). The results of THM sampling shall be monitored and expressed as a running annual average of quarterly results.

Parameter	Sample Location	Sample Date	Result Value	RAA Value	MAC* Limit	Unit of Measure	Exceedance
THMs	Winter Line & Lewis	Feb 24	18.7	33.1	100	ug/L	No
	Center SR & Green Valley Ln.	Jan 28	35.5				
	Victoria Rd.	Jan 28	27.3				
	Mitchells Bay Tower	May 12	30.1	34.2			No
	Center SR & Green Valley Ln.	Apr 14	38.3				
	Victoria Rd.	Apr 14	21.6				
	Winter Line & Lewis	Aug 11	39.2	34.9			No
	Center SR & Green Valley Ln.	Jul 14	45.6				
	Victoria Rd.	Jul 14	29.9				
	Mitchells Bay Tower	Nov 17	34.2	34.3			No
	Center SR & Green Valley Ln.	Oct 06	51.3				
	Victoria Rd.	Oct 06	40.1				

* MAC: Maximum Acceptable Concentration

As per Schedule 13 of Regulation 170/03, the Chatham Drinking Water System is required to ensure that at least one distribution sample is taken in each calendar quarter, from a point in the drinking water system's distribution system or plumbing that is connected to the drinking water system, that is likely to have an elevated potential for the formation of haloacetic acids (HAAs). The results of HAA sampling shall be monitored and expressed as a running annual average of the quarterly results.

Parameter	Sample Location	Sample Date	Result Value	RAA Value	MAC* Limit	Unit of Measure	Exceedance
HAAs	Grande Point Valve Chamber	Feb 24	5.0	15.5	80	ug/L	No
	Starkweather Lane	Jan 28	18.0				
	Victoria Rd.	Jan 28	14.0				
	Grande Point Valve Chamber	May 12	6.8	14.0			No
	Starkweather Lane	Apr 14	18.0				
	Victoria Rd.	Apr 14	5.8				
	Grande Point Valve Chamber	Aug 11	16.0	14.1			No
	Starkweather Lane	Jul 14	22.0				
	Victoria Rd.	Jul 14	14.0				
	Grande Point Valve Chamber	Nov 17	6.6	13.7			No
	Starkweather Lane	Oct 06	23.0				
	Victoria Rd.	Oct 06	15.0				

* MAC: Maximum Acceptable Concentration

4.4. Summary of Lead analysis during this reporting period:

As per Schedule 15.1 of Regulation 170/03, the Chatham Drinking Water System qualifies for reduced lead sampling. A minimum of 4 distribution samples must be taken and tested for lead during each of the following periods in the relevant 12-month period:

1. The period from December 15 to April 15.
2. The period from June 15 to October 15.

Any results displayed as less than (<) are below the detection limit of the accredited third-party laboratory.

Location Type	Number of Samples	Range of Lead Results (min #) - (max #)	MAC* Limit	Unit of Measure	Number of Exceedances / Adverses
Residential	0		10	ug/L	
Non-Residential	0				
Distribution	8	< 0.50 – < 0.50			0

* MAC: Maximum Acceptable Concentration

4.5. List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

As per Schedule 13-5 of Regulation 170/03, if a test result for any of the inorganic or organic parameters listed in Schedule 23/24 exceeds half of the standard prescribed for the parameter in Schedule 2 to the Ontario Drinking Water Quality Standards, the frequency of sampling and testing for that parameter under that section shall be increased so that at least one water sample is taken and tested every three months.

Parameter	Sample Date	Result Value	Half MAC* Limit	Unit of Measure	Exceedance
<i>None during the reporting period</i>					

* MAC: Maximum Acceptable Concentration

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

In accordance with Schedule C of the Municipal Drinking Water License, water discharged into the natural environment from the Chatham Drinking Water System must be tested at a monthly frequency for Total Suspended Solids, Total Phosphorus, Total Aluminum, Free Chlorine Residual and Total Chlorine Residual.

Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Residuals Management: Total Suspended Solids (mg/L)	4.7	10.7	3.7	4.7	4.2	7.3	3.0	8.7	28.0	3.3	2.3	2.0
Annual Average Concentration: 6.9 mg/L Annual Average Concentration Limit: 25 mg/L												
Residuals Management: Total Phosphorus (mg/L)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.05	0.02	0.02	0.02
Annual Average Concentration: 0.02 mg/L												
Residuals Management: Total Aluminum (mg/L)	1143	1267	305	660	733	1167	567	1230	3967	330	139	202
Annual Average Concentration: 976 mg/L												
Residuals Management: Free Chlorine Residual (mg/L)	-	-	-	-	-	-	-	-	-	0.05	0.00	0.00
Annual Average Concentration: 0.02 mg/L												
Residuals Management: Total Chlorine Residual (mg/L)	-	-	-	-	-	-	-	-	-	0.09	0.02	0.02
Annual Average Concentration: 0.04 mg/L Annual Average Concentration Limit: 0.02 mg/L Maximum Concentration Limit: 0.10 mg/L												

In accordance with Schedule C of the Municipal Drinking Water License, the requirements set out in the Ministry document titled “Harmful Algal Bloom Guide for Owners and Operators of Municipal Residential Drinking Water Systems” must be met. This includes proactive weekly sampling when visual observation alone is not sufficient to identify a bloom or when Harmful Algal Blooms have historically occurred in the source water for the system.

Any results displayed as less than (<) are below the detection limit of the accredited third-party laboratory.

Parameter	Sample Date	Result Value – Treated Water	MAC* Limit	Unit of Measure	Exceedance
Microcystin (ELISA analysis)	May 26	< 0.150	1.5	ug/L	No
	Jun 02	< 0.150			No
	Jun 09	< 0.150			No
	Jun 16	< 0.150			No
	Jun 23	< 0.150			No
	Jul 02	< 0.150			No
	Jul 07	< 0.150			No
	Jul 14	< 0.150			No
	Jul 21	< 0.150			No
	Jul 28	< 0.150			No
	Aug 05	< 0.150			No
	Aug 11	< 0.150			No
	Aug 18	< 0.150			No
	Aug 25	< 0.150			No
	Sep 02	< 0.150			No
	Sep 08	< 0.150			No
	Sep 15	< 0.150			No
	Sep 22	< 0.150			No
	Sep 29	< 0.150			No
	Oct 06	< 0.150			No
	Oct 14	< 0.150			No
	Oct 20	< 0.150			No
	Oct 27	< 0.150			No

* MAC: Maximum Acceptable Concentration

4.7. Summary of additional voluntary sampling and testing during the reporting period or the most recent sample results.

Any results displayed as less than (<) are below the detection limit of the accredited third-party laboratory.

Parameter	Sample Date	Result Value	MAC* Limit	Unit of Measure	Exceedance
Alkalinity	Nov 17	90	-	mg/L	-
Aluminum	Nov 17	11	-	ug/L	-
Colour	Nov 17	< 2	-	TCU	-
Hardness	Nov 17	120	-	mg/L	-
Perfluoroalkyl Substances (PFAS)	Aug 11	All results below the Summary of Guidelines for Canadian Drinking Water Quality (SGCDWQ), Health Canada	-	ng/L	-

5. ADVERSE WATER QUALITY INCIDENTS

An adverse drinking water condition is identified by a test result or an observed event that that water may not be safe for consumption and/or detrimental to public health.

Adverse water quality indicators may be as a result of adverse test results that exceed the Ontario Drinking Water Quality Standards. Additional indicators of adverse water quality may be, but not limited to, inadequate filtration or disinfection, low distribution system pressure, evident or suspected contamination of the water system.

Depending on the severity of the adverse water quality indicator, the local Medical Officer of Health / Public Health Unit may issue a water advisory, such as a Boil Water Advisory or Do Not Drink Advisory.

Adverse water quality incidents require timely reporting local Medical Officer of Health / Public Health Unit and the Spills Action Centre (SAC) of the Ministry of the Environment, Conservation and Parks (MECP).

Adverse Water Quality Incidents	
AWQI #: 167337	Type: Chemical Sample Result
Parameter: Benzene	
Result(s): 1.52 ug/L	Limit: 1.0 ug/L
Date Issued: 2025 Feb 05	Date Resolved: 2025 Feb 07
Details of Adverse: Benzene concentration greater than the O. Reg. 169/03 Chemical Standards in a drinking water sample. Sample Location: SS # 7 - Victoria Road, Thamesville (near Sherman Cemetery) Sample Date: January 28, 2025 Sample Time: 11:28 The distribution sampling location is commonly used for lead sampling. The majority of historic lead concentration analysis results are below the detection limit. THM sampling was also conducted on the same date in the North Kent Distribution System, the drinking water for both of these distribution systems is supplied from the Chatham Distribution System. The concentration of benzene in the distribution sample from the North Kent DS is non-detectable and below the Ontario Drinking Water Quality Standard.	
Actions Taken & Results Achieved: Distribution system flushing, re-sampling and re-testing. Sample Location: SS # 7 - Victoria Road, Thamesville (near Sherman Cemetery): 1.52 ug/L Sample Date: February 6, 2025 Sample Time: 12:55 Resample & Test Results: Benzene concentration = < 0.10 ug/L	
AWQI #: 167488	Type: Operational
Parameter: Distribution System Pressure	
Result(s): < 20 psi	Objective: 20 psi
Date Issued: 2025 Mar 07	Date Resolved: 2025 Mar 09
Details of Adverse: Pressure reduction in a section of the distribution system in the former Township of Dover. Start: 2025 Mar 07 @ approximately 10:45 End: 2025 Mar 07 @ approximately 11:20 Distribution system pressure reduced from approximately 60 psi to pressures in the 20 - 30 psi range during the period. Two, one minute recorded values were below 20 psi at the discharge from the Grande Point Valve Station facility. The lowest recorded pressure was 19.3 psi for a minute @ 11:16. Following this period, the pressure returned to previous values of approximately 60 psi. Positive pressure was maintained during this event. There were no watermain breaks around this period and contamination has not been observed or suspected.	

The Mitchell's Bay Elevated Tank is currently out of service for rehabilitation at this time. With the elevated tank out of service, the elevated tank is not available to provide pressure to the system in the area as would normally be the case when the elevated tank is in service.

Actions Taken & Results Achieved: Distribution system flushing, sampling and testing.

Sample & Test Results:

Mar 07	Free CL2 mg/L	TC cfu / 100 mL	EC cfu / 100 mL
Location			
Winter Line Rd & Marsh Ln, CK	1.67	0	0
Park St & L Pinsonneault St, Michell's Bay	1.69	0	0
Winter Line Rd & Lewis Ln, CK	1.71	0	0

AWQI #: 169023

Type: Microbiological Sample Result

Parameter: Total Coliforms (TC) in a Distribution Sample

Result(s): 1 cfu / 100 mL

Limit: 0 cfu / 100 mL

Date Issued: 2025 Jul 16

Date Resolved: 2025 Jul 17

Details of Adverse: Total coliform cfu / 100 mL greater than the 0. Reg. 169/03 Microbiological Standards in a drinking water sample.

Sample Location: 22750 Eastlawn Drive, Chatham

Sample Date: July 14, 2025

Sample Time: 13:40

Free Chlorine Residual: 1.11 mg/L

Total Chlorine Residual: 1.26 mg/L

Actions Taken & Results Achieved: Distribution system flushing, re-sampling and re-testing.

Resample & Test Results:

Jul 16	Free CL2 mg/L	TC cfu / 100 mL	EC cfu / 100 mL
Location			
North Hydrant	1.26	0	0
22750 Eastlawn Dr, Chatham	1.26	0	0
South Hydrant	1.31	0	0

AWQI #: 169353

Type: Microbiological Sample Result

Parameter: Total Coliforms (TC) in a Distribution Sample

Result(s): 1 cfu / 100 mL

Limit: 0 cfu / 100 mL

Date Issued: 2025 Aug 07

Date Resolved: 2025 Aug 08

Details of Adverse: Total coliform cfu / 100 mL greater than the 0. Reg. 169/03 Microbiological Standards in a drinking water sample.

Sample Location: Sample Station # 11 – Oak St, Chatham

Sample Date: August 5, 2025

Sample Time: 12:57

Free Chlorine Residual: 1.69 mg/L			
Total Chlorine Residual: 1.91 mg/L			
Actions Taken & Results Achieved: Distribution system flushing, re-sampling and re-testing.			
Resample & Test Results:			
Aug 07	Free CL2 mg/L	TC cfu / 100 mL	EC cfu / 100 mL
Location			
83 Warwick Dr, Chatham	1.67	0	0
SS # 11 – Oak St, Chatham	1.69	0	0
94 Warwick Dr, Chatham	1.71	0	0

Boil Water Advisories			
AWQI #: 167496		Type: Operational	
Parameter: Distribution System Pressure			
Result(s): < 20 psi		Objective: 20 psi	
Date Issued: 2025 Mar 10		Date Rescinded: 2025 Mar 13	
Details of Boil Water Advisory: Pressure reduction in a section of the distribution system in the former Township of Dover.			
Start: 2025 Mar 10 @ approximately 19:45 End: 2025 Mar 10 @ approximately 20:14			
Distribution system pressure reduced from approximately 70 psi to pressures below 20 psi at the discharge from the Grande Point Valve Station facility. Following this period, the pressure returned to previous values of approximately 70 psi.			
The fire department located in Mitchell’s Bay was conducting training using a hydrant at the Marine Park during this period.			
The Mitchell's Bay Elevated Tank is currently out of service for rehabilitation at this time. With the elevated tank out of service, the elevated tank is not available to provide pressure to the system in the area as would normally be the case when the elevated tank is in service.			
Affected Area: Mitchell's Bay, Grande Pointe, Bass Haven, homes along Angler's Line.			
Actions Taken & Results Achieved: Distribution system flushing, sampling and testing.			
Sample & Test Results:			
Mar 10	Free CL2	TC	EC
	mg/L	cfu / 100 mL	cfu / 100 mL
Location			
Winter Line Rd & Marsh Ln, CK	1.35	0	0
Park St & L Pinsonneault St, Michell’s Bay	1.38	0	0
Winter Line Rd & Lewis Ln, CK	1.49	0	0
Grande Point Valve Chamber	1.48	0	0

Mar 11	Free CL2 mg/L	TC cfu / 100 mL	EC cfu / 100 mL
Location			
Winter Line Rd & Marsh Ln, CK	1.61	0	0
Park St & L Pinsonneault St, Michell's Bay	1.59	0	0
Winter Line Rd & Lewis Ln, CK	1.06	0	0
Grande Point Valve Chamber	1.60	0	0

6. NON-COMPLIANCES

Failure to meet the standards outlined in provincial regulations, such as those set by the Safe Drinking Water Act, 2002, may result in non-compliance of such regulatory requirements. Additionally, failure to meet the requirements and conditions of the Municipal Drinking Water Licence and Drinking Water Works Permit may also result in a non-compliance.

Depending on the severity of the non-compliance, a non-compliance may affect the drinking water systems inspection rating, investigated with potential for charges/fines and provincial officers' orders issued all at the discretion of the Ministry of the Environment, Conservation and Parks (MECP).

Non-Compliances
Type: Non-Compliance of the Municipal Drinking Water License - Residuals Management
Parameter: Residuals Management Total Chlorine Residual Concentration
Date(s) / Period: 2025 Oct 14
Finding(s): Total Chlorine Residual of 0.16 mg/L
Criteria / Limit: Maximum Acceptable Total Chlorine Residual of 0.1 mg/L
Details: There were multiple factors contributing to the elevated Total Chlorine Residual obtained October 14th. The samples were not obtained at the point of discharge due to lack of safe access at the location of the storm sewer discharge along the bank of the Thames River. Instead, the samples were taken at the Equalization Tank discharge channel. By doing so, the Total Chlorine residual would have had less time to dissipate before being captured in the sample. Additionally, the pocket colourimeters utilized by staff at the Chatham Water Treatment Plant are not designed to accurately read chlorine residuals this low. To compensate for this, staff collecting Residuals Management samples also took Test Strip Residuals using Hach Test Strips. These test strips resulted in chlorine residuals of zero.
Action(s) Taken: The CK PUC is exploring alternative analysis equipment / processes for a method with a greater accuracy range for analysis of total chlorine residuals at very low concentrations.

Type: Non-Compliance of the Municipal Drinking Water License - Residuals Management
Parameter: Residuals Management Total Chlorine Residual Concentration - Annual Average
Date(s) / Period: January - December 2025
Finding(s): Total Chlorine Residual Annual Average Concentration of 0.04 mg/L
Criteria / Limit: Total Chlorine Residual Annual Average Concentration Limit of 0.02 mg/L
Details: The requirement to sample and test for total chlorine residual of the Residuals Management, with limits of the concentration of total chlorine residual discharged to the environment, was not a requirement in previous Municipal Drinking Water Licences for the Chatham-Kent Drinking Water Systems and was introduced in Licence Issue Number 8, August 25, 2025. A handheld free and total chlorine photometer is utilized to analyze the total chlorine residual discharged to the storm sewer, however the handheld colorimeter has accuracy of +/-0.03 mg/L (+/- 3% of reading at 25°C).
Action(s) Taken: The CK PUC is exploring alternative analysis equipment / processes for a method with a greater accuracy range for analysis of total chlorine residuals at very low concentrations.

7. NON-CONFORMANCES

Not undertaking or consideration of drinking water system best management practices may result in a non-conformance of such practices. Best management practices are not mandatory or a regulatory requirement for implementation, but rather a recommendation by the Ministry of the Environment, Conservation and Parks (MECP), to improve the drinking water system or quality management system.

Non-Conformances
<i>None during the reporting period</i>
Type:
Parameter:
Date(s) / Period:
Finding(s):
Recommendation / Objective:
Action(s) Taken:

8. SPILL OF A POLLUTANT / DISCHARGE OF A CONTAMINANT

Spills of a pollutant or discharges of a contaminant to the natural environment which has or may have an adverse effect on or impairment of the natural environment. The requirements monitoring, reporting, remediation of spills and containment discharges are set out in the Environmental Protection Act, R.S.O. 1990 and the Municipal Drinking Water Licence.

Spills of a pollutant or discharges of a contaminant require timely reporting to the local Medical Officer of Health / Public Health Unit and the Spills Action Centre (SAC) of the Ministry of the Environment, Conservation and Parks (MECP).

Spills of a Pollutant / Discharge or a Contaminant	
<i>None during the reporting period</i>	
Incident #:	Spill / Contaminant Material:
Beginning Date:	Beginning Time:
End Date:	End Time:
Duration:	Volume:
Source of Spill:	
Location of Spill:	
Cause of Spill:	
Action(s) Taken:	